Reducing Barriers

Migrations, Minor Ailments and Medicines

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List of Abbreviations

BFI	Berufsförderungsinstitut Steiermark Styrian Institute of Work Promotion
BiH	Bosnia-Herzegovina
DANAIDA	<i>Bildung und Treffpunkt für Frauen</i> Counselling and Education for Migrant Women
FP	Family Physician
GP	General Practitioner
HMC	Home Medicine Cabinet
HR	Republic of Croatia
IOM	International Organization of Migrants
ISOP	<i>Innovative Sozialprojekte GmbH</i> Innovative Social Projects LLC.
KBW	<i>Katholisches Bildungswerk Graz</i> Educational Institute of the Catholic Diocese of Graz-Seckau
KMI	Commission of Research on Migration and Integration
MD	Medical Doctor
OMEGA	Healthcare Centre Graz
ÖAW	<i>Österreichische Akademie der Wissenschaften</i> Austrian Academy of Sciences
ÖIF	<i>Österreichischer Integrationsfonds</i> Austrian Integration Fund
OTC-products	Over The Counter Products (no prescription necessary)
RSAP	Research in Social and Administrative Pharmacy (bi-monthly journal)
SOMM	<i>SelbstOrganisation von und für Migrantinnen und Musliminnen</i> Self-Organisation of Muslimic and Migrant Women
TCM	Traditional Chinese Medicine
TR	Republic of Turkey
UNECE	United Nations Economic Commission for Europe
UNESCO	United Nations Educational
UNHCR	United Nations High Commissioner for Refugees
ZEBRA	Intercultural Centre of Counselling and Therapy

Abstract

Based on the evidence that health and ill health are closely linked to a person's cultural and ethnic background, various studies have stated that responses to symptoms are culturally determined and that definitions of illness vary from culture to culture (Anderson & Bulatao & Cohen 2004, Braveman & Gruskin 2003, Jayaweera & Quigley 2010, Subedi 2003, Ulram 2009, Weiss 2003; see further Bischoff & Wanner 2004, Mossialos, Mrazek & Walley 2004). At the same time, particularly people from ethnic minority backgrounds are considered to experience difficulties in obtaining proper medical treatment, adequate housing and employment (Goldberg 1993, Kelleher & Hillier 1996, Marks & Worboys 1997). Although the World Health Organization has mapped out an ethical foundation to reduce health inequalities and promote people's health in 2008 (WHO Regional Office for Europe 2008), strategies to manage the consequences of such a health inequalities gap have not been able to keep pace with the growing challenges of modern migration.

Acknowledging an overall interest in the use of different systems of treatments and remedies in the case of minor ailments, this project explores health behaviour among people of four different ethnicities (Austrian, Croatian, Bosnian and Turkish) and two sequent migrant generations living in the city of Graz, Austria. While aiming at a deeper understanding of the issues surrounding the influence of culture and ethnicity on the process of decision making about how to cope with potentially self-treatable conditions, the project also provides a novel analysis for health behaviour in the context of migration. Focusing on what people do when experiencing minor health problems such as constipation or headaches (PAGB 2009, *Self Care in Practice*, PAGB 2008, RPSGB n.d.), this research project looks at patterns in the health behaviour of sequent migrant generations. Aiming at a better understanding of and a greater commitment to the needs of a continuously growing multicultural society, this project explores health behaviour among migrant cultures and ethnicities of sequent generations living in the city of Graz, Austria. While learning about the impact of culture and ethnicity on the processes of decision making when experiencing small ailments, and further exploring if and how patterns in health behaviour change over migration, similarities and differences between different ethnic groups and two sequent generations of migrants were investigated. Furthermore, specific similarities and differences between males and females, as well as people having a school leaving exam and those who have not were studied – within but also between the various cultural/ethnic groups. To collect data, it has employed an exploratory sequential mixed methods design, combining qualitative and quantitative methods (i.e. group discussions, guided interviews and a questionnaire). The target group for this research involves people with a background in Bosnia-Herzegovina, Croatia and Turkey, as these are the three largest groups of immigrants living in Graz (Magistrat Graz – Präsidialamt 2013, 2011). In order to get access to the target group and better anchor research locally, close collaborations have been sought with various local organisations working in the health and migrant sector.

Results suggest that in Austria people with a migrant background in Bosnia-Herzegovina, Croatia or Turkey experience inequalities in health status and health behaviour while at the same time utilising different strategies in order to cope with potentially self-treatable conditions. In contrast to the ancestral Austrian population, however, consulting a medical doctor is the main strategy utilised, even if the condition is familiar and people therefore have knowledge on the course of the condition as well as on treatment. Furthermore, analysis revealed differences in regard to the utilised methods of treatment, dependent on the persons's experiences with the present condition, but also on that person's cultural as well as socio-economic background. Overall it

can be concluded that issues related to minor ailments appear to be aligned with high tendencies to socially desirable responding and hence with insecurity and uncertainty, independent from social standard, sex, cultural background or working status.

By investigating minor ailments within a socio-cultural context, this interdisciplinary Social Pharmacy project brings together various sectors of research, combining different tools and methods. While it forms a novel approach towards looking at migrant health issues, it has strong practical relevance providing the groundwork for adapting health services towards the actual health needs of different cultural and ethnic groups. Furthermore, it can contribute to a sustainable improvement of migrants' health as well as to economic benefits (see Baquir et al. 2011).

Abstract

Gesundheit und Krankheit sind eng mit dem kulturellen bzw. ethnischen Hintergrund eines Menschen verbunden. Verschiedene Studien haben gezeigt, dass Reaktionen auf Symptome einer Krankheit kulturell abhängig sind und selbst die Definition von Krankheiten zwischen den einzelnen Kulturen variieren (Bischoff & Wanner 2004, Mossialos, Mrazek & Walley 2004). Weiters erleben viele Menschen mit Migrationshintergrund Schwierigkeiten in Bezug auf den Erhalt von Wohnung, Arbeit und medizinischer Betreuung (Goldberg 1993, Kelleher & Hillier 1996, Marks & Worboys 1997). Um das Bewusstsein für die Thematik zu fördern und Ungleichheiten von Gesundheit der Menschen zu reduzieren, hat die Weltgesundheitsorganisation 2008 eine Stiftung gegründet – bis jetzt konnten diese Strategien zur Handhabung aber nicht mit den Herausforderungen der modernen Migration Schritt halten und die Auswirkungen solcher Ungleichheiten reduzieren (WHO Regional Office for Europe 2008).

Vor dem Hintergrund eines allgemeinen Interesses an den angewendeten Heilmitteln und Behandlungssystemen, erforscht dieses Projekt das Verhalten bei kleineren Beschwerden wie beispielsweise Verstopfung oder Kopfschmerzen (PAGB 2009, Self Care in Practice, PAGB 2008, RPSGB n.d.) von in Graz, Österreich, lebenden Menschen aus vier verschiedenen Kulturen und zwei aufeinander folgenden Generationen von Migranten. Während einerseits ein größeres Verständnis für Themen rund um den Einfluss von Kultur und Ethnizität auf den Entscheidungsprozess bei potentiellen selbst-behandelbaren Beschwerden geschaffen werden soll, wurden kulturspezifische Verhaltensmuster aufgefunden gemacht, weswegen die vorliegende Arbeit andererseits auch eine völlig neuartige Analyse über das Gesundheitsverhalten bei kleineren Beschwerden vor dem Hintergrund der Migration liefert. Um Daten zu sammeln, wurde ein exploratives, sequentielles Mixed-Methods Design verwendet, das qualitative und quantitative Methoden (Gruppendiskussionen, leitfadengestützte Interviews und Fragebögen) kombinierte. Die Zielgruppe dieser Untersuchung umfasst dabei zwei aufeinander folgende Generationen von Menschen mit einem ethnischen Hintergrund in Bosnien-Herzegowina, Kroatien oder der Türkei, da diese die drei größten Gruppen von in Graz lebenden Immigranten darstellen (Magistrat Graz – Präsidialamt 2013, 2011). Um Zugang zu dieser Zielgruppe zu erlangen und die Untersuchung vor Ort besser zu verankern, wurde eine enge Zusammenarbeit mit unterschiedlichen lokalen Organisationen, die im Gesundheits- und Migrantensektor in Graz arbeiten, gesucht. Die Ergebnisse der vorliegenden Studie weisen darauf hin, dass in Österreich lebende Menschen mit Migrationshintergrund in Bosnien-Herzegowina, Kroatien und der Türkei Ungleichheiten im Gesundheitsstatus und Gesundheitsverhalten erleben. Dabei konnte ein unterschiedlicher Gebrauch verschiedenster Strategien, um mit potenziellen selbst-behandelbaren Beschwerden umzugehen, festgestellt werden. Im Gegensatz zur angestammten österreichischen Bevölkerung jedoch, wird zur Behandlung von kleineren Beschwerden prinzipiell bevorzugt ein Arzt konsultiert, selbst wenn die Beschwerden bekannt sind und bereits Erfahrungen mit dem Verlauf der Beschwerden als auch mit der Behandlung vorhanden sind.

Durch die Erforschung von leichten Beschwerden in einem sozio-kulturellen und gesellschaftlichen Kontext bringt dieses interdisziplinäre Social Pharmacy - Projekt verschiedenste Sektoren der Forschung zusammen, indem unterschiedliche Methoden kombiniert werden. Dabei stellt es nicht nur einen neuen Ansatz für die Betrachtung von Gesundheitsfragen in Bezug auf MigrantInnen dar, sondern hat auch große praktische Relevanz. Indem die theoretische Grundlage bereitgestellt wird, um Gesundheitsdienste auf die jeweiligen Bedürfnisse von verschiedenen kulturellen Gruppen anzupassen, kann diese Arbeit zu einer nachhaltigen

Verbesserung der Gesundheit von MigrantInnen und darüber hinaus sogar zu einem wirtschaftlichen Nutzen beitragen.

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Introduction

Being the first of its kind in Austria, this thesis related to the field of Social Pharmacy¹, identifies and discusses barriers in the context of migration, minor ailments and medicines by offering a more comprehensive insight into an issue that has only little previous evidence to guide research. As an outcome, this project wants to instigate the reduction of barriers in accessing health services through suggestions on how local health programmes could be customised towards meeting respective requirements and ultimately contributing to an improvement in the health status of a continuously growing multicultural society. Since general practitioners (GPs) spend more than 40% of their time in practice on the treatment of minor conditions (Porteous et al. 2006, Puntong & Boardman & Anderson 2011), empowering patients to rely on self-administered care when treating minor ailments represents a significant potential for reducing the demand of GP services for ailments which do not necessarily require a doctor's attention (Welle-Nielsen et al. 2011, The Mary Seacole Research Centre 2011). The research aim is to investigate the accessibility and functionality of the present healthcare system in regard to the encounter of migrants, minor ailments and medicines, and in that context to also reflect on modern pharmacists' role (see Baquir et al. 2011, Noseworthy 2013, Paudyal et al. 2013).

Since a person's health behaviour and health status is strongly affected by a person's cultural and ethnic background, the treatment of ill health and also the measures undertaken to improve health involve issues of cultural bias and result in different health beliefs and/or approaches of treatment² (Bischoff & Wanner 2004, Conner & Normann, WHCA 2011). Hence, modern western countries such as Austria need to be able to adapt to the demands of increasingly multicultural societies with a variety of different beliefs and opinions on health and ill health, providing both opportunities and challenges for all health professionals, including pharmacists (Fink 2010, Donyai 2012). Despite efforts undertaken so far, barriers in access to health remain. In Austria, every second resident³ has either only problematic (i.e. 38.2%) or inadequate (i.e. 18.2%) skills, capabilities and motivation to make decisions and undertake measures beneficial to health. In particular people having a migrant background account for a substantial share thereof, mostly due to languages issues or poor education, resulting in a lack of understanding of and access to health services (HLS-EU Consortium 2012, Mayer 2011, Sorensen et al. 2012). Thus, especially vulnerable groups such as migrants display substantial differences in regard to health literacy, health conscious behaviour as well as health status when compared to the ancestral population (Fassmann 2007, Statistic Austria 2012, WHO 2010 *Health of migrants*).

Although 'minor' is a subjective term which may be perceived differently by each person, minor ailments can be defined as "potentially self-treatable and self-limiting health problems that do not necessarily need medical attention" (NZSMI 2009, PAGB 2009, 2010, 2011, RPSGB n.d.). Hence, this project addresses conditions such as common colds, digestive problems, skin diseases, minor injuries and minor pains and further related symptoms such as nasal conjunction, light fever and else (ibid.). In that context, the prevalence of so called 'lifestyle-diseases' (i.e. non communicable diseases caused by leading an unnatural, stressful life such as obesity or cardiac

¹ Social Pharmacy is a strongly interdisciplinary subject that uses social science methods to address major problems facing healthcare systems globally in the early 21. Century, see also Chapter 1.1 Social Pharmacy Context.

² See also Chapter 1.3 Health, Ill Health and Culture.

³ The European Health Literacy Survey excluded all populations of non-EU migrants. Hence, only migrants with an EU-background were taken into account (see HLS-EU Consortium 2012).

conditions for example⁴) has been rapidly increasing (WHCA 2011), as people's health literacy, i.e. the willingness and ability to access, understand and apply health information in order to improve and maintain good health, has been decreasing (Sorensen et al. 2012). If people were enabled to practise responsible self care, ailments can be addressed at an early, i.e. minor, stage, possibly limiting the severity of symptoms, while being able to apply an individualised therapy according to their own personal understanding of health and ill health (AESGP 2012). As a result would people be less dependent on GPs, which in turn would reduce public spending and unburden the public health systems, while at the same time individual health and wellbeing would increase (Baqir et al. 2011, NZSMI 2009, WSMI 2009).

Self administered care (i.e. self care) is not a new concept, however, as every culture has its own medicines and treatments, mostly drawing from indigenous knowledge and culture-specific beliefs (Bodeker 2006, Fink 2010). Yet it seems that the skills needed to successfully manage one's health have become lost as especially people in developed countries such as Austria have become very dependent on health systems (PAGBB 2009 Annual Review). Since applying self care implies getting active and learning about health issues including options of treatment, it increases health conscious behaviour and a healthy lifestyle, while also ensuring an adequate amount of health knowledge. As a consequence, people are enabled to make more appropriate use of GP services, whereas the prevalence of 'lifestyle-' and other chronic diseases caused by an unhealthy lifestyle can be reduced (AESGP 2012, PAGB 2011, WSMI 2009). In that regard, collaborating with health experts such as pharmacists is pivotal in order to prevent issues such as inappropriate self-medication or possible side effects (AESGP 2012, NZSMI 2009; see also Chapter 1.2.2 The Concept of Self Care). Following an increasing trend of general consumer empowerment in the western world, a discipline called "integrative healthcare" has originated, combining the advantages of alternative and traditional medicines with those of modern medicine (BMG 2011, Crooks & Andrews 2009). In practice, OTC products still account for the biggest share of self-administered care, as they are considered safe and effective while easily accessible within the EU (AESGP 2012, IGEPHA 2010). Nevertheless, utilising complementary and alternative medicines (such as Homeopathy and Traditional Chinese Medicine) or traditional, homemade treatments (e.g. a wet pack with curd) has become increasingly popular, particularly in developed countries (Crooks & Andrews 2009, Mossiales & Mrazek & Walley 2004, WHO 2002). By integrating diverse medical practices into the healthcare system, a platform for cross-cultural dialogue and interaction could be developed, making it easier for all people, including migrants, to enter the local healthcare system, while developing trust and confidence in regard to the healthcare provided within the respective healthcare system (Cardol et al. 2004, PAGB 2009 Annual Review, Plass & Timmermanns & Van der Wal 2006). However, alternative treatments or homemade remedies are usually not seen as a form of primary healthcare and therefore little recognised in mainstream primary healthcare campaigns (Crooks & Andrews 2009).

This project utilised an exploratory sequential mixed methods design which consists of a qualitative research stage the subsequent quantitative part is based on⁵ (see Creswell & Plano Clark 2007, Klinger & Boardman 2011). While the initial qualitative analysis allowed enquiry into where people get informed about minor ailments, what kinds of treatment they apply and why they decide to choose a certain method of treatment, the sequential quantitative research reassessed the findings while providing quantifiable results for the target group. An initial phase of preliminary research helped to identify issues and develop an interview guide before six qualitative semi-structured interviews were carried out. Insights from these data then accounted for the design of a quantitative questionnaire which was implemented and validated quantitatively in a pre-test-phase while connecting the two research stages through the compilation of items and scales. Finally, a survey

⁴ See LIFE 2014.

⁵ See Chapter 3.3 Research Design, Chapter 4 Qualitative Analysis and Chapter 5 Quantitative Analysis.

was performed on a full sample comprising 199 people, with a response rate of 99.5%. Research tutors were sought out in order to ensure overall quality and a high academic standard throughout both stages of the project.

Learning about the impact of culture and ethnicity on the processes of decision making when experiencing minor ailments, this project investigates similarities and differences between four different ethnic groups⁶ and two sequent generations of migrants, all living in the city of Graz, Austria. As the country's second biggest city, Graz is home to a multifaceted population, where persons with an origin in Bosnia-Herzegovina, Croatia and Turkey account for the biggest share of migrants in Graz (Magistrat Graz – Präsidialamt 2013; see further Chapter 3.2 Target Group).

Findings suggest that treating oneself when experiencing potentially self-treatable conditions is not always people's first choice - regardless of cultural or ethnic background and generation membership. As analysis has found minor ailments and the treatment thereof to be afflicted with issues of insecurity and uncertainty, the degree of familiarity a person has in relation to the experienced condition has been identified as the most decisive aspect whether or not that condition is defined as 'minor' and whether or not medical care is sought. Nevertheless, almost all persons have been found to be familiar with the concept of self care and associated treatment options⁷. However, due to a lack of trusted alternatives as well as profound individual knowledge, particularly people with a migrant background tend to consult a doctor when feeling unwell - even when the experienced minor condition is familiar and they are certain that seeing a doctor is not really demanded. Moreover, findings strengthen the idea of the central role of females in regard to family healthcare provision as women take on a key role in providing self-administered care for the whole family. Especially migrant families have been found to rely heavily on women for healthcare, although many women with a migrant background (irrespective of age and generation membership) tend to buy a substantial share of medication rather randomly without consulting a health professional as second opinion or knowing the detailed instructions for application and eventual side effects. Indeed, these findings support the call for a more comprehensive health-education for particularly members of marginal groups in order to increase health conscious behaviour in Austrian society. Educating inhabitants on health issues and providing them with the necessitated skills and knowledge to manage their own health, is found to represent a crucial task of utmost importance.

This dissertation is divided into three parts. The first comprises the theoretical foundation and literature review, a description of the project aims and target group, as well as a detailed discussion of the utilised mixed methods research design. Part two describes the two undertaken research stages, i.e. the initial qualitative and the ensuing quantitative analysis, methodology as well as data management, and presents the results of both of them. The third and last part consists of the discussion of results and the conclusion, including limitations of the project and implications for further research.

⁶ i.e. residents with an ethnic background in Croatia, Bosnia-Herzegovina or Turkey, and an ancestral Austrian control group.

⁷ See Chapter 1.2.2.1 Self Care Treatments.

Part I

Chapter 1: Theoretical Foundation and Literature Review

1.1 Social Pharmacy Context

1.1.1 Social Pharmacy and the Social Aspects of Health

Social Pharmacy is a relatively new, but strongly developing academic field using social and behavioural science methods to address major problems faced by health care systems worldwide in the early 21st century. It recognises that ideal health gains require not just new medicines and delivery systems, but also the understanding of medicines and issues which affect access to medicines. As it addresses current events and processes utilising diverse research approaches, Social Pharmacy is an interdisciplinary field *“enabling the pharmacy profession to act, take part and take responsibility in drug matters at a societal level”* (Abrika & Hassali & Abduelkarem 2011, Harding & Taylor 2006, Sorensen & Mount & Christensen 2003, p.11).

Traditionally, natural science disciplines such as chemistry, biochemistry and pharmacology including the knowledge on medications and their affects form the basis of a pharmacist’s expertise. However, pharmacists not only work in laboratories or similar environments. In fact, more than 85% of graduated pharmacy students in Austria work within a community pharmacy setting after finishing their studies (PhG 2011). In order to ensure appropriate usage of medicines, provide adequate health information and educate people with the ultimate aim of promoting and maintaining individual health, appropriate skills are essential for every pharmacist. Since the “traditional” pharmaceutical disciplines cannot provide appropriate tools or perspectives to fulfil this role, however, as they rather focus on drug-related aspects only and leave out the social aspects (such as different health-related perceptions or beliefs of people), pharmacists require additional training. In order to be able to address the social aspects of drugs, including the preparation, distribution and prescription of drugs and medicines as well as information on drugs and drug control, pharmacists require profound expertise in health related research methodologies. As psychosocial factors are known to affect people’s beliefs and behaviours, and therefore influence on their health and illness-related outcomes (Donyai 2012), pharmacists also need to gain knowledge of their patients’ attitudes and opinions as well as of their relationship to health behaviours in order to be able to improve the efficiency of communication when dealing with people asking them for advice. Furthermore, interventions aiming at changing risky health behaviours such as smoking or obesity are more successful when pharmacists are empowered by relevant knowhow in regard to human behaviours and the complex interactions of patients’ individual beliefs and socially accepted norms (ibid., Sorensen & Mount & Christense 2003). In addition, research on patients’ perspectives and the broader context of medicines as part of which the researcher wants to understand or explain issues affecting access to and use of medicines, i.e. an appreciation of lay-people’s views and understandings of medicines, the constraints they face and the choices they make, also require a more extended tool box than that of the “traditional” pharmaceutical disciplines. Finally, all health professionals including pharmacists need to be educated in regard to culture-sensitive communication, intercultural competency and issues related to health literacy in order to live up to the

demands of increasingly multicultural societies and be enabled to address health inequalities appropriately in everyday practice (WHCA 2011, WHO Regional Office for Europe 2010).

As a result, Social Pharmacy includes “*all principles and methodologies of the social, humanistic and behavioural sciences relevant to pharmacy*” (Harding & Taylor 2006, p.126), such as for example health and health service research⁸ or the concepts of health and ill health⁹. In order to address diverse complex research questions referring to pharmaceutical practice and medicine use, Social Pharmacy is an interdisciplinary field drawing upon various science disciplines such as educational studies, communications, history and anthropology while relying more heavily on psychology, sociology as well as economics and political sciences, “*as these relate to issues in public health and social politics*” (Sorensen & Mount & Christensen 2003, p.8). As a result, it provides the researcher with an extensive collection of research tools and techniques, and enables him or her to look at pharmacy from a broader perspective while stretching beyond the borders of the natural sciences. Although there is an overlap between the areas of Social and Clinical Pharmacy, Clinical Pharmacy is an area more limited to the natural sciences and hence acts as a bridge between Social Pharmacy and the natural sciences, as illustrated in Figure 1.1 Disciplines involved in Social Pharmacy and Pharmaceutical Education below.

Figure 1.1: Disciplines involved in Social Pharmacy and Pharmaceutical Education

(Sorensen & Mount & Christensen 2003, p.10)

Due to an increasing social demand, the role of the pharmacist has changed tremendously over the last years. As “*the societal expectations of health care have increased*” (Cantrill & Morris & Weiss 2005, p.157) and due to an aging population experiencing more and more lifestyle diseases, the public perception of pharmacists is shifting (Abrika & Hassali & Abduelkarem 2011, Devereaux 2002, Harding & Taylor 2006, PAGB 2009 Annual Review). Because countries need to balance the health needs of their people with a continuing rise in health expenditure (Fink 2010), pharmacists’ roles gradually move away from focusing exclusively on medication dispensing towards a philosophy of serving, making pharmacy “*a professional practice affecting the public*”

⁸ See Bowling 2009.

⁹ See Faltermaier et al. 1998 and Conner & Norman 2008.

health, safety, and welfare" (Devereaux 2002, p. 1550). Struggling with an increasing workload of general practitioners (GPs) and continuing inequalities in health, expanding the pharmacists' contributions as low-threshold primary health care providers has therefore been the logical consequence. Although research indicates that many people are still unaware that pharmacists are *"medically trained and are there to provide sound knowledge-based advice"*, it has also been found that people are actually willing to utilise pharmacist-based service *"when being educated on their important advisory role"* (PAGB 2009 Annual Review, p. 7). According to the World Health Organisation (WHO), future pharmacists should act as caregivers, decision-makers, communicators, leaders, managers, life-long learners and teachers, further implying that all future pharmacists should receive extensive training in Social Pharmacy as it provides the foundation for aspiring these roles as part of an individual, patient-oriented service (Abrika & Hassali & Abduelkarem 2012, 2011). While some countries have already reacted and increased pharmacists' responsibilities towards a broader role in health promotion, others, however, have not yet addressed that issue. Nevertheless, expanding the pharmacist's role towards providing individualised, patient-centred and holistic care not only carries the potential to increase access to medicine and compliance while reducing the reliance on doctors, but it can also promote adequate health education and hence health literacy, resulting in a more responsible and self-determined way of patients' decision-making in regard to health issues (Abrika & Hassali & Abduelkarem 2012, 2011, Donyai 2012, Harding & Taylor 2006, NZ Herald 2013, Porteous et al. 2006, Rubin et al. 2012, WSMI 2009).

As pharmacy practice needs to be evidence-based, undertaking research on pharmaceutical services is crucial in order to ensure and maintain an adequate quality of services. According to Sorensen, Mount and Christensen (2003), topics for Social Pharmacy research relate to the supply, distribution, availability and demand of services as well as the organisation and process of service delivery and evaluation in regard to the quality, effectiveness and outcomes of services. One of the key concerns of Social Pharmacy and also an area of overlap to the disciplines of Public Health and Social Medicine is the identification, investigation and evaluation of disparities in health status as well as the implementation of interventions aiming at reducing them. Furthermore, undertaking Social Pharmacy research is suggested for the pharmacist's role as an interface between pharmaceutical and other health services, the evaluation of pharmacy-relevant policy innovations as well as pharmacy management, marketing and payment related to services (Abrika & Hassali & Abduelkarem 2012). By applying concepts or ideas evolving from the humanistic and/or social sciences, Social Pharmacy researchers develop *"a more general understanding of social factors that influence pharmacy practise and medicine use"* (Sorensen & Mount & Christensen 2003, p.10) when investigating the encounters of health, medicines and health care from a pharmaceutical point of view.

1.1.2 Social Pharmacy in Austria

This research projects that belongs to the field of Social Pharmacy is the first of its kind in Austria. No Austrian studies on minor ailments have been found and there is only little research available on patients' perspectives regarding minor ailments (Cantrill & Morris & Weiss 2006). As Austria has not yet formally acknowledged the advantages of self care and hence has not yet extended the role of its pharmacists (IGEPHA 2010), the author considers of great interest and relevance (to investigate) how patients define minor ailments, which strategies are applied when experiencing them and whether or not strategies differ between varying ethnic groups and sequent migrant generations. Incorporating issues of migration and ethnicity, this analysis thus adds a novel perspective on Social Pharmacy research in general, while undertaking research in this field not only underpins the importance of a broader perspective when looking at issues surrounding health and health care in Austria,

but may also contribute to keeping pace with the on-going changes worldwide shaping the future of the profession of pharmacy. In order to do so and further familiarise the public with the concept of Social Pharmacy, the author has tried to get as much media attention as possible for this project, has taken part in two international Social Pharmacy workshops and has further held multiple presentations and talks (see Chapter 3.4 Project Schedule and Work Procedure) while working together closely with local organisations in the migrant and health sector (see Chapter 3.2.4 Collaborations).

Likewise to other developed countries, the social aspects of health and medicines in Austria are gaining more relevance every day. As the country's well integrated health system provides universal access to health services for the entire resident population¹⁰, considerably rising health costs and an aging population experiencing more and more lifestyle diseases represent huge challenges for Austria. Within ten years, the number of prescriptions has increased at an annual rate of 1.2%, while the expenditure per prescription has almost doubled (Biffl 2003, Fink 2010). On the other hand, Austrian consumers have been found to utilise considerably less self-medication than Europeans overall, accounting for only 7.5% of the total pharmaceutical market, whereas Europeans on average spend 12.4% of the total pharmaceutical market, both excluding hospital sales (AESGP 2010). In addition, health literacy of Austrians is rather poor and people are less conscious about the link between individual behaviour and health status (HLS-EU Health Consortium 2012). While as part of a study in 2010 for instance, one third of participants stated to be aware that health conscious behaviour increases one's own health, it was only one fourth in 2011 (GfK Austria 2011). Moreover, the European Health Literacy Survey, comprising a comparative report on health literacy in eight EU member states (i.e. Austria, Bulgaria, Germany, Greece, Spain, Ireland, the Netherlands and Poland) stated for 56% of all Austrians to have rather poor health literacy, while 18% thereof even have inadequate health literacy. Compared to the other countries, Bulgaria was the only country displaying a bigger share of people with inadequate health literacy than Austria (HLS-EU Consortium 2012). Nevertheless, 77% of the Austrian population (with an on-going uptrend) was found to be active in self-medication, mostly applying various OTC products for coughs or colds, pain, digestive disorders as well as nutrition supplements and sleep-inducing or calming drugs (AESGP 2012, IGEPHA 2010). As there are major connections between health literacy, health promotion and health behaviour (including emergency service use or doctor's visits), these findings suggest serious issues in health knowledge and thus health conscious behaviour for more than half of the Austrian population, further involving a substantial potential for inappropriate self-medication.

Hence, undertaking Social Pharmacy research provides the basis for developing Social Pharmacy concepts which in turn can help find possibilities to extend Austrian pharmacists' responsibilities and add to the patients' wellbeing according to international examples (see Chapter 1.2.3 Minor Ailment Schemes).

Due to a long history of immigration, Austria's population is highly diverse, comprising people with migrant backgrounds from all over the world, which make up 18.5% of its altogether 8.4 Mio. permanent residents (Statistic Austria 2012, n.d.). Consequently, Austria's health system, as many others, has to meet the increasing health demands of a very diverse resident population with regard to health and health-related issues. As will be discussed more thoroughly in Chapter 1.3 Health, Ill Health and Culture, each ethnic group has its own culture, beliefs, and social norms, influencing on everyday life (e.g. regarding nutrition, appearance, body shape and the

¹⁰ The entire Austrian population including legal immigrants and refugees get health coverage through the public health insurance system, while people with low income are exempt from paying prescription charges for pharmaceuticals and other expenses. Nevertheless, cost-sharing for Austrian health services is increasing, resulting in partly high out-of-pocket payments for services (Biffl 2003, Fink 2010).

like). Since there are very close links to health and health related behaviour, the understanding of a culture's specific beliefs and social norms is essential in order to identify and understand the underlying constructs which may lead to health-related problems (Kelleher & Hillier 1996). Furthermore, implementing the findings of Social Pharmacy research can help to improve drug use and health conscious behaviour of the entire Austrian population and will, thus, not only contribute to reduce misinformation, confusion, and also inappropriate self-medication, but also to the development of more target-oriented health services for a multicultural society (Palaian et al. 2011).

1.2 Minor Ailments and Self Care

1.2.1 Minor Ailments

Defining minor ailments can be difficult as there are varying suggestions available in the literature¹¹. Adhering to already implemented minor ailment schemes (see Chapter 1.2.3 Minor Ailment Schemes), many studies define minor ailments either in relation to locally available non-prescriptive drugs (i.e. OTC products) or according to the list of dispense prescription drugs the pharmacist has permission to prescribe (Welle-Nielsen 2011). However, all researchers agree that “minor” illness always has to be a condition which patients “*can handle themselves*” (Welle-Nielsen 2011, p.40), that are “self-limiting” (NHS 2004, Wood 2008) and “*do not [necessarily] require medical attention*” (RPSGN n.d., p.2). Hence, management of minor ailments should be straightforward, “*and education and advice on self-management are all that is required*” (Wood 2008, p.21). In fact, minor ailment schemes have produced extensive lists of conditions and symptoms they are able to treat as part of associated service providers and therefore call minor ailments (NHS 2007, PAGB 2009 Making the Case for the Self Care of Minor Ailments, Welle-Nielsen 2011). According to the Proprietary Association of Great Britain (2009), the ten most frequently experienced minor ailments are back pain, dermatitis, heartburn and indigestion, nasal congestion, constipation, migraines, coughs, acne, sprains, strains and headaches. In addition, most minor ailment schemes further include conditions such as hay fever, dyspepsia (NHS 2004), nail or skin fungus, haemorrhoids, sore throat, vaginal thrush, bites and stings, colds, parasitic infections such as head lice or threadworms and other conditions considered to be minor (DHSSPS 2008, NHS 2010, PAGB 2009, RPSGB n.d., WSMI 2009).

Aiming at being as precise as possible in distinguishing between minor ailments and more serious conditions, the author has decided to define minor ailments as “potentially self-treatable and self-limiting conditions that do not necessarily require a doctor’s attention” (Baqir et al. 2011, Cantrill & Morris & Weiss 2005, Fassaert et al. 2008, NHS 2004, PAGB 2009 Fast facts about Self Care, PAGB 2011, Wood 2008) for the purpose of the present study. Moreover and in addition to an extensive literature review in order to cover the most frequent minor conditions, the author talked to various GPs, specialists and pharmacists in Austria before formulating the research design and defining eight key ailments which the author specifically asked for in every interview and questionnaire (see Table 1.2.1 Original Categories of Minor Ailments below).

In fact, definition of the minor ailments investigated within this study was performed in two stages. While the original categories of minor ailments were developed prior to the qualitative analysis, they were used as a guideline when conducting the interviews and during qualitative analysis. After developing a coding agenda and analysing the results of the qualitative stage of this research, the interrogated minor ailments were then revised and restructured. Drawing from qualitative findings, five categories of minor ailments were assembled, including related symptoms and conditions as shown in Table 1.2.1.2 Final Categories of Minor Ailments below.

¹¹ See All Party Parliamentary Group on Primary Care & Public Health 2008, Baqir et al. 2011, Cardol et al. 2004, Fassaert et al. 2008, NHS 2004, PAGB 2011, 2010, 2009 Fast facts about Self Care, RPSGB 2003, Wood 2008.

Table 1.2.1: Original Categories of Minor Ailments

- Common cold / sore throat or minor ear aches / a touch of fever / hoarseness
- Slight Diarrhoea
- Sharp shooting pains in the heart / high fever
- Minor strains / sprains / bruises
- Fungal infection of the nail or foot
- Head or back pains
- Swellings after insect stings or bites
- Rashes

(see further AESGP 1997, NPC 2004, NZSMI 2009, PAGB 2010, 2009 Fast facts about Self Care, PAGB 2011, RPSGB 2003)

Table 1.2.2: Final Categories of Minor Ailments

- common colds (e.g. a nasal congestion, cough, sore throat and light fever)
- digestive problems (e.g. diarrhoea, constipation or heart burn)
- skin diseases (e.g. swellings because of bug bites, an athlete's foot or nail fungus)
- minor pains (e.g. headaches, backaches or joint pains)
- minor injuries (e.g. abrasions, cuts, bruises or strains)

In general, what is perceived as a minor or major ailment not only depends on issues related to the experienced condition such as severity or persistency, but is, to a far greater extent, inextricably connected to a person's individual social circumstances and hence also relates to previous experience and health knowledge (Fassaert et al. 2008, Cantrill & Morris & Weiss 2005). Therefore, "minor" is a subjective term and is hence perceived differently by each person: what is "minor" to one person might be "major" to another (Conner & Norman 2008, Prager et al. 1999).

As a result, conditions can change from being received as "major" to "minor", while patients are known to consult a GP even when they are convinced that a condition is minor (Cantrill & Morris & Weiss 2005). Researchers are ambivalent regarding the reasons for that behaviour: according to Cantrill, Morris and Weiss (2006), the pivotal aspect in decision making whether or not to consult a GP for a minor ailment are previous experiences and knowledge on that specific condition, whereas Fassaert et al. (2008) rather believe that the degree of anxiety a patient has about the severity of the problem represents the decisive aspect for example. Moreover, research on the definition of minor ailments indicates differences between lay and professional interpretation regarding this matter, as patients may perceive something as more serious which health professionals would clearly consider a minor condition (such as an athlete's foot for example; see Chapter 4.3.5 Category 5 Minor Ailments) or vice versa (see Cantrill & Morris & Weiss 2005).

As implied by current research, people often tend to not know what to do in order to make themselves feel better, which is why they generally call for a doctor every time they feel unwell (Mossialos & Mrazek & Walley 2004). Furthermore, many people with minor ailments consult their family physicians out of convenience

(Brimelow 2010); due to reasons of access (e.g. getting a prescription); because they think ailments will disappear faster; or because they are not sure about the minor nature of the experienced condition (Cantrill & Morris & Weiss 2005). Consequently, the treatment of minor ailments accounts for a considerable amount of GPs workload. But consulting a doctor in the event of potentially self-treatable conditions not only results in having too many patients in overcrowded waiting areas and hence long waiting periods. It is also associated with high health costs and further takes time off medical practise every day, which would be better spent on patients with more severe conditions who really need a GP's input (DHSSP n.d., WSMI 2009).

According to various studies, minor ailments have been confirmed to make up a substantial share of workload in GPs clinics. An IMS-study carried out in the UK in 2006/07 found that 20% of all GP-consultations per year involve self-treatable conditions (PAGB 2011, 2009 Fast Facts about Self Care), while more than two billion Euros have been spent on GP consultations involving minor ailments during that time (Baqir et al. 2011). More recent studies indicate even higher numbers of 25% to 33% for family physicians in Ontario, Canada, whereas British Columbia spends \$95 million a year to treat minor ailments by general physicians (Noseworthy 2013). Even so, there is an ongoing dispute whether or not GPs are really "overwhelmed" by patients with minor ailments (Hannay 2010) and on the meaningfulness of dismissing "[...] *all minor ailments as a waste of GPs time*" (Cantrill & Morris & Weiss 2005, p.163). Nevertheless, it is a fact that dealing with people's minor ailments is part of a doctor's everyday routine and hence, ensuring that people receive the service they actually require represents a major challenge for public health services (PAGB 2011). Research indicates that people in the UK for instance experience on average four symptoms of minor illness every two weeks (PAGB 2011), while the ten most common conditions (i.e. back pain, dermatitis, heartburn and indigestion, nasal congestion, constipation, migraines, coughs, acne, sprains, strains and headaches) account for roughly 75% of all consultation costs and 85% of all prescription charges (PAGB 2011, 2009 Fast Facts about Self Care).

Clearly, the treatment of minor ailments therefore incorporates an increasing potential for reducing the demand of GP services by empowering people to depend more on self-administered care, i.e. self care (Cantrill & Morris & Weiss 2005, Welle-Nielsen 2011).

1.2.2 The Concept of Self Care

Self care encompasses a wide range of actions and decisions people make in order to maintain and improve health, prevent diseases and manage illness. Hence, it is part of their daily life and includes normal, everyday activities such as a healthy nutrition or physical exercise for example, but also applying self-administered care to treat minor ailments and/or prevent illnesses. By practicing self care, ill health is addressed at a very early stage, which limits the severity of symptoms and hence prevents a minor ailment to become a more serious condition which would require medical care (AESGP 2012, WSMI 2009). Furthermore, self care implies getting involved and active for one's own wellbeing, and learning about health issues which ultimately leads to an increased health conscious behaviour. As a consequence, self care reduces not only the amount of prescriptions and antibiotics used but also impacts on the development of chronic diseases such as cardiovascular diseases and diabetes as more health-conscious people actively pursue a healthier lifestyle (AESGP 2012, NZSMI 2009, PAGB 2011, WSMI 2009).

As the underlying idea to self care, i.e. have individuals take over more responsibility for themselves, coincides with an increasing trend of consumer empowerment, it further aims at increasing participation and involvement in the design of (health) policies and in the planning and development of (health related) services (AESGP 2012, NZSMI 2009, Patterson et al. 2008, WSMI 2009). As such, self care is not a new phenomenon, but the skills

needed to successfully manage one's health seem to generally have been lost while people have become more and more dependent on health systems. Today, particularly doctors and thereof GPs or family physicians respectively, are expected to provide universal health care and cure to all health problems by taking over responsibility for not only the health condition experienced, but also the person him- or herself and finally prescribe medicines that are *"stronger than anything else you can get"* (PAGB 2009 Annual Review, p.7). Especially the treatment of minor conditions involves a considerable amount of GPs workload as well as a substantial financial effort as already stated earlier (see Baqir et al. 2011, Noseworthy 2013, PAGB 2011). Since health care costs keep rising while the general interest in personal health and wellbeing is also continuing to grow, a *"paradigm shift towards self care"* is required (PAGB 2009 Self Care in Practise, p. 1). According to a study carried out in Germany which compared the costs for lower back pain treatment (in relation to doctor's visits, medication and administration costs) to the possibility of addressing lower back pain with self care, potential savings of close to EUR 30 million in one year and up to EUR 168.6 million over five years were indicated (AESGP 2012). It was further estimated that the annual savings in the EU would even exceed EUR 16 billion if 5% of medical care could be shifted to self care.

Nevertheless, self care not only involves the potential to reduce pressure on health care systems and public finances. In practicing self-administered care, people are empowered to redevelop the skills they have lost and thus take over more responsibility for their own health so that they are able to differentiate between conditions that are self-treatable and those that are not. As a result, people benefit from improved control and management of minor ailments, and are encouraged to be more health conscious and hence more preventive against diseases. Finally, their general health and wellbeing are improved, they are less dependent on and hence, make more appropriate use of GP services, which in turn reduces the financial burden on the public health system (NZSMI 2009, WSMI 2009). Aiming at increasing self care, some countries such as the United Kingdom or New Zealand have already set measures in order to balance health expenditure and provide low-threshold primary care services such as prescribing pharmacists (Noseworthy 2013), extended formulary nurse prescribers (Johnson & Hill-Smith & Ellis 2006) or so called Minor Illness and Injury Units (Rubin 2012). Undertaken studies suggest that in the western world, people's attitudes towards self care when experiencing minor ailments have already shifted (Cardol et al. 2004) and hence, most people already apply self care in everyday life (AESOG 2012, PAGB 2011, Porteous et al. 2006). However, Cardol et al. (2004) for instance stated that particularly older patients, those with lower education or a non-Western background feel that they expect greater benefit when consulting GPs than utilising self care in the case of minor ailments since they can prescribe and know what to do (PAGB 2009 Annual Review). In addition, most people were also found to abandon self care earlier than necessary when symptoms persist (i.e. after a 4-7 days period of self-administered care) and consult a GP instead of continuing with self care (PAGB 2011). Consequently, by means of self care GPs workloads are not always reduced (Porteous et al. 2006) and subsequent use of health services is common (Rubin 2012). As people were further found to be willing and motivated to take over more responsibility for their health, yet still feel the need to get reassured on the condition's nature and treatment, while having higher trust in GPs than pharmacists, these findings suggest significant issues of trust related to the idea of self care.

Figure 1.2.2: The Self Care Continuum

(PAGB 2009, p.2)

As stated by the World Health Organization (WHO), self care describes *“activities individuals, families and communities undertake with the intention of enhancing health, preventing diseases, limiting illness and restoring health. These activities are derived from knowledge and skills from the pool of both professionals and lay experience and are undertaken by lay people on their own behalf either separately or in participative collaboration with professionals”* (NZSMI 2009, p.2). Importantly, this definition states very clearly that self care does not mean consumers are left alone - the idea of collaboration between the individual and a health care professional is vital to effective self care (see Figure 1.2.2 The Self Care Continuum above). In that sense, self-administered care can comprise a partnership in form of assisted management or shared care with doctors, nurses and pharmacists, physiotherapist, dieticians or other health professionals while involving both curative and preventive care (NZSMI 2009). Hence, all health professionals including pharmacists require extensive training in regard to communication, health behaviour and social skills (such as intercultural competency for example) in order to be able to equip all patients with the tools, skills and support they need to make their own health decisions in an informed and responsible way. Furthermore, the concept of self care also necessitates a paradigm change for health professionals from the role of the provider to an integrated perspective with a stronger involvement of patients and a focus on health conscious behaviour and preventive care (NZSMI 2009, PAGB 2009 Self Care in Practise, WSMI 2009). However, this not only requires a change in policies but also *“a cultural change in the relationships between the different health care professions, particularly GPs and pharmacists”* (NZSMI 2009, p.6). So, in order to ensure that people have convenient access to both, i.e. the professional advice or treatment they seek and the health information they need, the joined effort of all health professionals working together to support people’s decision making has been identified as the crucial element to successful self care (Cantrill & Morris & Weiss 2005, NZSMI 2009, PAGB 2011, 2010, WSMI 2009). Thus, close collaborations between all involved health professionals in form of a *“shared clinical management of patients”* (NZSMI 2009, p. 6) are pivotal in order to support self care in an efficient and effective way.

As self care implies that people are actually able to treat themselves, it includes all the skills and tools people may use such as problem solving strategies (e.g. where to get access to health information or treatment), decision making and the ability to develop plans to improve and maintain health (NZSMI 2009, PAGB 2011, 2009

Self Care in Practice). Hence, practicing self-care *“requires and implies a conscious and active approach by individuals to take responsibility for [...] their own health”* (AESGP 2012, p.5). When applying self-administered care, people also improve their health literacy as this encompasses knowledge, motivation and competences to access, understand, appraise, and apply health information in order to make judgments and make health decisions in everyday life (Sorensen et al. 2012). Hence, health literacy is a critical element in relation to self care, particularly in regard to reducing inequalities in health outcomes (NZSMI 2009). Accordingly, outcomes of weak health literacy are poorer health choices including riskier behaviours, less use of preventive services and therefore more delayed diagnoses while at the same time, people adhere less to medical instructions, understand less of the provided information and have less health knowledge which results in poorer self-management skills and poorer physical and mental health (WHCA 2011). Consequently, these issues most likely lead to an increased risk of hospitalisation and higher health costs not only for the health system, but also for the individual persons (ibid.). Moreover, health literacy impacts on self care outcomes: the more health literacy people have, the more they are able to undertake self-administered care in a way which adds to health and their own wellbeing. In contrast, somebody who does not have the necessary knowledge (e.g. where to get access to information or treatment) or is not motivated enough to undertake self care probably experiences difficulties in making the right decisions and thus, may also show lower health literacy. According to the idea of self care, people could improve their health, save money for themselves and the health system while contributing to sustainability for the future if being enabled to take over more responsibility for their own health-status and hence improve their health literacy when being empowered with better health education and adequate support. In that sense, health education ensures that self care is applied appropriately and responsibly while minimising potential health risks (AESGP 2012, NZSMI 2009, PAGB 2011, Sorensen 2012, WHCA 2011, WSMI 2009).

1.2.2.1 Self Care Treatments

According to various studies, non-prescription medicines, i.e. OTC products, account for the biggest share of self-administered care (IGEPHA 2010, PAGB 2009 Annual Review, WSMI 2009). While displaying a high consumer satisfaction level, the effectiveness and easy accessibility are said to be the main reasons for their internationally widespread use (AESGP 2012). As all OTC products are made to comply with the same EU standards of safety, quality and efficacy, they are also considered to be “safe” (IGEPHA 2010). Furthermore, the Association of the European Self-Medication Industry (AESGP 2012) has formulated guidelines for the safe usage of non-prescription medicines, such as when utilising OTC products is not appropriate (e.g. one or more medicines applied without success), what conditions can be treated (e.g. colds, skin problems such as insect bites or warts or digestive disorders such as heartburn) and has highlighted that specific attention should be paid when children are concerned or during pregnancy and breastfeeding. In that regard, it must be said that free access without restriction combined with only little knowledge regarding the experienced conditions or health issues in general undoubtedly involves a potential for issues of inappropriate self-medication leading to possible health hazards (Mossialos & Mrazek & Walley 2004). Here, support from pharmacists is essential as *“community pharmacists have a very important role to play in providing assistance, advice and information to the patients about self-medication and the rational use of medicines”* (AESGP 2012, p. 8). In addition, recent studies have shown that people with better knowledge of their experienced ailment and associated treatment options are more inclined to treat themselves, while prior experiences with non-prescriptive medicines most often represents the main reason behind the choice to utilise OTC products again (AESGP 2012, Cantrill & Morris & Weiss 2005). Hence, support and input from health professionals has a two-fold effect: while on the one hand it ensures for people to apply safe, informed and effective self care, it also promotes re-utilising self care when experiencing the treated condition again.

Another option of treatment when applying self care represent complementary/alternative medicines or treatments (CAM) which, within this project, are defined as measures opposed to modern, conventional medicine and include healing systems such as Traditional Chinese Medicine, herbal treatment or Homeopathy (BMG 2011). Furthermore, people may choose to utilise homemade remedies (i.e. traditional medicines TM), which are traditionally used recipes made of natural ingredients that can be found at home such as a wet pack with curd or alcohol for instance (WHO 2002). Made from plants, animal parts or minerals, every culture has its own medicines and treatments, mostly drawing from indigenous knowledge and culture-specific mindsets or beliefs (Bodeker 2006, Fink 2010, WHO 2002). Especially developing countries such as Nepal or Uganda rely heavily on CAM and traditional treatment as a substantial share of the population lacks access to medical facilities. In most countries, traditional knowledge is passed on orally and includes specific instructions on preparation as well as application of the medicine (Crooks & Andrews 2009, Fink 2010, WHO 2002). However, the lack of written information involves a potential of losing knowledge when regular usage declines, as happened to New Zealand Maori for example or within developed countries in regard to homemade remedies (Fink 2010, PAGB 2010, 2009 Annual Review). As utilising alternative treatments or traditional remedies *“is not usually thought of as a form of primary health care”* (Crooks & Andrews 2009, p.167), these treatments are hardly recognised by mainstream primary health care campaigns. Nevertheless, alternative as well as traditional treatments are often used and have become increasingly popular, as the vast majority of Western consumers have come to embrace both types of treatments: the conventional, “western” and the alternative/complementary, “natural” ones (Mossialos & Mrazek & Walley 2004). While being most frequently applied for chronic-type illnesses (e.g. chronic pain) and iatrogenic diseases¹², this trend continues to rise (BMG 2011, Crooks & Andrews 2009). Across gender, age and illness-related categories, particularly people in developed western countries such as the U.S. for example have come to utilise complementary/alternative medicines or traditional, homemade treatments as *“direct form of primary health care, whether individually or in combination with conventional medicines”* (Crooks & Andrews 2009, p.171). As the ongoing shift of primary health care towards a more collaborative and hence multidisciplinary focus enables better integration of various therapeutic measures, the rising popularity of especially complementary/alternative medicines has even provoked various educational and medical institutions to form an academic institution of integrative medicine in the US (Crooks & Andrews 2009). Hence, while aiming at combining the advantages of complementary/alternative medicines with those of modern medicine, a new discipline called “integrative medicine” or else “integrative health care” has originated and has been implemented in minor ailment schemes, further driving the international development towards self care (BMG 2011, Crooks & Andrews 2009, NZSMI 2009, PAGB 2009 Self Care in Practise, WHO 2002, WSMI 2009). Integrating diverse medical practices into the health care system is not only extending the range of remedies providing patients and pharmacists with more options to choose from. Looking at healthcare from this broader perspective, a platform for cross-cultural dialog and interaction is developed, making it easier for all people or else residents to enter the local healthcare system, while developing trust and certainty in regard to the health care provided within the respective health care system (Cardol et al. 2004, PAGB 2009 Annual Review, Plass & Timmermanns & Van der Wal 2006).

1.2.3 Minor Ailment Schemes (MAS)

Even if the idea of handing over more responsibilities to other members of the primary care team such as pharmacists is new for Austria, it is not in other parts of the world. Due to increasing financial pressure onto the health insurance-system and the need to unburden GPs and emergency units (Cardol et al. 2004, PAGB 2011,

¹² Iatrogenic diseases are diseases caused by medical doctors and involve side effects of drugs as well as illness caused by medicines (Burger & Wachter 1998, Pschyrembel 2002).

Pharmacy Guild of Australia 2010), governments all over the world have started to look beyond borders, installing scopes of practice for pharmacists across their jurisdictions.

Perhaps the most extended manifestation of self care is apparent in the United Kingdom. As a focus on patient-centred treatment and self care represent the central parts of the health system and have thus been reflected in the UK government's health policy since 2000, self care is incorporated at every stage of health care, including prevention and treatment of ill health as well as chronic illnesses. Furthermore, measures have been undertaken to ensure adequate training in relation to the introduction of MAS for all the people involved, such as GPs, practice nurses, practice receptionist, community pharmacists and community pharmacy staff (NHS 2004). Minor ailment schemes are locally commissioned pharmacy services¹³, hence locally designed and operated by community pharmacies. According to the idea of self care, patients are encouraged to consult a pharmacist rather than a GP when experiencing minor conditions, as minor ailment schemes allow for the pharmacist to supply certain drugs and medicines to patients. By better integrating community pharmacies into the primary care team, patients are expected to get easier and quicker support they need to treat themselves which in return allows GPs to spend their time on more complex conditions for which their input is really needed (NHS 2004, PAGB 2011, 2010, 2009 Annual Review, PAGB 2009 Fast Facts about Self Care, RPSGB 2003). As MAS cover only specific conditions or medicines according to the local demand, MAS differ in the types of conditions and treatments they cover. Furthermore, MAS vary in regard to who is eligible, which again feeds back on the conditions covered (Baqir et al. 2011, RPSGB 2003). While some MAS are specifically developed for families with small children (such as the MAS in Hull, England) and therefore cover ailments such as nappy rashes, others are designed especially for people who are referred from a GP's practice by the receptionist or practice nurse. Also, in order to get access to pharmaceutical care, some MAS require registration with the community pharmacy or patients have to be exempt from prescription charges, whereas others do not and are open to self-referral (Baqir et al. 2011, NHS 2004, Puntong & Boardman & Anderson 2011, RPSGB 2003). Since 1999, various minor ailment schemes (MAS) have been successfully installed throughout the United Kingdom. The „Care in the Chemist“-scheme in the town of Bootle was the first minor ailment scheme and used as a model for various similar schemes which are implemented in the UK today. Although it could not be proven that GPs' workload was reduced through the original Bootle scheme, it provided evidence that MAS are indeed feasible while being further acceptable for patients (Baqir et al. 2011). A subsequent pilot project in Scotland started 2001 in two counties and has been extended ever since, now covering two health boards, Ayrshire and Tayside. Subsequently, other MAS have been and are still installed throughout the UK, while minor ailment schemes are promoted as safe and efficient to deliver health care by the “Pharmacy White Paper” (UK Department of Health 2008). Furthermore, independent evaluation found that the aforementioned installed MAS have been conducted successfully, suggesting high patient satisfaction, reduced GP workload and thus easing pressure on public spending, while assessing them to represent a suitable alternative to medical consultations at a general practice¹⁴. By now, further specific pharmacy-based services have additionally been implemented, such as services aiming to reduce medical waste or services which help patients with long-term conditions (see NHS Choices Online Portal).

Similar to the UK model, New Zealand and Australia stress the importance of self care and hence have undertaken measures to install pharmacy based minor ailment schemes (i.e. “Pharmacist Prescriber Schemes”)

¹³ MAS in the UK are commissioned by local organizations, i.e. so called Primary Care Trusts that provide primary health care or commission it from providers such as community pharmacies (Puntong & Boardman & Anderson 2011).

¹⁴ See Baqir et al. 2011, NHS2004, Paudyal et al. 2013, Porteous et al. 2006, Puntong & Boardman & Anderson 2011, The Mary Seacole Research Centre 2011.

similar to those in the UK. Throughout the last years, the Pharmacy Councils of New Zealand and Australia have developed plans for an extended education of pharmacists (i.e. postgraduate certification as Pharmacy Prescriber) including vaccination programmes and a focus on complementary/alternative medicines and treatments (CAM). Furthermore, a recertification process for pharmacists has been installed, continuing professional development and appropriate quality of care. While the programmes have already started in New Zealand, Australia expects the implementation of MAS to be finalised by June 2015 (Pharmacy Council of New Zealand 2012, NZSMI 2003, Pharmacy Guild of Australia 2010, Pharmacy Guild of New Zealand 2013).

Turning to North America, while Canada has already installed pharmacy-based minor ailment schemes according to the UK model in Nova Scotia, Saskatchewan and Alberta with an increasing trend to introduce expanded scopes for pharmacists across Canada altogether (Canadian Pharmacy Association 2013, Noseworthy 2013), the USA have implemented so called “self-management support” initiatives, specifically addressing patients with chronic conditions, as these account for almost 75% of total health expenditures in the US (Arnold & Folsom & Bosk 2007). While focusing on reducing costly health crises such as asthma, cardiovascular disease, depression, diabetes, heart failure and migraines, self-management support programmes improve the quality of care patients receive as well as health outcome for chronically ill patients. In addition, the US government stresses a focus on self care and health education of patients to increase health outcomes. As a consequence, patient education programmes, nurse-case manager interventions, 24-hours nurse hotlines, guidelines to standardise care, integrated primary health care delivery approaches (e.g. Minute Clinic or Walgreens Healthcare Clinic) and evidence based treatment plans have been compiled and implemented (AGHRQ 2013, Arnold & Folsom & Bosk 2007, Minute Clinic 2013, Patterson et al. 2008, Pearson et al. 2007, Walgreens Healthcare Clinic 2013).

Similarly, respective policy strategies in the Netherlands have been aiming at increasing self care and reducing GP demand during the last decades. Gradually, medication for the treatment of minor ailments has been taken out of the prescription package while health websites and leaflets have been developed, comprising information on both how to lead a healthy life and how to manage minor ailments without doctor’s visits. As a consequence, patients’ attitudes towards treating minor ailments were found to have moved away from seeking medical advice towards applying self care, even though this was found to not necessarily result in a more appropriate utilisation of health services meaning that workload of GPs was not successfully reduced. Therefore, strong emphasis remains on self care within the Dutch health system as GPs act as “gatekeepers” to control costs and promote self care and nurse practitioners perform check-ups on the chronically ill who are in addition encouraged to treat themselves (Cardol et al. 2004, Daley & Gubb 2013, Plass & Timmermans & Van der Waal 2010).

1.3 Health, Ill Health and Culture

An individual's health behaviour is subject to continuous change and relies on various variables, such as the perceived advantages and disadvantages of behaviour (Prochaska 1994), patients' perspectives on their own illness (WHO 2003), psycho-social influences, impacts of the socio-economic environment and a number of cognitive and affective factors including individual attitudes and beliefs, as well as expectations of future events or outcomes. In order to predict health behaviour and explain the processes underlying its change, a number of theories and models to describe health and ill health respectively have been developed. In fact, research in regard to the social aspects of health is highly relevant to our understanding of the processes and outcomes of health or ill health as well as preventive or promoting health services (see Bowling 2009, Munroe et al 2007, Rutton & Quine 2002 and Sutton 2002). Regarding this project, all arguments and conclusions related to health behaviour thus represent a current snapshot and do not seek validity for past or future situations.

In the western world, the bio-medical model is considered the predominant model of disease, which assumes patients to be passive recipients of doctors' instructions, while ill health is seen as generated by biomedical causes (i.e. bacteria or viruses) and treatment therefore focuses on the patients' bodies (Bowling 2009). Thus, bio-medical models ignore personal and social contexts, leaving out all factors other than patient characteristics such as socio-economic contexts, psycho-social influences as well as health cognitions. As patients are generally active decision makers, however, who do not merely receive and follow instructions, their individual thoughts and feelings associated with a particular health-related behaviour (i.e. health cognitions) do determine their decisions and hence their health behaviour. So, social models of health, building on the World Health Organization's definition of health (WHO 1948), where health is not only defined as the absence of disease or infirmity, but considered a state of complete physical, mental and social well-being, are surely more appropriate when undertaking research on health behaviour of different social and cultural groups (Bowling 2009, Munro et al. 2007).

In contrast, social cognition models (SCM) are based on the assumption that behaviour can be seen as a function of how people perceive reality, than as an objective characterisation of the stimulus environment (Conner and Norman 2008). Furthermore, SCMs belong to the field of self-regulation research where people are viewed as *"striving to eliminate dysfunctional patterns of thinking or behaviour and engage in adaptive patterns of thinking or behaviour"* (ibid., p. 20). Self-regulation includes the re-evaluation of ideas and beliefs and goal setting as the initial motivational stage, involving the consideration of factors such as costs and benefits as well as ongoing monitoring and evaluation of goal-directed behaviour as a second, i.e. volitional stage, encompassing the planning of actions towards achieving the set goal. Hence, self-regulation models such as health belief models are utilised in research aiming at an understanding of people's responses to symptoms, their adherence to suggested treatment as well as use of preventive health measures and health-promoting services, while displaying limitations in regard to the exclusion of emotions such as anxiety or denial and its focus on rationality (Baban & Craciun 2007, Bowling 2009, Conner & Norman 2008, Munro et al. 2007).

The aforementioned health belief models were developed in the 1950s and are the oldest, most influential and most widely used social cognition theories. They postulate health behaviour to be determined by the perceived threat of illness on the one hand, comprising the perceived susceptibility to fall ill and the perceived severity of illness-related consequences. On the other hand, it is determined by the evaluation of behaviours to counteract the threats an illness may pose, involving barriers such as costs and benefits related to a particular course of action (see Figure 1.3: The Health Belief Model below). According to the health belief models, the perceived

seriousness of and vulnerability to a disease influence a person's perceived threat of a disease. Likewise, a person's perception of the effectiveness in regard to a certain health behaviour is influenced by the perceived benefits and barriers associated with a path of measures. In addition, perceived severity and perceived susceptibility as well as the perceived benefits and barriers to action are influenced by socio-demographic, social and psychological variables, such as age, gender, ethnic/cultural background, education etc. Moreover, internal cues (e.g. perception of a physical symptom) or external cues (e.g. health-related advice from others, i.e. health professionals or families) to action influence on the perceived threat, whereas health motivation refers to differences in regard to a person's value of health and the motivation to look after one's health. As stated by Conner & Norman (2008), adoption of the recommended health behaviour is expected if the person already holds other key beliefs which favour action (e.g. the given advice confirms one's own belief) or if the person already shows a high motivation to look after his/her health. Finally, high perceived benefits combined with low perceived barriers to action and a high perceived threat of illness increase the likelihood of performing the recommended health behaviour (Baban & Craciun 2007, Bowling 2009, Conner & Normann 2008, Munro et al. 2007, Sutton 2002).

Figure 1.3: The Health Belief Model

(Conner & Norman 2008, p.20, Munroe et al. 2007, p.5)

1.3.1 Individual Therapy

The prevalence of health behaviour is known to vary across cultural and social groups. Thus, the ultimate goal of guaranteeing each patient an individual therapy that meets all of her/his needs can only be achieved if keeping in mind that health and illness are closely linked to a person's cultural and social background (Bowling 2009, Porteous et al. 2006, Subedi 2003). Hence, responses to various symptoms are culturally determined, and even the definition of illness varies from culture to culture. As variations in perspectives are not limited to the lay public only, uncertainty in medical issues can lead to different perceptions of what conditions require treatment and which ones don't. The treatment of low blood pressure in Germany and Austria represents a good example for this, as this condition is usually not treated elsewhere (Bowling 2009, Conner & Norman 2008).

In fact, patients with varying cultural, ethnic and social backgrounds respond differently towards similar symptoms. While various studies have found out that women are more likely to report ill health and have higher consultation rates than men, it is also suggested that females are culturally more accepted to fall ill. In contrast, men have higher mortality patterns and perceive themselves as more robust and less fragile with respect to their health condition than women (BMG 2011, Bowling 2009, OECD 2008, Sieverding & Kendel 2012). Furthermore, lower social classes experience the highest risk of ill health, while at the same time they are the least likely to access preventive care or adopt a healthier lifestyle (Bowling 2009). Finally, health behaviour has been found to be hugely influenced by a person's direct social contacts, i.e. his/her family or social circle of friends. As families for instance share beliefs and ideas on health and ill health, they not only influence each other in regard to health behaviour, but also in regard to benefits and hence the utilisation of health care (Cardol et al. 2004).

According to Bowling (2009) and Mossialos, Mrazek and Walley (2004), clear cultural distinctions can be found in regard to symptom response and health behaviour. While Mossialos et.al.'s cross-cultural study on healthcare utilisation confirmed that patients in different countries do respond differently towards similar symptoms, a study conducted in 1988 suggested huge discrepancies for health approaches between Americans, Germans, British and French people (Bowling 2009). While Americans were found to adopt a rather aggressive, 'do something' approach when it came to their health, they had high rates of surgeries, diagnostic tests and stronger medication (especially OTC-products) and did worry only little about viral infections. In contrast, French people seemed to prefer more holistic treatment such as homeopathy and prescribed the most nutrients while seeing their body more as a biological organism. Except for antibiotics in the case of minor ailments, the British were found to have fewer medication, tests and surgery than the Americans, with a general *"stiff upper lip" attitude to illness* (Bowling 2009, p.25), while Germans had the highest medication as well as medical consultation rates, increased utilisation of diagnostic technology and displayed a common worry about circulation. Another study suggested similar differences in regard to minor ailments (the study was conducted on the treatment of minor respiratory diseases), as Americans, French and Swedes mainly used OTC-products, while the Germans rather tended to seek professional care. The French also tended to do so, while the Swedes were rather likely to 'do nothing' (Mossialos, Mrazek and Walley 2004). Similarly, another study carried out in Switzerland focusing on migrants' health not only found major differences between migrants' and natives' health status, but also within the different migrant groups. These disparities in migrants' health status were explained due to their different biographies, including varying circumstances of emigration and living conditions, possible exposure to risk factors and also different opinions on measures conducive to their health, resulting in different health behaviours (Bischoff & Wanner 2004).

As health behaviour is influenced by one's underlying attitudes and beliefs, the decision of how to cope with ill health depends on an individual's inner thoughts and emotional state. People assess health threats in a way that makes sense to them, rating their ability to cope as a function of available resources (Donyai 2012). Thus, patients do not necessarily see medical regimens in the same way as health professionals do, as for example the consumption of medicines is strongly influenced by cultural factors, affecting both patients and healthcare professionals. These cultural factors are mediated and developed through the interaction between medicine users and medicine suppliers, due to the fact that many aspects of medicine use are deeply embedded in the prescriber's and the patient's culture (Mossialos & Mrazek & Walley 2004, Subedi 2003). Hence, people's own representations of the necessity for medication versus their bias about the medicines in question appear to be

the pivotal aspect whether or not medicines are taken as directed (Donyai 2012). Therefore, the availability and distribution of medicines are only two of various factors that have an impact on patients.

Although culture does generally not formally determine the way people live, it does influence everyday life. It may, for example, provide ideas about what is appropriate behaviour for men, women or children, about what kind of food is suitable, or about what the right body shape and appearance may be. In addition to other socio-economic determinants such as age, sex, level of education, income, social networks and the like, all of these influences affect how people actually respond towards ill health and medical treatment. Consequently, their culture and in that context, ethnic membership, are two of the structures people unconsciously utilise when deciding about how to cope with illness (Bowling 2009, Bischoff & Wanner 2004, Kelleher & Hillier 1996, Mossialos & Mrazek & Walley 2004).

1.3.2 Migrants and Health

It is safe to assume that around the world, migrants are expected to adapt to the system provided by their state of residence as fast and inconspicuously as possible. Particularly with regard to the public health system, this poses several issues, however, as migration is in general associated with considerable health hazards such as stress, trauma and weary life circumstances, and thus, migrants' health disparities are often argued with the process of migration itself (Fassmann 2007, Marks & Worboys 1997, Weiss 2008). In addition to language issues that complicate adequate communication in everyday-life, many people from ethnic minorities or with a migrant background are experiencing difficulties in obtaining adequate housing, employment and education as well as treatment from both the social security and health care systems (Eichler 2008, Goldberg 1993, WHO Regional Office for Europe 2008). Also, cultural beliefs and concepts as well as culturally determined social roles influence on health decisions and therefore on health behaviour and outcome (BMG 2011, Kelleher & Hillier 1996, Mayer 2011, Subedi 2003). Hence, the health of migrants is dependent on the circumstances in their countries of origin, those during the migration process as well as in their countries of immigration (Mayer 2011) which require careful consideration when research on migrants' health is undertaken (Bowling 2009, WHO 2008, WHO Regional Office for Europe 2010).

Regarding cultural integration, especially second generation migrants have been found to struggle trying to bridge the gap between the different gender and social roles attributed by their parent and resident culture (Binder & Rasuly-Paleczek & Six-Hohenbalken 2005). Since second generation migrants in particular are considered torn between feeling a strong need for affiliation to their parents' ethnic group on the one hand, while on the other hand membership of that group is less central to their identity (as a result of education and other factors such as social circle or environment), issues of identification are often highly problematic (Kelleher & Hillier 1996, Marks & Worboys 1997). In that sense, culture and the culturally adopted beliefs and views on appropriate gender-specific behaviour and gender roles for instance may appear as a barrier to adopting specific (health-related) behaviour or accessing (health) services for the whole population with a migrant background, but especially for migrants of the second generation (Binder & Rasuly-Paleczek & Six-Hohenbalken 2005, Eichler 2008, Friedrich 2009).

With *Health 21*, the World Health Organization (WHO) developed a health policy framework for the European Region, stating that *'the enjoyment of health is one of the fundamental rights for every human being'* (WHO Regional Office for Europe 2008, p.2). To achieve the main goals of promoting people's health throughout their lives and reducing the incidence of main diseases and injuries, three basic rights have been formulated, including *'equity in health and solidarity in action between and within all countries and their inhabitants'* (WHO

Regional Office for Europe 2008, p.8). Nevertheless, entitlements of migrants and asylum seekers differ widely, even between European countries, while issues of entitlement to use health services can make access difficult for many migrants, especially when the entitlements they have are not respected (Jakab 2011, PICUM 2010, WHO Regional Office for Europe 2010). Hence, when looking at health issues of migrants, a wide range of policies and practices including their associated consequences for the health and wellbeing of migrants need to be critically assessed (Bowling 2009, WHO Regional Office for Europe 2010, PICUM 2010). Even so, strategies to manage the consequences of inequalities on health have not been able to keep pace with the growing challenges coming from an increase of volume, speed and diversity of modern migration. Closely associated with globalisation, the dynamics of modern migration differ from traditional trends because today, most countries are simultaneously countries of origin, transit and destination. In addition, migratory behaviour has become highly diverse, including not only permanent immigration, but also circular migration back to the place of origin as well as short and long time migration (WHO 2010 *Health of Migrants*).

1.3.2.1 Inequalities and Health

There is substantial evidence of inequities in both health status and the accessibility and quality of health services available to migrants. Although some migrant groups may enjoy health advantages in regard to specific aspects due to inherited resistance or also processes of selection (i.e. healthy migrant effect; see Statistic Austria 2012), mainly disadvantages have been found in relation to migrants' health overall. As health behaviour is highly diverse and the definition of illness and health is known to vary between different cultural, ethnic and social groups (see Chapter 1.3.1 Individual Therapy), differences between various migrant groups or to the ancestral population vary according to the specific migrant group(s) being studied, the health problems or services involved, and of course the country concerned. It can be concluded that migrants generally represent a highly heterogeneous group, and research on migrant health therefore needs to be precisely targeted (Statistic Austria 2012, 2011, 2010, WHO Regional Office for Europe 2010).

Furthermore, vulnerable groups such as migrants are in general associated with lower socio-economic status, language issues and lower health literacy (HLS-EU Consortium 2012, WHCA 2011), and hence often experience considerable barriers in accessing health care related to minor ailments. Studies have shown that, migrants with a background in former Yugoslavia and Turkey in Austria tend to be less formally educated and they do not promote their health actively (BMG 2011, Biffl 2003, Statistic Austria 2012). As health literacy and health behaviour are known to be closely linked to socio-economic determinants such as working status and level of education, many people associated with limited health literacy, i.e. migrants or people with a migrant background respectively, people with lower levels of education and those who are unemployed seek for medical advice more frequently and they are more likely to access curative than preventive care (Eichler 2008, GfK Austria 2011, HLS-EU Consortium 2012, Statistic Austria 2012, WHCA 2011). However, employment status and the level of education a person has, correlates positively with socio-economic status as well as health conscious behaviour and therefore with health status as well, irrespective of ethnicity and cultural background (Cutler & Lleras-Muney & Vogl 2008, Biffl 2003). Meaning, migrants or people with a migrant background respectively are not unhealthy and disadvantaged in terms of accessing medical care and health status but in general, the more educated somebody is, the more likely he/she undertakes measures to promote and maintain health, while getting easier access to information and health services (Bowling 2009, Fassmann 2007, Weiss 2003). Jayaweera and Quigley (2010) further stated that improvement of socio-economic circumstances in regard to migrant groups not necessarily leads to a change in health behaviour or results in better health outcomes. Nevertheless, many health discrepancies are reduced or even disappear when socio-economic status is increased (WHO Regional Office for Europe 2010). In that respect, education in regard to health literacy

seems to play an important role when explaining health disparities and differences in health related behaviour. It can be concluded that researchers need to be aware that an individual's health status is strongly, but certainly not exclusively, dependent on socio-economic circumstances (Fassmann 2007, Jayaweera & Quigley 2010, Marks & Worboys 1997, Weiss 2008), and viewing socio-economic status as an intervening variable rather than as the underlying cause of ill health may be more plausible when undertaking research on health (Bowling 2009, WHO Regional Office for Europe 2010).

Existing social disadvantages are further intensified by processes of social exclusion to which migrants and people with a migrant background may be exposed (Ullrich 2009). Within the European Region, values such as social solidarity, universal access to health care and the shared values of equity, sustainability, participation and dignity are deeply rooted. According to the WHO Regional Office for Europe (2010, p.v), *"discrimination at individual and institutional levels, as well as the limited social rights accorded to many migrants, must be regarded as the fundamental cause of many health problems"*. Thus, health systems not only need to improve the services available to migrants, but also address the social determinants of health across many sectors in order to be able to reduce health inequities, as issues such as those related to language or gender still represent major barriers to health for most migrant groups (Eichler 2008, Marks & Worboys 1997, Weiss 2003). For example, it is presumably difficult to find appropriate work when communication does not work well, and accordingly, health status is often worse than others' due to difficulties in communicating health problems (Esser 2006). Hence, developing adequate language skills is the key issue in order to get socially integrated, employed or educated when living in foreign-language countries, which are all indicators of socio-economic status (Cutler & Lleras-Muney & Vogl 2008). Consequently, good language skills can be associated with a higher social standard in the widest sense (Herzog-Punzenberger & Bruneforth & Lassnigg 2012, Kehse 2009).

Since establishing an adequate network of social support contacts is crucial in regard to an individual's health and health outcome, while migrants are generally found to have more limited social networks than people without a migrant background (MWIA 2013, Weiss 2003), this issue must not be neglected when undertaking research on migrants. In this context, particularly female migrants have been found to be endangered of getting socially excluded and are thus in need of more support. In Austria for example, while the employment rates of women with a migrant background in former Yugoslavia are rather similar to those of the female population without a migrant background (i.e. 61% versus 69% for the latter), only 45% of women with a migrant background in Turkey work; in general, more than one third of female migrants who have children in their homes are not employed (versus one fifth of mothers without a migrant background; see Statistic Austria 2012). This may be mostly argued by culturally derived gender roles which see women as housewives, staying at home and caring for the family, while playing a key role in regard to providing self-administered health care for the whole family (BMG 2011, Eichler 2008, Sieverding & Kendel 2012, Wyn et al. 2003). As many migrant women further tend to almost exclusively share social contacts within their own cultural group, this behaviour cannot only lead to language issues and particularly low levels of employment rates, but also involves the potential to impose pressure and hence represent a strain for women (BMG 2011). As a result, the following ambivalence in regard to female migrants arises: while they are seen as particularly vulnerable and marginalised on the one hand, they are on the other hand also perceived as in the centre referring to family health care (Binder & Rasuly-Palczek & Six-Hohenbalken 2005, Eichler 2008, Kröll & Schaupp 2011).

Finally, it needs to be stated that providing equity in health service within a multicultural society does not necessarily mean enabling all people to use the same services. Existing health services, including written information on health, have been developed according to the needs of the majority population, mostly

targeting middle classes. As a result, lower educated people and especially those who experience problems in communication due to language issues might experience considerable barriers in accessing these services (Mayer 2011, WHCA 2011). In order to be able to provide individual, high-quality, accessible and appropriate care towards an increasingly multicultural society, the existing health services need to be adapted towards the particular needs of the targeted groups. These efforts should always be undertaken in cooperation with the respective target groups and need to be extended to all areas of health care services, such as health promotion and education, preventive care and screening, curative and palliative care. Furthermore, communication training for health workers related to the concept of intercultural competency, including adequate communication and inter-personal behaviour in the encounter of different cultural backgrounds is essential for people working in the health care sector. By developing an understanding of cultural sensitivities, people working in the health care sector will be able to promote the learning experience and the processes of partnership-building more easily and ideally, prompt a change in health behaviour leading to a more active role in obtaining and maintaining good health (Binder & Rasuly-Palczek & Six-Hohenbalken 2005, Kröll & Schaupp 2011, WHCA 2011, WHO Regional Office for Europe 2010).

1.3.2.2 Health of Migrants in Graz

Graz is the main city of Styria, Austria's biggest province in the south-east of the country. As Austria's second biggest city, it is home to a multifaceted population of more than 300 000 people. Besides German immigrants, people with an origin in Bosnia-Herzegovina, Croatia and Turkey account for the most substantial share of migrants in Graz and also represent the targeted groups within this research (Magistrat Graz – Präsidialamt 2013).

According to the literature, people with a migrant background in Turkey and former Yugoslavia have higher health burdens than native Austrians, with chronic conditions such as headaches, back pain, digestive or dermatological conditions as well as emotional problems being the most common (Biffl 2003, Fassmann 2007, Statistic Austria 2012). As particularly male migrants with a migrant background in Turkey and former Yugoslavia are manual workers and are hence more exposed to physically strenuous work and a more hazardous work environment, they have a generally higher risk to suffer from injuries, skin and back conditions (Biffl 2003, Fassmann 2007). Furthermore, in general migrants from these countries are known to access more curative than preventive care and tend to consult especially GP's far more frequently than the Austrian population without a migrant background (Stoppacher et al. 2011). Also, they are twice more likely to not seek medical care for more severe health problems than people without a migrant background, despite experiencing conditions which are persisting and require medical care. As a result, people who have a migrant background in Bosnia-Herzegovina, Croatia or Turkey have less vaccinations and less conscious health behaviour. As a result, in particular females in particular have been found to be obese, while younger males are more likely to smoke (namely 47% versus 30% of younger males without a migrant background; Stoppacher et al. 2011). Further, migrants with a background in former Yugoslavia and Turkey tend to be less formally educated and show lower employment rates than the ancestral population. According to Statistic Austria (2012), the employment rate for people with a migrant background in Turkey is 59%, for people with a migrant background in former Yugoslavia it is 66% and 74% for Austrians without a migrant background. These low employment rates may also result from especially few working migrant women, since more than one third of female migrants who have children in their homes are not employed (versus one fifth of mothers without a migrant background; Statistic Austria 2012). Interestingly, while women with a background in Turkey generally show particularly low employment rates of 45%, employment status of women with a migrant background in former Yugoslavia is rather similar to

those of the female population without a migrant background (namely 61% for the former and 69% for the latter; BMG 2011, Biffl 2003, Statistic Austria 2012, 2011, Weiss 2003).

As stated before, since language issues represent one of the major barriers in accessing a country's health system and are considered the key to immigration, language issues impact on health status, health behaviour and a person's emotional wellbeing (Stoppacher et al. 2011). In Graz, various local low-threshold health initiatives for migrants such as the Caritas Marienambulanz (St. Mary's Medical Centre) or the OMEGA Health Care Centre Graz, as well as the university hospital in fact provide translators in order to decrease language barriers to health services (see Haigl 2013, Mair 2011, Pfandl-Pichler 2011, Vasak 2010). Moreover, many social migrant initiatives such as DANAIDA (Counselling and Education of Migrant Women), the Self-Organisation of Muslimic and Migrant Women (SOMM) or the Styrian Institute of Work Promotion (BFI) provide language courses for migrants and people with a migrant background, further offering social workshops, education and mentoring in order to reduce barriers for migrants (Stoppacher et al. 2011).

Chapter 2: Project Aims

2.1 Research Purpose and Objectives

Aiming at a better understanding of and a greater commitment to the needs of a continuously growing multicultural society, this project explores health behaviour among migrant cultures and ethnicities of sequent generations living in the city of Graz, Austria. While learning about the impact of culture and ethnicity (see Chapter 3.1.3 The Concept of Culture and Ethnicity) on the processes of decision making when experiencing small ailments, and further exploring if and how patterns in health behaviour change over migration, similarities and differences between different ethnic groups (see Chapters 3.2 Target Group, 4.1.2 Target Group and Sampling in Qualitative Research and 5.1.2 Target Group and Sampling in Quantitative Research) and two sequent generations of migrants were investigated. Furthermore, specific similarities and differences between males and females, as well as people having a school leaving exam and not having a school leaving exam were studied – within but also between the various cultural groups.

As laid out in the background section (see Chapter 1 Theoretical Foundation and Literature Review), various studies clearly show that minor ailments account for an extensive part of GPs' work load and involve issues with regard to seeking information, (often dangerous) self-medication and taking over personal responsibility for one's health on the patient's side (Baqir et al. 2010, Mossialos & Mrazek & Walley 2004, PAGB 2009). Furthermore, health behaviour and management of any kind of illness are closely linked to a person's cultural and ethnic background (see Chapter 3.1.3 The Concept of Culture and Ethnicity), while the treatment of minor ailments involves a considerable financial effort for public healthcare (see Baqir et al. 2010). This project wants to provide information on the accessibility and functionality of the present healthcare system in regard to the encounter of minor ailments and migrants and further determine whether there is need for further action (i.e. such as the implementation of an advisory centre for minor ailments for instance). As an outcome, this project aims at reducing barriers in access to health services through making suggestions how local health programmes could be customised towards meeting respective requirements (see Chapter 6 Conclusion) and ultimately contributing to an improvement in health status of migrants.

Since using only qualitative or quantitative methods would have been inadequate in order to meet the complex research problem, an explorative mixed-methods design was chosen (see Chapter 3.3 Overall Research Design), involving a qualitative followed by a quantitative analysis. The combination of both research approaches provided a more complete picture for the purpose of this research: in-depth knowledge of the patients' health behaviour as well as general trends and generalisations could be taken into account while subtleties could be clarified and findings cross-validated (Bowling 2002, Creswell & Clark 2007). According to Brikci and Green (2007), qualitative methodologies can address various health-related topics, including how health needs and health behaviour are affected by attitudes, different experiences or life-circumstances (e.g. different generations of migrants). Also, applying qualitative methodologies is advisable when learning about participants' experiences on accessing care and their own health needs (e.g. in regard to minor ailments) or if the researcher wants to understand different perspectives, for example different cultural, ethical or social perspectives (Brikci & Green 2007). Diccio-Bloom and Crabtree (2006) further stress that when undertaking qualitative research in health or health-related areas, the research questions have to be focused enough to ensure that a group of participants has shared experiences on the topic of the study's focus.

2.2 Research Questions

2.2.1 Qualitative Research Questions

While trying to gain a deeper understanding of the issues surrounding the influence of culture and ethnicity on the process of decision making about how to cope with potentially self-treatable conditions (Kelleher & Hillier 1996), the qualitative study's focus on minor ailments and medicines use provides a novel analysis for health behaviour in the context of migration. In order to retrieve information on potential culture-specific patterns and patients' perspectives in the encounter of minor ailments, the following qualitative research questions were formulated.

- 1) Do people know how to define minor ailments and how to differentiate between self-treatable conditions and those that are not?
- 2) Where do people seek for medical advice when experiencing minor ailments (e.g. internet, MD, friends, family, etc.)?
- 3) What kinds of treatments used when experiencing minor ailments (i.e. see doctor or undertake self care involving OTC-products, traditional remedies or alternative kinds of treatment)?
- 4) Do people know traditional remedies, and are they still in use? And further, what kinds of traditional remedies are used?
- 5) Are cultural-specific patterns in response towards minor conditions detectable?
- 6) Does health behaviour in regard to small ailments change over migration, i.e. do the reactions towards minor ailments vary between first and second generation migrants?

As the first stage of the project, the qualitative data analysis provided us with highly detailed information regarding the patients' perspectives and the processes of decision-making when experiencing minor ailments. After analysing the results, the following qualitative hypotheses regarding minor ailments in general and the specific strategies of treatment used were formulated (see Chapter 4.5.2 Generating the Hypotheses).

Qualitative hypotheses:

- People can easily define minor ailments, but struggle at differentiating between self-treatable conditions and those that are not.
- Seeing a doctor is the primary strategy utilised, whether only information on health or medical intervention is needed.
- When experiencing minor ailments, people prefer using traditional remedies over alternative forms of treatment.
- When looking for information on health issues, people prefer asking female friends or family members over males, independent from their level of medical expertise.
- Defining minor ailments and the treatment thereof are irrespective to a participant's ethnicity.

2.2.2 Quantitative Research Questions

Based on the concept of sequential mixed methods design (Creswell & Clark 2007, see Chapter 3.3 Overall Research Design), the following quantitative research questions were derived from the qualitative results and hypotheses (see Chapter 4.4 Results and Findings in Qualitative Research):

- 1) How do people define minor ailments and can they differ between self-treatable conditions and those that are not?
Are there differences in defining as well as in dividing minor ailments in regard to requiring medical care or not between females and males, migrants of the first and second generation, people with and without a school leaving exam or persons with and without migrant background?
- 2) Where do people get informed about minor ailments?
Do information sources on minor ailments differ between females and males, migrants of the first and second generation, people with and without a school leaving exam or people with and without migrant background?
- 3) How do people rank health or rather health conscious behaviour in specific within their lives and do they know what is beneficial to health?
Are there differences regarding interest in health, individually perceived health status and undertaken measures, i.e. health conscious behaviour between females and males, migrants of the first and second generation, people with and without a school leaving exam or people with and without migrant background?
- 4) How often do people experience minor ailments and how are they treated?
Are there differences in frequency in regard to experiencing minor ailments and does the type of treatment differ between females and males, migrants of the first and second generation, people with and without a school leaving exam, or people with and without migrant background?
- 5) Do the different constructs information sources, medical advice on and the frequency of experiencing minor ailments impact on the constructs health or rather health behaviour, the individually perceived necessity to require medical care when experiencing minor ailments and the type of treatment being used?

As described in Chapter 5 Quantitative Analysis, these quantitative research questions were then translated into quantitative hypotheses of difference and further tested by means of a survey (Creswell & Clark 2007) in order to get verifiable and meaningful results for the whole target group (see Chapter 5.1.1 Research Questions).

Chapter 3: Research Approach

3.1 Ethical Issues

Since a researcher is responsible to the participants as well as to the audience to whom the findings are presented, ethical concerns need to be considered. Beauchamp and Childress formulated four basic principles in 1983 which need to be taken into account when undertaking research (Brikci & Green 2007; see Table 3.1 Basic Ethical Considerations by Beauchamp and Childress (1983) below). Although there is a range of ethical frameworks available, these ideas present the researcher with a structure to build on when it comes to undertaking research with other humans being involved, such as doing interviews or a survey.

Table 3.1: Basic Ethical Considerations by Beauchamp and Childress (1983)

Autonomy	respect the rights of the individual
Beneficence	doing good
Non-maleficence	not doing harm
Justice	particularly equity

(Brikci & Green 2007, p.6)

There are two subjects of prime concern when looking at ethical issues: confidentiality and consent. Protecting the participants so that individual identities are not linked to the information retrieved and cannot be revealed in public is essential when undertaking research (Polit and Beck 2006). Although DiCicco-Bloom & Crabtree (2006) argue that true anonymity cannot be achieved when undertaking face-to-face research, such as face-to-face interviews or supervised surveys, it is important to undertake every effort to keep the participants' identities safe. Hence, it might be necessary to code sensitive information, if collected, i.e. family and place names (see also Chapter 4.2.3.3 Confidentiality and Security Issues). However, literature also suggests that the retrieved information should not be passed on to others in any form – thus, it is important to inform the participating person extensively prior to the research, e.g. interview or questionnaires, and get written consent for all designated activities (Brikci & Green 2007; see also Chapter 4.2.3.2 Interview Setup). Participation in a research project needs to be totally voluntary, without participants being forced to participate or incommensurately pressurised. In order to make an informed decision, potential participants should receive comprehensive and veridical information on the project and what precisely participation entails. Furthermore, participants need to be assured that declining will not affect any services they receive and that they can withdraw their consent on participation at any time (Brikci & Green 2007, DiCicco-Bloom & Crabtree 2006).

Although it is discussed that collecting written consent may scare off the participants, it is the safest way to go and especially recommended for novice researchers (Diekmann 2002, Flick 2009, Lamnek 2010, Whiting 2008).

3.1.1 Ethical Approval

As stated by Brikci and Green (2007), *“in order to ensure that a research project is carried out in an ethically sound way, [...] overall ethical review should always include a review by a locally constituted review board in the country where the research will take place (p.7)”*. This mixed methods research was subject to formal ethical review at the Ethical Commission of the Karl-Franzens-University of Graz (see Appendix). In addition, qualitative research was conducted following the Ethical Guidelines for International Comparative Social Science Research (MOST Management of Social Transformations, UNESCO) and the Guidelines for Social Research (SRA 2007) in order to ensure overall quality and respectability.

3.1.2 The Concept of Culture and Ethnicity

In order to gain an understanding of differences in health, it is both practically useful and theoretically valid to use concepts of culture and ethnicity, although there is an ongoing debate about how to use these terms. In general, issues raised in relation to the use of ethnic and cultural grouping include the problem of framing boundaries: Who and who is not a member of a certain group? By choosing to consider membership of an ethnic or cultural group as important, people gain a sense of community, making ethnic and cultural identity an organising concept for individuals who try to fit into a permanently changing and also often hostile world (Kelleher & Hillier 1996, Marks & Worboys 1997, Nagel 1994). As further indicated by various studies (see Eichler 2008, Dannenbeck et al 1999, Goldberg 1993 and others), the ethnicity classification is highly problematic in terms of identity - especially for second and third generation immigrants. According to Nagel (1996, p.154), *‘Ethnic identity is the result of a dialectical process involving internal and external opinions and processes, as well as the individual’s self-identification and outsiders’ ethnic designations.’*

In the present study, ‘ethnicity’ and ‘culture’ are defined as follows: ‘Ethnicity’ is understood as a set of specific cultural behaviours and historical traits common to a group, such as a shared language, heritage or religious beliefs (Kelleher & Hillier 1996, Marks & Worboys 1997, Nagel 1994). ‘Culture’ is seen as a dynamic set of ideas and beliefs needed to manage the problems of everyday life which changes through time, since people develop new ways to respond to their surroundings (Eichler 2008, Nagel 1994, WHO 2010 *Health of Migrants*).

3.2 Target Group

In order to learn about if and how migrants of the first and second generations hybridise their beliefs and knowledge with that of their new residence, an in-depth analysis of the health behaviour of sequent generations of people having a migrant background¹⁵ in Croatia, Bosnia-Herzegovina and Turkey and living in the City of Graz was undertaken.

3.2.1 Historical Background

Austria has a long history in terms of migration, and has seen numerous waves of immigration particularly since the 19th century (see Bade 2001 & 2000, Fassmann 2007, Fassmann & Franz 2010, Fassmann & Münz 1995, Gruber 2012), but when the Yugoslav Wars produced a massive inflow of refugees during the years 1991 – 1999, the city of Graz played an important role due to its location near the Slovenian border. Altogether more than 110 000 people coming from Croatia, Bosnia-Herzegovina and Kosovo sought for asylum in Austria during that time, although many of those remigrated into their countries of origin over the following years. However, more than 60 000 people (mostly from Bosnia-Herzegovina) decided to stay in Austria, (UNHCR n.d.), adding to the numerous guest workers from former Yugoslavia and Turkey who were already living here with their families. Ever since, people from former Yugoslavia and Turkey have been among the biggest groups of migrants living in Austria (Bade 2001, Bakic-Hayden 1995, Biffl 2011, Gruber 2012, Fassmann 2007, Fassmann & Franz 2010, Fassmann & Münz 1995, Medienservicestelle 2011, UNHCR n.d.).

3.2.2 Composition of Target Group

When designing the research in 2009/10, the target group was determined to consist of persons having a cultural and ethnic background in Bosnia-Herzegovina, Croatia and Turkey, which were then the three largest groups of foreigners¹⁶ in Graz exclusive of Germans¹⁷ (see Figure 3.1 Foreign population of Graz 2010, listed by citizenship (Top 10, 1.1.2010) below). Together these groups accounted for around 4.7% of the total population of 294 148 people. Related to the overall percentage of immigrants without Austrian Citizenship (15.6%), the target group further represented approximately 30.3% of all foreigners living in the city of Graz at that time (Magistrat Graz – Präsidialamt 2010). By 2013, the situation has changed due to a rapid rise of Rumanian immigrants (see Figure 3.2 Foreign population of Graz 2013, listed by citizenship (Top 10, 1.1.2013) below). Still, the targeted groups remains to represent almost 30% of the now 18.8% of foreigners living in Graz, accounting for almost 5% of the in total 300 002 inhabitants of the city of Graz (Magistrat Graz – Präsidialamt 2013).

¹⁵ According to the recommendations by the United Nations Economic Commission for Europe, Austria uses the term 'population with migrant background' for persons whose parents were born outside Austria, independent from citizenship (ÖIF 2011 Migration & Integration, UNECE 2006).

¹⁶ According to the recommendations by the United Nations Economic Commission for Europe, Austria uses the term 'foreigner' for inhabitants who do not possess Austrian Citizenship (ÖIF 2011 Migration & Integration, UNECE 2006).

¹⁷ Migrants from Germany in fact make up the biggest immigrant group in Austria (see figure 3.1); for the purpose of this study, however, this group was excluded due to its high degree of similarities in regard to health behaviour when compared to the Austrian host population (see Europ Assistance Group & Cercle Santé Société 2012).

Figure 3.1: Foreign population of Graz 2010, listed by citizenship
(Top 10, 1.1.2010)

(Magistrat Graz – Präsidialamt 2010, p.34)

Figure 3.2: Foreign population of Graz 2013, listed by citizenship
(Top 10, 1.1.2013)

(Magistrat Graz – Präsidialamt 2013, p.32-33)

3.2.3 'Migrant Background' versus 'Foreigners'

According to the recommendations by the United Nations Economic Commission for Europe (UNECE), Austria uses the term 'population with migrant background' for people whose parents were born outside Austria, independent from citizenship, and the term 'foreigner' for inhabitants who do not possess Austrian Citizenship (ÖIF 2011 Migration & Integration, UNECE 2006). This research focuses on 'people with migrant background', rather than 'foreigners', since many members of the first generation may already have Austrian citizenship and therefore (due to Austrian law) their children automatically do, too, (BKA n.d.) which makes them invisible to

statistics regarding ‘foreigners’. So access was broadened in order to reduce barriers and include as many people as possible in the research target group. Also following the recommendations by the United Nations Economic Commission for Europe, first generation of migrants for this project means people (and their parents) born outside Austria and immigrated later on, while migrants of second generation are born inside Austria (ÖIF 2011 Migration & Integration, UNECE 2006).

3.2.4 Collaborations

In order to get access to the respective target groups, very close collaborations with local organisations working in the health and migrant sector were sought, in order to make use of the snowball-system and to ensure that an appropriate, i.e. statistically significant, mix of voluntary participants regarding sex, age and socio-economic and cultural background could be reached. Respective organisations included the Styrian Institute of Work Promotion (BFI), Counselling and Education of Migrant Women (DANAIDA), Self-Organisation of Muslimic and Migrant Women (SOMM), Caritas Graz, Graz Migrant Advisory Council, Catholic Diocese’s Educational Institute Graz (KBW), Frauengesundheitszentrum Graz (Health Centre for Women Graz), Innovative Social Projects (ISOP), OMEGA Health Care Centre Graz, ZEBRA Intercultural Centre of Counselling and Therapy, Department of Migration and Globalisation of the Danube University Krems, Commission of Research on Migration and Integration (KMI), International Organization of Migrants (IOM) and the Austrian Integration Fund.

3.3 Research Design

The three main methodological approaches used in social and also behavioural sciences are qualitative (mainly using inductive methods), quantitative (mostly utilising deductive methods) and mixed methods research, combining inductive and deductive thinking by using all methods (Creswell & Clark 2007, Tashakkori & Teddlie 2003). Aiming at getting information-rich and detailed results which are also verifiable and representative, this project needed both, i.e. inductive and deductive approaches complementing each other in order to obtain a deeper understanding of the issues surrounding and the treatment of minor ailments (Bowling 2009). Hence, a sequential multi-study in an explorative mixed-methods-design was chosen, incorporating a first qualitative part consisting of group discussions and semi-structured interviews, and a second quantitative part involving a questionnaire (Bowling 2009, Creswell & Plano Clark 2007, Hussy et al. 2010). Since test-persons were selected and further assembled to groups due to natural characteristics (such as sex, ethnic or cultural background, migrant generation, and education; i.e. purposeful sampling) as opposed to randomised assembling in experimental designs, the suitable type of experiment is quasi-experimental (Bowling 2009, Diekmann 2002, DiNardo 2008, Hussy et al. 2010).

3.3.1 Advantages of Mixed Methods Research

According to Creswell & Clark, *'the central premise of mixed methods research is that the use of quantitative and qualitative approaches in combination provides a better understanding of problems than either alone'* (Creswell & Plano Clark 2007, p.5). Hence, mixed methods research involves qualitative and quantitative philosophical assumptions while applying both qualitative and quantitative methods. These philosophical assumptions, however, are opposed to each other – thus, there is an ongoing debate about the validity of the mixing-process and also how to define mixed methods research itself (see Bazeley 2008, Bowling 2009; see also Table 3.3.2 Qualitative versus Quantitative Research – An Overview below). Nevertheless, mixed methods research offers many benefits that are well recognised in the literature (Vitale & Armenakis & Feild 2008).

Probably the most important argument for more than the last 30 years and also the greatest strength of mixed methods research is that each method's weaknesses can be balanced when combining qualitative and quantitative approaches (Creswell & Plano Clark 2007). For example, qualitative research looks at issues in depth and is strong in understanding the context or setting in which people talk, but cannot generalise the findings or get quantifiable results. In contrast, quantitative methods target big samples and provide objective and comparable results, yet they leave out cause analysis and cannot take into account individual specifics. However, combining these very different approaches clearly can offset their weaknesses and can therefore contribute to a deeper understanding of the research questions by providing richer detail (Bazeley 2008, Bowling 2009, Creswell & Plano Clark 2007, Diekmann 2002, Rossman & Wilson 1991; see Table 3.3.2 Qualitative versus Quantitative Research – An Overview below). As stated by DiCicco-Bloom and Crabtree (2006), research applying mixed methods approaches are *"increasingly needed"* in order to *"contribute to rich and comprehensive studies"* (p.320). More detailed information on qualitative and quantitative research will be provided in Chapters 4 Qualitative Analysis and 5 Quantitative Analysis.

Table 3.3.1: Qualitative versus Quantitative Research – An Overview

	Qualitative Research	Quantitative Research
Characteristics	Understand and interpret Hypotheses generation Individualistic Inductive Dynamic process	Explain Hypotheses testing Collectivistic Deductive Static process
Strengths	Flexible: the researcher can adapt to the situation and develop questions spontaneously during the interview process	Objective: Results are exactly quantifiable due to statistical calculations
	Information rich: the derived information also provides the associated background information	High external validity due to big sample sizes
	High validity with regard to content due to direct, personal interaction with the participants	Big sample size: results can be generalised easily
Weaknesses	Difficulties in generalising the results due to small sample size	Inflexible: standardised questions and research conditions are determined in prior
	Subjective: personal interpretation is made by researcher	Participants are only indirectly heard

(Bowling 2009, Creswell & Plano Clark 2007, Diekmann 2002, Eichler 2008, Fuchs-Heinritz et al. 1995, Gubrium & Holstein 2001, Hussy, Schreier & Echterhoff 2010, Kallus 2010, Malhotra & Birks 2007, Ullrich 1999)

Furthermore, when applying a mixed methods approach, the researcher can use all kinds of tools and methods to address the research problem, rather than being restricted to typically qualitative or quantitative tools. By doing so, researchers combine inductive and deductive thinking and can provide fresh insight by initiating new lines of thinking (Bazeley 2008, Rossman & Wilson 1991, Vitale & Armenakis & Feild 2008). Also, they may be encouraged to use multiple worldviews or paradigms instead of the ones typically associated with quantitative or qualitative research. In addition, mixed methods research can answer research questions which cannot be answered by neither qualitative nor quantitative methods on its own or when using only one method is inadequate in order to meet complex research questions (Creswell & Plano Clark 2007). Furthermore, combining both research approaches provides a more complete picture for the researcher, since in-depth knowledge of the participants as well as general trends and generalisations can be taken into account, while subtleties can be clarified and findings cross-validated (Creswell & Clark 2007). Hence, a mixed methods approach extends a researcher's toolbox and may also provide the opportunity to form a synthesis of different research-traditions (Bazeley 2008, Vitale & Armenakis & Feild 2008).

3.3.2 Exploratory Mixed Methods Design

As already mentioned before, a two-phase exploratory mixed-methods-design, also referred to as Exploratory Sequential Design, was chosen (Creswell & Plano Clark 2007). It starts with a first qualitative phase aiming at exploring a phenomenon in order to build on the results and connect them as part of a second, quantitative phase. Intending that the results of the first qualitative part help develop the second quantitative part (Greene et al. 1989), exploratory designs are best suitable when an instrument (e.g. a questionnaire) needs to be

developed and tested because there is none available (Creswell & Plano Clark 2007), or when results should be generalised to different groups (Morse 1991). Based on the central premise that exploration is needed due to unknown variables, not available instruments or missing theory, the Exploratory Sequential Design has two common variants called Taxonomy and Instrument Development Model (see Figure 3.3.3 Exploratory Design: Instrument Development Model below). The Instrument Development Model connects the two parts through the development of items and scales for a quantitative survey instrument (e.g. questionnaire). Hereby, the research topic is explored qualitatively in a first qualitative step, while, in a second step, the developed instrument is implemented and validated quantitatively.

Figure 3.3.3: Exploratory Design: Instrument Development Model

(Creswell & Plano Clark 2007, p.76)

When utilising the Instrument Development Model, researchers often emphasize the quantitative part (see Myers & Oetzel 2003), even so it is not always the case (see Crump & Logan 2008) and the decision how to weigh research depends on multiple issues like theoretical drive (see Morse 1991), research questions, research goals and choice of procedures as well as practical considerations, e.g. resources (Creswell & Plano Clark 2007, Crump & Logan 2008, Gailliard et al. 2010, Morse 1991, Myers & Oetzel 2003, Nathan et al. 2010, Tashakkori & Teddlie 2003). Within this project, emphasis is given to the second, quantitative stage, since qualitative research was seen as an intermediate step for developing the research instrument, i.e. the questionnaire. Thus, the representative results of the final stage (i.e. quantitative research) are decisive in order to answer the research questions, while both parts represent important parts in addressing the overall research problem (Creswell & Plano Clark 2007).

3.4 Project Schedule and Work Procedure

Since the concept of Social Pharmacy was new in Austria (see Chapter 2.2 Social Pharmacy in Austria), this project had to deal with a principal lack of infrastructure and support (scientifically and financially) throughout the whole research process, especially at the beginning during 2010 and 2011. However, great personal commitment and devotion to the project by the whole team and scientific help from many experts working in the Natural and Social Sciences or Humanities (University of Graz, University of Otago and private sector) allowed for 'Reducing Barriers – Migrations, Minor Ailments and Medicines' to become a high quality and current academic work while bringing the different disciplines of science a little closer together.

Within this project, control persons, i.e. tutors, were implemented in order to ensure overall quality and an academic standard throughout both the qualitative and the quantitative stage of the research, as well as in regard to the superior mixed-methods design (see Creswell & Plano Clark 2007, Flick 2009, Kvale 2007). Qualitative tutor Dr. Charlotte Christina Fink (Independent Scholar Cultural Studies and Social Sciences) supported the author scientifically through the whole research process, while especially advising on the qualitative stage (see Chapter 4 Qualitative Analysis). She instructed the author on performing group discussions and interviews and assisted in all matters of qualitative research, whilst reviewing transcription and qualitative content analysis procedures. In order to ensure a representative and professional performance in regard to the quantitative analysis (see Chapter 5 Quantitative Analysis) of this project, the author has further received scientific advice and support throughout the whole quantitative stage from my quantitative tutor Mag. Michael Blümel (independent scholar, Research Methodology). He instructed the author on quantitative methodology as well as on applying the computer-based SPSS software, while monitored and counselled on the author's performance regarding all investigations related to quantitative research. During the quantitative design-process including compilation of questions and scales, the author further received special advice from o. Univ-Prof. Dr. Max Haller and ao. Univ-Prof. Mag. Dr. Katharina Scherke (both Institute of Sociology, University of Graz).

Detailed work procedure and timetable were as shown in the chart below.

2010	2011	2012	2013
Research, Literature Review			
Development of overall concept	Seeking collaboration with various institutions working in the health and migrant sector (see methods)	Analysing qualitative data collected through interviews and recruitment of quantitative Tutor (Statistics)	Acceptance at the Catholic Diocese's Educational Institute in Graz Division of Intercultural Affairs
Selecting the methods used for the interviews & the questionnaire			
Applying for the Docforte scholarship programme, ÖAW (Austrian Academy of Sciences) 2010	February – April: Performing group discussions as preliminary research	March: Voted 'Alumna of the Month', Alumni Uni Graz	Preparations for quantitative data analysis
		Assembling a progress report (qualitative data analysis)	January – March: Development of the research instrument (questionnaire)
Gathering data about Graz	April: Presentation at the Institute of Pharmaceutical Chemistry, University of Graz	Visit from Dr. Susan Heydon: Presentation on Social Pharmacy at the Institute of Pharmaceutical Chemistry, University of Graz	February: Presentation at DocDay (Doctoral School of Pharmacy)
Participating in 16 th ISPW International Social Pharmacy Workshop, Lisbon	Applying for the Docforte programme, ÖAW 2011	Participation in 17 th ISPW, Thailand and presentation of the progress report	March – April: Conducting survey
Visit from Dr. Susan Heydon: Presentation on Social Pharmacy at the Institute of Pharmaceutical Chemistry, University of Graz	Designing qualitative data analysis (interviews)	Interview in 'Der Standard' (daily newspaper)	March: Pre-test Trial
Participation in and successfully completion of seminar "Intercultural Competence", University of Graz	Award of research grant 'Scholarship of the Universitätsrat, Karl-Franzens University of Graz, Fonds für JungforscherInnen' (24 months)	Developing a theoretical hypothesis drawing on from results of qualitative data analysis	April: Translating the questionnaire into Croatian, Bosnian, Turkish
Adaption of the project based on the feedback received from the docforte scholarship programme	October: Presentation at 'Caritas Campusgespräche Graz', Caritas Graz	November: Participation in and presentation at the young researchers colloquium, University of Graz	Analysing quantitative data collected through questionnaires
Award of Scholarship, Faculty of Natural Sciences, University of Graz	Construction of Homepage http://reducingbarriers.Jimdo.com	Designing quantitative data analysis	Interpreting the results of quantitative data analysis
Gathering data about migrants in Graz	November-December: Conducting qualitative interviews	Publication in 'Research in Social and Administrative Pharmacy', vol.8	December: Writing up the thesis

Part II

Chapter 4: Qualitative Analysis

4.1 Research Design and Methods

As first step of the mixed-methods-design (see Chapter 3.3 Overall Research Design), a qualitative research project containing six semi-structured interviews was conducted. To ensure a high standard, the overall procedure followed the Ethical Guidelines for International Comparative Social Science Research (MOST Management of Social Transformations, UNESCO) and the Guidelines for Social Research (SRA 2007). In order to get a good range regarding different ethnicities, age and gender, interviewees were selected by means of purposeful sampling utilising various networks while cooperating with a range of health and migrant organisations (for more information see Chapter 4.1.2 Target Group and Sampling). Following the literature suggesting to implement a control person in order to ensure overall quality and an academic standard throughout the interview process (Creswell & Plano Clark 2007, Flick 2009, Kvale 2007, Turner 2010), the author received scientific advice and instructions on all qualitative methods and procedures from qualitative tutor Charlotte Christina Fink (Independent Scholar Cultural Studies and Social Sciences; see Chapter 3.4 Work Procedure).

4.1.1 Research Questions

The central aim of the project was to explore health behaviour of three different migrant groups in regard to minor ailments. Hence, the main purpose of this qualitative sub-study was to gain insight into if and how patterns in health behaviour change over migration, as well as if and what kinds of 'traditional' treatments are still in use. As pointed out before, people take their health profiles with them, carrying their beliefs and values, which reflect their socio-economic as well as cultural backgrounds. These beliefs are generally different from those of the host community and may have impact on a person's health as well as on a migrant's use of health and related services of the host community (WHO 2010 *Health of Migrants*; see further Chapter 1.3 Health, Ill Health and Culture). This qualitative study wanted to learn about how health behaviour changes over migration as well as if and how migrants of the first and second generation hybridise their values, beliefs and knowledge regarding minor ailments and the treatment of minor ailments with that of their new residence. Consequently an in-depth analysis of the health behaviour centred on minor conditions of two sequent generations of migrants was undertaken, involving informal discussions as preliminary research, the development of an interview guide and semi-structured, qualitative interviews (see Chapter 4.2 Instrument Design).

The developed qualitative research questions were as follows:

- 1) Do people know how to define minor ailments and how to differentiate between self-treatable conditions and those that are not?
- 2) Where do people seek for medical advice when experiencing minor ailments (e.g. internet, MD, friends, family, etc.)?

- 3) What kinds of treatments used when experiencing minor ailments (i.e. see doctor or undertake self care involving OTC-products, traditional remedies or alternative kinds of treatment)?
- 4) Do people know traditional remedies, and are they still in use? And further, what kinds of traditional remedies are used?
- 5) Are cultural-specific patterns in response towards minor conditions detectable?

Does health behaviour in regard to minor ailments change over migration, i.e. do the reactions towards minor ailments vary between first and second generation migrants?

4.1.2 Target Group and Sampling

The target group consisted of persons having a cultural and ethnic background in Bosnia-Herzegovina, Croatia or Turkey and accounted for almost 30% of all foreigners living in Graz (Magistrat Graz – Präsidialamt 2010). For more information on the target group's composition, please see Chapter 3.2 Target Group.

During November and December 2011, six semi-structured interviews were conducted. All participants had a migrant background in Bosnia-Herzegovina, Croatia or Turkey and were selected by means of mixed purposeful or criterion based sampling (see Chapter 4.1.2.1 Sampling Strategies and Sample Size). Socio-demographic data including sex, age, education, profession, family status, living situation (e.g.: together with family, single household or else) and first language(s) (i.e. the language(s) spoken at home) was collected. Furthermore, information on ethnic membership interviewees identified themselves with was gathered (see Table 4.1.2 Interview Sample: Range regarding Age, Sex, Socio-economic and Ethnic Background below). Both in the qualitative as well as in the quantitative stage of this research (see Chapter 5 Quantitative Analysis), ethnic background and generation membership was explored by retrieving information on the participants' countries of birth, but also countries of birth of their parents and grandparents. In order to be able to differ between first and second migrant generation, the collected data was combined and compared when analysis took place. In this study, following the recommendations by the United Nations Economic Commission for Europe, first generation migrants means people who (and whose parents) were born outside Austria and immigrated later on, while migrants of the second generation are generally born in Austria (ÖIF 2011 Migration & Integration, UNECE 2006).

As shown in Table 4.1.2 Interview Sample: Range regarding Age, Sex, Socio-economic and Ethnic Background below, four women and two men were interviewed. Three participants were aged over forty and three aged below thirty, with each group consisting of two females and one male. Within the younger age group, the two women were students and lived together with their families, whereas the male interviewee was a working professional and living on his own. As for the older age group, one man and one woman had children; the male lived together with his two sons and wife, whereas the woman was divorced and lived together with her teenage daughter. Five out of the six interviewees had higher education involving a tertiary education background; only one male interviewee had no school leaving exam but was trained as a locksmith and had been working as truck driver before retiring due to health issues. In terms of citizenship, one Croatian, one Turk, one Bosnian and three Austrians were interviewed, whereas in terms of ethnic membership interviewees identified themselves with, there were one Kurd, one Serb, two Bosnians and one Austrian being interviewed (one preferred not to specify). Although all interviewees stated to have been born outside Austria, half further explained to have moved to Austria as infants (i.e. less than one year old). Hence, these three participants were seen as members of the second migrant generation, though second generation migrants are generally defined as born in Austria, as stated above.

Table 4.1.2: Interview Sample: Range regarding Age, Sex, Socio-economic and Ethnic Background

		n	Total n
Sex	females	4	6
	males	2	
Age in years (range 20 -52)	< 30	3	6
	> 40	3	
Education	school leaving exam or higher	5	6
	no school leaving exam	1	
Country of Birth	Bosnia-Herzegovina	4	6
	Croatia	1	
	Turkey	1	
Parents' countries of birth	Bosnia-Herzegovina	8	12
	Croatia	2	
	Turkey	2	
Grandparents' countries of birth	Bosnia-Herzegovina	13	24
	Croatia	5	
	Turkey	4	
	Other	2	
First language(s)	Austrian, Turkish & Kurdish	1	6
	Bosnian	2	
	Croatian	3	
	Serbian	1	
Citizenship	Austrian	3	6
	Bosnian	1	
	Croatian	1	
	Turkish	1	
Ethnic Membership	Austrian	1	5 (one did not specify)
	Bosnian	2	
	Turkish Kurd	1	
	Serb	1	
Family Status	children	2	6
	no children	4	
Living Situation	family household	4	6
	single household	2	

4.1.2.1 Sampling Strategies and Sample Size

Since qualitative research is concerned with identifying and understanding a person's views and beliefs, hence does not aim for getting generalisable results (see Chapter 4.1.3 Methodology), the utilised sample does not require being representative in regard to the basic population. In fact, getting a preferably heterogeneous,

informative group of people who differ widely in regard to the relevant features (according to the principle of maximum variation) is the best way to go in order to ensure that all relevant information to the research questions can be collected (Brikci & Greene 2007, Patton 2002). Creswell (2007) and Morse (1991) also highlight the importance of choosing candidates for qualitative interviews who may provide the most creditable information to the study. While quantitative research strives for random sampling in order to get generalisable results (see Chapter 3.3 Overall Research Design), qualitative sampling strategies can be structured into inductive and deductive methods as well as strategies mixing inductive and deductive approaches. There is a variety of different sampling strategies available in the literature (see Merrens 1997 and Patton 2002), though many qualitative studies utilise purposeful or criteria-based sampling. In order to find participants who are willing to open up and honestly share information with the researcher, Creswell (2007) also recommends sampling strategies such as purposeful or else criterion based sampling. When using purposeful sampling, the sample consists of persons sharing the characteristics relevant to the research questions, which could be, for example, a specific cultural or ethnical background (Flick 2009, Diekmann 2002, Green & Thorogood 2009, Lamnek 2010).

In this qualitative study, a mixed purposeful sampling approach was utilised, combining snowball or chain sampling, criterion sampling, gatekeeper sampling and self-activating sampling. The advantage of combining different strategies is that the combination meets multiple interests and needs, whereas utilising only one strategy might be insufficient to answering the research questions or in regard to the sample's composition (Byrne 2001, Patton 2002). The snowball or chain sampling uses personal contacts and connections to approach members of the target group. Hence, it is not only an efficient strategy to get in contact with many potential participants within a short amount of time, but it also helps identifying information-rich, extreme or deviant cases, for example people who never suffer from minor ailments or suffer from minor ailments all the time (Byrne 2001, Patton 2002). However, chain sampling rather follows up structures within a personal network than works according to the principle of maximum variation. Hence, the sample may be quite homogeneous since participants know and might inform each other on the research (Merrens 1997). Criterion sampling is applied when the researcher looks for information on quality issues within a process or system, for example health services for migrants in regard to minor ailments, while aiming at improving the system or process. Basically, information-rich cases are selected while the researcher hopes to reveal a major problem or weakness within the system in order to improve it. When utilising gatekeeper sampling, experts of the field (e.g. people working at local health and migrant organisations; see Chapter 4.2.1 Public Relations) suggest potential interviewees they think are appropriate for the research. Although experts can help the researcher to get an overview and orientation, experts can be selective and the criteria of selection might not be easy for the researcher to scrutinise. In contrast, self-activated sampling defines a secondary sampling strategy where the sampling depends on the willingness of potential interviewees to participate. This technique is utilised when the research is advertised by flyers, notes on blackboards or else (see Chapter 4.2.1 Public Relations) and ensures the voluntariness in participating, often leading to higher motivation on side of the interviewees (Byrne 2001, Patton 2002, Merrens 1997, Quasus 2007).

As mentioned before, qualitative methods look at issues in a more holistic way and do not aim for representative results. Thus, sample size depends on the method of analysis being used within that research. Following the principle of maximising variance, the central premise and general rule is the concept of theoretical saturation (see Glaser & Strauss 1967). This means that an appropriate sample size has been reached when the process is saturated, i.e. no new relevant information can be retrieved. In other words, when

the qualitative sample size answers the research questions in an adequate way, it can be seen as sufficient for the project (Bortz & Döring 1995, Creswell 2007, Diekmann 2002, Flick 2009, Turner 2010).

4.1.3 Methodology

Embedded in a mixed-methods-design (see Chapter 3.3 Overall Research Design), the first step of the project was qualitative and used mostly inductive methods. Inductive methods are applied according to the ideas of grounded theory and do not start with a theoretical hypothesis, but with the collection of the data. Key points are then marked with codes extracted from the text and later on grouped into similar concepts and furthermore categories. These categories then lead to the construction of a hypothesis, putting theory in qualitative research last (Allan 2003, Eichler 2008, Hussy & Schreier & Echterhoff 2010). The instrument most often used in qualitative research is the interview (Whiting 2008), and there are many different types, sub-types and varieties of interviews (see e.g. Diekmann 2002, Gubrium & Holstein 2001, Ullrich 1999). As suggested by Newton (2010), face-to-face interviews should be chosen when the interview context is especially significant and the research focuses on understanding or gaining insight.

In contrast to quantitative methods, the central premises for qualitative research are openness, flexibility and communication (Fuchs-Heinritz et al. 1995; see also Table 4.1.3 Characteristics, Strengths and Weaknesses of Qualitative Research below). Since qualitative research is concerned with identifying and understanding a person’s views and beliefs, it offers the opportunity of looking at issues in a more holistic and detailed way. Ultimately aiming at understanding the meaning individuals give to a phenomenon inductively (Creswell & Plano Clark 2007), qualitative research further describes empirical facts, sets up classifications or typologies, generates hypotheses and tests research hypotheses (Diekmann 2002, Lamnek 2010, Mayring 1993). The dynamic design of qualitative research allows for the researcher to be flexible and adapt to the individual person being interviewed. Furthermore, interview questions are open-ended, intending to learn from the participants while allowing them to answer the questions in their own words. Consequently, a familiar, intimate situation similar to everyday communication is created, aiming at reducing potential inhibitions while at the same time increasing the interviewees’ presence regarding the time used to speak. Hence, qualitative research is information-rich and produces high validity with regard to content due to direct, personal interaction with the participants. As already mentioned in Chapter 4.1.2 Target Group and Sampling, Creswell (2007) and Morse (1991) stress the importance of selecting interview-candidates in regard to who may provide the most creditable information to the study. To find participants willing to openly and honestly share their opinions with the researcher, Creswell (2007) further suggests sampling strategies such as purposeful or else criterion based sampling. Finding a suitable environment, where the interviewees feel comfortable and may speak without restriction and distraction could also help with collecting information-rich data with high validity in regard to content (Turner 2010).

Table 4.1.3: Characteristics, Strengths and Weaknesses of Qualitative Research

Central principles	<div>Openness</div> <div>Flexibility</div> <div>Communication</div>
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Characteristics	Understand and interpret Generate hypotheses Individualistic Inductive Dynamic process Research in everyday situations
Strengths	Flexible: the researcher can adapt to the individual situation Information rich: the derived information also provides the associated background information High validity with regard to content
Weaknesses	Difficulties in generalising the results Hard to replicate and thus compare with analogue results Personal interpretation is made by researcher

(Bowling 2009, Creswell & Plano Clark 2007, Diekmann 2002, Eichler 2008, Fuchs-Heinritz et al. 1995, Gubrium & Holstein 2001, Hussy, Schreier & Echterhoff 2010, Malhotra & Birks 2007, Ullrich 1999)

While aiming at a deeper understanding, the numbers of interviewed persons are normally much smaller than those of quantitative research. A maximum of ten interviews per interviewer ensure high interview quality and minimise adulteration (Diekmann 2002, Noelle 1963). However, the general rule on sample sizes in regard to qualitative interviews says that a sufficient sample size is reached when the process is saturated, i.e. no new relevant information can be retrieved (Glaser & Strauss 1979; see Chapter 4.1.2 Target Group and Sampling). Thus, generalising qualitative results to larger groups is difficult, not only due to small sample sizes and because randomised sampling is not utilised, but also due to the extensive amount of data that is collected. Further, the qualitative data in form of words (audio-recording) or images (video-recording) is subject to personal interpretations made by the researcher which may create an ensuing bias. Therefore it is crucial, especially for novice researchers, to adopt a reflexive approach towards the interview process while acknowledging this bias and trying to address it through systematic and comprehensive analysis (Boyce & Neale 2006, Creswell & Plano Clark 2007, Diekmann 2002, Hussy, Schreier & Echterhoff 2010, Spencer et al. 2003, Whiting 2008, Lamnek 2010; see Chapter 4.4.1 Limitations of Study).

4.1.3.1 Group Discussions

Group discussions or focus groups are social science research instruments which collect empirical data in a non-standardised form at comparatively low costs¹⁸. After introducing the research project (i.e. project on migrants' health in Graz regarding the treatment of minor ailments), the topic of discussion (e.g. how to treat minor ailments or whether there are any sensitive issues in regard to cross-cultural interviewing) is outlined by the facilitator. After that, participants discuss the delivered subject among themselves with as little interruption and interference by the chairperson as possible. If the discussion is not stimulated enough and slows down, the chairperson may add further arguments to encourage the conversation. Group discussions can be performed utilising audio-recording, while data analysis may involve transcription and content analysis but could also utilise other methods (Fuchs-Heinritz et al. 1995, Lamnek 2010). Group sizes usually range from five to fifteen

¹⁸ Since for this project there were no costs related to room rental, i.e. infrastructure, expenditure regarding the group discussions only comprised refreshing and sweets for the participants (around €100 for all three discussions; see also 4.2.2 Preliminary Research).

people (Hussy, Schreier & Echterhoff 2010). There are different forms of group discussions, although the investigative form is the most frequently used in qualitative social science research. According to the literature, group discussions or else focus groups are often used as preliminary qualitative research, but they can also be utilised complementary to qualitative or quantitative methods (Lamnek 2010, Bohnsack, Przyborski & Schäfer 2006). Furthermore, focus groups are often applied in opinion research since individual for example health related opinions are shown stronger within a group setting (Lamnek 2010). Due to their multifunctionality and flexibility, the method of group discussion is especially recommended to explore areas of research where there is yet no or only little experience (Fuchs-Heinritz et al. 1995).

4.1.3.2 Semi-structured or Focused Interviews

According to Polit and Beck (2006), interviews are defined as a method of collecting data where one person, i.e. the interviewer, asks another person (the interviewee) questions either via telephone or face to face. There are three fundamental types of research interviews: structured, semi-structured and unstructured. For the purpose of this qualitative study, so called semi-structured or else focused interviews based on a respective interview guide (see Chapter 4.1.3.5 Content Analysis and Appendix) were used throughout. These in-depth interviews are the most frequent used format in qualitative research and can be performed either interviewing an individual or a group (DiCicco-Bloom & Crabtree 2006). This method is one of the oldest interview techniques and was developed during the 1940s in the USA. Based on the principle that all participants share a 'stimulus', i.e. a certain experience, knowledge or else (for example having a cold), focused interviews are always performed utilising an interview guide (see Chapter 4.4.2 Interview Guide). Using open-ended questions, this type of interview allows for two-way communication and leave both the interviewer and the person being interviewed the flexibility to go into detail or discuss issues arising during the interview spontaneously. Hence, they also allow for the interviewees to take some time and talk about their opinions on a particular subject, although the wording of questions will not necessarily be the same for all participants.

As one of the major benefits of this, semi-structures or focused interviews are perceived as less intrusive to the interviewee than other interview alternatives, since people tend to discuss sensitive issues like health topics more easily when being interviewed face-to-face and involved in a two-way communication. While making the interview feel like a normal conversation, the researcher can try to build a positive rapport with the interviewee in order to collect data about feelings or emotions behind the spoken information given. Also, the meanings behind actions may be revealed as the person being interviewed is able to talk about something in detail and depth with only little direction from interviewer. Thus, the derived data not only provides potential answers to the research questions but also the associated background information. DiCicco-Bloom and Crabtree (2006) further argue that especially in-depth interviews *"are widely used by health care researchers to co-create meaning with interviewees by reconstructing perceptions of events and experiences related to health and health care delivery"* (p.316). However, the focused interview's personal nature may make findings difficult to generalise, since interviewees may effectively be answering different questions and due to the impact of the researcher on data collected. Dependent on the interviewer's skills, unconscious signals may be given to the interviewees, guiding them to answer in a certain way expected by the interviewer. Thus, it is important for the researcher to demonstrate awareness of how biases may emerge and reflect on all stages of the qualitative research project (Bortz & Döring 1995, Diekmann 2002, Flick 2009, Gubrium & Holstein 2001, Lamnek 2010, Polit & Beck 2006, Turner 2010, Whiting 2008).

Furthermore, this interview technique depends on the researcher's ability to establish positive rapport to the person being interviewed; hence, good communication skills and situative competency, i.e. high sensitivity

regarding the interviewee and the overall interview process, are crucial and strongly required from the interviewer (Flick 2009; see Chapter 4.4.1 Limitations of Study). As an individual's experiences and beliefs are private and therefore ethnically sensitive issues, a trustful relationship between interviewer and interviewee established on professionalism and respect is pivotal for success. Thus, issues of confidentiality and anonymity need to be discussed thoroughly prior to each interview (Lamnek 2010; see Chapter 3.1 Ethnic Issues). Semi-structured or focused interviews are usually scheduled prior at a designated time and location, while lasting from thirty minutes up to several hours (DiCicco-Bloom & Crabtree 2006; see Chapter 4.2.3 Conducting the Interviews).

4.1.3.3 Interview Guide

Interview guides can be understood as relatively open frameworks, which are prepared prior to the interview and shall help the interviewer to not lose track during the conversation by writing down the topics or questions examined in the interview (see Table 4.1.3.3 Characteristics, Strengths and Weaknesses of Interview Guides below). Dependent on what kind of interview is used, interview guides can either be very open, showing just a rough outline of the topics to be discussed or very detailed, indicating the precise questions to be asked (Diekmann 2002, Fuchs-Heinritz et al. 1995).

According to Gall, Gall and Borg (2003), there are three different formats of interviews, namely the informal conversational interview, the general interview guide approach and the standardized open-ended interview. They differ in the extent to which one interview can be compared with another due to degree of standardisation and structure (Cohen 2007). Compared to the informal conversational interview, the general interview guide approach is more structured, but leaves enough flexibility in its composition so that the wording of questions depends on the researcher conducting the interviews (Gall & Gall & Borg 2003, Kvale 2007). Therefore and in contrast to the extensively structured open-ended interviews, participants are not necessarily asked the same questions. Hence, the researcher is responsible for collecting the same areas of information from each interviewee, creating a more focused approach than compared to informal conversational interviews (Turner 2010).

As a matter of principle, all qualitative research, including interview guides, is developed iteratively. Hence, when developing the questions at first, a number of issues, i.e. the research's focus, the learning experience, but also issues centred on time management, accessing the target group and else need to be considered (DiCicco-Bloom & Crabtree 2006, Diekmann 2002, Reinders 2005). Further, this iterative process may lead to modifying the interview questions, since data collection often goes simultaneously with preliminary data analysis. Hence, ineffective questions can be sorted or adapted and new ones can be added to the interview guide, as the researcher gains more knowledge with each step (DiCicco-Bloom & Crabtree 2006). As shown in Table 4.1.3.3 Characteristics, Strengths and Weaknesses of Interview Guides below, the general maxim in regard to structure reads that interview guides should be as flexible as possible but as structured as necessary (Helfferich 2011, Lamnek 2010). Helfferich (2011) further expresses six requirements of interview guides, including considering the general principle of openness for qualitative research (see also Chapter 4.1.3 Methodology) while producing a clear arrangement of a limited number of questions. Moreover, she stresses the priority of not sticking to the interview guide (see principle of "bureaucratisation of interviews", Hopf 1978) but instead following digressions, since they come along with the flow of memory or argument and often result from the interviewees' areas of interests. Thus, spontaneously produced narrations can be very productive so that the interviewer needs to be prepared to depart from the interview agenda at any time (DiCicco-Bloom & Crabtree 2006).

The interview guide finally structures the interview in different key questions, each comprising of individual blocks of questions, in order to avoid abrupt and frequent changes of themes (Lamnek 2010). Furthermore, the researcher needs to prepare some useful prompts for narration to encourage the respondent to talk about important subjects if they do not come up spontaneously during the interview process (Brikci & Greene 2007). To compile an interview guide, Helfferich (2011) suggests the following approach involving four steps: Firstly, as many questions as possible have to be assembled. In a second step, the collected questions need evaluation in regard to initiate knowledge and the central principle of openness. After that, the questions are sorted in regard to content and time flow. Finally, the individual aspects are subsumed under different prompts for narration. When designing an interview guide, the most pivotal aspect is to create effective interview questions (Flick 2009, Helfferich 2011, Lamnek 2010).

Table 4.1.3.3: Characteristics, Strengths and Weaknesses of Interview Guides

Central principles	Openness Flexibility Communication
Characteristics	Iterative process Flexibility in regard to structure depends on research questions Open-ended wording of questions Contains different formats of questions Requires good communication skills and situative competency Requires high reflection-skills in regard to performance and bias
Strengths	Helps researcher to orient and keep focused Data gains structure Clear statements answering specific questions are perceived Flexibility in regard to sequence and wording of the questions Enhanced comparability of data
Weaknesses	Difficult to establish a positive rapport with the interviewee Vulnerability to "bureaucratisation of interviews" (see Hopf 1978) Personal interpretation is made by researcher Complex and challenging process and analysis

(Flick 2009, Lamnek 2010, Helfferich 2011, Quasus 2007)

There are different interview stages which require different types of questions. The initial interview stage is called apprehension phase and can comprehend issues of tentativeness and also discomfort (DiCicco-Bloom & Crabtree 2006). Herein, it is important for the interviewer to introduce him/her, but also give basic information on the aims of the research. Ethnic issues including confidentiality and anonymity, as well as recordings also need to be discussed within that stage. Furthermore, it has to be stated clearly that the interviewees can interrupt any time answering the questions is not compulsory if they do not want to (Brikci & Green 2007, Gill et al. 2008; see Chapters 3.1 Ethnic Issues and 4.3.2.1 Interview Setup).

Ensuing warm-up questions should engage the interviewee in a more general conversation in order to reduce tension and establish a more relaxed atmosphere. After establishing an initial inter-personal connection

through introduction and warm-up questions, more general questions on the topic of interest, i.e. opening questions, can help to orientate the interview according to the research questions (Creswell 2007, Reinder 2005). The second stage in interviewing is the exploration phase. Within this stage, the person being interviewed should be encouraged to describe more details in depth. Hence, it is crucial for the researcher to be sensitive and leave enough space for the interviewees to reflect on their true feelings and beliefs when asking key and adequate prompt questions. In order to obtain optimal responses, adequate prompts for narration should be used in a way that the interview flow is enhanced while key issues can be addressed. Further, different probing questions, i.e. echoing the participants' points, agreeing verbally (e.g. "yes", "uh-huh") or else can help to improve interaction. When reaching the co-operative stage of the research, comfort level is achieved. At this point of the interview, both the interviewer and the person being interviewed cease to worry about offending each other, while confidence and rapport grows on both sides). Thus, more sensitive issues and also ad-hoc questions can be asked during that stage in order to give more profoundness and amplitude to the collected data (DiCicco-Bloom & Crabtree 2006, Whiting 2008). Lastly, the interview is ended by using closing questions, often involving gathering socio-demographic data (Flick 2009, Lamnek 2010).

Although there is a discussion within the literature whether giving a gift or financial reimbursement is appropriate (Whiting 2008), it can help to further establish positive rapport while enhancing the interviewee's willingness to comment on issues they have thought about, or think are important, but did not come up during the interview (Flick 2009, Gill et al. 2008, Reinder 2005). Finally, it is important to end the interview on a positive note and thank the interviewee for his time and endurance.

Regarding the development of interview questions, many recommendations and suggestions can be found in the literature (see Boyce & Neale 2006, Diekmann 2002, Flick 2009, Gall, Gall & Borg 2003, Green & Thorogood 2009, Gubrium & Holstein 2001, Helfferich 2011, Kvale 2007, Reinders 2005, Turner 2010, Whiting 2008 and else). For example, questions need to be worded clearly, i.e. the type of language and expressions potentially being used within the interviews should be aligned in a way that interviewees understand the questions and do not feel daunted or condescended (Brikci & Green 2007). According to Turner 2010, this also involves knowing terms specific for the respondent's culture or surroundings if working with people having different cultural or social background. Furthermore, questions should be designed as neutral as possible in order to obviate that wording influences on how questions are being answered (i.e. leading questions¹⁹, judgemental or provocative wording). It is also important to assemble open-ended questions (meaning that they cannot be answered with yes or no), so that the interviewees can choose their words freely when answering the research questions. Finally, paying attention to issues of inter-personal interaction, such as whether sitting in a certain position, keeping eye contact or being sensitive to special needs (e.g. bad hearing) is making the interviewee feel comfortable or not, can help to improve information content. In order to maximise the information gained, the interviewer further needs to be a good listener with good communication skills as well as situative inter-personal competency (see Chapter 4.4.1 Limitations of Study) and avoid biasing the interview, i.e. presenting his/her own perspectives (Boyce & Neale 2006, Brikci & Green 2007, Flick 2009, Gall & Gall & Borg 2003, Green & Thorogood 2009, Gubrium & Holstein 2001, Helfferich 2011, Kvale 2007, Reinders 2005).

4.1.3.4 Grounded Theory

Grounded theory was developed in the 1960s by Anselm Strauss and Barney Glaser and describes a method that enables the researcher to systematically compose a valid theory which is grounded in empirical data. Although

¹⁹ Leading questions are questions containing the information or suggesting the particular answer the researcher wants to have confirmed (Fuchs-Heinritz et al. 1995).

clearly a qualitative method, grounded theory wants to combine the strength of quantitative research methods (i.e. logic and systematic analysis) with the depth and richness of qualitative approaches (Walker & Myrick 2006, Bryant & Charmaz 2007, Glaser & Strauss 1967). Also called “*method of constant comparison*” (Glaser & Strauss 1967, pp. 105-115), it reflects back at each step while generating qualitative theories through the analysis of data. Hereby, the processes of cognition and detection are not performed in a linear process, but proceed in a continuous dialogue between theoretical presumptions and collected data. Hence, theoretical presumptions are continuously expanded with new information and may be changed in parts or completely during the research process (Alheit 1999, Evans 2013, Walker & Myrick 2006, Glaser & Strauss 1967). Rather than following the traditional model of research and start with a hypothesis, the first step of grounded theory is data collection (see Figure 4.1.3.1 Scheme of Grounded Theory Procedure below).

As a second step, the following analysis procedure combines two different approaches by an “*analytic process of constant comparison*” (Glaser & Strauss 1967, p.102) into an intermediate form. Herewith, the amount of data collected is sought to be reduced by organising it into smaller divisions, which is called coding (Allan 2003, Walker & Myrick 2006). Codes are “*descriptor phrases*” (Allan 2003 p.1) used by the interviewee to describe an important item or ideas during the interview and help identifying the key points within the data (Allan 2003, Alheit 1999, Kvale 2007). To code, data are broken down and compared while codes, i.e. “*descriptor phrases*” (Allan 2003 p.1), are identified. As shown in Table 4.1.3.2 Stages of Coding in Grounded Theory below, the data is then sorted into different concepts comprising codes with similar content. Similar concepts are merged into categories following the concept ‘similar goes to similar’, whereas new data creates new categories (Allan 2003, Walker & Myrick 2006). These categories finally form the basis for creating a hypothesis, making coding the fundamental element in applying grounded theory (Bryant & Charmaz 2007, Corbin & Strauss 2008, Walker & Myrick 2006).

Figure 4.1.3.4: Scheme of Grounded Theory Procedure

(Walker & Myrick 2006, p. 550)

Table 4.1.3.4: Stages of Coding in Grounded Theory

Stage	Description	Purpose
Codes	Descriptor phrases; help to identify and gather key points	Label data
Concepts	Compilation of codes with similar content	Grouping of data

Categories	Collection of similar concepts	Generation of theory
Theory	Accumulation of explanations	Explain the research objectives

(Allan 2003)

Howsoever, the formulation process of themes and codes vary from researcher to researcher. Hence, a third party consultant²⁰ is suggested in order to review codes or themes and determine the quality and effectiveness of the coding procedure. This way, researcher bias and problems evolving due to over-analyzing can be diminished (Turner 2010). Also, the founders of grounded theory, Glaser and Strauss, rather give a description of the concept which may be followed than precise instructions of how to perform the coding (Allan 2003). Thus, different perspectives have emerged regarding the procedures used in which researchers should engage with the data (Evans 2013, Walker & Myrick 2013). Today, four different models are considered the main grounded theory methodologies: classic grounded theory²¹, the Strauss and Corbin qualitative data analysis²², the constructivist grounded theory²³ and the feminist grounded theory²⁴ (Evans 2013). However, applying the grounded theory method requires not only a strong background in theory, but also a considerable amount of experience – hence, expert support and advice is crucial for novice researchers when working according to grounded theory (DiCicco-Bloom & Crabtree 2006).

4.1.3.5 Content Analysis

Qualitative content analysis after Philipp Mayring is a method for qualitative research which ties different approaches of systematic text analysis together, involving a procedure which concentrates data and sorts it into categories based on theory and valid implications (Patton 2002). Ever since its development during the 1980s, it has become international standard literature in regard to qualitative content analysis (Mayring 2003). Aiming at being able to draw conclusions about certain aspects of communication, Mayring's content analysis wants to analyse communication in a systematic way while sustaining the advantages of quantitative content analysis as developed in communication science. Mayring's main idea was to further develop the advantages of the systematic quantitative content analysis approach into qualitative-interpretative steps of text analysis (Kohlbacher 2005, Mayring 2000). Hence, not only the obvious content of the material is analysed, i.e. recorded communication (e.g. transcripts of interviews), but also "*everything that's not in the text*" (Mayring 2002, p.114), i.e. the material's formal aspects and latent content. According to Mayring (2000), qualitative content analysis can be defined as an empirically and methodologically controlled way to analyse texts within their context of communication while following step by step models as well as content analytical rules while not rushing into quantification. Since the method's strength clearly can be seen in its strict step-by-step analyse and methodological control, the central principle is to analyse text systematically, i.e. apply a theory-based systems of inductive and deductive categories which have gradually been developed in regard to the material. Further, analysis should be embedded in a communication model, including defining the text-producer's (e.g.

²⁰ i.e. qualitative tutor Dr. Charlotte Fink, see Chapter 3.4 Project Schedule and Work Procedure.

²¹ See Glaser, B 1978, *Theoretical Sensitivity: Advances in the Methodology of Grounded Theory*, Sociology Press, Mill Valley.

²² See Strauss, A, Corbin, J 1990, *Basics of Qualitative Research: Grounded Theory Procedures and Techniques*, Sage, London.

²³ See Charmaz 2000.

²⁴ See Wuest, J 1995, 'Feminist Grounded Theory: An exploration of the Congruency and Tensions Between Two Traditions in Knowledge Discovery', *Qualitative Health Research*, vol.5, no.1, pp.125–137.

interviewee's) experiences and beliefs as well as socio-demographic background and details on the original (e.g. interview) situation (Mayring 2003, 2002, 2000).

Figure 4.1.3.5.1: Basic Procedure of Qualitative Content Analysis

(Kohlbacher 2006, [58])

There are three basic analytical procedures (i.e. summary, explication and structure) in content analysis which may be carried out either independently or in combination (see Figure 4.1.3.5.1 Basic Procedure of Qualitative Content Analysis above). As a first step, the material collected is summarised by means of abstraction in order to reduce the amount of data collected while at the same time preserving essential content. This step may also be understood as a technique for building up inductive categories. Aiming at getting additional information regarding unclear parts within the data (e.g. phrases or sentences), explication is performed as the second step, involving explaining, clarifying and annotating the material. As a last step, the material is structured so that evaluation can take place or certain aspects can be gained from the data collected. Since structuring represents the central part of the process, it needs to be divided into three stages: First, units of analysis are determined and the features regarding the system of categories are fixed. Accordingly, definitions are formulated while key examples including rules for coding in separate categories are developed. As the second step, the material is examined two times. The first time, the location of data is marked whereas the second time, data is processed and extracted. Finally, the system of categories is reconsidered and revised if necessary, requiring complete re-evaluation of the material. As already mentioned before, the development of categories within the content analysis after Mayring can be divided into inductive and deductive approaches (Kohlbacher 2006, Mayring 2003, 2002, 2000).

Inductive categories are applied according to Figure 4.1.3.5.2 Implementation of Inductive Categories below. The core and central aim of the process is to phrase a criterion of definition which determines the aspects of the considered material, i.e. text. Following a systematic, rule-based process, this criterion should be deduced from the theoretical background and the research question. According to the criterion phrased, the material is now worked through while categories are compiled carefully and iteratively. The categories are revised through a feedback loop, eventually altered and further checked in respect to their reliability (Mayring 2000). This concurs with suggestions made prior to the development of Mayring's approach by Glaser and Strauss (1967), who recommended using constant comparison method when applying the inductive category approach.

Figure 4.1.3.5.2: Implementation of Inductive Categories

(Mayring 2000, [11])

Figure 4.1.3.5.3 Implementation of Deductive Categories below shows the process of compiling deductive categories. In contrast to the application of inductive categories, deductive categories work with aspects of analysis that have been formulated in prior and are theoretically founded.

These aspects of analysis are further brought into connection with the text. Hence, the qualitative step of this analysis assigns categories to certain text passages in a methodologically controlled way. Core to applying deductive categories is the precise definition of prior formulated categories as well as the determination of content-analytical rules. When approaching content analysis via the deductive category approach, working with a coding agenda, i.e. a coding scheme/agenda or guide for coding has been well proven and is therefore recommended to ensure consistency in coding (Mayring 2000).

Figure 4.1.3.5.3: Implementation of Deductive Categories

(Mayring 2000, [14])

As part of this project, content analysis was performed according to the process developed by Philipp Mayring. Hence, the developed coding agenda was orientated towards the examples given by Mayring (see Mayring 2003, 2002, 2000) and can be examined in the Appendix. As described in Chapter 4.3 Results and Findings, five categories, namely measures beneficial to health, getting medical advice, medical doctors, self care and minor ailments, were developed and further subdivided into sub-categories. As an example, Figure 4.1.3.5.4 Coding

Agenda below shows a short section of the guide for coding (Category 2: Measures beneficial to health, Sub-category 2.1: Using the internet) assembled to analyse the semi-structured interviews conducted during November and December 2011 (see also Appendix 4.2 Coding Agenda for the complete Coding Agenda).

Figure 4.1.3.5.4: Coding Agenda

Sub-Category 2.1	Definition	Examples	Rules for Coding	Codes
USING THE INTERNET Category: 2 - GETTING MEDICAL ADVICE	Statements regarding usage of the internet as information source for advice on any kind of health issues.	IE: Na, es kann sein, dass ich vielleicht; – Aber wie gesagt, trotzdem bleibt die erste Quelle was im Internet durchzulesen, weil das geht schnell, ruck zuck.(...)Wenn die ein paar gute [Anmerkung: Bücher] hätten, wo ich sicher sein kann, dass es super Informationen sind, dann wäre es mir egal, aber so einfach Geld auszugeben für nichts und wieder nichts. Mmh. ((ablehnend)) (Transcription Interview 8 November 2011_1)	Looking on the internet for medical information is the first thing the person does before doing anything else, and no matter which measures will be undertaken later on.	In1
			Looking on the internet is one of many possibilities to gather information on health and is sometimes (not always!) utilised.	In2
			No use of the internet as information source on health at all or only very randomly.	In3
		I Haben Sie schon einmal im Internet sich erkundigt -- zu irgendwelchen Erkrankungen oder zu irgendwelchen Sachen? Haben Sie da schon im Internet einmal nach Informationen gesucht?	The person fully relies on the information she/he gets from the internet. Additional advice is being sought when suggested by that information.	In4
		IE Nein! ((Vehement)) (Transcription Interview 17 Dec 2011)	The person is not really sure about the quality of the information and often seeks further advice when feeling insecure.	In5
			The person doesn't trust the internet in terms of information's quality and if he/she uses the internet at all, always gets a second opinion from a health professional.	In6

4.2 Data Collection and Management

As already discussed in Chapter 4.1 Research Design and Methodology, six semi-structured or focused in-depth interviews based on an interview guide were conducted. In order to gain an understanding of issues surrounding the health behaviour of migrants in Graz when experiencing minor ailments and then developing an interview guide drawing on from that, it was necessary to add a preliminary step prior to the interviews. Further, interviews and preliminary research were advertised in order to reach potential participants from the target group, wherefore multiple channels were used.

4.2.1 Access to Target Group

Throughout 2011, the qualitative stage, i.e. informal discussions (see Chapter 4.2.1 Preliminary Research) and interviews, was advertised using various ways of communications and utilised multiple networks by means of notices on blackboards or online panels (on <http://ReWi.at>, the Psychoforum Graz, <http://Biograz.com>, the URBI-info lounge, and the SOWI-Info lounge) in order to get access to the target group. Furthermore, qualitative research was promoted via the project's homepage (<http://reducingbarriers.jimdo.com>), handing out leaflets and putting a notice in the Alumni Uni Graz Newsletter of November 2012. Likewise, three presentations were held at different locations in order to inform about the project and further establish collaborations with local organisations working in the health and migrant sector. Respective organisations include the IOM (International Organization for Migration), Caritas Graz, Frauengesundheitszentrum Graz, ISOP (Innovative Sozialprojekte GmbH), a network of qualitative researchers at the Karl-Franzens University of Graz, OMEGA Health care Centre Graz, ZEBRA Intercultural Centre of Counselling and Therapy, Department of Migration and Globalisation of the Danube University Krems, KMI Commission of Research on Migration and Integration and the Austrian Integration Fund. Two presentations were held earlier in the year (2 January and 4 April 2011) at the Institute of Pharmaceutical Chemistry on the University's campus. The third presentation took place on October 19th 2011. Mag. Susanne M. Gobetz was invited as Keynote Speaker to the Caritas Campustalk at the Caritas Campus in Graz in order to talk about migrants' health in Graz and inform the audience about the project (see <http://reducingbarriers.jimdo.com/english/>). The connections and relations established at these presentations were used to cross-link the project "Reducing Barriers – Migrations, Minor Ailments and Medicines" to the existing local infrastructure in regard to migrants' health and discuss the design with experts in the field. Furthermore, this network enabled working by means of personal contacts and recommendations, i.e. utilising the snowball-system, in order to ensure that an appropriate mix of voluntary participants regarding sex, age and socio-economic and cultural background could be reached (Diekmann 2002).

4.2.2 Preliminary Research

As a preliminary step, three informal group discussions were held between February and April 2011²⁵. Targeting people having a migrant background and working or studying at the University of Graz, group discussions were advertised all over the university's campus. Various ways of communications were utilised to promote the meetings such as flyers, notices on blackboards or online panels, presentations and else (see Chapter 4.1.2 Target Group and Sampling). The setting for the discussions aimed to be low-threshold and informal, thus, no registration was needed to participate. Basic socio-demographic data including sex, age, native language, nationality and finally information about ethnic group membership was collected (see Table 4.2.1 Preliminary Qualitative Research: Group Discussions below). Both in the pre-test as well as in the full sample, ethnic

²⁵ February 24, March 4 and April 15, 2011.

background was explored by retrieving information on the participants' countries of birth, but also the countries of birth of their parents and grandparents (for more information see Chapter 3.2 Target Group). Each discussion was located at the library of the Institute of Pharmaceutical Sciences at the Karl Franzens University Graz and lasted around one hour. Since for this project there were no costs related to room rental, i.e. infrastructure, expenditure regarding the group discussions only comprised refreshing and sweets for the participants. For the purpose of analysis, parts of the discussions were audio-recorded and the facilitator, i.e. the author Mag. Susanne M. Gobetz, took notes during all sessions. At the beginning of each meeting, the participants were informed orally about these measurements so that they could decide whether to leave if not complying with the one or the other (see Chapter 3.1 Ethnic Issues).

In total six volunteers attended the meetings, all male and aged between 21-28 years (see Table 4.2.2 Preliminary Qualitative Research: Group Discussions below). Since there was no registration needed to participate, it was not possible to predict the numbers of volunteers taking part. Hence, the discussions rather ended up as informal meetings with maximum three participants at once. Literature suggests that the interviewer's person (i.e. sex, age, profession, etc.) impacts on the counterpart and can create bias (see Sieverding & Kendel 2012, Whiting 2008, Wizemann & Pardue 2001). Nevertheless, the low number of participants rather drew on from semester break (January 31 – February 25 in 2011) and many students leaving the university during that time than due to the author's person. Furthermore and according to Gill et al. (2008), the optimum size for informal discussions is six to eight participants, while three participants (excluding the researcher) are still enough to work successfully as a focus group (Gill et al. 2008). Since informal discussions represented the first step in preliminary research and aimed at learning about possible topics around minor ailments, their treatment as well as adequate conversational and cultural behaviour amongst the study groups, the small group sizes did not influence the content of the discussion. However, conclusions were of limited value since there was only one sex and one age group present in the discussions.

Two participants came from a Croatian, two from a Bosnian and two from a Turkish background. There was also one participant attending two different meetings. Although most participants stated to have been born outside Austria, some explained to have moved to Austria as infants. Hence, these participants were seen as representatives of the second migrant generation, though second generation migrants are generally defined as born inside Austria within this research²⁶ (ÖIF 2011 Migration & Integration, UNECE 2006). In terms of membership regarding ethnic groups they identify themselves with, all volunteers identified themselves according to their parents' ethnical and cultural background. Initiated to gather data on minor ailments and further support the person conducting the interviews²⁷ in learning about possible topics centred on minor ailments and their treatment, the informal discussions should also help to find out about adequate conversational and cultural behaviour amongst the study groups. Since there was only one sex and one age group present in the discussions, conclusions were of limited value, as mentioned before. However, initial information could be gained about issues surrounding migrants' health behaviour in Graz when experiencing potentially self-treatable conditions. Moreover, the conducted informal group discussions provided information on appropriate behaviour in regard to potential conversational and cultural issues which might be arising during cross-cultural interviews. For instance, one participant added that some people might have had negative experiences with interviews due to immigration procedures or else. Furthermore, all volunteers emphasised their culture's hospitality and presumed that the interviewer would be invited into the interviewee's homes many times. Within that context, all participants suggested bringing a small gift when interviewing, mentioning

²⁶ For more information, see Chapter 4.1.2 Target Group and Sampling.

²⁷ i.e. Mag. Susanne M. Gobetz; see Chapter 4.2 Data Collection and Management.

chocolate candy, flowers or coffee as they were convinced that this would help to establish positive relations with the participants. Another item of discussion was further, whether or not the participants think that language barriers might present an issue. Regarding this matter, all five participants were convinced that language barriers would be an issue during the interviews. Thus, they all agreed that translating the interview guide into Croatian, Bosnian and Turkish would be a good idea to minimise potential language barriers.

Table 4.2.2: Preliminary Qualitative Research: Group Discussions

Sex	Age	Place of birth ²⁸	Parents' / grandparents' places of birth ³	Native language(s)	Ethnic membership	Citizenship
M	21	HR	HR	Croatian	Croatian	Croatia
M	22	BiH	BiH	Bosnian	not specified	Austria
M	22	A	TR	Turkish German	Turk	Austria
M	23	BiH	BiH / HR	Serbo-Croatian	Serb	Bosnia-Herzegovina
M	23	TR	TR	Kurdish Turkish	Kurd	Republic of Turkey
M	28	HR	HR	Croatian	Croatian	Croatia

Drawing from the results of the discussions, a preliminary line of questions was proposed and moulded into an interview guide-draft. As proposed in the literature (Diekmann 2002, Kvale 2007, Patton 2002), two pilot interviews were then conducted in order to train the interviewing person and revise the instrument design. Since family members volunteered as interviewees, no socio-demographic data was collected. Although Reinders (2005) argues that a researcher's friends or family members are not appropriate participants due to the bias this may create on both sides, he also states that this rule does not apply on preliminary research, i.e. pre-tests or pilot trials. While trying out the questions to see what kind of issues may arise, this additional trial generally aimed at improving the instrument used (i.e. the interview guide) in respect to ensuring overall quality, determining limitations or weaknesses within the interview design, language issues as well as non-ambiguous questions, and also strengthening the interviewer's competence in performance (Diekmann 2002, Kvale 2007, Lamnek 2010).

4.2.3 Conducting the Interviews

The interviews took place from October until December 2011. Due to the busy pre-Christmas period, it was difficult to get appropriate volunteers for the interviews. However, six²⁹ guided interviews were performed by end of December 2011, each lasting about ninety minutes. For the purpose of transcription, all interviews were audio recorded and followed the Ethnic Guidelines of the Social Research Association (SRA 2007 & 2003). The

²⁸ HR = Croatia; BiH = Bosnia-Herzegovina; TR = Turkey; see also List of Abbreviations.

²⁹ Originally there were seven interviews, but one interviewee had to stop and leave during our interview session.

interviews were conducted in German and language issues never arose. To ensure overall quality and an academic standard in qualitative research, a control person was installed³⁰.

4.2.3.1 Interview Venue and Duration

As stated by DiCicco-Bloom & Crabtree 2006, semi-structured or else focused interviews are usually scheduled in advance at a designated time and location, while lasting from thirty minutes up to several hours. Although good communication skills are more important in order to conduct interviews successfully (Whiting 2008), the location may impact on the interviewees and the way they response to questions (Brikci & Green 2007). Hence, finding a suitable environment where the interviewees feel comfortable and can speak without restriction and distraction can help with collecting information-rich data showing high validity in regard to content (Creswell 2007, Diekmann 2002, Lamnek 2010, Turner 2010). Therefore, conducting interviews in a quiet, private room or giving the choice of venue to the participant is recommended (Diekmann 2002, Flick 2009, Patton 2002, Whiting 2008).

Table 4.2.3.1: Settings of Interviews

setting	n	sex	age in years
individual working environment	2	female	> 40
interviewees' homes	1	male	> 40
university campus	3	female & male	< 30

Within this research project, interview venues and dates varied due to the interviewees' preferences, while all the interviews lasted around one and a half hours each. After getting in contact, date, time and location were prearranged individually by phone. As part of this phone call, interviewees further received basic information on the project (see Chapter 4.2.3.2 Interview Setup) as well as on the estimated length of one to two hours. As shown in Table 4.2.3 Settings of Interviews above, three participants decided to utilise the provided room on the Karl-Franzens University Graz's campus which had prior been selected and prepared with drinks by the author. Whereas two other parties asked the interviewer to come to their individual working places, one invited Mag. Susanne Gobetz to his home for health reasons.

As already mentioned in Chapter 4.1.3.3 Interview Guide, there is a disagreement within the literature whether giving a gift or financial reimbursement is appropriate (Whiting 2008). However, the author decided to bring chocolate candy intended as a thank-you gift for every participant, as had been suggested at the preliminary informal discussions. Furthermore and as common Austrian convention suggests, flowers were given to one interviewee's wife when entering the interviewee's home. The chocolate candy was handed over after the interview process had been finished, the audio-recorder had been turned off and just before the participants or respectively the interviewer left. All participants were very pleased with their little gifts and offered to answer

³⁰ i.e. Mag.Dr. Charlotte Christina Fink (Independent Scholar Cultural Studies and Social Sciences); see Chapter 3.2.4 Collaborations.

any potentially upcoming questions regarding their interviews right away. Thus, the intention to credit the interviewee’s efforts with small gifts such as chocolate, flowers or coffee (see Chapter 4.2.2 Preliminary Research) can help to establish good relations and a positive basis for further enquiry.

4.2.3.2 Interview Setup

According to DiCicco-Bloom and Crabtree (2006), individual in-depths interviews allow for the researcher to look deeply into the interviewees’ social and personal matters; hence they are of sensitive nature. Thus, literature suggests a number of preparations for the implementation stage of an interview process and provides extensive instructions for issues that need to be discussed with the participants before interviewing (see Bricki & Green 2007, DiCicco-Bloom & Grabtree 2006, Diekmann 2002, Flick 2009, Gill et al. 2008, Lamnek 2010, Patton 2002, Whiting 2008 and others). In Table 4.2.3.2 Subjects to clarify before Interviewing below, an overview on the most essential instructions was assembled.

Table 4.2.3.2: Subjects to clarify before Interviewing

<ul style="list-style-type: none"> • Topic of interest and interview purpose • Estimated interview duration • Issues of confidentiality and anonymity • Issues of data security • Usage of video or tape recorder • Voluntariness of participation: interview disruption or abruption (if necessary)
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(Brikci & Green 2007, DiCicco-Bloom & Grabtree 2006, Flick 2009, Gill et al. 2008, Lamnek 2010, Whiting 2008)

As already mentioned, basic information on the project was given by phone and in addition via email to all participants prior to the interviews. Within these phone and written conversations, interviewees were informed about the purpose of the interviews as well as the research topic and audio-recording while also clarifying issues of consent and confidentiality (see Chapter 3.1 Ethnic Issues). Thus, eventual questions regarding the interview procedure could be answered before the actual interview situation, which contributed considerably in establishing positive rapport at the interview venue right away. As a result, these measures helped the potential interviewees to consider all aspects (such as audio recording or confidentiality for example) and make an informed decision about participating in the interviews. All of the potential participants who were contacted by the author and approved of receiving information by email and phone also agreed on participating in the interviews, stating to have been very good informed prior to the interviews. In addition, a consent form was prepared, including basic information on the research topic, interview procedure and ethnic issues such as recording, confidentiality and the right to withdraw from participation at any time (Whiting 2008; see Appendix). Furthermore, the consent form was used to gather demographic data on the participants (see Chapter 4.1.2 Target Group and Sampling) and acted as contact information³¹. Thus, it was handed out right at the end of the interviews, but before saying goodbye and thank-you gifts were presented. Consent forms were handed out in pairs, since one had to be signed by the interviewees and one was given to the participants to be able to keep in contact and stay up to date on the research project.

³¹ For more information on data storage, see Chapter 4.2.3.3 Confidentiality and Security Issues.

After the interviewee, or the interviewer, respectively, arrived at the interview venue, the interviewer introduced herself and started a very general, informal conversation in order to ease eventual tension (DiCicco-Bloom & Crabtree 2006; see Chapter 4.1.3.3 Interview Guide). Further, the above-named issues related to the implementation stage of the interview were discussed and clarified within that communication. After both, the interviewee and the interviewing person, felt relaxed and agreed on starting the interview, the tape recorder was placed on the table and turned on. Hence, the additionally, but sparsely taken notes aimed at supplementing the recordings in terms of latent meaning or feelings regarding body language and facial expressions to make sure to collect all relevant, including non-verbal communication. All interviews were entirely audio-recorded, thus, the interviewer could concentrate on the interview process and conversation without being distracted by taking notes, however (Turner 2010). Further, attention could be paid to various aspects of inter-personal interaction, e.g. whether sitting in a certain position, keeping eye contact or being sensitive to special needs (e.g. bad hearing) is making the interviewee feel comfortable or not, but also avoid biasing the interview, i.e. presenting the author's own perspectives instead of letting the interviewees tell theirs (Boyce & Neale 2006, Brikci & Green 2007, Flick 2009, Gall, Gall & Borg 2003, Green & Thorogood 2009, Gubrium & Holstein 2001, Helfferich 2011, Kvale 2007, Reinders 2005). Occasionally during the interview procedure, the tape recorder was checked to verify that it was still recording. In order to enhance fluency between major topics, transition phrases were used (e.g. "We've talked about... now I'd like to move on to...") while conversation evolved along the prepared interview guide and control was maintained by the interviewer (Kvale 2007, Turner 2010). Although concern has been expressed that recording might negatively affect both persons, i.e. the interviewee and the interviewer), Whiting (2008) argues that rapport may still be established quickly. Hence, after the interviews had been concluded, the audio recorder was turned off while the interviewer continued chatting freely with the interviewees for a few more minutes. This way, the interviewer could generally gauge whether or not the interviewees were constrained by the recorder (Brikci & Greene 2007). Lastly, consent forms had to be filled out and signed. After this the interviewer, Mag. Susanne M. Gobetz, expressed her gratitude by presenting the chocolate candy as a thank-you gift and took leave of the interviewee.

4.2.3.3 Confidentiality and Security Issues

As already discussed in Chapter 3.1 Ethnic Issues, ethnic issues related to qualitative research such as informed consent, confidentiality, data security and consequences for the participants are of sensitive nature and therefore careful to approach (Kvale 2007). Especially researchers new to qualitative methods need to think about and settle those matters thoroughly before undertaking a qualitative research project (Brikci & Green 2007, DiCicco-Bloom & Crabtree 2006, Turner 2010, Whiting 2008). For this research, formal ethnic approval was granted by the Ethnic Commission of the Karl-Franzens University of Graz (see Appendix). In addition, all qualitative procedures followed the Ethnic Guidelines for International Comparative Social Science Research (MOST Management of Social Transformations, UNESCO) and the Guidelines for Social Research (SRA 2007) in order to ensure overall quality and respectability in regard to international standard. Since the overall aim for qualitative research is to be information rich and as far standardised as possible, there was always the same person (Mag. Susanne M. Gobetz) performing the discussions and interviews. Likewise, it was the author only, who organised, i.e. catalogued and further archived the data, while she was also responsible for data confidentiality and related ethnic issues (see Chapter 3.1 Ethnic Issues). All of the collected data was anonymised by the author right after the interviews had been performed, utilising anonymous data sheets developed for this purpose (see Appendix 4.1 Interview Guide and Data Sheets). According to the suggestions and instructions given by the literature, family and place names were replaced by codes or deleted entirely (Brikci & Green 2007) before transcription took place.

4.2.4 Transcription of Interview Data

The method of transcription (of interview data) defines the preparations which are necessary in order to analyse the material collected through the conducted interview, further implying the transcription from oral speech to written document (Kvale 2007). Aiming at reproducing a transcript as accurate as possible compared to the transcribed conversation, the researcher also has to give thoughts to readability, hence a feasible form of compacting the conversation which is subject to transcribing. Thus, a transcript can never reproduce all multiple facets of a conversation, i.e. nonverbal aspects including environmental and visual issues, smell, body language, facial expression and else. Depending on the scope of research and research questions, the investigator has to decide whether to use simple systems for transcription, focusing on content and transcribing mainly spoken words (e.g. transcription after Hoffman-Riem) or more complex systems also specifying para- and nonverbal activities, for example tone pitch, rate of speaking or else (such as GAT³²) (DiCicco-Bloom & Crabtree 2006, Dittmar 2004, Dresing & Pehl 2012, Flick 2009, Lamnek 2010). Whatever approach is applied, it is further argued that transcribing is a difficult, elaborate and time-consuming process. Since people tend to use run-on sentences, dialect or slurring within their conversations, researchers may be forced to make judgement calls in regard to sentence structure which can change the meaning of a sentence severely. Hence, transcribing requires a lot of attention, skill and experience from the researcher and should be revised repeatedly (DiCicco-Bloom & Crabtree 2006, Lamnek 2010).

Table 4.2.4: Basic Transcription after Hoffmann-Riem

--	Short break
---	Medium-length break
----	Long break
It is <u>hard</u>	Noticeable emphasis on word / phrase
It is h a r d	Drawled word / phrase
(that hard?)	Not fully understandable, assumed wording
(...)	Not understandable at all, hence elision
((laughs))	Nonverbal expression
((laughing))	Nonverbal expression as corollary (e.g.: the person is laughing while talking)

(Dittmar 2004)

Since this research focused on content as opposed to analysing language, the basic transcription system after Hoffmann-Riem was applied (see Table 4.2.3.4 Basic Transcription after Hoffmann-Riem above). In a first step, the spoken conversation was hereby put into writing while applying the suggestions for transcription according to Hoffmann-Riem which are displayed below. Subsequently, the author listened to the recordings repetitively while proof-reading the script, in order to correct the text regarding mistakes in hearing, sentence structure,

³² GAT (Gesprächsanalytisches Transkriptionssystem) is a complex, language-analytical system for transcription often used in linguistics, especially throughout German-speaking countries. For more information, see Dresing & Pehl (2012, pp.33ff).

inconsistency and else. Finally, qualitative tutor Charlotte Fink monitored the transcripts before analysis procedure started (see Chapter 4.1.3.5 Content Analysis).

4.3 Results and Findings

As described in Chapters 4.1.3.5 Content Analysis, interviews were analysed applying qualitative content analysis after Mayring. Consequently, an agenda for coding was assembled (see Appendix) comprising five main categories, namely measures beneficial to health, getting medical advice, medical doctors, self care and minor ailments. Following the principles of Philipp Mayring's approach, the main categories were then redivided into sub-categories as explained in Figure 4.1.3.5.3 Implementation of Deductive Categories, while further revision and analysis in regard to migrant generation, migrant background, gender and else took place (see Chapter 4.4 Discussion and Analysis).

4.3.1 Category I Measures Beneficial to Health

Category one of the five categories of analysis dealt with measures that are beneficial to health³³, i.e. physical exercise, healthy diet and smoking and was subdivided into three sub-categories, i.e. doing sports, nutrition and smoking

Sub-category one, doing sports, collected all statements regarding any kind of physical exercise (such as walking, going to a fitness centre, doing dance classes or walking stairs for instance) and was evaluated based on nine different key points concerning intensity and importance of doing sports. One older female and two younger interviewees of different sexes having a Croatian and respectively Bosnian backgrounds stated that doing sports is an important part in their lives and that they think it would not be possible to lead a healthy lifestyle without exercising. Thereof, the older female stated that she starts feeling physically unwell if she does not do enough sports regularly and that she even wants to exercise more often. In addition, she was also the only one exercising three times per week or more. Another older, male interviewee with a Serbian background thought that exercising regularly is important but other things such as nutrition, not smoking and preventive medicine (i.e. regular check-ups) are as well, while the two remaining females of different age groups with Kurdish and Bosnian backgrounds stated that they did sports only to stay healthy, with exercising being more obligation than fun to them. Half of the interviewees consisting of both men and one younger woman stated to exercise at least one time and at maximum three times per week, while the younger female with a Bosnian background and the older male Serb both said that they would like to do more but cannot right now due to being in constant pain or time issues. Of the other two females having a Kurdish and respectively a Bosnian background, the younger Kurd does not exercise on a regular basis and the older exercises at maximum one time per week. This participant further said that she did sports only to lose weight and that exercising by itself did not help to improve health, only when combined with other measures.

In sub-category two, all statements in respect to eating and drinking were evaluated with reference to eight key points concerning the evaluation of a healthy diet, the consumed amount of food and nutrition habits. In addition, indication was sought in regard to following special diets (e.g. vegetarian, no alcohol) and if the person was responsible for his/her family's nutrition (e.g. shops or cooks for family every Tuesday). All of the interviewees agreed on maintaining an overall balance as the most important thing in regard to nutrition. Nevertheless, only four interviewees (every one of the younger age group and one older female with child) thought that eating healthy is an important part to maintain overall health and that without healthy nutrition it

³³ For this project, beneficial measures to health were assumed to be physical activity (e.g. biking, walking, going to a fitness centre, doing dance classes, walking stairs instead of using the lift or else), keeping a healthy diet (in regard to nutrition behaviour, amount of food, nutrition habits and else) and not smoking as suggested by general knowledge (see Affeman 1978, Berner & Zapotoczky 1992, 1990, 1989, BMGF 2005).

is not possible to lead a healthy lifestyle. This participant with a Bosnian background further specifying that she hardly drank alcohol, while two others thereof (both below thirty, one male with a Croatian and one female with a Bosnian background) were Muslims who completely abstain from pork and alcohol at all. Of the latter, the younger male interviewee stated to be a straight vegetarian but eating fish. Two females from different age groups and migrant backgrounds (Bosnian and Kurdish) stated to be responsible for their families' nutrition - one had a teenage child and was therefore struggling with that child's soft spot for junk food, while the other one was doing the shopping for her family on a daily basis. Three participants - the younger male with a Croatian background as well as two females of different age groups with an origin in Bosnia-Herzegovina - stated that they generally eat healthy food only (i.e. food that is low in sugar and fat, high in fibres and carbohydrates, and no junk food), with exceptions being rare. The younger woman further explained that she was on a diet right now, aiming at losing weight and improving her performance in sports. Hence, the older woman and the male vegetarian were the only ones adhering to a strict nutrition-plan in normal everyday life. Three females further declared to try to eat and drink healthy but admitted to having some soft spots. Whereas one younger female with a Kurdish background named coffee as her soft spot, the other two (one of each age group, both Bosnian backgrounds and no children) specified their soft spots as chocolate or respectively sweets in general. Only the older male with the Serbian background said that he eat and drank whatever he liked and did not care much about a healthy nutrition. He was also the only one saying that to eat unhealthy (e.g. fast food) more than three times a week. While three interviewees with a Bosnian background thought that they were eating too much in general, none of the participants thought that they were eating too little.

Sub-Category three collected all statements regarding smoking, even if the person has already quit. Evaluation was based on eight key points, i.e. how much the person smokes, whether smoking is important to the person or not and else. If the person was smoking on a regular basis, he/she was defined as a smoker within this project. All interviewees thought of smoking as unhealthy and as a bad habit or respectively, addiction. Half of the interviewees, one female over forty and both males said they have quit smoking already. While only the two older, having a Serbian and Bosnian background, further stated that quitting had been a satisfying decision and that they did not need cigarettes at all anymore, they further declared to have gained weight considerably since then. In contrast, one younger and one older female smoker from a Bosnian and respectively a Kurdish background specified smoking as important to them and that they did not want to miss it. Consequently, these were the only ones to smoke regularly during the day and on an everyday basis, even though they thought of smoking as unhealthy and bad habit. Only one younger female with a Bosnian background stated to have never smoked before, reasoning that her mother used to smoke for a long time and that within an Islamic community it would not be considered as appropriate when young girls smoked.

When asked about their own opinion which measures would be the most important to stay healthy, almost all interviewees stressed focusing on a balance between all aspects , i.e. sports, nutrition and generally their own bodies' needs. The older male with the Serbian background thought of prevention as the most important aspect and to generally think about how to stay healthy before getting sick. Additionally, one younger female with a Bosnian background also pointed out the importance of emotional balance, whereas the younger male with the Croatian background underlined the importance of enough sleep.

4.3.2 Category II Getting Medical Advice

Category two examined where the interviewees look for medical advice if needed and was therefore subdivided into four sub-categories, namely internet, medically trained friends or family, pharmacies and migrant facilities.

Sub-category 'Internet' collected statements regarding the usage of the internet as information source for advice on any kind of health issues. Evaluation was carried out applying six key markers, for instance how much the internet was utilised for that matter, whether the information retrieved was seen as reliable or not and whether or not additional advice is being sought. Two women of different age groups and the younger male, with an origin in Turkey and respectively Bosnia and Croatia, said, that looking on the internet is one of many possibilities to gather information on health and is sometimes (however, not always) utilised by them. When utilising the internet for that matter, all three of those further stated that they would always get a second opinion from a health professional. Thereof, the older female and the male indicated having a sister being trained as an MD and therefore to do not trust the internet in terms of information's quality. In contrast, the older male and one younger female interviewee, both with an origin in Bosnia-Herzegovina, said to not use the internet as information source on health at all or only very randomly. The woman below thirty further explained to have tried it once but couldn't rely on the information collected because it was so confusing and preferred seeing an MD instead. In contrast, both of the older female interviewees (both having a Bosnian background) said that looking on the internet for medical information is the first thing they do before doing anything else and no matter which measures they undertake later on. The one having a child further reasoned that using the internet to get medical advice is very convenient as information is easily accessible, whereas the other one said to primarily use the world wide web to get information on alternative forms of treatment³⁴ and that her first point of contact if medical advice is needed would always be her sister. Nevertheless, neither they nor the other interviewees fully relied on the information they got from the internet. As already mentioned further up, half of the interviewees said to always get a second opinion from a health professional, whereas two females added they often do not really feel sure about the quality of the information and thus often seek further advice when feeling insecure. While the younger female with a Kurdish background thereof stated to read up further and/or discuss the issue with her friends, the older with a Bosnian background usually tries to check out what she referred to as 'more serious sites' (i.e. information published by public health centres) or health-related events to get informed.

In sub-category two, the focus lay on medically trained persons within the person's family or friends. Within this project, a medically trained person was defined as any kind of health professional like a pharmacist, nurse, MD, druggist or else. It was also asked who the medically trained person was and what profession he or she belonged to. There was nobody who did not have any medically trained personal within his/her family and/or circle of friends. As already mentioned in the last paragraph, half of the interviewees (both men and one older woman, having a Croatian and respectively Bosnian backgrounds) stated to have an MD within their families. The older female and the younger male thereof further said to get in touch with the health professional they knew as the first thing they did before doing anything else whilst the older Serb stated to not utilise his female relative as information source on health at all. The other half of the interviewees consisted of only females, two with a Bosnian background but of different age groups and one younger Kurd with an origin in Turkey. These participants stated to have any other medically trained person (nurse, pharmacist, druggist or else) within their

³⁴ Alternative Treatment, for this project, was defined as measures opposed to 'modern' conventional medicine including healing systems such as Ayurveda, TCM Traditional Chinese Medicine (TCM), Homoeopathy, Bach Flower Remedies or herbal treatment (see Chapter 1.2.2 The Concept of Self Care).

families or circle of friends. Thereof, the older woman said to not utilise her male psychologist relative as information source on health at all, while one of the younger tried to sometimes (however not always) get advice from her male health manager friend, yet was not always sure about the information's quality. By contrast, the other younger woman having a Kurdish background declared that getting in touch with her female nurse and physiotherapist friends was the first thing she did, no matter which measures she would undertake later on.

Statements regarding the use of pharmacies as an information source for advice on any kind of health issues were collected within sub-category three and evaluated using eight key points, for example whether the person already used or has used pharmacies to get informed, if they were only buying medicines there or if additional advice has been sought (i.e. on skin products) and also what the experiences were. Half of the interviewees (one male and one female, both over forty with children and with an origin in Bosnia as well as one younger female Kurd) stated to have made more or less negative experiences with pharmacies, while the other half (two females of different age groups with an origin in Bosnia, and the younger male with a Croatian background) stated to have made more or less positive experiences with pharmacies. Of those who have made positive experiences, the older female stated to only visit two pharmacies and therein certain pharmacists she knew and trusted, while the younger female said to have tested different pharmacies to double-check if quality varied and that she had been satisfied with all of them. All thereof further reasoned to visit a pharmacy when looking for professional advice on health issues and information about additional options of treatment or medicines, with the two females being the only ones using pharmacies on a regular basis to get informed. Those with more or less negative experiences regarding pharmacies said that they never use pharmacies as information source on health issues, and that they only went there to buy medicine. They further argued that products were over-priced, staff was unfriendly and that they felt like there was no personal interest coming from the pharmacists as if they just wanted to sell something, no matter what. As for the kind of products on which advice was being sought, three interviewees declared to most of the time just go to a pharmacy to buy medicine, but randomly also try to get advice there, mainly in regard to OTC-products. This group consisted of the younger male who said to have made positive, and two females of different age groups and origin who said to have made negative experiences. Another half the interviewees, all females, stated to look for professional advice on cosmetics or skin care products (e.g. sun blocker) when being in a pharmacy. Thereof, one younger and one older woman with Bosnian backgrounds have made positive experiences, whilst the third one with a Kurdish background has made negative experiences in regard to pharmacies. Finally, two older interviewees with an origin in Bosnia (one male one female), stated to know exactly what to buy and that they did not want any further advice when coming into a pharmacy.

Statements regarding facilities for migrants in Graz and the health services they offer were collected in sub-category four, evaluating them by using six key points (i.e. if and what kind of services are familiar and whether they have already been used or not). None of the interviewees has already utilised any migrant facilities in Graz, neither for health services or any other kind of service. Three female interviewees (two older with an origin in Bosnia and one younger with a Kurdish background) knew about, i.e. were familiar with various facilities for migrants in Graz and the service they offer due to their working backgrounds. Only one younger female interviewee with a Bosnian background did not know about any facilities for migrants in Graz, although when mentioning some, they sounded familiar to her. Both males stated to know about some facilities or have heard of any. The facilities mentioned the most among all interviewees were Omega and ISOP (see Chapter 3.2.4 Collaborations).

4.3.3 Category III Medical Doctors

Category three focused on the interaction between patients and medical doctors and divides into the Sub-Categories, i.e. seeing a medical doctor in general, the family physician in specific and further dealing with medical questionnaires.

All statements regarding seeing an MD were collected and evaluated within sub-category one. Evaluation was based on fourteen key points, reflecting the intensity of MD utilisation, MDs' performances, annual check-ups and duration of consultation. Additionally, information was collected regarding chronic sickness as well as long-term therapies, occasion and date of the last MD-consultation. All interviewees except for one said to suffer from chronic health problems, mostly mentioning allergies, headaches, back pain and others. Thereof, four stated to experience emotional health problems as well, the same further declaring to be in at least one long-term therapy at the moment. The older female having a Bosnian background and declaring not running a long-term therapy treated her chronic headaches using OTC-products. In contrast, the younger male having a Croatian background was the only one neither experiencing chronic health problems nor running a long-time therapy. In terms of how often a specialist was seen, all female participants stated to consult one at least once a year, mostly due to annual check-ups. Thereof, one younger interviewee with a Bosnian background was only doing so because of her long-term therapies, while the other Kurd below thirty said that, generally speaking, she had no time for seeing an MD or getting advice from a health professional at all. Except for the older male with a Serbian background, none of the interviewees consults a specialist more often than four times a year (due to his long-term therapy that started after a bad accident, the older male needed consultations constantly). As for frequency of GP visits, two thirds of the participants consisting of both older females with Bosnian backgrounds, one younger female with a Kurdish background and the younger Croatian male, stated to consult a GP once or twice a year. The remaining older male and younger female participants, both with an origin in Bosnia said to do so once or twice a month, albeit the older male had to sometimes do more frequent visits due to his long-term therapies (see above).

In regard to annual check-ups (no distinction was made between specialist and GP), almost all interviewees stated to do them regularly. The older female not having children was the only one saying that she only did check-ups when thinking of it but tried doing them on a regular basis. If they needed any information on health issues, all interviewees stated they would go and see an MD. However, the other female over forty having a Bosnian background further argued to only ask the MD for medical advice when she was already there instead of seeing an MD just to get information. The two male participants on the other hand further said to read up on health issues before seeing an MD and then asking for advice only to double-check their own knowledge. When evaluating their own behaviour regarding MD consultations, two thirds of all interviewees consisting of all females with an origin in Bosnia and the younger Croatian male, declared that they consulted an MD only if they thought it was really necessary. Yet, one younger and one older women thereof as well as the older male, all with an origin in Bosnia-Herzegovina, said that when feeling uneasy, the first thing they do would be seeing an MD. In addition, the same older women and another younger female interviewee with an origin in Turkey also said to only see an MD if they thought it was not avoidable. The female interviewee with a Kurdish background further explained that she did not believe in medication at all and that she always tried to cure her situations else wise. Yet, the older woman thereof and the younger male both indicated to have sisters being trained as MDs. Hence, after utilising their medically trained sisters - which they stated would be their option number one - seeing another MD would be the next thing they to do when feeling uneasy. Finally, two thirds of all interviewees, all with a Bosnian background, said to already have experienced insecurities or scepticism regarding an MD's performance and that they have always chosen to get a second opinion in that case. The

remaining third consisting of the younger male with a Croatian and a younger female with a Kurdish background, stated to never felt insecure or unsatisfied regarding a doctor's performance. In regard to the duration of consultations, all interviewees having an origin in Bosnia-Herzegovina said to often experience long waiting periods and sometimes hasty examinations, while almost all mentioned no GPs but specialists in that context. The two participants who declared to never have felt insecure or unsatisfied regarding a doctor's performance before, also stated to never have experienced hasty examinations when seeing a GP, although sometimes they also had to wait a long time.

Sub-category two gave attention to the Family Physicians (FP) and evaluated through key points if and why the person consulted his/her FP (like for example the office is nearby, friendly staff, the doctor speaks the native language and else). Furthermore, it questioned for how long the person had been consulting this FP (for instance since being a child, since coming to Austria or else) and also looked at duration of FP consultations. All interviewees stated to have a certain GP they were seeing regularly, making this doctor their family physician. In regard to why they were seeing their FPs, all interviewees reasoned to like it there because doctor and staff were friendly and efforts were being made to keep the patients satisfied. All female participants emphasised that their FPs already know them and their medical records, yet only half of all interviewees, including the older male and two younger females each with a different background (Serbian, Bosnian and Kurdish) stated to consult their FPs because they were acting very professionally. The same three participants together with one older female having also a Bosnian background further explained that their FPs had been suggested by family or friends. Those two thirds of all interviewees were also the ones who had been consulting their current FPs for the longest - more than ten years. In contrast, the remaining participants, the other older woman having a child and the younger man (with a Bosnian and respectively Croatian background) started consulting their current FPs recently or only a few years ago. They further explained that the doctors' offices were very close (not more than ten minutes walk from their homes) and that they find this very comfortable, especially when having a child - as the woman further added. Interestingly, none of the interviewees argued to have chosen his/her GP because the doctor spoke their native language, even though one told about language problems in the past. Concerning the duration of FP consultations, the two older women with Bosnian backgrounds stated to often experience long waiting periods and always hasty examinations with much too little time due to too many patients, while the rest said to often have to wait for quite a long time due to the same reason, but examinations were never hasty at all.

Statements in regard to medical questionnaires were assembled in sub-category three, looking for information about if and where the person already had to fill out some, if there were any language issues due to medical terminology and further if there was any help available. All interviewees already had to fill out medical questionnaires, most of the times when seeing a medical facility for the first time (general practitioner, vaccination centre, specialist and plasma donation centre). Furthermore, all interviewees stated to never have needed help in filling out these forms, yet there was only one older female who was offered assistance once. Also, none of the interviewees experienced problems due to medical terminology, except for the older male who in the past did, but not anymore.

4.3.4 Category IV Self Care

Subdivided into the three sub-categories alternative treatment, home medicine cabinet and home remedies, Category four self care examined how much knowledge pertaining to health education was available, what kind of strategies in regard to self care the interviewees developed and further utilised in their everyday life.

Sub-category one collected any statements regarding the usage of alternative methods of treatment, including what kinds of alternative treatments were familiar, how they were evaluated, where the information about alternative treatments came from and lastly, what kind and for how long of alternative treatment was used. All interviewees said to have heard of alternative forms of treatment before. One half of the interviewees, including the younger male having a Croatian and two women of different age groups having a Bosnian background, said to have heard of some but did not know any details about them, whereas the other half of the participants also knew some details about alternative methods, mostly mentioning homeopathy, TCM and herbal treatment. Regarding the frequency of usage, the two older participants having children and a Bosnian background together with the younger female having a Kurdish background, stated to already use some alternative methods of treatment, especially homeopathic treatment, on a more or less regular basis. All of them also said to have tried other kinds of alternative methods of treatment that they might use again, naming TCM and Acupuncture. When asked about their attitudes on alternative forms of treatment, the same half of the interviewees thought of them in a basically enthusiastic way. Thereof, the older female who had a child saw benefits in alternative treatments being holistic and balanced with nature, but also disadvantages like incompatibility with everyday life due to them being time-consuming. The remaining older male and younger female saw the biggest drawback in utilising alternative ways of treatment, however, in the high costs. The other half of people who had been interviewed thought of alternative forms of treatment in a basically sceptical way. Yet, only the other older female participant had already made bad experiences, hence would not want to use them again. Two younger interviewees of the two different sexes having a Croatian and respectively a Bosnian background could not imagine that alternative forms of treatment could help at all and thus have not tried them yet. The female thereof also believed that alternative treatment was time-consuming and did not help fast, whereas the male thought of alternative forms of treatment as expensive. In terms of where the interviewees got informed about alternative treatments, almost all with an origin in Bosnia, except for the older female not having a child, mentioned their FPs as source of information. Thereof, the other older female having a child also referred to a pharmacist, being the only participant utilising pharmacists as information source on alternative methods of treatment. Further, two interviewees stated to have got informed by a friend, whereas two females with an origin in Bosnia but of different age groups said to have used books or the TV to retrieve the information needed. Finally, the older female thereof was the only one stating to have used the internet as information source on alternative methods of treatment.

Statements regarding home medicine cabinets (HMCs) were collected in sub-category two, focusing on what kind of medicines and why specifically these medicines were kept in the house at all times, where they were from and who used or rather stocked the home medicine cabinet in general. All interviewees stated to have various painkillers in form of pills and/or ointments, something to treat digestive disorders and a common cold within their home medicine cabinets, except for the younger male with a Croatian background, who declared wound treatment and drugs to treat a common cold (like nasal sprays, cough mixtures, medicinal teas or else) as parts of his HMC. One of the younger female participants with an origin in Bosnia further specified to permanently need wound treatment, bandages and tape – thus, she kept these things at home at all times. In addition, half of the interviewees, consisting of two older participants both with an origin in Bosnia but of different sexes and one younger female with a Kurdish background, stated to have an extensive accumulation of various drugs, ointments and other medicines within their home medicine cabinet. Regarding why specifically these medicines were kept at home at all times, three participants, including the younger male and two women of different age groups but both with a Bosnian background, reasoned to want exactly this kind of medical treatment to be at home permanently because they thought these products help the most. Another older female also integrated her first aid kits for travelling into the home medicine cabinet, while the older male was

the only one explaining that his HMC consisted largely of prescription-leftovers. In matters of where the interviewees got informed about what goes into a home medicine cabinet, all interviewees having an origin in Bosnia-Herzegovina stated to buy the medicines in a pharmacy but know exactly what they want, hence they felt no need to actually consult a pharmacist before buying. Thereof, two females of the two different age groups, the older one having a daughter, stated to often buy OTC³⁵ products suggested by a pharmacist as well, whereas the younger male with a Croatian background said to do so only sometimes. All female participants having a Bosnian background stated to see an MD and get prescription when medicines for their HMCs are needed. However, both younger female interviewees having a Bosnian and respectively a Kurdish background stated to often buy medicines recommended by relatives or friends who did not have any medical training at all, whilst the one having a Bosnian background further added that she also often got informed by a friend who is a physiotherapist. The younger male and the older female having a daughter utilised friends or family as information source only sometimes, while arguing that they often followed suggestions made by their sisters, who were both trained as MDs. Regarding who used or rather stocked the home medicine cabinet, two younger and one older interviewee not having children said to use and stock their HMCs by themselves, even though the younger female also stated that her family had another, separate home medicine cabinet stocked by her mother which they all use. Whereas all the interviewees living together with their families (representing all except for the younger male and the older female without children) stated to have one HMC for all family members, there were only two (older Serbian male, younger Kurdish female) declaring that their home medicine cabinets were stocked by somebody else living in their households (i.e. parents or wife). Thereof, the older male further specified that his wife was not the only one stocking it; he also buys medicines by himself if necessary, whilst the older female reasoned that she was the only one to stock their HMC, because her daughter was still a minor.

Sub-category three concentrated on homemade remedies³⁶, exploring if, how and what kind of homemade remedies are used. Furthermore, it was tried to find about where the knowledge on traditional remedies comes from.

Generally, all interviewees stated to know about homemade remedies, only one younger participant (male Croatian) thought of cleanser or treatment methods of the middle-age at first, but could remember some later on. In regard to where they gained knowledge on traditional remedies, all declared their mothers or grandmothers, or in addition other female relatives (aunt or great-grandmother) as wells. Only two participants with a Croatian and respectively a Bosnian background (younger male and female over forty without child) also stated to have learned on homemade remedies made out of honey from their fathers, who were bee-keepers. No participant gained information on homemade remedies from neither medically trained family or friends, nor a pharmacist or any other health professional, but there was one younger participant with a Kurdish background who got informed by her FP. However, another older female interviewee with a Bosnian background and having a child remembered her parents getting a special tonic formula from a not medically trained neighbour when she had to stay in hospital as a child. Regarding utilising the media or internet to get informed, the other older female together with the younger Turkish Kurd stated to have used the internet. Even so, the younger one added that she wouldn't use it anymore, further explaining that she only did so when she was

³⁵ OTC (Over The Counter)-products are medicines which are sold directly to the consumer without getting prescription from an MD (Burger & Wachter 1998).

³⁶ For this project, homemade or traditional remedies are defined as traditionally used recipes made with natural ingredients which can be found at home (Burger & Wachter 1998), e.g.: wet pack (foment) using curd.

younger and embarrassed of her skin problems while trying to get rid. Concerning the frequency of usage of traditional remedies, the older male and two younger female participants with a Kurdish and respectively Bosnian backgrounds said to have tried them already and might use them again. All of them further thought that homemade remedies were used more intensively in their homeland countries, as did the older female having a daughter. They explained this with long distances in their homeland country, further reasoning that every MD was so far away and expensive that the people might have needed to develop other strategies in order to treat their illnesses. Two females of different origins and age groups (the older having a daughter and the younger Turkish Kurd) both stated to use specific traditional recipes (like a warm pack or bath against back pain and tea with honey and lemon to treat a sour throat or cold) on a more or less regular basis. The younger male with a Croatian background, however, said that except for tea he had not used and also did not want to try any traditional remedies at all. In contrast, both older female interviewees have already tried many different homemade remedies that had helped really well every time. However, most were intricate and also often repugnant (disgusting smell and feeling, time-consuming preparation) - thus, they did not want to use all of them again. In matters of participants' attitudes towards traditional remedies, all older interviewees together with the younger male declared to feel about traditional remedies in a more or less sceptical way. Only one younger female with a Kurdish background thought of them in a more or less enthusiastic way, while the other younger female having a Bosnian background said to only know very little on that subject in general. In regard to what kind of homemade remedies are used, wet packs are known by all interviewees and also popular in terms of usage, though there were five different variations (the most popular being alcoholic and iced, but also with vinegar, cabbage or yoghurt) and three indications (mostly fever, but also strains/sprains or stings) mentioned. Except for the older male, all participants also declared to know some recipes with honey. All together, four different indications were mentioned (sour throat/cold, smoothen lips, universal tonic and stings from bees), although treating a sour throat or cold were the most popular.

4.3.5 Category V Minor Ailments³⁷

Category five looked at minor ailments in general and at three common minor conditions in specific. Hence, it divided into the four sub-categories minor ailments, common colds, digestive disorders and sprains, strains and bruises.

Statements regarding how the person defined minor ailments in general, including what kind of treatment the person used when treating minor ailments by him/herself and also if and for how long the person usually waited before seeing an MD, were assembled within Sub-Category one. One half of the interviewees, consisting of both males and one older female having a daughter, having a Croatian and respectively Bosnian backgrounds, were able to define minor ailments and could at least give three examples (all naming head-/back pain and common colds. Additionally, the older male mentioned dental problems, while the younger one also mentioned blisters, but both hesitated and needed to think about it for a while. In contrast, both of the younger females with Kurdish and Bosnian backgrounds were able to give the definition including five examples right away and without hesitating (cold / sour throat / nasal congestion / cough, head- / stomach- / back pain, heartburn), while the remaining older woman has never heard of minor ailments before. Nevertheless, she could think of a common cold as example after explaining the definition to her. The definitions given varied a little, but essentially stated minor ailments as 'small everyday conditions' (younger female with Kurdish background) or 'bagatelles' (younger female with Bosnian background) that were 'easily and quickly cured' (older male and female with Bosnian backgrounds, both having children) and did not need medical attention 'right away'

³⁷ Minor ailments are defined as potentially self-treatable and self-limiting health problems that do not necessarily need medical attention (PAGB 2011, PAGB 2009 Fast facts about self care).

(younger male with Croatian background) or 'at all' (younger female with Bosnian background). In regard to what strategies the interviewees developed when experiencing minor ailments, all participants used medicines from the home medicines cabinet to cure minor conditions, except for the younger female with Kurdish background who earlier stated to not believe in medication and tried curing her illnesses through other ways instead. All participants below thirty further declared to use home remedies (tea or wet packs) when experiencing minor ailments, with the male also utilising herbal treatment, as did all other participants aged over forty. Half of the interviewees, consisting of both who had Bosnian backgrounds and were parents as well as the younger male, said to reduce the overall stress amount as well as workload, mental and physical activity, albeit the female added that even though she knew this would be the right thing to do, she did not always do it. The same woman together with another younger one having a Bosnian background and the younger male also stated to use OTC-products they bought at the pharmacy, mainly naming drops, syrups or gargle solutions. Thereof, the two younger participants added to also treat minor ailments by doing nothing and waiting until they got better. In regard to seeing an MD when experiencing small conditions, all interviewees stated to consult a doctor after having tried treating themselves without improvement. The two younger females and the older male also thought that - generally speaking - seeing an MD was not really necessary when experiencing minor ailments, whereas the younger male said that once you start to worry about something, you should definitely seek a doctor's attention. The younger female having a Kurdish background further reasoned that seeing an MD was very time-consuming and the health system already overloaded. Hence, MD consultations should be left to those people who really needed it. Yet, she also said that if she was experiencing a minor condition for the first time and feeling insecure about the right treatment, she would rather see an MD instead of treating herself. There was only one older female participant declaring at the outset that when experiencing minor ailments, she preferred consulting a doctor towards treating herself. The same further added that she would not consult her FP, but her sister who was trained as an MD. Finally, the other older female parent and a younger one, both having a Bosnian background, said that when experiencing an athlete's foot, it was absolutely pressing to consult an MD, because this was way too serious to be a minor condition.

Sub-category two collected statements regarding how the person treated a common cold when appearing with symptoms like nasal congestion, sour throat, hoarseness and light fever, what kind of treatments were used and if and for how long the person waited before consulting an MD. All interviewees stated to have already made experiences with common colds. In respect to what treatments were used when experiencing a common cold, no one said to be not sure how to treat this minor condition by him- or herself, or preferred consulting an MD instead. Furthermore, all interviewees stressed the importance of reducing the overall stress amount as well as workload, mental and physical activity (sports). Also, all participants declared to use herbal treatment (tea), whereas almost all females (except for the older without children) said to utilise home remedies as well, mostly naming liquid formulas containing honey. Except for the younger female with a Kurdish background, all interviewees further stated to use medicines out of their home medicine cabinets when treating a common cold (mostly nose drops, syrups or gargle solutions). However, all three females with an origin in Bosnia-Herzegovina also said that these medicines were largely OTC products they bought at the pharmacy when they were used up. Therefrom, the younger and the older female without children as well as the younger female having a Kurdish background further stated to initially do nothing when experiencing a common cold and just wait until it got better. These three further declared that seeing an MD was not necessary when experiencing a common cold, as did the older male. Yet, he and the younger female, both having an origin in Bosnia-Herzegovina, also stated that after treating a common cold by themselves without improvement, seeing an MD would be necessary after all.

Statements regarding the treatment of slight digestive disorders with symptoms like slight diarrhoea, congestion or heartburn were assembled within Sub-Category three. This Sub-Category also looked at what kind of treatments were used and if and for how long the interviewees would wait before consulting an MD. No statements regarding slight digestive disorders were made by the younger female with an origin in Bosnia-Herzegovina; hence there were only five interviewees, two males and three females, sharing their opinions on that subject with the interviewer. In regard to the treatment being utilised, no participant treated slight digestive disorders by neither reducing the overall stress amount as well as workload, mental and physical activity, nor using OTC products bought at the pharmacy. Except for one older female over forty, all interviewees stated to utilise home remedies (e.g. special diet) when experiencing slight digestive disorders. The older male with a Serbian background further declared to use herbal remedies (e.g. tea) as well, whilst two females of different age groups having a Kurdish and respectively a Bosnian background also said to use medicines they kept within their home medicines cabinets at all times. The two interviewees having sisters who were trained as MDs were the only ones stating that they were not sure how to treat slight digestive disorders by themselves – hence, they would consult their sisters instead. Thereof, the younger male with a Croatian background even said that he would do nothing because he himself could not do anything about it. Further concerning MD consultations when experiencing slight digestive disorders, the other interviewees all thought it would be appropriate to see an MD after treating these conditions by themselves for a few days without improvement.

Sub-Category four concentrated on light minor strains, sprains and bruises, exploring again what kind of treatments were used by the interviewees and if and for how long they would wait before consulting an MD. The male and female over forty who both had children stated to be not sure how to treat minor strains, sprains and bruises by themselves and therefore tended consulting an MD right away, the male further adding that he in general preferred consulting a doctor when bones were involved. As did the younger male, further specifying that it depended on how much pain and swelling there was. Two other female interviewees of different age groups but both with a migrant background in Bosnia-Herzegovina, thought that seeing an MD was not necessary when experiencing minor strains, sprains and bruises. Thereof, the older female was also the only one stating to use home remedies (ice packs) to treat herself in that case. Both younger females further said that they basically treated minor strains, sprains and bruises by doing nothing and waiting until the injury got better. Finally, half of the interviewees consisting of the younger male having a Croatian background as well as two females of different age groups with an origin in Bosnia, mentioned to additionally reduce physical activity in the case of minor strains, sprains and bruises.

4.3.6 Summary of Key Results

Minor Ailments

When being asked about minor ailments, all participants defined them as ‘small everyday conditions’ or ‘bagatelles’ that are ‘easily and quickly cured’ and do not need medical attention ‘right away’ or ‘at all’. Regarding the strategies of treatment that are utilised, approaches varied: All participants of the age group over forty said to use alternative forms of treatment when experiencing minor ailments, whereas the other age group below thirty preferred homemade remedies. OTC-products were also often utilised, while half of the interviewees said that seeing a doctor was the first thing they did when starting to feel uneasy. Yet, another three generally thought of seeing a doctor as not necessary when experiencing minor ailments, while – when being asked about specific minor conditions, like for example an athlete’s foot, small digestive disorders or

minor strains, sprains or bruises – one third to one half of the participants were not sure how to treat those or thought of them as more serious and therefore stated to consult a doctor straight away.

Self Care

When looking at the results for key category self care, all interviewees said that OTC-products account for the biggest share within their home-medicine-cabinets, because they thought 'they helped the most'. Yet, only half got informed by a pharmacist, while the majority stated to mostly buy OTC-products that were suggested by family or friends who did not have medical training at all. When looking for information on health issues, all interviewees further preferred utilising female family members or friends to males, regardless whether their persons of trust were medically trained or not.

Homemade Remedies

Although most already used homemade remedies in one way or another, the majority was sceptical, thinking of them as 'complicated, time-consuming in preparation' and sometimes even 'repugnant'. Yet, all interviewees were convinced of the effectiveness, further explaining to have learned on homemade remedies from their mothers and grandmothers, who have used their own recipes much more often than they do now. Furthermore, most think that nowadays, traditional remedies were used more intensively in their countries of origin, reasoning that people there do not have many other options.

Alternative Forms of Treatment

Regarding alternative forms of treatment, half of the interviewees stated to get informed by their family physicians, mostly utilising homeopathy, TCM or herbal treatment. Nevertheless, opinions were divided in halves, seeing alternative forms of treatment as 'holistic and balanced with nature' on the one hand, but also as 'expensive and slow' on the other hand. In addition, some participants entertained some doubts in terms of medical effect.

4.4 Discussion and Analysis

Although findings reflect that people are aware of the fact that lifestyle impacts on health and that health conscious behaviour involves taking active measures to improve health (Biffl 2003), they partly struggle at implementing their intentions regarding exercising, nutrition and smoking into everyday life (see Chapter 4.3.1 Category I Measures Beneficial to Health).

According to the literature, people with a migrant background in Turkey and former Yugoslavia have higher health burdens than native Austrians and they do not promote their health as well as native Austrians (Biffl 2003, Fassmann 2007, Gebhard 2011, Statistic Austria 2012, 2011). However, health conscious behaviour increases with the level of education the person receives, independent from his/her ethnic background (Biffl 2003). Almost all participants promote their health actively, exercising more or less on a regular basis, while eating healthy and trying to avoid smoking. Since five out of the six participants have a school leaving exam or even higher, i.e. have received a tertiary education (see Table 4.1.2: Interview Sample: Range regarding Age, Sex, Socio-economic and Ethnic Background in Chapter 4.1.2 Target Group and Sampling), no cultural patterns in regard to health conscious behaviour could be found. Since university graduates converge in regard to displayed (health) behaviour independently from social, ethnic and cultural background (Statistic Austria 2012, 2011), findings accord to literature.

Regardless of that, especially chronic conditions are still widely spread among people with migrant backgrounds. According to Statistics Austria (2012, 2011) and Gebhard (2011), chronic diseases such as back pain, headaches and emotional problems are specifically common among migrants from former Yugoslavia and Turkey as opposed to others. Especially the older, first generation migrants suffer from a poor health status derived from multiple chronic diseases and poor health conscious behaviour (Fassmann 2007). Analysis indicates equivalent results, since almost all participants stated to experience chronic health problems, mostly mentioning headaches, back pain and also emotional problems. Yet, results differ in regard to allergies. Albeit recent statistics say that allergies declined among migrants coming from or having a migrant background in former Yugoslavia or Turkey (Biffl 2003, Statistic Austria 2012), they were mentioned as often as back pain or headaches by interviewees of the second generation. Hence, it may be argued that second generation migrants are exposed to different health hazards than their parental generation and rather converge with the equivalent generation of the native population not having a migrant background (Statistic Austria 2011, Weiss 2003).

Albeit migration is associated with considerable health hazards due to stress, trauma and weary life circumstances, migrants or people with migrant backgrounds respectively, are not always necessarily unhealthy and disadvantaged in terms of accessing medical care. Furthermore, Jayaweera and Quigley (2010), found improvement referring to socio-economic circumstances of migrant groups to not necessarily change health behaviour or result in better health outcomes. So, interpretations need to be made carefully, since one's health status additionally is strongly, but certainly not exclusively, dependent on socio-economic circumstances (Fassmann 2007, Marks & Worboys 1997, Weiss 2003).

As suggested in multiple researches, there is supposed to be a considerable correlation between language skills, health status and socio-economic circumstances. In other words, the better communication works, the faster migrants can develop social and personal resources in order to deal with health problems and, more generally, with problems of everyday life. Hence, language issues represent one of the major barriers in accessing a country's health system (Eichler 2008, Marks & Worboys 1997, Weiss 2003). In Graz, some low-threshold

migrant initiatives such as the Caritas Marienambulanz (St. Mary's Medical Centre) or OMEGA, as well as the university hospital in fact provide translators in order to decrease these barriers (see Haigl 2013, Mair 2011, Pfandl-Pichler 2011, Vasak 2010). However, the results of this research do not fully reflect this language barrier. Almost all of the participants have never experienced barriers due to communication problems, neither when dealing with medical questionnaires (such as the ones you get when entering a medical facility, e.g. GP or vaccination centre, for the first time) nor when consulting a doctor. Since five out of the six participants have a school leaving exam or even higher education (see Table 4.1.2: Interview Sample: Range regarding Age, Sex, Socio-economic and Ethnic Background in Chapter 4.1.2 Target Group and Sampling), they can all be associated with higher social standards. As already mentioned earlier, language skills, health status and socio-economic circumstances are linked together very closely. Hence, it is presumably difficult to find appropriate work when communication does not work well, and accordingly, health status might be worse than compared to others due to difficulties in communicating health problems but also due to physical stress. As stated by Statistics Austria (2012, 2011, 2010), most of (especially male) migrants with a background in former Yugoslavia (63%) and Turkey (69%) work as blue collar workers, the vast majority in physically straining work environments, such as the construction industry for example. The only person without higher education who was a workman his whole life has experienced both, language problems when having just arrived in Austria, and deriving difficulties to access health care. Drawing on from that time there are multiple chronic conditions needing constant medical care from GPs and specialists. Thus, it can be concluded that migrants or people with migrant backgrounds who live in a safe and healthy environment where they are able to live a productive, meaningful and socially integrated life are less endangered to get deprived and marginalised, while the risk to not succeed decreases with higher education (Biffi 2003, Weiss 2003).

Nevertheless, most participants have never experienced language issues, neither when dealing with medical questionnaires nor when consulting a doctor. Consequently, having a family physician who is able to speak their native language, i.e. Bosnian, Croatian, Serbian or Turkish, respectively, in order to communicate their problems properly has never been an issue. Still, barriers in accessing health services due to problems with language represent a huge problem for Austria and Graz, respectively. Hence, adopting adequate language skills as an important criterion when utilising health care (e.g.: selecting a family physician), as suggested by Haigl 2013, Mair 2011, Pfandl-Pichler 2011 and Vasak 2010, was presumed but could not be confirmed due to the issues discussed earlier. Instead, results claim that selecting a family physician is rather performed pursuant to suggestions made by family or friends as well as reasons of convenience than according to the degree of a GP's language knowledge. Additionally, results display migrants having a background in Bosnia-Herzegovina, Croatia or Turkey ambitious to stay at their selected family physicians as long as possible, with ongoing doctor-patient relationships of seven years on average. Interestingly, all females explained this on the basis of issues of trust, and further stressed the importance of the established patient-doctor relationship and accumulation of an extensive medical record. Meanwhile, the most important issue for male participants was convenience in getting there and professionalism in performance.

In regard to being unsatisfied or insecure with an MD's performance, results show striking differences between migrants with Bosnian backgrounds and those with Croatian or Turkish, respectively. People who have a Bosnian migrant background are far more likely to seek a second opinion or change the attended doctor when experiencing scepticism related to overall performance or diagnosis than others are. However, interpretations need to be made carefully, since value is limited due to the sample's composition in regard to socio-economic standard, as discussed before.

Furthermore, health behaviour differs between the sexes in regard to women's and men's own perceptions. Men perceive themselves as robust and less fragile with respect to health condition and believe to show vastly different health behaviour than compared to women, who - in men's opinion – are seeing a doctor for every minor condition or bagatelle (Sieverding & Kendel 2012). In contrast, women are said to be more endangered to suffer from self-declared illness and emotional disorders related to stress (OECD 2008). However, results do not suggest any patterns in regard to sex when seeing a doctor because of experiencing minor ailments, as will be discussed within the following paragraphs.

When seeking information or advice on health issues related to minor ailments³⁸ respectively, utilising the Internet is a popular option which is applied extensively all around the world (Eichler 2008, Mossialos & Mrazek & Walley 2004). Findings confirm this suggestion, since almost all participants said they use the Internet for this purpose more or less regularly. Even so, people are aware of the Internet's unregulated nature and do not fully rely on the information retrieved. Hence, they either discuss the health issue with friends and/or family members or get a second opinion from a health professional, mostly their family physicians (FPs). In general, seeing a general practitioner (GP) (mostly their family physicians) is quite popular and for many option number one when looking for information on health issues. Although some only see their FPs to double check the information they read up on earlier, most simply consult their doctors without undertaking any further effort to get informed. Other health experts, for instance pharmacists, however, are apparently rarely utilised in order to get informed. Although people know that pharmacists can provide professional and reliable counselling on various health issues, information on additional forms of treatment and medication options, people's opinions on pharmacies differ. While half of the participants listed certain pharmacists in different pharmacies they trust and are satisfied with, the other half criticised the constant rush in consultations and a perceived principal sales pressure to when talking to a pharmacist. Further, findings show that many people, and especially women, tend to buy a substantial share of medication, especially OTC-products, following recommendations made by family members or friends without medical training at all and without consulting any kind of health professional as second opinion. Since people are convinced that they do not need further advice or information, this involves a potential for issues of inappropriate self-medication leading to possible health hazards (Mossialos & Mrazek & Walley 2004). Although in the study every participant had a medically trained person (i.e. MD, nurse, psychotherapist, health manager) within his/her circle of friends or as one of their family members respectively, utilising this health expert in order to get informed was not necessarily their option of choice. Since trust is a fundamental issue when it comes to health, it may depend on the nature of relationship between the person looking for information on the one hand and the person providing information on the other hand (Nussbaum 2000, Sieverding & Kendel 2012). Accordingly, siblings or close friends of the participants, who have received medical training are utilised far more often as information sources on health than more distant relatives or friends.

The treatment of potentially self-treatable minor health problems represents a particular grey zone for most people. Hence, findings suggest high levels of insecurity and scepticism regarding the treatment of minor ailments and in regard to self care in general- irrespective of a participant's ethnicity or generation membership. People struggle with differentiating between conditions that are self-treatable and those that are not. Thus, they are not really sure about what to do and most of the times call for a doctor when they feel unwell, even if they are convinced that seeing a doctor is not really demanded. Of all five specific minor conditions which were

³⁸ Minor ailments are defined as potentially self-treatable and self-limiting conditions that do not necessarily require a doctor's attention. Minor conditions are for example common colds, slight digestive disorders, minor strains, sprains and bruises and an athlete's foot (PAGB 2009 Fast facts about self care, NPC 2004, NZSMI 2009, PAGB 2011, RPSGB 2003).

questioned during the interview, namely common colds, slight digestive disorders, minor strains, sprains and bruises and an athlete's foot (see also Chapter 4.3.5 Category V Minor Ailments), the common cold was the only condition where no insecurity or questions regarding the treatment arose. However, for some, lack of improvement after a few days of self-administered treatment necessitates seeing a general practitioner (GP). Since people would be able to treat themselves but decide to call for a doctor instead, this again suggests issues of insecurity and scepticism towards the concept of self care in regard to the treatment of minor ailments. Also, seeing a GP is quite popular and for many option number one when looking for information on health issues, as already mentioned earlier. According to an Intercontinental Marketing Services (IMS) study carried out in the UK in 2006/7, the treatment of minor ailments accounts on average for over an hour a day for every GP. In other words, 20% of the 290 million GP-consultations per year involve conditions that do not necessarily require a doctor's attention and are thus self-treatable (PAGB 2009 Fast Facts about self care). Further research states that more than two billion Euros have been spent on over 57 million GP consultations involving minor conditions during that time (Baqir et al. 2010). Hence, this kind of health behaviour not only costs a lot of money, it also takes time off medical practise every day, resulting in too many patients waiting in overcrowded waiting areas and long waiting periods. Furthermore, these growths in GPs' everyday workload sometimes result in hasty examinations and accordingly, a lack of proper information and health education. Nevertheless, findings suggest that large parts of people with migrant backgrounds see their family physicians immediately or after a few days latest when experiencing minor ailments. Even though results indicate that most of the time, knowledge on self care methods exists and that trust in the attending doctor decreases with an increasing number of patients and waiting periods, people tend to generally call for a doctor instead of trying to act on one's own initiative. Further, results in regard to the treatment of minor ailments do not display any behavioural patterns in regard to sex, generation membership or ethnicity, and rather suggest more parallels than differences between the sexes. Although almost all participants stressed that seeing a doctor is not really necessary when experiencing minor ailments, most further stated to consult a GP at least once for treatment – totally irrespective of sex, migrant generation membership and cultural or ethnic backgrounds.

Although treating minor, i.e. self-treatable conditions already implies that people should treat themselves when experiencing a common cold for example, applying self care is not always their option of choice, as discussed in the last paragraph. However, there are a variety of different approaches people may use in order to do so. This project focuses on self care utilising OTC products, homemade or also traditional remedies and further includes alternative forms of treatment, i.e. healing systems like TCM or homeopathy, which can be defined as measures opposed to modern, conventional medicine (see also Chapter 1.2 Minor Ailments and self care). Results suggest high levels of scepticism and insecurity by people having a migrant background in Bosnia-Herzegovina, Croatia or Turkey concerning the application of alternative forms of treatment. Although alternative treatments have been suggested by their trusted family physicians, people are in doubt about their medical efficacy. Hence, opinions on alternative forms of treatment are split. Particularly first generation migrants with children prefer utilising homeopathy, TCM or herbal treatment when applying self care. Alternative forms of treatment are seen as holistic and balanced with nature on the one hand, but also as expensive, incompatible with everyday life (slow) and not always effective on the other. In contrast, homemade remedies such as wet packs with curd, alcohol or liquid formulas made of honey are quite popular and are generally perceived as highly effective. Although most already use homemade remedies on a more or less regular basis, usage of traditional remedies has declined due to an increasing number of more convenient and less intricate options of treatment. Hence, homemade remedies are thought to be used more intensively in the migrants' countries of origin since people there might not have many other options due to living far away from health care or having no money to pay for it. This lack of options in treatment, however, can be seen as a general problem of rural areas and health

systems with high out-of-pocket payments, since many countries struggle with macroeconomic factors, such as geography or poverty, influencing on one's access to health care (Fink 2010). Nevertheless, recipes for traditional remedies are perceived as complicated, time-consuming in preparation and sometimes also nauseating, while at the same considered cheap, highly effective and easily available. OTC products account for the biggest share within the people's home-medicine-cabinets and are often utilised when treating minor ailments by applying self care. Because people are convinced of their medical effectiveness, extensive accumulations of various drugs are often assembled, containing drugs, ointments and other formulations in order to treat pain, digestive disorders, common colds and wounds. However, the majority of participants prefer to buy OTC products that are suggested by family or friends who do not have medical training at all than getting medical advice from a health professional. As already mentioned, this raises a potential for issues of inappropriate self-medication and can lead to further health problems instead of curing them (Mossialos & Mrazek & Walley 2004).

As already mentioned, there are also substantial differences in health behaviour between males and females due to different gender³⁹ roles. These gender roles result from the combination and complex interaction between biology (e.g. genetics, hormones and physiology) on the one hand, and environmental factors (e.g. life circumstances, social standard) as well as cultures (e.g. religion, hierarchical relationships, historical and geographic location and social roles which impact on both sexes) on the other (Eichler 2008, MWIA 2013, Wizemann & Pardue 2001). While women depend on friends, family and/or co-workers in order to determine which measures are appropriate, men rather utilise the Internet to read up or get informed at their family physicians. Consequently, gender roles impact on health care utilization and use of preventive examinations (Eichler 2008, Sieverding & Kendel 2012). Although men in general and male migrants who have a background in Turkey or former Yugoslavia are said to utilise fewer preventive care measurements such as vaccination, annual checkups or else, than (migrant) women (Statistic Austria 2012, 2011, 2010), the results of this research show no differences between the sexes in regard to annual check-ups, which are performed more or less regularly. Likewise, women use health care services far more often than men, accounting for two thirds of all in- and outpatient care, as well as provided pharmaceutical services (Nussbaum 2000). When living together with their families, home medicine cabinets are served and stocked exclusively by females (i.e. female participants themselves, their mothers or wives), independent from migrant generation, ethnicity or the participants' gender. Furthermore, the findings suggest that in general, people prefer asking female friends or family members over males, independent from their level of medical expertise. This may be due to females being able to establish positive rapport quicker within everyday conversations while having a more expressive style to communicate and recognising nonverbal signals and emotions better than males (Sieverding & Kendel 2012). Additionally, it is argued that females play a central role in regard to family health care provision, representing the *"major coordinators of care and the link to the health care system for their families"* (Wyn et al. 2003, p.4). Results strengthen the central role of women in regard to providing self-administered care in form of homemade remedies (Eichler 2008). Since almost all interviewees have their knowledge about traditional remedies from their mothers, grandmothers and/or other female relatives, it is clear that women take up a key role in passing on traditional knowledge between sequent generations while working as pivot point in regard to self care.

³⁹ Gender is a social construct ascribed to each sex by society, changing overtime and differing between various societies. It can be understood as the full range of personality features including attitudes, feelings, values, behaviours and activities that are assigned to both sexes in varying degree (MWIA 2013).

In addition to influencing an individual's health behaviour, certain aspects of gender and gender roles also influence the patient-doctor relationship with respect to communication, diagnosis, and treatment, which can result in misdiagnosis and inadequate treatment (Sieverding & Kendel 2012). However, these aspects are not within the scope of this project, hence will not be discussed further. Nevertheless, results suggest a need for research in regard to minor ailments and migrants given that female doctors are said to spend more time on communication and reach higher patient satisfaction than compared to male doctors. Since statements varied in regard to patients' satisfaction respective to MDs performances and durations of consultations, looking more closely at these issues surely presents itself as an interesting topic for future research.

4.4.1 Limitations of Study

Although interviews are the most often utilised instruments in qualitative research (Whiting 2008), and especially in-depth interviews *"are widely used by health care researchers"* (DiCicco-Bloom & Crabtree 2006, p.316), it is important to be aware and also address the weak points associated with this method. Since the qualitative stage is embedded in a mixed methods design, thus supplemented by a following quantitative stage, some of the weaknesses usually aligned with qualitative methods in general can be balanced within the scope of the whole research project (Boyce & Neale 2006; see Chapters 3.3 Research Design and 6 Discussion). As stated by Newton (2010, p.5), *"using other data drawn from questionnaires [...] builds a picture of the interviewee through which other inconsistencies could be identified"*. However, these issues related to qualitative research in general, and interviews or respectively semi-structured interviews in specific need to be mentioned within this section.

As stated by Newton (2010), success and validity of conducted interviews depend on to what extent they truly reflect the interviewees' beliefs and opinions. Since in-depth interviews aim at retrieving rich data, it is pivotal for the interviewer to question in a way that respondents can answer freely and preferably unswayed from insecurity, preconceptions and bias, while using their own words and phrases to describe their stories and ideas. Considering the complexity of spoken language and that all face-to-face interviews occur live, validity of this method can be threatened by using inadequate language, leading questions or other issues related to question-design (see Chapter 4.1.3.3 Interview Guide). Clearly, this interview technique depends on the researcher's ability to establish positive rapport to the person being interviewed; hence, good communication skills and situative competency, i.e. high sensitivity regarding the interviewee and the overall interview process, are crucial and strongly required from the interviewer (Flick 2009). Additionally, researchers impact substantially on what and how people respond, due to what is called the "interviewer effect" (Fuchs-Heinritz et al. 1995). Their preconceived ideas of what is and is not worth discussing (Newton 2010), but also an investigator's attitude towards the topic of interest as well as behaviour during the interview (Fuchs-Heinritz et al. 1995) and further sex, age and ethnic origin of the interviewing person influence on how much and also how honest respondents decide to share information (Newton 2010). Furthermore, interviewees' responses can be biased by "demand characteristics", i.e. what they think the situation requires (Fuchs-Heinritz et al. 1995). To counteract these issues, interviewers need to clarify the purposes and topics of the undertaken research and try to minimise tension before the actual interviews starts (Newton 2010).

Another issue influencing the quality of focused interviews is tied to applying an interview agenda. When applying pre-formulated questions, interviewers are endangered to get "stuck" with the organised question-scheme (i.e. "bureaucratisation of interviews"; see Hopf 1978). In order to counter stick to the interview guide and allow for the interviewees to develop and tell their own stories instead, the researcher needs to be well prepared and ready to depart from the agenda, i.e. follow up digressions at any time during interviews are

conducted (Dicicco-Bloom & Crabtree 2006, Helfferich 2011). Drawing on from this and due to the flexible structure of semi-structured, guided interviews (see Chapters 4.1.3.2 Semi-structured or focused interviews and 4.1.3.3 Interview Guide), the wording of questions will not necessarily be the same for all participants. Hence, it is difficult to generalise the results, since interviewees may effectively be answering different questions (Patton 2002, Turner 2010).

Reduced comparability further evolves from small sample sizes (see Chapter 4.1.2.1 Sampling Strategies and Sample Size). As mentioned before, qualitative methods look at issues in a more holistic way and do not aim for representative results. Thus, sample size depends on the research questions and the method of analysis being used. As suggested by Diekmann (2002) and Noelle (1963), ten interviews per interviewer at maximum ensure high interview quality and minimise adulteration. It should be noted here that the central premise and general rule for qualitative research following the principle of maximising variance in regard to sample size is the concept of theoretical saturation (Boyce & Neale 2006, Glaser & Strauss 1979; see also Glaser & Strauss 1967). Namely, if the qualitative sample size answers the research questions in an adequate way, it can be seen as sufficient for the project (Bortz & Döring 1995, Flick 2009, Lamnek 2010).

Also, sampling was performed in a purposeful rather than a randomized manner (Flick 2009, Patton 2002; see Chapter 4.1.2.1 Sampling Strategies and Sample Size). Therefore, generalising the results to larger groups is difficult, not only due to inconsistency in posing questions, small sample sizes and because randomised sampling was not utilised, but also due to the extensive amount of data that was collected. On average, one interview of the interviews conducted within this research accounted for 26.6 pages of transcript. According to Dresing & Pehl (2012), time expenditure for transcribing an interview based on a simple system for transcription and proof-reading once encompasses five to ten times the interview duration. Further increasing time expenditure, transcripts are suggested to be revised and checked again, ideally by another control-person provided with adequate skills (Dresing & Pehl 2012). When analysing, it is important to work systematically, iteratively and in a rigorous manner (see Chapter 4.1.3.5 Content Analysis) while following a very time-consuming process requiring a lot of skills and endurance (Allan 2003).

Further, all qualitative data in form of words (audio-recording) or images (video-recording) are subject to personal interpretations made by the researcher which may create an ensuing bias. Thus, it is important for the researcher to demonstrate awareness of how biases may emerge and reflect on all stages of the qualitative research project (Boyce & Neale 2006, Creswell & Plano Clark 2007, Flick 2009, Gubrium & Holstein 2001, Lamnek 2010, Polit & Beck 2006, Spencer et al. 2003, Turner 2010). It is especially essential for novice researchers to strive after achieving the skills and knowledge required to embrace those issues related qualitative research. While addressing them through systematic and comprehensive analysis, it is pivotal for novices *“to seek and take advantage of any expert advice and support”* (Whiting 2008, p.35). For this qualitative research, advice was sought from qualitative tutor Dr. Charlotte Christina Fink, who instructed the author on all matters of qualitative research, whilst assisting on and reviewing all stages involved. Further, the author was privileged to present and discuss this research with an international research community at the 17th ISPW International Social Pharmacy Workshop 2012 in Phuket, Thailand.

Finally, it needs to be stated that an individual's health behaviour in general is subject to continuous change (Prochaska 1994); hence, all arguments and conclusions within this project represent a snapshot and do not seek validity for past or future situations.

4.3.2 Generating the hypotheses

As a first step, qualitative data analysis provided us with very detailed information regarding the patients' perspectives and the processes of decision-making when experiencing minor ailments. After analysing the results, qualitative hypotheses regarding minor ailments in general and the strategies of treatment being used in specific have been formulated as followed.

Qualitative hypotheses:

- People can easily define minor ailments, but struggle at differentiating between self-treatable conditions and those that are not.
- Seeing a doctor is the primary strategy utilised, whether only information on health or medical intervention is needed.
- When experiencing minor ailments, people prefer using traditional remedies over alternative forms of treatment.
- When looking for information on minor ailments, people prefer asking female friends or family members over males.
- Defining minor ailments and the treatment thereof are irrespective to a participant's ethnicity.

Following the concept of a sequential mixed methods design, these qualitative hypotheses were translated into quantitative hypotheses of difference and then tested through a survey as discussed earlier (Creswell & Clark 2007, see Chapter 5.1.1 Research Questions).

Chapter 5: Quantitative Analysis

5.1 Research Design and Methodology

Drawing on the results of the qualitative interviews and as a second step of the project, a quantitative data analysis in the form of a survey was performed during March and April 2013. In contrast to qualitative research, quantitative research often uses deductive methods involving large numbers of test persons, putting the theory first, by generating hypotheses of differences for example, and then comparing it with the data collected (Eichler 2008, Hussy & Schreier & Echterhoff 2010, see also Chapter 3.3). Aiming at getting more details on the accessibility and use of the present health care system in relation to the idea of Self Care, the quantitative part of this study reassesses the findings from the qualitative part in order to get verifiable and more well-defined statements for the target group.

5.1.1 Research Questions

The overall purpose of this study was to gain insight into the influence of culture and ethnicity on the processes of decision making within the context of potentially self-treatable conditions (i.e. minor ailments⁴⁰; Kelleher & Hillier 1996) and further if and how patterns in health behaviour change with migration. Hence, similarities and differences between four different ethnic groups and two sequent generations of migrants were investigated (see Chapter 5.1.2 Target Group and Sampling), and further specific similarities and differences between males and females, those with higher level education, i.e. with a school leaving exam and those without, i.e. compulsory education as well as between working and non working people – within but also in between the different groups – were the focus of this project. Thus, males and females, people with and without school leaving exam, and lastly two generation of migrants and Austrians who do not have a migrant background were included as independent variables relating to the hypotheses of difference. Moreover, four quantitative key categories (sources of information on minor ailments, identifying minor ailments, treatment of minor ailments and measures that are beneficial to health) were developed and determined as dependent variables.

Derived from the qualitative results and hypotheses (see Chapter 4 Qualitative Analysis), the developed research questions were as follows:

Research Question 1: How do people define minor ailments and can they differ between self-treatable conditions and those that are not?

- a) Are minor ailments defined differently by females and males, migrants of the first and second generation, persons with and without a school leaving exam, working and non-working people or people with and without migrant background?

⁴⁰ Minor ailments are defined as potentially self-treatable and self-limiting health problems that do not necessarily need medical attention and include conditions such as common colds (e.g. a nasal congestion, cough, sore throat and light fever), digestive problems (e.g. diarrhoea, constipation or heart burn), skin diseases (e.g. swellings because of bug bites, an athlete's foot or nail fungus), minor injuries (e.g. abrasions, cuts, bruises or strains) and minor pains (e.g. headaches, backaches or joint pains; NPC 2004, NZSMI 2009, PAGB 2011, 2010, 2009 Fast facts about Self Care, RPSGB 2003).

- b) Are there differences in dividing minor ailments in regard to requiring medical care or not between females and males, migrants of the first and second generation, persons with and without a school leaving exam, working and non-working people or people with and without migrant background?

In order to operationalise minor ailments and the treatment thereof, the first research question was two-fold. On the one hand, it focused on to what degree the theoretically derived definition of minor ailments concurs with that of the participants (see 5.4.1.1 Results of Open Questions). On the other hand, it also looked at the individually perceived necessity to require medical care when experiencing minor ailments such as a common cold, digestive problems, skin diseases, minor injuries and minor pain by utilising the scale AFKB, i.e. “Personal Necessity to Require a Doctor’s Attention” (see Chapter 5.4.1.2 Results of Scale “Personal Necessity to Require a Doctor’s Attention”). Hence, different statistical approaches were applied (see Chapter 5.1.3 Methodology). The first research question was translated into quantitative hypotheses of difference as shown in Table 5.1.1.1 Research Question 1: Quantitative Hypotheses of Differences below.

Table 5.1.1.1: Research Question 1: Quantitative Hypotheses of Differences

1.1a:	The previously from theory derived definitions of minor ailments do not differ from those provided by the participants.
1.2a:	The provided definitions of minor ailments do not differ from each other.
1.3a:	The provided definitions of minor ailments differ between people without migrant background and two generations of migrants.
1.4a:	The provided definitions of minor ailments differ between male and female participants.
1.5a:	The provided definitions of minor ailments differ between people who have a school-leaving exam and those who do not.
1.6a:	The provided definitions of minor ailments differ between working and non working participants.
1.1b:	The individually perceived necessity to require medical care when experiencing minor ailments differs between people without migrant background and two generations of migrants.
1.2b:	The individually perceived necessity to require medical care when experiencing minor ailments differs between males and females.
1.3b:	The individually perceived necessity to require medical care when experiencing minor ailments differs between people who have a school-leaving exam and those who do not.
1.4b:	The individually perceived necessity to require medical care when experiencing minor ailments differs between working and non working people.

Research Question 2: Where do people get informed about minor ailments?

Do information sources on minor ailments differ between females and males, migrants of the first and second generation, persons with and without a school leaving exam, working and non-working people or people with and without migrant background?

Focusing on from where participants inform themselves when looking for information about minor problems, the second research question looked at which kinds of information sources are perceived as important or relevant. Building on the results of the qualitative analysis (see Chapter 4.3 Results and Findings), the predetermined items included the Internet, friends, family members and health professionals as Scale

“Information Sources on Minor Ailments” (IQKB) (see Chapter 5.4.2 Results of the Second Research Question). The developed quantitative assumptions of difference are shown in Table 5.1.1.2 Research Question 2: Quantitative Hypotheses of Differences below.

Table 5.1.1.2: Research Question 2: Quantitative Hypotheses of Differences

2.1:	Information sources on minor ailments differ between people without migrant background and two generations of migrants.
2.2:	Information sources on minor ailments differ between male and female participants.
2.3:	Information sources on minor ailments differ between people who have a school-leaving exam and those who do not.
2.4:	Information sources on minor ailments differ between working and non working people.

Research Question 3: How do people rank health and health conscious behaviour specifically within their lives and do they know what is beneficial to health?

- a) Are there differences regarding interest in health between females and males, migrants of the first and second generation, persons with and without a school leaving exam, working and non-working people or people with and without a migrant background?
- b) Are there differences between females and males, migrants of the first and second generation, persons with and without a school leaving exam, working and non-working people or people with and without migrant background in regard to undertaken measures, i.e. health conscious behaviour?
- c) Are there differences between females and males, migrants of the first and second generation, persons with and without a school leaving exam, working and non-working people or people with and without a migrant background regarding individually perceived health status?

Research question number three aimed at retrieving information on how people assess their own health status and further evaluate their own health behaviour. In doing so, health behaviour referred to individually perceived health status, subjective health knowledge or interest in health, as well as individual health promotion and specific health behaviour. The utilised scale “Health Status and Health Behaviour” (GHSoz) (see Chapter 5.4.3 Results of the Third Research Question) further included items on social desirability and social support. Formulated hypotheses of difference are shown in Table 5.1.1.3 Research Question 3: Quantitative Hypotheses of Differences above.

Table 5.1.1.3: Research Question 3: Quantitative Hypotheses of Differences

3.1:	Interest in health, health conscious behaviour as well as individually perceived health status differs between people without a migrant background and two generations of migrants.
3.2:	Interest in health, health conscious behaviour and individually perceived health status differs between male and female participants.
3.3:	Interest in health, health conscious behaviour as well as individually perceived health status differs between people who have a school-leaving exam and those who do not.
3.4:	Interest in health, health conscious behaviour as well as individually perceived health status differs between working and non working people.

Research Question 4: How often do people experience minor ailments and how are they treated?

- a) Are there differences in frequency in regard to experiencing minor ailments between females and males, migrants of the first and second generation, persons with and without a school leaving exam, working and non-working people or people with and without migrant background?
- b) Does the type of treatment differ between females and males, migrants of the first and second generation, persons with and without a school leaving exam, working and non-working people or people with and without migrant background?

As explained earlier, minor ailments were divided into five categories, including common symptoms and manifestations of minor disorders. These categories were the common cold (e.g. a nasal congestion, cough, sore throat and light fever), digestive problems (e.g. diarrhoea, constipation or heart burn), skin diseases (e.g. swellings because of bug bites, an athlete's foot or nail fungus), minor injuries (e.g. abrasions, cuts, bruises or strains) and minor pains (e.g. headaches, backaches or joint pains). Research question four focused on how frequently people experience minor ailments (see Scale HKB in Appendix) and what kinds of treatments are favoured. Options of treatment included seeing a doctor or undertaking Self Care, such as utilising OTC-products, alternative forms of treatment (e.g. Homeopathy) or home remedies (e.g. wet pack with ice; see Scale "Methods of Treatment" in Chapter 5.4.4 Results of the Fourth Research Question). The derived quantitative hypotheses of differences are displayed in Table 5.1.1.4 Research Question 4: Quantitative Hypotheses of Differences below.

Table 5.1.1.4: Research Question 4: Quantitative Hypotheses of Differences

4.1a:	Migrants of the first and second generation and people without migrant background differ in frequency in regard to experiencing minor ailments.
4.2a:	Females and males differ in frequency in regard to experiencing minor ailments.
4.3a:	People who have a school-leaving exam and those who do not show different frequencies in regard to experiencing minor ailments.
4.4a:	Working people and non working people show different frequencies in regard to experiencing minor ailments.
4.1b:	The choice of treatment when experiencing minor ailments differs between people with and without migrant background and between two generations of migrants.
4.2b:	The choice of treatment when experiencing minor ailments differs between males and females.
4.3b:	The choice of treatment when experiencing minor ailments differs between people who have a school-leaving exam and those who do not.
4.4b:	The choice of treatment when experiencing minor ailments differs between working and non working

Research Question 5: Do the different constructs (i.e. scales) “information sources” and “medical advice on and the frequency of experiencing minor ailments” have an impact on the constructs “health and health behaviour”, “individually perceived necessity to require medical care when experiencing minor ailments” and “type of treatment used”?

Research question five evaluated the interaction of the prior (i.e. in research questions two to four) formulated constructs (namely information sources on minor ailments, medical advice on and the frequency of experiencing minor ailments) with the other constructs (i.e. scales, also compiled during the survey) “health and health behaviour”, “individually perceived necessity to require medical care when experiencing minor ailments” and “type of treatment used when experiencing minor ailments”. Statistical measurements included testing in regard to reliability and homogeneity, as well as structure review (see Chapter 5.1.3 Methodology). Quantitative hypotheses of differences related to the fifth research question were formulated as shown in Table 5.1.1.5 Research Question 5: Quantitative Hypotheses of Differences below.

Table 5.1.1.5: Research Question 5: Quantitative Hypotheses of Differences

5.1:	Information sources on minor ailments impact on the constructs health or rather health behaviour, individually perceived necessity to require medical care when experiencing minor ailments and type of treatment used.
5.2:	Medical advice on minor ailments impacts on the constructs health or rather health behaviour, individually perceived necessity to require medical care when experiencing minor ailments and type of treatment used.
5.3:	The frequency of experiencing minor ailments impacts on the constructs health or rather health behaviour, individually perceived necessity to require medical care when experiencing minor ailments and type of treatment used.

5.1.2 Target Group and Sampling

The target group consisted of persons having a cultural and ethnic background in Bosnia-Herzegovina, Croatia and Turkey; they are the most dominant immigrant groups in Graz that account for almost 30% of all foreigners living there (Magistrat Graz – Präsidialamt 2013; see Chapter 3.2 Target Group). For the survey a control group of Austrians was included who do not have a migrant background (meaning both their parents and grandparents were both born in Austria⁴¹) in order to learn about similarities and differences in health behaviour regarding minor ailments between migrant and ancestral populations. Altogether, the sample group comprised 199 persons, i.e. 49 with a migrant background in Bosnia-Herzegovina, 47 with a migrant background in Croatia and 49 with a Turkish migrant background, while Austrian control group consisted of 54 people without a migrant background (see Table 5.1.2 Full Sample: Range regarding Age, Sex, Socio-economic and Ethnic background below).

Table 5.1.2: Full Sample: Range regarding Age, Sex, Socio-Economic and Ethnic Background

	n		%	n		%	Total n
Sex	females	114	57.5	males	85	42.5	199
Age in Years (range: 18-81)				f	m		
	18-29	76	38.2	46	30		199
	30-39	69	34.7	34	35		
	40-49	20	10.0	15	5		
	50-59	17	8.5	10	7		
	60-69	11	5.5	6	5		
	>69	6	3.0	3	3		
Education	school leaving exam or higher	99	49.5	59	40		196
	no school leaving exam	100	50.5	53	47		
Country of Birth	born in Austria	106	53.3	Bosnia-Herzegovina	26	13.1	199
	not born in Austria	93	46.7	Croatia	20	10.0	
				Turkey	47	23.6	
Parents' Countries of Birth	Austrian (Ancestral population)	54	27.1	Bosnia-Herzegovina	48	24.1	199
				Croatia	45	22.6	

⁴¹ According to the recommendations of the United Nations Economic Commission for Europe, Austria defines 'population with migrant background' as people whose parents were born outside Austria, independent of citizenship (ÖIF 2011 Migration & Integration, UNECE 2006).

	other	3	1.5	Turkey	49	24.6	
Migrants' Generation Membership	1 st migrant generation	93	64.1	2 nd migrant generation	52	35.9	145

Since quantitative analysis aimed for an approximately equal distribution in regard to ethnicity, the full sample was therefore assessed for representativeness in regard to cultural and ethnic background. Likewise to qualitative analysis, an approximately even distribution in regard to age could be achieved (i.e. $52\% \leq 32$ years; $48\% > 32$ years), which was important in terms of comparability and further supplementation of data. In regard to immigrant generation membership, sex and socio-economic background, 42.5% males and 57.5% females, 26% second and 47% first generation migrants, 27% ancestral Austrians, 49.5% persons with and 50.5% persons without a school leaving exam as well as 60.3% working and 39.7% non working people were surveyed. Thus, the full sample was considered to be representative referring to all independent variables, i.e. "sex", "education", "migration" and "working status"⁴².

To get an appropriate range regarding sex, age, education (school leaving exam or higher level education / no school leaving exam, i.e. compulsory education), generation membership (first or second migrant generation⁴³) and ethnic background (Austrian / Bosnian / Croatian / Turkish background), participants were selected by means of purposeful sampling. According to Creswell (2007) and Diekmann (2002), purposeful sampling should be utilising when the sample has to consist of persons sharing the characteristics relevant to the research questions, such as a specific cultural or ethnical background for example. Since four different ethnic groups and two sequent generations of migrants were investigated, purposeful sampling was the most suitable sampling strategy in order to get representative results in regard to the independent variables, i.e. sex, level of education, working status as well as four different ethnic groups and two sequent generations of migrants.

For advertising the survey, various networks were utilised throughout February, March and April 2013. Potential participants were reached by means of notices on blackboards, online panels (on <http://ReWi.at>, the Psychoforum Graz, <http://Biograz.com>, the URBI-info lounge, and the SOWI-Info lounge) and the project's homepage (<http://reducingbarriers.jimdo.com>), flyers and notices in Alumni Uni Graz Newsletters (March and April 2013), email-emanations via the University of Graz's press office and student body. These advertisements were mostly aimed at students or members of the University of Graz hence in most instances, responders were quite young (below 40), well-educated and belonged to the second generation of migrants when having a migrant background (however, most of them were German native speakers). In order to also reach people with lower level education (i.e. without school leaving exam), older participants and further migrants of the first generation, close collaborations and networks with multiple organizations working in the health and migrant sector had been established prior to the survey (see Chapter 3.2.5). An extensive share of the questionnaires was handed out and recollected within various (language) courses (at the BFI, DANAIDA, SOMM, and the Austrian Integration Funds) or events of these collaborators (at Caritas Graz and the Graz Migrant Advisory Council Graz). Thus, a quite equitable distribution regarding migrant generations, language skills and education could be achieved. However, it was difficult to reach the entire target group since it turned out to be

⁴² see Table 5.2.1 Full Sample: Independent Variables in Chapter 5.2 Instrument Design

⁴³ Following the recommendations of the United Nations Economic Commission for Europe, first generation of migrants means people (and their parents) who were born outside Austria and immigrated later on, while migrants of the second generation are generally born inside Austria (ÖIF 2011 Migration & Integration, UNECE 2006).

challenging to gain access to especially Croatian, Bosnian and Turkish men. Here, the snowball-system, i.e. working by means of personal contacts and recommendations (see Diekmann 2002), was beneficial and ensured the total target was achieved and further an appropriate range regarding sex and ethnic background. Working through personal contacts also allowed for the survey to get enough volunteers not having a migrant background as participants for the control group of ancestral Austrians.

Both in the pre-test as well as in the full sample, ethnic background was explored by retrieving information on the participants' countries of birth, but also the countries of birth of their parents and grandparents. In order to be able to differ between the ancestral Austrian population (i.e. participants and their parents and grandparents who were born in Austria) and the migrant population, but also the migrant population in regard to generation membership, the collected data was combined and compared when analysis took place.

5.1.3 Methodology

The quantitative research questions were drawn on from the hypotheses that had been generated out of the qualitative results (Creswell & Clark 2007, Hussy et al. 2010), as laid out in Chapter 3 Research Approach and according to the idea of an explorative multi-methods-design. Deriving from the qualitative results and theoretical background, a preliminary line of questions was designed, further evolving into a pre-test version of the questionnaire. After pre-testing in regard to test-retest reliability and validation of scales was performed (see Chapter 2.2.1 Pre-test), the final questionnaire was developed. Response rate for the survey was 99.5% (see Chapter 5.3 Data Collection and Management), while full sample comprised 199 people. While purposeful sampling was performed, the sample was considered to be representative referring to all independent variables, i.e. "sex", "education", "migration" and "working status"⁴⁴ (see Chapter 5.1.2 Target Group and Sampling). No personal details were collected or saved and the author alone was responsible for organising and archiving data. Hence, all statistical measurements were performed with data which was made anonymous, as discussed in Chapter 3.1 Ethical Issues.

Different methods were used to analyse the data collected: Chi-Square Test, t-Test for independent samples, Single Factor Variance Analysis, Exploratory factor analysis, and Structural Equation Measurement Models (Confirmatory Factor Analysis and Covariance Structure Analysis). All statistical techniques were performed utilising the "IBM SPSS Statistics" program, which is a software package for statistical analysis which was purchased from the Karl-Franzens-University of Graz in 2012.

As already mentioned in Chapter 5.1 Research Questions, the first research question was two-fold, thus, different statistical approaches were used for analysis. While a Chi-Square Test was utilised to compare the collected definitions of minor ailments, evaluation of the necessity to require medical attention was conducted using analysis of variance for independent ratings and further included a t-Test for independent samples. The first research question was tested via two open questions as well as the scale "Personal Necessity to Require a Doctor's Attention" (AFKB) of the questionnaire. Research questions two to four were also analysed by means of Single Factor Variance Analysis, an analysis of variances (ANOVA) for independent ratings which is used for variables with more than two samples (e.g.: independent variable migration). Further, a t-Test for independent samples was performed. While the second research question contained the scale "Information Sources on Minor Ailments" (IQKB), the third involved the scale "Health Status and Health Behaviour" (GHSoz) and further

⁴⁴ see Table 5.2.1 Full Sample: Independent Variables in Chapter 5.2 Instrument Design

included items on social desirability as well as social support. Research question number four was analysed by involving Scale “Frequency of Experienced Minor Ailments” (HKB) as well as the Scale “Methods of Treatment” (VKB). As already mentioned, research question five comprised the interaction of the constructs “information sources on minor ailments”, “medical advice on” and “the frequency of experiencing minor ailments”, with the other constructs “health”, “individually perceived necessity to require medical care” and “types of treatment being used when experiencing minor ailments”. In order to do so, it also included the scale “Personal Necessity to Require a Doctor’s Attention”(AFKB). Statistical measurements included testing in regard to reliability⁴⁵, which comprised a first step involving exploratory analysis and a second step determining selectivity and homogeneity, i.e. internal consistency⁴⁶. Finally, structure review between the constructs, which were estimated through analysis of reliability and factor analysis, was performed utilising a structural equation modelling (SEM) involving confirmatory factor analysis (CFA). The scales utilised in the final version of the questionnaire are displayed in Chapter 5.4 Results and Findings.

5.1.3.1 Chi-Square Test / χ^2 -Test

Utilised for analysing the first research question (see Chapter 5.1.1 Research Questions), Chi-Square Tests are generally nonparametric procedures which compare frequencies on the assumption of uniform distributions. Nonparametric statistical techniques are designed for nominal, ordinal and metric data, and test hypotheses that do not require normal distribution or variance assumptions about the populations from which the samples are drawn. They are utilised to test the difference between a previously or hypothetically established distribution and an actual sample, but can also be used to test differences between two or more actual samples. There are two different types of comparison that can be evaluated via Chi-Square Tests: goodness of fit (One-Way Classification) and tests of independence (Two-Way Classification). The One-Way Classification or goodness of fit statistic is used when looking at the numbers of responses (or people) that fall into two or more categories while establishing whether or not an observed distribution of frequency differs significantly from an expected one. A test of independence or Two-Way Classification determines whether paired observations of two or more variables are independent from each other. Hence, it assesses the significance of difference between frequencies of appearance in at least two categories with at least two groups (e.g. relate responses on how to define minor ailments to migrant background in order to see if one’s migrant background is related to the definition of minor ailments; Bortz & Döring 2002, Bühner 2011, Field 2009).

Formula 5.1.3.1.1: Null Hypothesis of χ^2 - Test

$H_0: \pi_1 = \pi_2 = \dots = \pi_k$	
π_1	relative frequencies of sample 1
π_2	relative frequencies of sample 2

(Bühner & Ziegler 2009)

⁴⁵ Reliability is the ability of an assessment tool to produce stable and consistent results even when conditions are changed (Field 2009).

⁴⁶ Internal consistency is a measure of reliability assessing the degree to which different test items that explore the same construct produce similar results (Field 2009).

When applying a Chi-Squared Test, independence of observations is postulated by the null hypothesis (H_0) while the empirical chi-square distributions number χ^2 , i.e. the test statistic, is related to the theoretically derived chi-square distribution number. The value of χ^2 can only be calculated if the so called number of degrees of freedom⁴⁷ associated with it is known. If there is one independent variable, the test statistic has $k-1$ degrees of freedom ($df = k - 1$), where k is the number of frequencies which are compared. If the empirical Chi-Square of the actual sample values equal or less the chi-square of the previously or hypothetically established distribution, relative frequencies (π) do not differ or rather are not independent from each other. In this case, the null hypothesis (see Formula 5.1.3.1.1 Null Hypothesis of χ^2 – Test above) needs to be rejected (Bühner & Ziegler 2009).

Formula 5.1.3.1.2: Chi-Square Test / χ^2 - Test

$$\chi^2 = \sum_{i=1}^k \frac{(n_{bi} - n_{ei})^2}{n_{ei}}$$

$$n_{ei} = \frac{\sum_{i=1}^k n_{bi}}{k}$$

χ^2	test statistic
n_{bi}	observed frequency
n_{ei}	expected frequency, asserted by the null hypothesis
k	number of frequencies which are compared

(Bortz & Döring 2002, Bühner & Ziegler 2009)

Any statistical procedure testing hypotheses with a chi-squared sampling distribution and a true null hypothesis⁴⁸ can be referred to as χ^2 -Test. Hence, this test is widely applicable. Nevertheless, there are still some restrictions regarding its use. First of all, the data used must be of quantitative nature and in a frequency form (i.e. nominal data or higher). Further, a simple random sample should be used and sample size must be sufficiently large. If a χ^2 -Test is conducted on a sample with a sample size that is too small, inaccurate inference will result. Lastly, the individual observations need to be independent from each other, while no expected frequency should be equal zero ($n_{ei} \neq 0$) and not more than 20% of the variables are to have an expected value of frequency of less than five ($n_{ei} < 5$).

⁴⁷ Degrees of freedom are the number of entities which are free to vary when estimating a statistical parameter. Degrees of freedom influence on significance tests for χ^2 , t and F determine the exact form of the probability distribution for these test statistics (Field 2009).

⁴⁸ Generally speaking, the null hypothesis is the logical antithesis of the experimental hypothesis which the researcher wants to examine (Field 2009).

Effect size⁴⁹ (ω) of Chi-Square Tests can be calculated by using the Formula 5.1.3.1.3 Effect Sizes (ω) of Chi-Square Test as displayed below. After Cohen⁵⁰, effect sizes are subdivided into small (ranging from 0.1 to 0.3, i.e. $0.10 \leq \omega < 0.30$), middle (ranging from 0.3 to 0.5, i.e. $0.30 \leq \omega < 0.50$) and large effects (bigger than 0.5, i.e. $0.50 \leq \omega$). Effect size describes a standardised measure while indicating the dimension of an effect. An effect is on hand when the null hypothesis is rejected in an associated statistical test. Effect sizes are commonly used to compare differences between various groups in a standardised manner (Bortz & Döring 2002, Bühner 2011, Bühner & Ziegler 2009, Fahrmeir & Hammerle & Tutz 1996, Field 2009, Key 1997, Lienert & Raatz 1996).

Formula 5.1.3.1.3: Effect Sizes (ω) of Chi-Square Test

$$\omega = \sqrt{\frac{\chi^2}{n_{ei} + n_{bi}}}$$

ω effect size

χ^2 test statistic

n_{bi} observed frequency

n_{ei} expected frequency, asserted by the null hypothesis

(Bortz & Döring 2002, Bühner & Ziegler 2009)

5.1.3.2 t-Test for Independent Samples / Unpaired Two Sample t-Test

Independent or unpaired t-Tests are hypothesis testing procedures determining whether two sets of data show significant difference from each other. There are different types of t-Tests: One Sample t-Tests, Paired and Unpaired Two Sample t-Tests, which are also referred to as t-Tests for Independent Samples. While Paired or Repeated Measures t-Tests determine the difference between two responses measured on the same statistical unit (e.g. measurements of growth), Unpaired or Independent t-Tests are utilised when two separate sets of samples are provided, one from each of the two groups compared (e.g. males and females). While the population mean and standard deviation are unknown, Independent t-Tests evaluate whether two means extracted from two independent samples differ significantly (Bühner 2011, Bühner & Ziegler 2009, Field 2009).

Formula 5.1.3.2.1: Null Hypothesis of Equal Sample Means

$$H_0: \mu_1 - \mu_2 = 0$$

μ_1 expected mean of sample 1

μ_2 expected mean of sample 2

(Bortz & Döring 2002, Bühner & Ziegler 2009)

⁴⁹ Effect size measures the magnitude of an effect in an objective and usually standardised way (Field 2009).

⁵⁰ Cohen proposed rules for interpreting effect sizes (Field 2009).

When applying a t-Test for independent samples, independence of observations is postulated by the null hypothesis (H_0) while the empirical t-Test distributions number (t), i.e. the test statistic, is related to the theoretically derived t- , or rather z- distribution number⁵¹ (t- distribution if $df \leq 100$, z-distribution if $df > 100$). Degrees of freedom of the test statistic are calculated subtracting sample sizes from each other, with n_1 being the first sample size and n_2 being the second sample size ($df = n_1 - n_2 - 2$). If hypotheses are undirected and the empirical t-Test distribution number, i.e. the test statistic, is bigger than the theoretically derived t- or rather z- distribution number, the means of the compared samples differ significantly. Hence, the null hypothesis needs to be rejected (Bühner & Ziegler 2009).

Formula 5.1.3.2.2: Independent t-Test / Unpaired Two Sample t-Test for Unequal Variances

$$t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{\frac{\widehat{\sigma}_1^2}{n_1} + \frac{\widehat{\sigma}_2^2}{n_2}}}$$

t	test statistic
$\bar{x}_i$	sample means
n_i	sample sizes
$\widehat{\sigma}_i^2$	estimated sampling variances

(Bortz & Döring 2002, Bühner & Ziegler 2009)

There are three important assumptions for Independent t-Tests: independence of measured data, normal distribution and homogeneity of variance. Further, utilised scales relating to the dependent variable (e.g. sources of information on minor ailments) need to be of metric nature in order to interpret differences in a meaningful way. While the measured data of the two samples need to be independent from and hence not influencing each other, the statistical units of the two different samples compared are not allowed to overlap (i.e. independence of measured data). According to the central limit theorem⁵² and as suggested by Bortz (1999), scores only need to show normal distributions in each of the compared populations with an overall sample size smaller than 100 (t-distribution if $df \leq 100$; z-distribution if $df > 100$). In contrast, homogeneity of variance always needs to be established when applying an Unpaired Two Sample t-Test. This means that both of the compared groups must have equal variances. This can be tested utilising various procedures, such as the software-based Levene's Test (null hypothesis: equal variance of samples ($\sigma_1 = \dots = \sigma_k$; with two samples compared when applying a t-Test, hence $k = 2$). If the result of the Levene's Test is significant, the assumption referring to homogeneity of variances is violated.

⁵¹ A z-score is an observed value expressed in standard deviation units. When standardising an observed distribution, it is converted into z-scores, creating a new distribution with a mean of 0 and a standard deviation (i.e. standard error) of 1.

⁵² The central limit theorem states that the sampling distribution of large samples ($n_i > 30$) will shape as a normal distribution, regardless which shape the distribution of the sample's population shows from which the sample is drawn (Field 2009).

Formula 5.1.3.2.3: Degrees of Freedom of Independent t-Test for Unequal Variances, Correction Formula

$$df = \frac{(n_1 - 1) \cdot (n_2 - 1)}{(n_2 - 1) \cdot c^2 + (n_1 - 1) \cdot (1 - c)^2}$$

$$c = \frac{\frac{\widehat{\sigma}_1^2}{n_1}}{\frac{\widehat{\sigma}_1^2}{n_1} + \frac{\widehat{\sigma}_2^2}{n_2}}$$

df	degrees of freedom
$\bar{x}_i$	sample means
n_i	sample sizes
$\widehat{\sigma}_i^2$	estimated sampling variances

(Bortz & Döring 2002, Bühner & Ziegler 2009)

However, the t-Test for Independent Samples or Unpaired Two Sample t-Test is quite resistant to unequal variances if the sample sizes in the two compared groups are equal. In this case, the following correction formula for unequal variances needs to be utilised when calculating the test statistic (t) in order to meet the precondition of homogeneity of variances as described before. Further, degrees of freedom need to be adapted towards the unequal variances according to the correction formula above.

Formula 5.1.3.2.4: Effect Size of Independent t-Test ($\hat{d}$)

$$\hat{d} = \frac{\bar{x}_1 - \bar{x}_2}{\sigma_{pool}}$$

$$\sigma_{pool} = \sqrt{\frac{(n_1 - 1) \cdot \widehat{\sigma}_1^2 + (n_2 - 1) \cdot \widehat{\sigma}_2^2}{n_1 + n_2 - 2}}$$

$\hat{d}$	effect size of Independent t-Tests
$\bar{x}_i$	sample means
n_i	sample sizes
$\widehat{\sigma}_i^2$	estimated sampling variances
σ_{pool}	estimated standardized sample variance of the two samples

(Bortz & Döring 2002, Bühner & Ziegler 2009)

Statistical significance and the effect size⁵³ of Independent t-Tests are the two primary outputs of applying a t-Test. Statistical significance indicates whether the differences between sample averages are likely to represent actual differences between the two compared groups, while the sample's effect size of Independent t-Tests ($\hat{d}$) indicates whether the dimension of that effect is big enough to be practically meaningful. Effect size can be calculated by using the Formula 5.1.3.2.4 Effect Size of Independent t-Test ($\hat{d}$) displayed above. After Cohen⁵⁴, effect sizes of Unpaired Two Sample t-Tests are subdivided into small effects ranging from 0.2 to 0.5 (i.e. $0.20 \leq \hat{d} < 0.50$), middle effects ranging from 0.5 to 0.8 (i.e. $0.50 \leq \hat{d} < 0.80$), and large effects bigger than 0.8 (i.e. $0.80 \leq \hat{d}$). According to the literature, α -error probability, i.e. the type I error, should be reduced when there are more t-Tests within one set of data. Since this research is of explorative nature and t-Tests show higher test strengths versus analysis of variance when comparing two samples, an α -level of 5% was maintained. Results showing α -levels equal or only little below 5% are discussed in Chapter 5.5 Discussion and Analysis (Bortz & Döring 2002, Bühner 2011, Bühner & Ziegler 2009, Fahrmeir & Hammerle & Tutz 1996, Key 1997, Salkind 2011).

5.1.3.3 Single Factor - / One-Way - / Simple Analysis of Variance⁵⁵/ANOVA

Analyses of variance or ANOVAs, also referred to as F-Tests, are an important and increasingly popular technique for analysing effects of factors⁵⁶ on a response which divides the variability in the response variables⁵⁷ amongst the different factors. Simple or also single factor ANOVAs “involve testing the differences between the means of more than two groups on one factor or dimension” (Salkind p.225). In other words, one-way analyses of variance explore only one factor or treatment variable (such as group membership for example) while there are more than two levels within this factor (e.g.: people without migrant background, migrants of the first and second generation). Performing a simple ANOVA is required when differences across groups in average scores are explored while there are more than two levels of a grouping factor but only one dimension or treatment. In contrast, other ANOVAs (i.e. analyses of variance), namely the Multifactor ANOVA, Variance Components Analysis and General Linear Models, are used when there is more than one categorical factor.

Formula 5.1.3.3.1: Simple Analysis of Variance/ ANOVA

$$F = \frac{\frac{\sum_{i=1}^k (\bar{x}_k - \bar{\bar{x}})^2}{k-1}}{\frac{\sum_{i=1}^k (x_k - \bar{x}_k)^2}{n_{total}-1}} = \frac{\frac{SS_{between}}{df_{between}}}{\frac{SS_{within}}{df_{within}}} = \frac{MS_{between}}{MS_{within}}$$

F test statistic
 $\bar{\bar{x}}$ grand mean

⁵³ Effect size measures the magnitude of an effect in an objective and usually standardised way (Field 2009).

⁵⁴ Cohen proposed commonly used rules for interpreting effect sizes (Field 2009).

⁵⁵ Variance is defined as the estimate of average variability or also spread of a data set. It is calculated by the sum of squares divided by the number of values the sum of square is based on minus 1. There are different types of variance. Common variance is the variance shared by two or more items, i.e. variables. Unique variance is the variance specific to a particular item hence not shared with other items and can be attributed to only one measure. In contrast, random variance is defined as the variance unique to a specific item and also not shared with other items, but not attributable to only one measure. Finally, error variance is the proportion of variance that cannot be explained by the factor (Field 2009).

⁵⁶ A factor is a variable which affects the response variable's outcome (Field 2009).

⁵⁷ The result of an experiment which is measured is called response variable (Field 2009).

$\bar{x}_k$	sample means
$n_{total} - 1$	total degrees of freedom

(Bühner & Ziegler 2009)

When performing a simple ANOVA, the null hypothesis (H_0) determines that there is no difference between the samples' means ($H_0: \mu_1 = \dots = \mu_k = 0$; with μ being the expected mean of a sample and k the total number of means, as already mentioned before). Hence, if results show significant differences of means, the null hypothesis is rejected and the assumption of homogeneity of variances needs to be discarded. Since ANOVA and t-Tests both explore the differences between means, the two procedures are quite similar to each other. Nevertheless, t-Tests only look at differences between two sets of data (i.e. compare two means so *that* $k = 2$), while ANOVAs compare more than two means ($k > 2$).

If a t-Test is performed involving more than two means, the first statistical error α is accumulated. This means that α -error probability increases according to $\alpha_{total} = 1 - (1 - \alpha)^k$, with k being the number of means. This accumulation of an α -error can be avoided by utilising simple ANOVAs which compare the means of all samples to the so called grand mean, i.e. the overall mean of all samples. The sum of squares (SS) describes the scattering between the samples' means (such as between Austrians not having a migrant background and migrants of the first and second generation). It is divided into sum of squares (SS) between groups, comparing the means with the grand mean and further sum of squares (SS) within groups, comparing the means within a group. The quotients of sum of squares (SS) divided by the degrees of freedom (df) are named mean-squares (MS) after the included aberration from grand mean and sample means. Mean-squares can be seen as or rather accord to variances in variance-analytical designs. Hence, "between" mean-squares represent the variances explained or caused by differences between groups or rather samples, while "within" mean-squares represent the variances not explained or rather error variance. Finally, degrees of freedom between ($df_{between}$) result from the number of samples or groups of the independent variable minus one ($df_{between} = k - 1$), whereas degrees of freedom within (df_{within}) are calculated by subtracting the number of samples or groups of the independent variable from the total sample size (full sample) or the sum of all samples ($df_{within} = n_{total} - k$), respectively.

In contrast to t-Tests, the ANOVA's test statistic (F) does not allow for statistical inference in order to identify which means differ significantly. So to estimate where exactly the differences are, the calculated test statistic (F) is compared to the theoretically derived F-distribution number (showing asymmetric F-distribution) by utilising the degrees of freedom ($df_{total} = n_{total} - 1$), and post hoc comparisons need to be performed. A variety of statistical post hoc tests are available, although comparison of means is performed utilising multiple range tests, such as the Tukey's HSD procedure, contrasting individual means to each other, as well as the conservative Scheffé-Test, which explores differences between various combinations of means. However, results of post hoc comparisons can only be interpreted if the ANOVA or F-Test shows significant findings.

As explained earlier, effect size measure the magnitude of an effect in an objective and usually standardised way (Field 2009). The effect size of simple ANOVAs (η^2) can be calculated by using Formula 5.1.3.3.2 Effect Size of Simple Analysis of Variance ANOVA displayed below. After Cohen⁵⁸, effect sizes of single factor analysis of variance are subdivided into small, ranging from 0.001 to 0.060 (i.e. $0.001 \leq \eta^2 < 0.060$), middle, ranging from

⁵⁸ Cohen proposed commonly used rules for interpreting effect sizes (Field 2009).

0.060 to 0.140 (i.e. $0.060 \leq \eta^2 < 0.140$), and large effects bigger than 0.140 (i.e. $0.140 \leq \eta^2$; Bühner & Ziegler 2009).

Formula 5.1.3.3.2: Effect Size of Simple Analysis of Variance ANOVA (η^2)

$$\eta^2 = \frac{SS_{between}}{SS_{total}}$$

$$SS_{total} = \sum_{i=1}^{n_i \cdot k} (x - \bar{\bar{x}})^2$$

η^2 effect size of Simple ANOVA

$n_i \cdot k$ number of participants when sample sizes are equal

$\bar{\bar{x}}$ grand mean

(Bühner & Ziegler 2009)

In order to perform simple ANOVAs, there are some basic assumptions required. Similar to a t-Test, an ANOVA requires independence of measured data⁵⁹. Secondly, every group of measurements is obtained from a normal population – hence, the dependent variable must show normal distribution in all samples. Thirdly, sample variances need to be homogeneous, i.e. equal, which again can be tested utilising the Levene’s Test (null hypothesis: equal variance of samples ($\sigma_1 = \dots = \sigma_k$; with $k > 2$). If the assumption of homogeneous variance is violated, alternative nonparametric procedures, such as the Brown-Forsythe-Test, need to be performed. These alternative procedures are based on the comparison of medians instead of means, but show disadvantages in terms of interpreting results of post-Tests, since post hoc tests are based on comparison of means rather than medians. Further, utilised scales related to the dependent variable (e.g. sources of information on minor ailments) need to be of metric nature in order to be able to interpret the results in a meaningful way. According to Kühnel (1993, p.50), “*even ordinate data can be interpreted as imprecise measurements of metric quantitie*”. Hence, ordinate data can be assumed to be of metric nature when performing a simple ANOVA. Generally speaking, the simple ANOVA is quite resistant if these suppositions are not met, especially when the sample sizes in the compared groups are equal ($n_1 = n_2 = \dots = n_k$). If sample sizes or rather group sizes of independent variables are unequal, the α -level can be reduced (e.g. 2.5% instead of 5%). Nevertheless, results of post hoc-procedures need to be interpreted carefully if the requirement of homogeneous variances is not met and sample sizes vary (Bortz & Döring 2002, Bühner 2011, Bühner & Ziegler 2009, Fahrmeir & Hammerle & Tutz 1996, Key 1997, Salkind 2011).

⁵⁹ For more details on these requirements, see Chapter 5.1.3.2 t-Test for Independent Samples / Unpaired Two Sample t-Test.

5.1.3.4 Exploratory Factor⁶⁰ Analysis

Exploratory factor analysis is a multivariate statistical technique for identifying groups or clusters of variables. It reduces the amount of information collected to a small number of factors by identifying superior background factors (i.e. latent variables) which correlate to a set of observed variables, as displayed in Figure 5.1.3.4 Scheme of Factor Analysis below. Factor analyses are always linear models which can be classified into explorative and confirmatory factor analyses, while exploratory factor analysis can be further divided into principal axis factor analysis and maximum likelihood factor analysis. Principal axis factor analysis or also principal factor analysis aims at explaining covariance⁶¹ and is based on a statistical model as will be explained in the following section. As a procedure for detecting structure, exploratory factor analysis is utilised when there are no or only little presumptions regarding the variables' correlations. Hence, it explores the structure of a set of variables and reduces a set of data to a more manageable size while maintaining as much of the original amount of information as possible. The basic premise of exploratory factor analysis is that a variable's value can be subdivided into a sum of (hypothetical) factors (see Formula 5.1.3.4 Basic Premise of Exploratory factor analysis below).

Factor analysis isolates the underlying factors utilising a correlation matrix which displays associations between the data. It is a linear model where all interdependent relationships are examined. There is no specification of dependent variables, independent variables, or causality. Factor analysis further assumes that all the rating data on different attributes is related to each other thus can be reduced down to a few important dimensions, also called latent variables or factors (see Figure 5.1.3.4 Scheme of Factor Analysis below). Statistically speaking, the initial rating or also raw score given to any attribute is also partially due to another attribute's influence on that attribute. The statistical algorithm (i.e. principal axis factor analysis or maximum likelihood factor analysis) deconstructs the raw score into its components and further fractionises the partial scores into underlying factor scores. The degree of correlation between the initial raw score and the final factor score is called a factor loading (Bortz & Döring 2002, Field 2009, Salkind 2011, Noack 2007, Weiber & Mülhhaus 2010).

Figure 5.1.3.4: Scheme of Factor Analysis

(Noack 2007, p. 5)

⁶⁰ Factors are independent variables or predictors and are also referred to as latent variables in factor analysis.

⁶¹ Covariance measures the average relationship between two variables (Field 2009).

When undertaking an exploratory factor analysis, the procedure usually starts with the compilation of a correlation matrix which is a graph describing correlations among variables. After correlation coefficients between the variables are examined by utilising a correlation matrix, factor loadings⁶² as well as factor variances are estimated. It should be noted that due to the correlation of the factors, explained variances cannot be used in a summative way when performing a factor analysis (Bühner 2011). Furthermore, variables need to be standardised⁶³, i.e. converted into z-scores, prior to analysing. Extraction of factors can be performed either utilising principal axis factor analysis or maximum likelihood factor analysis. After the extraction of factors, meaningful factors, i.e. those explaining enough variance, need to be identified and selected for interpretation. Although this process is rather subjective, there are some procedures to support the researcher (e.g. Horn's parallel analysis, see also Field 2009). As a last step, factor rotation needs to be performed in order to improve interpretability of factors. Since most items are loading on more than one factor, this factor rotation effectively rotates the factor axes so that variables are loaded on only one factor. Rotation can be performed in an orthogonal or oblique way. While orthogonal rotation means that factors are independent before rotation and remain uncorrelated, oblique rotation allows for the factors to correlate. However, oblique rotation is more complex and demands for a factor transformation matrix. For this research, it was supposed that underlying factors were theoretically related, hence, oblique rotation was performed, further utilising SPSS promax 4, a computer based software package for statistical research (Bühner 2011, Field 2009, Fuchs-Heinritz et al. 1995).

Formula 5.1.3.4: Basic Premise of Exploratory Factor Analysis

$$V_{ki} = \lambda_{i1}f_{k1} + \lambda_{i2}f_{k2} \dots\dots + \lambda_{iq}f_{iq} + \varepsilon_{ki}$$

k = number of persons
i = number of variables
q = number of factors
 V_i = observed value of standardised variable
 λ_i = factor loading
 f_i = factor
 ε_{ki} = error term in linear systems of equation

(Bühner 2011, p.299)

Principal component analysis and factor analysis are both linear models, hence quite similar and often result in similar solutions. However, there are different suggestions in regard to ambit due to only factor analysis taking into account random error. Applying a factor analysis is recommended when there are existing ideas about relationships between items, i.e. variables, since only factor analysis can estimate underlying factors, i.e. latent variables. In contrast, principal component analysis should be applied when the data is to be explored in regard

⁶² Factor loading is a factor-analytical index for that share of a variable's covariance which is explained by a certain factor and can also be interpreted as the regression coefficient of a variable describing a factor (i.e. latent variable) as explained before.

⁶³ A z-distribution is a standardised distribution with a mean of 0 and a standard deviation of 1.

to patterns. Furthermore, the two techniques differ in regard to the used estimates of communalities. While factor analysis utilises a mathematical or rather statistical model in order to estimate the factors as mentioned before, principal component analysis fractionises the original data into a set of linear variates. According to Bühner (2011, p.312), *“the factor-analytic technique of principal axis analysis [as opposed to utilising the principal component analysis] produces the best solutions for estimated communalities”*, since they are not assumed with a value of one, but calculated on the basis of the variables’ multiple correlations (R). Since principal axis analysis is interested in finding common underlying dimensions within the data, it is important to know about common variance, which is defined as that part of a variable’s variance which can be explained by the background factors it shares with other variables. Statistically speaking, *“commonality is the proportion of a variable’s variance that is common variance”* (Field 2009, p.783). If an observed variable, i.e. item, has no unique or else random variance, it could be fully explained by its background factors. Thus, it would have a commonality of 1, whereas an item not sharing any of its variance with any other items would have a commonality of 0. However, in reality, this is usually not the case. Hence, the problem of communalities is defined as the necessity to choose communalities that are smaller than one (Fuchs-Heinritz et al. 1995, Überla 1971). As already mentioned, principal axis analysis not only describes the estimated and thereof derived communalities, but also deviation and factor loading between an observed and a reproduced correlation matrix.

5.1.3.5 Confirmatory Factor Analysis (CFA)

Confirmatory factor analysis belongs to the techniques of structural equation modelling (SEM), which further include research approaches utilising regression and path analysis.

Likewise to factor analyses (see Chapter 5.1.3.4 Exploratory Factor Analysis), structural equation modelling reduces the number of observed variables into a smaller number of latent variables by examining the covariance⁶⁴ among the observed variables. While being based on relationships between variables, linear SEMs dealing with latent variables represent multi-equation systems which display relations between the variables in form of regression equations (Bortz 1999, Salkind 2011, Schreiber et al. 2006). Therefore, structural equation modelling allows for the researcher to test theoretical assumptions about how the constructs are theoretically linked and also the directionality of significant relations (Schreiber et al. 2006). Thus, SEMs extend the possibility of relationships among the latent variables when compared to utilising confirmatory factor analysis as single method and encompass not only a measurement model, but also a structural model. Since SEM relies on several statistical tests to determine the adequacy of model fit to the dataset (such as a Chi-square test, Root Mean Square Error of Approximation (RMSEA), Normed Fit Index (NFI), Non-Normed Fit Index (TLI), and Comparative Fit Index (CFI)), they can *“[...] deal with a number of important issues that typically arise in multimethod evaluation studies and that are not adequately addressed with conventional methods of data analysis”* (Craeyen et al. 2011, p.498). For example, the mean and covariance structure of multiple latent constructs can be estimated simultaneously, while correlations among constructs can be assessed. Hence, analysis of issues related to dimensionality and analysis of the relations between different constructs can be performed within only one single measurement model when applying structural equation modelling (Craeyen et al. 2011, Schreiber et al. 2006). Furthermore, analyses of variance (ANOVAs) measure the outcome variables at least on an interval scale (see also Chapter 5.1.3.3 Single Factor-/ One-Way-/ Simple Analysis of Variance⁶⁵/

⁶⁴ Covariance measures the average relationship between two variables (Field 2009).

⁶⁵ Variance is defined as the estimate of average variability or also spread of a data set. It is calculated by the sum of squares divided by the number of values the sum of square is based on minus 1. There are different types of variance. Common variance is the variance shared by two or more items, i.e. variables. Unique variance is the variance specific to a particular item hence not shared with other items and can be attributed to only one measure. In contrast, random variance

ANOVA) and can lead to incorrect results if ordinal outcomes are treated as if they were continuous. In contrast, SEMs assume underlying continuous response variables by specifying a model for ordinal variables, representing another important benefit of structure equation modelling, since dichotomous or ordinal items can be used as indicators for the constructs of interest (Crayen et al. 2011).

As mentioned before, factor analyses are always linear models which can be classified into explorative and confirmatory factor analyses. In contrast to exploratory factor analysis, which is set out to discover relationships between variables (see Chapter 5.1.3.4 Exploratory Factor Analysis), confirmatory factor analysis (CFA) is utilised when specific hypotheses about structure and relations between the latent variables underlying the data are tested. Hence, CFA is often applied as second step after exploratory factor analysis, when confirmation is needed on whether a proposed model works for a dataset or not (Field 2009, Salkind 2011). Furthermore, confirmatory factor analyses are often utilised for study replication, cross-validation as well as validation of a questionnaire. Within structural equation modelling, CFAs are frequently used as first steps to assess the proposed measurement model in terms of structural review (Crayen et al. 2011, Schreiber et al. 2006).

Figure 5.1.3.5: Scheme of Confirmatory Factor Analysis (CFA)

(Schreiber et al. 2006, p. 324)

When performing a CFA, the assumed relations between variables are formalised via hypothetical measurement models and become operational through factor loading⁶⁶. Likewise to exploratory factor analysis, CFA isolates the underlying factors utilising a correlation matrix which displays associations between the data, while there is no specification of dependent variables, independent variables, or causality (Stein & Nehr Korn-Ludwig 2007). While utilising a hypothesized design to gauge a covariance matrix and comparing it with the observed covariance, the extent of interrelation and covariance among the latent constructs (i.e. background factors or unobserved variables) as well as reliability of the observed variables is evaluated (Schreiber et al. 2006).

is defined as the variance unique to a specific item and also not shared with other items, but not attributable to only one measure. Finally, error variance is the proportion of variance that cannot be explained by the factor (Field 2009).

⁶⁶ The degree of correlation between the initial raw score and the final factor score is called a factor loading (Field 2009; see also Chapter 5.1.3.4 Exploratory Factor Analysis).

As displayed in Figure 5.1.3.5 Scheme of Confirmatory Factor Analysis (CFA) above, a measurement model consists of indicators (i.e. items), which are empirical or measured variables on the one hand, and unobserved variables (i.e. background factors or also latent variables) on the other hand. While calculating the relationships between factors and indicators, CFA further estimates the interaction between the measurement errors (i.e. unique factors). In contrast to common factors, where the effects of unobserved variables are shared in common with one or more observed variables, effects of unique factors are only associated with one observed variable (Schreiber et al. 2006). As indicated before, CFA investigates reflexive measurement models only. Hence, the factor is always assumed to impact on the item (i.e. indicator), whereas formative measurement postulates opposite directionality of relations, with the indicators (i.e. items) impacting on the factor (Eberl 2004). In related graphs (see Figure 5.1.3.5 Scheme of Confirmatory Factor Analysis (CFA) above or also Figure 5.4.3 Measurement Model for the 5th Research Question), background factors (i.e. latent or also unobserved variables) are depicted graphically with ovals, measurement errors (i.e. unique factors) are displayed as (small) circles and the rectangles represent the indicators (i.e. items or observed variable). Further, the curved arrow between latent variables indicates correlations, whereas the straight line pointing from a background factor (i.e. latent variable) to an indicator (i.e. observed variable or item) indicates the causal effect of the latent variable on the observed variables (i.e. reflexive measurement (Schreiber et al. 2006, Weiber & Mülhhaus 2010). In addition with the related tables, the model provides information about the indicators a factor is loading on, the amount of variance explained by a factor (e.g. by means of λ^2), estimated determinants of reliability (such as λ^2 and Rel_{ϵ_j}), estimated determinants of validity⁶⁷ (e.g. DEV_{ϵ_j} and Fornell/Larcker criterion) and the relations between the factors ($r_{\epsilon_{ij}}$) as well as the amount of variance explained between the factors ($r_{\epsilon_{ij}}^2$).

In order to calculate a CFA (with AMOS)⁶⁸, variables need to be standardised (i.e. converted into z-scores) prior to analysing. When converting into standardised z-distribution, the means and standard deviations are standardised, i.e. converted into a mean of 0 and a standard deviation of 1, while missing data are supplemented utilising the “serial-mean” in AMOS¹. In reference to model fit and as a first step, two determinants of interference statistics, i.e. the p-value of chi-square tests⁶⁹ and the p-value of Bollen-Stine bootstrap⁷⁰, are evaluated. Both determinants should be more than 0.05 ($p > .05$), since the chi-square test’s null hypothesis (saying that the observed and reproduced correlation matrix concur) needs to be approved. Further, the Root Mean Square Error of Approximation (RMSEA), a residual-based index is evaluated. It looks at discrepancies between observed and predicted covariances and should be less than .08 to indicate good fit ($.08 > p$). Other indices of fit indices are the Standardized Root Mean Square Residual (SRMR), the Normed Fit Index (NFI), the Non-Normed Fit Index (TLI), and the Comparative Fit Index (CFI). The SRMR is a popular residual-based absolute fit indicator, describing the discrepancy function F^{71} in relation to model complexity, degrees of freedom and sample size, which should be smaller than .05 to indicate good fit. Incremental indices such as CFI, NFI and TLI also represent how much of the variance has been accounted for in the covariance

⁶⁷ Validity refers to how well a test measures what it is supposed to measure (Field 2009).

⁶⁸ For this project, confirmatory factor analysis was calculated utilising “AMOS”, an additional package for the the “IBM SPSS Statistics” program, which is able to calculate structural equation models including CFAs.

⁶⁹ See Chapter 5.1.3.1 Chi-Square Test / χ^2 –Test.

⁷⁰ Bootstrap is a statistical technique which estimates a sampling distribution of a statistic by taking repeated samples from the dataset. There are two forms: naive bootstrap for generating empirical estimates of standard errors and Bollen-Stine bootstrap for obtaining adjusted p values for the model fit statistic (Field 2009).

⁷¹ A discrepancy function is a mathematical function describing the conformity between a structural model and the observed data (Weiber & Mülhhaus 2010).

matrix, but also include discrepancies from a "null" model by comparing the ideal model (i.e. default model) to the worst case model (independence model) in regard to minimal discrepancy function F (Field 2009, Schreiber et al. 2006, Suhr 2006, Weiber & Mülhhaus 2010).

5.2 Instrument Design

The instrument used in most quantitative research is a questionnaire (Hussy, Schreier & Echterhoff 2010, Kallus 2010). It is a formalised set of questions and has three objectives: translating the needed information into questions which the questioned person can and will answer, motivating and encouraging the respondent to cooperate and complete the task and to minimise response error⁷² (Kallus 2010, Malhotra & Birks 2007). Drawing from the qualitative results, theoretical background (see Chapter 2) and based on the qualitative interview guide (see Chapter 4.1.3.3 Interview Guide), a line of questions followed by a preliminary questionnaire (pre-test version with 14 pages) containing six scales was designed throughout November 2012 to February 2013. Emanating from the results of the pre-test, a short version of the questionnaire containing nine pages was developed. In order to ensure that the questionnaire was designed and analysed in a representative and professional manner, the author received scientific advice and collaboration throughout the whole quantitative stage from the tutors Mag. Michael Blümel (independent scholar, Research Methodology) as well as Mag. Dr. Charlotte C. Fink (independent scholar, Cultural Studies and Social Sciences). Furthermore, especially during the design-process including the assembly of questions and scales, feedback was sought from o. Univ-Prof. Dr. Max Haller and ao. Univ-Prof. Mag. Dr. Katharina Scherke (both Institute of Sociology, University of Graz). Aiming at minimising potential language barriers which represent a major issue in research and can lead to non-representative results (Bowling 2009, Edberg 2007, Eichler 2008, Marks & Worboys 1997), questionnaires were translated into Croatian, Turkish and Bosnian by professional translators or native speakers. Further, all questionnaires were translated back into German by other native speakers in order to maximise the translations' qualities while ensuring logical and adequate transfer of the items (see Kallus 2010).

According to the idea of an explorative multi-methods-design (see Chapter 3.3.3 Explorative Mixed Methods Design), the quantitative research questions were drawn on from the hypotheses that had been generated out of the qualitative results (Creswell & Clark 2007, Hussy et al. 2010) as laid out in Chapter 3 Research Approach. Thus, sex, education status, working status and migration were included as independent variables related to the hypotheses of difference. Moreover, four quantitative key categories (sources of information on minor ailments, identifying minor ailments, treatment of minor ailments and measures that are beneficial to health) were developed and further determined as dependent variables. Table 5.2.1 Full Sample: Independent Variables below displays the full sample's composition in regard to the independent variables as well as age. The independent variable which is central to this research, "migration", subdivides into the three different specifications "no migrant background", "first⁷³" and "second generation migrants". The second independent variable "sex" divides into "females" and "males", while the independent variable "education" shows two levels, namely "school leaving exam" and "no school leaving exam". Lastly, the fourth independent variable "working Status" differs between "working" and "non working", while the specification "working" also includes people in training or studying.

Emanating from a factor-analytical perspective, measurements were of reflective nature and scales were devised following the concept of multiple items (see Eberl 2006, Weiber & Mühlhaus 2010). The concept of multiple items means that dependent variables, scales or sub-scales are formalised via latent variables or

⁷² Response error is defined as the error that arises when the interviewees' answers are misanalysed, or when interviewees give inaccurate answers (Malhotra & Birks 2007).

⁷³ Following the terms used by the Austrian government, "first generation migrants" defines foreign born individuals (also their parents) who immigrated later on, while migrants of the second generation are born inside Austria, while having foreign born parents (ÖIF 2011 Migration & Integration, UNECE 2006).

factors, and then operationalised through appropriate items. This has the advantage that *“the items’ performances can be tested when multiple observed items of one construct are measured reflectively including reliability and internal consistency”* (Weiber & Mülhhaus 2010, p.92). Furthermore, random errors⁷⁴ are offset through the mean of a set of items, and subtle grading of the full scale allows for more precise estimates due to the item total (Churchill 1979, Weiber & Mülhhaus 2010). Measurement models represent the mostly correlative relations between indicators, i.e. items on the one hand and homogeneous factors, i.e. latent variables (which are suspected behind those indicators) on the other (Bühner 2011, Kallus 2010, Hussy et al. 2010).

Table 5.2.1: Full Sample: Independent Variables

Independent variables		Migration			Total
		no migrant background	2 nd generation migrants	1 st generation migrants	
Sex	male	26 (30.5%)	37 (43.5%)	22 (26.0%)	85 (42.5%)
	female	28 (24.5%)	15 (13.0%)	71 (62.5%)	114 (57.5%)
Education	school leaving exam	31 (31.3%)	30 (30.3%)	38 (38.4%)	99 (49.5%)
	no school leaving exam	23 (23.0%)	22 (22.0%)	55 (55.0%)	100 (50.5%)
Working status	working	36 (30.0%)	42 (35.0%)	42 (35.0%)	120 (60.3%)
	non working	18 (23.0%)	10 (12.6%)	51 (64.4%)	79 (39.7%)
Age	≤ 32 years	19 (18.3%)	36 (34.6%)	49 (47.1%)	104 (52.3%)
	> 32 years	35 (36.8%)	16 (16.8%)	44 (46.4%)	95 (47.7%)
Total		54 (27.0%)	52 (26.0%)	93 (47.0%)	199

5.2.1 Pre-test

Throughout November 2012 to February 2013, a pre-test version of the questionnaire was designed. Drawing on the qualitative results and theoretical background (see Chapter 4.3.2 Generating the Hypotheses and Appendix 4.1 Coding Agenda), it evolved from a preliminary line of questions. These questions were developed drawing on the qualitative interview guide and further considering qualitative findings, while quantitative measures were applied as suggested in the literature (see Bühner 2011, Field 2009, Fuchs-Heinritz et al. 1995, Kallus 2010). The preliminary pre-test version of the questionnaire comprised fourteen pages and contained six scales, as displayed in Appendix 5.25.1 Pre-test version in English). Within the long version, some scales (i.e. scale IQKB, scale HKB and scale VKB) were presented in two different manners each as a six-point rating scale and as question of frequency regarding the frequency of occurrence of specific health behaviour during the last six months. Both versions were evaluated in regard to test-retest reliability. Further, validation of scales was

⁷⁴ A random error is the overall errors’ variable part that changes between the different measurements and is defined as the aberration of the total error from its mean value (Statistics.com n.d.).

performed with all items of the pre-test version (see Chapter 5.2.2.2 Evaluation of Test Quality). Based on the results of the pre-test, a short version of the questionnaire containing nine pages was developed.

The first scale “Information Sources on Minor Ailments” (IQKB) was developed from the second research question (“Where do people get informed about minor ailments?”). It comprised five different information sources, namely “Internet” (IQKB-I), “Other Health Professionals” (IQKB-FL), “Friends or Acquaintances” (IQKB-FB), “Relatives” (IQKB-Fam) and “Analogue Media” (IQKB-SMed). The second scale “Doctor’s Advice on Minor Ailments” (AIKB) was constructed out of the question concerning behaviour-related instructions the patients get from doctors when experiencing minor ailments. On the one hand, it comprised five prominent minor conditions, including common symptoms and manifestations of minor ailments. These were “common colds (e.g. nasal congestion, cough, sore throat and light fever)”, “digestive problems (e.g. diarrhoea, constipation or heart burn)”, “minor skin diseases (e.g. swellings because of bug bites, an athlete’s foot or nail fungus)”, “minor injuries (e.g. abrasions, cuts, bruises or strains)” and “minor pains (e.g. headache, backache or joint pain)”. On the other hand, it included medical information regarding various forms of treatment for minor ailments, such as “Traditional or Homemade Remedies⁷⁵” (AIKB-HM), “Non-prescription Medicines (OTC-products⁷⁶)” (AIKB-RFM), “Alternative Forms of Treatment⁷⁷” (AIKB-AH) and “Prescriptive Medicine” (AIKB-RPM). Evaluation of the personally conceived necessity to require medical care when experiencing minor ailments was conducted utilising two open questions at the beginning of the pre-test questionnaire. The third scale “Methods of Treatment” (VKB) emanated from the question about how people treat minor ailments, and comprised the five options of treatment “Traditional or Homemade Remedies” (VKB-HM), “Non-prescription Medicine (OTC-products)” (VKB-RFM), “Alternative Forms of Treatment” (VKB-AH), “No Therapy” (VKB-Nix) and “Medical Care” (VKB-Arzt). Deriving from the third research question (“How do people rank health or rather health conscious behaviour specifically within their lives and do they know what is beneficial to health?”), Scale GHSoz “Health Status and Health Behaviour” was developed. It looked at twenty-one different items regarding health status, health behaviour, interest in health, health knowledge and health conscious behaviour as well as social support. The short scale “Necessity to Require Medical Care” (EAFKB) was assembled after the assumption emanating from theory that minor ailments do not necessarily require medical attention⁷⁸. It included the five main categories of minor ailments mentioned before (i.e. common colds, digestive problems, minor skin diseases, minor injuries and minor pains) and was additionally evaluated by utilising factor and item analysis. The last scale “Frequency of Experienced Minor Ailments” (HKB) was developed after researching question four (“How often do people experience minor ailments and how are they treated?”) and included the main categories of minor ailments as explained earlier.

5.2.1.1 Pre-test Sample

To identify and eliminate potential problems, a pre-test encompassing 54 participants of the target group was performed. According to Kallus (2010, p.27), performing a pre-test with fifty or more questionnaires “allows for a first assessment of psychometric qualities and potential statistical outliers”. Getting a statistically relevant mix

⁷⁵ For this project, homemade remedies are defined as traditionally used recipes made with natural ingredients which can be found at home, for example a wet pack using curd (Burger & Wachter 1998).

⁷⁶ OTC (Over the Counter)-products are medicines which are sold directly to the consumer without getting a prescription from a medical doctor (Burger & Wachter 1998).

⁷⁷ Alternative treatment, for this project, is defined as opposed to ‘modern’ conventional medicine and includes healing systems like Ayurveda, TCM Traditional Chinese Medicine, Homoeopathy, Bach Flower remedies or herbal treatment.

⁷⁸ Minor ailments are defined as potentially self-treatable and self-limiting health problems that do not necessarily need medical attention (PAGB 2009 Fast facts about Self Care, PAGB 2011).

of participants in regard to sex, age, education (school leaving exam or higher / no school leaving exam), generation membership (first or second migrant generation) and ethnic background (Austrian/ Croatian/ Bosnian/ Turkish background) was hard to achieve and required various strategies throughout the whole survey (see Chapter 5.1.2 Target Group and Sampling). In fact, the pre-test-sample only shows appropriate socio-demographic distribution in regard to sex and age. In matters of education, generation membership and cultural background, the pre-test is not representative in regard to the research problem (see Chapter 5.1.1 Research Questions). However, since pre-tests aim at verifying a questionnaire's quality, i.e. comprehensibility of questions, validity and reliability, in order to ensure meeting quality standards of test theory and further train the interviewer, this is not relevant in terms of instrument quality (Diekmann 2002, Kallus 2010, Malhotra & Birks 2007; see also Chapter 5.2.2.2 Evaluation of Test Quality).

As displayed in Table 5.2.1.1 Pre-test Sample: Range regarding Age, Sex, Socio-Economic and Ethnic Background below, there were thirty-three females and twenty-one males participating in the pre-test, showing a reasonably even distribution between the sexes. Most of the volunteers participating in the pre-test belonged to the two youngest age groups (18-29 and 30-39 years), together accounting together for almost 65% of all pre-test participants. However, the two middle age groups (40-49 and 50-59) made up for 24.1%, and the oldest age group (over 69 years) was represented by one member. In regard to participants' education, more than 72% of the fifty-two persons who gave full particulars declared to have a school leaving exam or higher (tertiary) education. As already mentioned, ethnic background was explored by asking for information on the participants' countries of birth, but also their parents' and grandparents', both for the pre-test and the full sample. When analysing the data, the collected material was combined and compared in order to be able to differentiate between the ancestral Austrian population (i.e. participants, parents and grandparents were born in Austria) and the migrant population, but also the migrant population in regard to generation membership.

Table 5.2.1.1: Pre-test Sample: Range regarding Age, Sex, Socio-Economic and Ethnic Background

	n		%	n		%	Total n
Sex	females	33	61.1	males	21	38.9	54
Age in Years (range: 20-70)	18-29	19	35.2				54
	30-39	16	29.6				
	40-49	5	9.3				
	50-59	8	14.8				
	60-69	5	9.3				
	>69	1	1.9				
Education	school leaving exam or higher	39	72.2	no school leaving exam	13	24.1	52 ^b
Country of Birth (Citizenship) ^a	born in Austria ^a	39	72.2	Bosnia-Herzegovina	8	14.8	54
	not born in Austria	16	27.8	Croatia ^a	7	12.95	
				Turkey	1	1.9	
Parents'	Austrian	36	66.7	Bosnia-	7	13	54

Countries of Birth	(Ancestral population)			Herzegovina			
				Croatia	9	16.7	
	other	1	1.9	Turkey	1	1.9	
Migrants' Generation Membership	1 st migrant generation	15	27.8	2 nd migrant generation	3	5.5	18

^a ad Citizenship: Except for one person with Austrian citizenship who was born in Croatia, distribution of citizenship accorded with the countries of birth.

^b Two participants declined to give full particulars regarding their level of education.

As shown above, over 72% of the participants were born in Austria, whereas roughly 28% were born elsewhere. Of the remainder, most were born in Croatia or Bosnia; only one stated having been born in Turkey. With one exception, distribution of citizenship accorded with the countries of birth (only one person with Austrian citizenship was born outside Austria, in Croatia). Thirty-six out of the thirty-nine people born in Austria further indicated Austria as their parents' (and also grandparents') country of birth; hence, 66.7% of the pre-test sample consisted of an ancestral Austrian population. Of the 33.3% (i.e. eighteen people) in the pre-test sample who had a migrant background, only three belonged to the second generation of migrants (i.e. were born in Austria but had foreign born parents) while the rest were exclusively foreign born.

5.2.1.2 Evaluation of Test Quality

Evaluation of test quality was performed in a two-fold way: First, a factor analysis was conducted aiming at testing the scales' dimensionalities. In order to minimise the problem of commonalities (see Überla 1971), the factor-analytic technique of principal axis analysis rather than a principal component analysis was chosen⁷⁹. Besides estimated and thereof derived commonalities, principal axis analysis further described factor loading and deviation between an observed and a reproduced correlation matrix (Bortz & Döring 2002). As already mentioned in Chapter 5.1.3.4 Exploratory Factor Analysis, variables need to be z-transformed prior to analysis, and explained variance of correlating factors cannot be used in a summative way in principal axis analysis (Bühner 2011). Regarding the scales AIKB and VKB, all factors comprised five theory-based, prominent minor conditions as variables, including common symptoms and manifestations of minor ailments as outlined in Chapter 1.2.1 Minor Ailments. Secondly, item analysis was conducted for all subject areas and scales, so questions were of appropriate standard regarding their validity⁸⁰ (Fuchs-Heinritz et al. 1995). Item analysis provided information in form of graphs for the distribution of means as well as boxplots displaying medians, quantiles and statistical outliers. Further, it described standard deviation (SD), item difficulties, selectivity (r_{ITC}) and reliability in regard to internal consistency (i.e. Cronbach's α coefficient)⁸¹. According to Bühner (2011), means of rating scales can also be interpreted as item difficulties. Hence, the graphs also display the items' difficulties which should have a value between 2.00 and 5.00 in order to account for medium item difficulty. All items with an item difficulty lower than 2.00 exhibited high item difficulties, meaning that they were answered

⁷⁹ See Chapter 5.1.3.4 Exploratory Factor Analysis.

⁸⁰ Validity represents the degree of evidence that a test measures what it is supposed to measure (Field 2009).

⁸¹ Internal consistency is a measure of reliability assessing the degree to which different test items that explore the same construct produce similar results (Field 2009).

contrary to the intended direction of agreement. All tables and graphs related to the pre-test results can be found in Appendix 5.2.1 Pre-test Results.

5.2.1.2.1 Scale “Information Sources on Minor Ailments” (IQKB)

As explained before, the scale IQKB looked at information sources on minor ailments and comprised five different sources, namely the “Internet” (IQKB-I), “Health Professionals” (IQKB-FL), “Friends or Acquaintances” (IQKB-FB), “Relatives” (IQKB-Fam) and “Analogue Media” (IQKB-SMed). In regard to its explorative nature, the scale overall showed satisfying results, although only three out of four assumed factors could be extracted (i.e. IQKB-FBFam, IQKB-I and IQKB-FL). Redundancy of factor analysis (i.e. the percentage of concordance between observed and reproduced correlation matrix) was 70%. Analysis of standard deviation (SD), selectivity (r_{ITC}) and internal consistency (Cronbach’s α coefficient) confirmed the results of the principal axis analysis, with the first factor displaying maximum selectivity through its items “relatives” and “female relatives”. Hence, these two items not only represented the factor “Friends, Acquaintances and Relatives” the best, but also the whole scale when compared to items of the second and third factor. Excluded items such as those of the subscale “Analogue Media” (IQKB-SMed), displayed high item difficulties, thus were not reintegrated when assembling the final (i.e. short) version of the questionnaire.

5.2.1.2.2 Scale “Doctor’s Advice on Minor Ailments” (AIKB)

Results of factor and item analysis regarding the scale “Doctor’s Advice on Minor Ailments” (AIKB) were satisfying, hence, it could be included as whole into the final version of the questionnaire as no adaptation was necessary. When undertaking the principal axis analysis regarding the scale, all of the four assumed factors, namely “Traditional or Homemade Remedies” (AIKB-HM), “Alternative Forms of Treatment” (AIKB-AH), “Prescriptive Medicine” (AIKB-RPM) and “Non-prescription Medicine” (AIKB-RFM) could be extracted⁸². As explained before, all factors comprised five theory-based categories of minor conditions including common symptoms as variables. A negative correlation between factors indicated a heterogeneous construct for “Doctor’s Advice on Minor Ailments”. Thus, when undertaking the final analysis, the four extracted factors required separate calculation, i.e. could not be extracted together. However, the examination of dimension delivered overall satisfying results with all items showing moderate item difficulties, while redundancy for the scale AIKB was 85%. Further, results suggested the scale AIKB as best represented by the variables “doctor’s recommending non-prescription medicines when experiencing minor injuries, skin diseases and digestive problems” and “doctor’s recommending non-prescription medicines or homemade remedies when experiencing minor a common cold”.

5.2.1.2.3 Scale “Methods of Treatment” (VKB)

The scale “Methods of Treatment” (VKB) looked at various forms of treatment the participants turn to when experiencing minor ailments and comprised the five theory-based categories of minor conditions including common symptoms as variables for all factors as explained before, while delivering only a partially encouraging solution. On the one hand, three out of five assumed factors could successfully be extracted in a joined way utilising factor analysis, namely “Alternative Forms of Treatment” (VKB-AM), “Traditional or Homemade Remedies” (VKB-HM) and “Non-prescription Medicine” (VKB-RFM). Moderate positive factor correlations between these three supposed a homogeneous construct, while the individually and independently extracted factor “No Therapy” (VKB-Nix) could deliver satisfying results when handled as individual factor. Lastly, redundancy between the observed and reproduced correlation matrix was 78%. On the other hand, item analysis assessed high item difficulties for the subscale “Alternative Forms of Treatment” (VKB-AH) which were

⁸² For more information, see Chapter 1.2 Minor Ailments and Self Care.

of critical quality (see Table in Appendix 5.4.1 Results: Tables). Hence, after the main inspection took place, all three extracted factors required reassessment in regard to item difficulties and examination of dimension (see Chapter 5.4 Results and Findings). Finally, it needs to be stated that the subscale “Medical Care” (VKB-Arzt) could either be excluded or retested after the main inspection, whereas the subscale “No Therapy” (VKB-Nix) would always require separate calculation because this subscale could not be measured as an autonomous or rather homogenous construct.

5.2.1.2.4 Scale “Health Status and Health Behaviour” (GHSoz)

The scale “Health Status and Health Behaviour” (GHSoz) looked at twenty-one items regarding various aspects of health-related behaviour as well as social desirability. Overall, its analysis or rather the analysis of the two extracted factors, namely “Health Knowledge and Interest” (WIG) and “Health Status” (StaG), displayed unsatisfying results when conducting the examination of dimension and analysis of selectivity as well as internal consistency. Only the assessment of item difficulties met the requirements, displaying median items’ difficulties ranging from 2.00 to 5.00 for almost all items. Hence, the construction of the scale GHSoz was reassessed and the scale was redesigned for the main analysis. Nevertheless, the single factor “Health Conscious Behaviour” (SELG), which was extracted independently, showed adequate results in regard to factor and item analysis. Thus, it could be utilised for the questionnaire’s final version, although it required revaluation via an examination of dimension and analysis of reliability after the main inspection had taken place.

5.2.2 Final Questionnaire

The final, i.e. short version of the questionnaire was assembled according to the results of the pre-test in order to ensure adequate fitness of the research instrument in regard to validity⁸³ and reliability⁸⁴. As suggested in the last chapter, some items or scales were included without adulteration, while others were rephrased and remodelled. Moreover, some questions, i.e. items, were left out in the final form due to unsatisfying results in the pre-test (such as the scale IQKB or scale GHSoz for example). After all necessary modifications took place, the final form of the questionnaire, as can be seen in the appendix section in its German version, consisted of six-point rating scales and two open questions at the very beginning, retrieving information on the how minor ailments were defined. The six-point rating scales included in the final version were AFKB “Personal Necessity to Require a Doctor’s Attention”, IQKB “Information Sources on Minor Ailments”, GHSoz “Health Status and Health Behaviour”, HKB “Frequency of Experienced Minor Ailments”, VKB “Methods of Treatment” and AIKB “Doctor’s Advice on Minor Ailments” (see Appendix 5.3 Full Sample: Scales of the Questionnaire in English).

⁸³ Validity represents the degree of evidence that a test measures what it is supposed to measure (Field 2009).

⁸⁴ Reliability is the ability of an assessment tool to produce stable and consistent results even when conditions are changed (Field 2009).

5.3 Data Collection and Management

As shown in Table 5.3 Full Sample: Data Collection below, sampling was performed in stages due to organisational and time management reasons. Due to reasons of confidentiality, the author alone was responsible for organising and archiving data. She only arranged all the meetings and collaborated with local migrant organisations (see Chapter 5.1.2 Target Group and Sampling) and she alone had access to the data collected.

The pre-test sample and first share of data (i.e. 54 questionnaires) was collected between 7 February to 18 March 2013, mostly in person (meaning that the person handing out the questionnaires stands by and recollects them afterwards), but also using e-mail. The person administering this share, i.e. distributing and recollecting the forms, was the author only. Time and location for the collection in person differed due to participants' preferences, although most meetings were held at the KF-University campus, whereas only a few took place in the participants' homes or at cafés. For the pre-test, only the long version of German questionnaires was utilised, while pre-testing was performed and the short version of the questionnaires had been developed (see Chapter 5.2 Instrument Design). After all translations and questionnaires were finished, the second share of data was collected from March 20 to April 16, 2013. Taking place mostly at meetings or as part of courses of collaborating organizations (see Chapter 5.1.2 Target Group and Sampling), data collection was not only performed in person, but questionnaires were also deposited, further distributed and put aside by supportive project management staff of the various organizations – this way, altogether 96 forms could be recollected. Within those 96 questionnaires, most people utilised Bosnian, Croatian and Turkish versions (see Table 5.4 Full Sample: Language of Questionnaires below). The third and last share of data was collected from April 1 to May 6, 2013. Aiming at a statistically appropriate range regarding sex and ethnic background, this stage worked through personal connections and recommendations while mostly utilising e-mail but also meetings in person. Within this period, 50 questionnaires could be recollected, though one had not been filled out properly. Due to issues of anonymity as well as confidentiality, the author was the only person administering distribution via email or individually arranged meetings in person.

Table 5.3.1: Full Sample: Data Collection

Collection method	Stage 1	Stage 2	Stage 3	Total
in person	38		23	61
e-mail	16		26 (1)	43
organisations		96		96
Total	54	96	49 (50)	199 (200)

Table 5.3.2: Full Sample: Language of Questionnaires

Language	Stage 1	Stage 2	Stage 3	Total
German	54	25	22 (23)	101 (102)
Bosnian		15	10	25

Croatian		15	11	26
Turkish		41	6	47
Total	54	96	49 (50)	199 (200)

Due to test-economic reasons, 200 questionnaires were handed out. In order to get meaningful results, this number was appropriate in regard to the utilised statistical methods and techniques (see Chapter 5.1.3 Methodology). Further, 200 was an adequate number referring to the migrant population living in Graz and having a background in Bosnia-Herzegovina, Croatia and Turkey (see Chapter 3.2.2 Composition of Target Group), regardless of whether every questionnaire was returned comprising usable and valid information or not. Finally, 200 was still a manageable number for an individual's project in terms of a doctoral thesis' dimensions and when put in relation to the overall concept of this mixed methods research (see Chapter 3.3 Research Design). Out of the 200 distributed forms, 199 could be recollected containing useful and valid information. Hence, response rate for the survey was 99.5%.

5.4 Results and Findings

Results of the statistical approaches relating to the five research questions (see Chapter 5.1.1 Research Questions) are described in the following sections.

The impact of the independent variables⁸⁵ “sex”, “education” and “working status” on the items of the questionnaire’s scales was evaluated by utilising a t-Test. Since “migration” was the essential independent variable central to this research, its influence on the scales was assessed by means of simple ANOVA. As already mentioned, variables needed to be z-transformed prior to some statistical analysis procedures such as exploratory factor analysis (EFA), confirmatory factor analysis (CFA) or analysis of variance (ANOVA). Further, explained variance of correlating factors cannot be used in a summative way when performing principal axis analysis (Bühner 2011; see Chapter 5.1.3.4 Exploratory Factor Analysis). Regarding the scales AFKB, HKB and VKB, all factors comprised five theory-based categories of minor conditions as items (i.e. variables), including common symptoms and manifestations of minor ailments, as described earlier⁸⁶. Due to sample size and according to the central limit theorem, evaluations of normal distributions were unattended when performing statistical analysis. Moreover, all items were transformed to show interval-scale-level since *“even ordinate data can be interpreted as imprecise measurements of metric quantities”* (Kühnel 1993, p.50). While also describing standard deviation (SD), selectivity (r_{ITC}) and internal consistency (cronbach α coefficient), means of rating scales were interpreted as item difficulties when performing an explorative analysis (Bühner 2011; see also Chapter 5.1.3 Methodology). The provided information in form of graphs for the distribution of means as well as boxplots displaying medians, quantiles and statistical outliers as well as all tables which are not provided within the text can be found in Appendix 5.4 Results.

During analysis, it was found that evaluating the interaction between the factors might be interesting and also helpful in terms of interpreting the results. Hence, a Multifactor ANOVA (also referred to as F-Test) involving two or three factors, was performed on almost all scales of the final questionnaire (i.e. scale AFKB, GHSoz, HKB and IQKB). Since Multifactor ANOVAs are complex research tools and require a lot of attention, however, no Multifactor ANOVA was performed in regard to scale VKB. Further, these investigations were performed in addition to the prior described methods (see Chapter 5.1.3 Methodology), thus they are not described within this section. However, the related results in the form of tables are included in the appendix section (see Appendix 5.5.1 Results: Tables) as well as discussed within Chapter 6 Discussion and Conclusion.

⁸⁵ As mentioned earlier (see Chapter 5.2 Instrument Design), the independent variable “migration” subdivided into the three specifications “no migrant background”, “first generation migrants” and “second generation migrants”. Likewise, the second independent variable “sex” divided into “females” and “males”, while “education” distinguished between “school leaving exam” and “no school leaving exam”. Lastly, the fourth independent variable “working status” differed between “working” and “non working”, while “working” also included people in training or students.

⁸⁶ i.e. “common colds (e.g. nasal congestion, cough, sore throat and light fever)”, “digestive problems (e.g. diarrhoea, constipation and heart burn)”, “minor skin diseases (e.g. swellings because of bug bites, athlete’s foot and nail fungus)”, “minor injuries (e.g. abrasions, cuts, bruises and strains)” and “minor pain (e.g. headache, backache or joint pain)”, see also Chapter 1.2.1 Minor Ailments and Chapter 5.2.1 Pre-test.

5.4.1 Results of the First Research Question: “How do people define minor ailments and can they differ between self-treatable conditions and those that are not?”

The first research question (“How do people define minor ailments and can they differ between self-treatable conditions and those that are not?”; see also Chapter 5.1.1 Research Questions) comprised people’s definitions of minor ailments as well as the individually perceived necessity to require medical care when experiencing minor ailments, such as common colds, digestive problems, minor skin diseases, minor injuries or minor pains. Due to the two-fold nature of this question, different statistical approaches were used for analysis. In order to compare the collected definitions of minor ailments, a Chi-Square Test was applied to two open questions at the very beginning of the questionnaire (see Table 5.4.1.1 Open Questions below). Further, evaluation of the individually perceived necessity to require medical care when experiencing minor ailments was performed via the scale “Personal Necessity to Require a Doctor’s Attention” (AFKB; see Table 5.4.1.3 Scale “Personal Necessity to Require a Doctor’s Attention” AFKB below) by utilising analysis of variance for independent ratings and a t-Test for independent samples.

Except for the category “skin diseases”, all theory-based categories of minor ailments were mentioned more frequently than the category “others”. In other words, related to “common colds”, “digestive problems”, “minor skin diseases”, “minor injuries” and “minor pains”, respondents defined the same conditions as minor ailments as those derived from theory. Hence, hypothesis 1.1a (H_0 : The previously from theory derived definitions of minor ailments do not differ from those provided by the participants.) could be confirmed for all minor ailments-categories except for “skin diseases”. Hypothesis 1.2a, (i.e. alpha-adjusting), assuming that “small ailments do not differ from each other,” was not confirmed since the described categories of minor ailments differed from each other. Hypothesis 1.3a (i.e. “The provided definitions of minor ailments differ between people with and without migrant background and two generations of migrants.”) could be confirmed except for category “skin diseases”, as the provided definitions of minor ailments differ between people with and without migrant background and two generations of migrants. Since the collected definitions of some minor ailments differed between male and female participants, the third hypothesis (1.4a: The provided definitions of minor ailments differ between male and female participants.) could be affirmed for minor ailment-categories “common colds”, “minor injuries” and “minor pains”. Due to a lack of interaction between categories of minor ailments and the independent variable education, hypothesis 1.5a (H_0 : The provided definitions of minor ailments differ between people having a school leaving exam and those who do not.) was not confirmed, meaning that there were no results retrieved for this variable. Finally, the provided definitions of minor ailments only differed between working and non working participants in regard to “common colds”. Thus, the sixth hypothesis (1.6a H_0 : The provided definitions of minor ailments differ between working and non working participants.) could be confirmed for category of minor ailments “common colds”. Referring to the individually perceived necessity to require medical care when experiencing minor ailments, hypothesis 1.1b (H_0 : The individually perceived necessity to require medical care when experiencing minor ailments differs) was confirmed for all categories of minor ailments except for “minor injuries”. Hence, the perceived necessity to require medical care when experiencing minor ailments such as common colds, digestive problems, skin diseases or minor pains, differed between people with and without migrant background and two generations of migrants. However, there were no differences between females and males in regard to the perceived necessity of requiring medical care for the treatment of minor ailments detectable, thus, hypothesis 1.2b (H_0 : The individually perceived necessity to require medical care when experiencing minor ailments differs between males and females.) was not confirmed. Except for minor ailment-categories “minor pain” and “skin diseases”, hypothesis 1.3b (H_0 : The individually perceived necessity to require medical care when experiencing minor ailments differs between people having a school leaving exam and those who do not.) was confirmed, due to

education impacting on the respondents' perceived necessity to require medical care when experiencing minor injuries, common colds or digestive disorders. Finally, hypothesis 1.4b (H_0 : The individually perceived necessity to require medical care when experiencing minor ailments differs between working and non working people.) related to a difference between working and non working people could be confirmed for all categories of minor ailments except for digestive problems (AFKB-03).

In summary, it was found that definitions of minor ailments given by the participants generally concurred with the definitions given by theory. Yet the provided definitions of minor ailments did differ from each other, and so did the individually perceived necessity to require medical care when experiencing minor ailments when put in relation to the independent variables "migration", "sex", "education" and "working status" as explained in the following sections.

5.4.1.1 Results of Open Questions

Table 5.4.1.1 Open Questions below shows the two open questions utilised to extract information on how participants defined minor ailments. While the first question asked respondents to state diseases or symptoms they would categorise as minor ailments, the second question asked specifically for minor ailments that did not require a medical doctor's attention. Findings were related to the five main categories of minor ailments (common colds, digestive problems, minor skin diseases, minor pains; including related symptoms), which were developed from theory prior to research as mentioned before. Whilst the categories "common colds" and "minor pains" or related symptoms were listed significantly often, the categories "digestive problems", "skin diseases" and "minor injuries" were only seldomly mentioned. The condition which was defined as minor ailment the most frequently was the common cold (more than 77%), while the condition mentioned the least frequently was skin problems (around 10%). Listed conditions other than those of the main categories were assembled in category "others" (such as dental conditions for example. Generally, most respondents were able to give two or three different examples of minor conditions, and only eleven people (5.5%) mentioned none. Hence, 188 people or 94.5% listed at least one condition or symptom of the prior defined category of minor ailments, whereas only six (i.e. 3%) were able to specify all.

Table 5.4.1.1: Open Questions

- What do you understand by minor ailments? Please list some diseases or symptoms which you would categorize as minor ailments.
- There are many minor ailments in our daily life – some can be self-treated and some demand the consultation of a doctor. Please list some minor conditions that – in your opinion – do NOT make consulting a doctor necessary.

Further, independent variables (migration, sex, education and working status) impacted on the different categories of minor ailments in varying degrees. Minor ailment-category "common colds" was independent from education, but dependent on independent variables migration ($\chi^2 = 16.79$, $p \leq .01$), sex ($\chi^2 = 6.12$, $p \leq .05$) and working status ($\chi^2 = 4.52$, $p \leq .05$). Hence, in general, migrants of the second generation as well as people without a migrant background named at least one symptom related to common colds more than

migrants of the first generation. Accordingly, more migrant respondents of the first generation did not list any symptoms of common colds than participants of the second generation or those not having a migrant background. Surprisingly, men mentioned common colds or at least one related symptom more often than women, while women were more likely than men to not mention any conditions related to common colds at all. Further, non working people were more likely to not call any ailments related to common colds, while working people more often mentioned at least one symptom related to common colds than non working respondents. Independent from independent variables sex, education and working status, category “digestive problems” depended on independent variable migration ($\chi^2 = 8.11$, $p \leq .05$), which differed between the three levels “no migrant background”, “first” and “second generation migrants”, as mentioned further up. Results suggest that more respondents without a migrant background and first generation migrants mentioned at least one symptom associated with digestive disorders than second generation migrants. Reversed, second generation migrants were more likely to mention no conditions related to digestive disorders than first generation migrants⁸⁷ or people not having a migrant background. Minor ailment-category “skin diseases” is not dependent on any independent variable, thus there was no impact of independent variables detectable. Category “minor injuries” was independent from education and working status, but dependent on independent variables migration ($\chi^2 = 18.05$, $p \leq .01$) and sex ($\chi^2 = 12.53$, $p \leq .01$). First generation migrants were more likely to not mention any conditions associated with minor injuries, whereas second generation categorised minor injuries as minor ailments more often than people without migrant background or first generation migrants. In regard to sex, females were less likely than men to mention symptoms related to minor injuries when defining minor ailments. Likewise to category “minor injuries”, minor ailment-category “minor pain” showed independence from education and working status, but dependence in regard to independent variables migration ($\chi^2 = 6.44$, $p \leq .05$) and sex ($\chi^2 = 6.54$, $p \leq .05$). When compared to ancestral Austrian respondents without migrant background and migrants of the first generation, second generation migrants were more likely to not mention any symptoms related to minor pain. Vice versa, respondents not having a migrant background as well as first generation migrants did mention minor pain or at least one associated condition more often than participants belonging to the second migrant generation. Further, women categorised minor pain and associated symptoms more often as minor ailments than compared to men.

5.4.1.2 Results of Scale “Personal Necessity to Require a Doctor’s Attention” (AFKB)

A second aspect of the first research question, evaluation of the respondents’ individually perceived necessity to require medical care when experiencing minor ailments was performed utilising the scale “Personal Necessity to Require a Doctor’s Attention” (AFKB) as shown below. While the items AFKB-01 to AFKB-05 represented the theory based categories of minor ailments, scaling was transformed into 0 (for self-treatable) to 5 (for medical care) instead of 1 to 6 prior to analysis.

Results of the explorative analysis displayed moderate difficulties⁸⁸ for all five items. While respondents assigned the lowest necessity to require a doctor’s intervention to minor pains (item AFKB-01), skin diseases (item AFKB-04) showed the highest need for medical attention. Although only item AFKB-04 showed an approximately univariate normal distribution but due to a lack of outliers or extreme values, scale AFKB can be seen as homogeneous (with exception of item AFKB-01).

⁸⁷ First generation migrants were situated in the middle between ancestral Austrian respondents and migrants of the second generation.

⁸⁸ ($1 < \bar{x} \text{ (Mean)} < 4$).

Table 5.4.1.2: Scale “Personal Necessity to Require a Doctor’s Attention” (AFKB)

	1	2	3	4	5	6
	self-treatable					medical care
	increasing necessity for medical care →					
AFKB-01	minor pain (e.g. headache, backache, joint pain)	1	2	3	4	5 6
AFKB-02	cold (e.g. runny nose, cough, sore throat, light fever)	1	2	3	4	5 6
AFKB-03	digestive problems (e.g. diarrhoea, constipation, heart burn)	1	2	3	4	5 6
AFKB-04	skin diseases (e.g. swellings because of bug bites, athlete’s foot, nail fungus)	1	2	3	4	5 6
AFKB-05	minor injuries (e.g. abrasions, cuts, bruises, strains)	1	2	3	4	5 6

Results of the t-Test⁸⁹ displayed significant influence of independent variables “education” and “working status” on the scale AFKB, while independent variable “sex” did not impact on the items at all. Differences of the means were determined utilising an Independent t-Test, while homogeneity of variances was evaluated utilising a Levene’s Test (see Chapter 5.1.3 Methodology). According to the results of the t-Test in regard to independent variable “education”, people without a school leaving exam were more likely to think of common colds (AFKB-02), digestive problems (AFKB-03) as well as minor injuries (AFKB-05) as requiring medical care than people having a school leaving exam or higher, i.e. tertiary education. When comparing the two specifications of independent variable “working status”, non working respondents were far more likely to receive all categories of minor ailments except for digestive disorders (AFKB-03) as requiring medical attention than working respondents. Regarding effect sizes (d), education impacted greatest on minor injuries (AFKB-05), while working status showed the biggest influence on minor pains (AFKB-01). Compared to the other independent variables, “working status” showed the most effects when interacting with the items and displayed the greatest impact (moderate effect size) in regard to the respondents’ personally received necessity to require medical care when experiencing minor pains (AFKB-01).

The impact of independent variable “migration” and its three specifications “no migrant background”, “first generation migrants” and “second generation migrants on items AFKB-01 to AFKB-05 was evaluated by means of Simple ANOVA⁹⁰. Significant results could be retrieved for all items except for AFKB-05 “minor injuries”. While differences of the means were determined by the single factor ANOVA, homogeneity of variances was evaluated utilising a Levene’s Test. Since the assumption of equal variances needed to be condemned for all four impacting items, the non-parametric Brown-Forsythe-Test needed to be utilised. Hence, but especially due to varying sample sizes, the results of Tukey’s HSD post hoc-procedure need to be interpreted carefully (see Chapter 5.1.3 Methodology). Generally speaking, results suggested first generation migrants to consider utilising Self Care as less appropriate than consulting a doctor when experiencing minor ailments (or rather any

⁸⁹ As explained in Chapter 5.1.3.2 t-Test for Independent Samples / Unpaired Two Sample t-Test’ statistical significance of t-values indicates whether the differences between sample averages are likely to represent actual differences between the two compared groups, while the sample’s effect size of Independent t-Tests (d) indicates whether the dimension of that effect is big enough to be practically meaningful.

⁹⁰ As described in Chapter 5.1.3.3 Single Factor-/ One-Way-/ Simple Analysis of Variance ANOVA, Simple ANOVAs are required when differences across groups in average scores are explored while there are more than two levels of grouping factor (e.g.: ancestral Austrians without a migrant background, migrants of first and migrants of second generation) but only one dimension or treatment (e.g.: migration).

of the conditions included in the preassembled categories of minor ailments; see Table 5.4.1.2 Scale “Personal Necessity to Require a Doctor’s Attention” above). When compared to respondents without migrant background as well as second generation migrants, they thought of minor pains (AFKB-01) as less appropriate for utilising Self Care, whereas all respondents with a migrant background (i.e. first and second generation) considered treating themselves as less suitable than calling on a doctor when suffering from digestive disorders (AFKB-03) or skin diseases (AFKB-04). In terms of effect size, migration impacted the most on items AFKB-01 (minor pain) and AFKB-02 (common colds), both displaying high effect sizes.

5.4.2 Results of the Second Research Question: “Where do people get informed about minor ailments?”

The second research question (“Where do people get informed about minor ailments?”) looked at different information sources while exploring where participants get themselves informed when looking for information on minor ailments. Building on the results of the pre-test (see Chapter 5.2.2.2.1 Scale “Information Sources on Minor Ailments” IQKB), the utilised scale (see Table 5.4.2 Scale “Information Sources on Minor Ailments” IQKB below) included the four subscales “Internet” (IQKB-I), “Friends and Acquaintances” (IQKB-FB), “Family Members” (IQKB-Fam) and “Health Professionals” (IQKB-FL). Likewise to scale AFKB, the scaling was transformed into 0 (for never) to 5 (for always) instead of 1 to 6 prior to analysis. Research question two was analysed by means of explorative analysis and a t-Test for independent samples. Further, a single factor analysis of variances for independent ratings, i.e. a Simple ANOVA as well as a Multifactor ANOVA comprising the two independent variables (i.e. factors) “migration” and “education”, was performed.

Migrants of the first generation look for information on advisory pages on the Internet more frequently than second generation migrants and members of the ancestral Austrian population, whereas relatives are more often utilised by second generation migrants than persons without a migrant background and least by migrants of the first generation. Moreover, medical doctors are more frequently utilised by all respondents with migrant background than compared to people without migrant background. Thus, hypothesis 2.1 (H_0 : Information sources on minor ailments differ between people with and without migrant background and two generations of migrants) could be confirmed for the items IQKB-02, IQKB-06 and IQKB-12 (see Table 5.4.2.1 Scale “Information Sources on Minor Ailments” below). Compared to males, female respondents utilise advisory pages and search engines on the Internet as well as female relatives and friends or acquaintances more often, whereas male participants rather use male friends or acquaintances as well as male relatives than other information sources. Therefore, the second hypothesis of difference (2.2 H_0 : Information sources on minor ailments differ between male and female participants) could be confirmed with regard to the/regarding/including/relating to the following items: IQKB-02, IQKB-04, IQKB-10, IQKB-11, IQKB-13 and IQKB-14 12 (see Table 5.4.2.1 Scale “Information Sources on Minor Ailments” below). Hypothesis 2.3 (H_0 : Information sources on minor ailments differ between people who have a school leaving exam and those who do not) was only confirmed by the items IQKB-05 as well as IQKB-04, saying that respondents with a school leaving exam or higher education are more likely to search for information on minor ailments on the Internet, utilising search engines, whereas people without a school leaving exam tend to utilise pharmacies instead. Finally, hypothesis 2.4 (H_0 : Information sources on minor ailments differ between working and non working people) looked at differences between people who work and people who do not (including those in training or studying) and was confirmed for the items IQKB-11, IQKB-12 and IQKB-14 (see Table 5.4.2.1 Scale “Information Sources on Minor Ailments” below). People who work are more likely to get informed by relatives in general as well as specifically male relatives, friends and acquaintances than respondents falling into category “non working”.

Table 5.4.2.1: Scale “Information Sources on Minor Ailments” (IQKB)

	1 never	2 seldom	3 sometimes	4 often	5 very often	6 always	
Whenever I need information about minor ailments (e.g. cold, joint pain, digestive problems, etc.), I obtain it from...							
IQKB-09 friends or acquaintances	never	1	2	3	4	5	6 always
IQKB-02 advisory pages on the internet	never	1	2	3	4	5	6 always
IQKB-13 female relatives (e.g. mother, sister)	never	1	2	3	4	5	6 always
IQKB-05 pharmacies	never	1	2	3	4	5	6 always
IQKB-12 relatives	never	1	2	3	4	5	6 always
IQKB-03 the online source Wikipedia	never	1	2	3	4	5	6 always
IQKB-18 other health professionals (e.g. nurses, chemists)	never	1	2	3	4	5	6 always
IQKB-10 female relatives (e.g. mother, sister)	never	1	2	3	4	5	6 always
IQKB-04 search engines on the Internet	never	1	2	3	4	5	6 always
IQKB-06 a doctor	never	1	2	3	4	5	6 always
IQKB-11 male friends or acquaintances (e.g. co-workers)	never	1	2	3	4	5	6 always
IQKB-19 health care centres specifically oriented towards migrants	never	1	2	3	4	5	6 always
IQKB-14 male relatives (e.g. father, brother)	never	1	2	3	4	5	6 always

According to the explorative results regarding the scale IQKB, three out of its thirteen items were defined as difficult items ($\bar{x} \leq 1$), while all others displayed moderate item difficulties ($1 < \bar{x} < 4$). Hence, only few participants retrieve information from male friends or acquaintances (IQKB-11), the online source Wikipedia (IQKB-03) or from health care centres specifically oriented towards migrants (IQKB-19). Most respondents agreed on seeking information regarding minor ailments from female relatives (IQKB-13) or relatives in general (IQKB-12) as well as from medical doctors (IQKB-06), whereas pharmacies (IQKB-05) and friends or acquaintances in general (IQKB-09) are less frequently utilised but are still quite popular as information sources on minor ailments.

Results of the t-Test displayed significant influence of the independent variables “sex”, “education” and “working status” on the scale IQKB. As explained before⁹¹, statistical significance of t-values indicates whether the differences between sample averages are likely to represent actual differences between the two compared groups, while the sample’s effect size of Independent t-Tests ($\hat{d}$) determines whether the dimension of that effect is big enough to be practically meaningful (Bühner & Ziegler 2009). While differences of the means were determined utilising an Independent t-Test, homogeneity of variances was evaluated utilising a Levene’s Test⁹². In regard to the impact of the independent variable “sex” on the choice of information sources for minor

⁹¹ See Chapter 5.1.3.2 t-Test for Independent Samples/ Unpaired Two Sample t-Test.

⁹² The Levene’s Test verifies the homogeneity of variances. If the variances are unequal, the Levene’s Test results will be significant and the degrees of freedom for the t-value are corrected according to the formula (Bühner & Ziegler 2009; see also Chapter 5.1.3.2 t-Test for Independent Samples).

ailments, results suggested a more frequent usage of the Internet, i.e. advisory pages (IQKB-02) and search engines (IQKB-04), for women than (compared to) men. Further, female respondents turn to females (IQKB-13 and IQKB-10) far more often when looking for information on minor ailments than men. In contrast, male respondents tend to consult male relatives (IQKB-14) or friends and acquaintances (IQKB-11) more often than females. When comparing the two specifications of the independent variable “education”, respondents with a school leaving exam or higher education are far more likely to search the Internet for information on minor ailments, mostly utilising search engines (IQKB-04). People without a school leaving exam tend to get informed by consulting health professionals, mostly seeking advice in a pharmacy. Referring to the independent variable “working status”, working people (including students and people in training) are far more likely to get informed by male friends and acquaintances (IQKB-11), relatives in general (IQKB-12) as well as male relatives (IQKB-14) than those non working. In regard to effect sizes ($\hat{d}$), the independent variable “sex” impacted the most on the item “female friends and acquaintances” (IQKB-10), displaying a moderate effect size, while “education” showed its greatest effect (but displaying only small effect size) on item IQKB-04 (search engines on the Internet). Lastly, “working status” showed the biggest influence on the item “relatives” (IQKB-12), also indicating only small effect size. Overall, “sex” showed the most effects when interacting with all items and displayed the greatest impact on the item “female friends and acquaintances” when compared to the independent variables “education” and “working status”.

Evaluation of the independent variable “migration” and its three specifications “no migrant background”, “first generation migrants” and “second generation migrants” impacting on the choice of information sources for minor ailments was performed utilising Single Factor Analysis of Variance, also called Simple Analysis of Variance (ANOVA)⁹³. While differences of the means were determined by the single factor ANOVA, homogeneity of variances⁹⁴ was evaluated utilising a Levene’s Test. Since the assumption of equal variances needed to be rejected for all three of the impacting items, significant differences of the medians were confirmed by the non-parametric Brown-Forsythe-Test. Hence, and yet again due to varying sample sizes, the results of Tukey’s HSD procedure⁹⁵ need to be interpreted carefully (Bühner & Ziehler 2009). Statistically significant results could be retrieved for the items “advisory pages” (IQKB-02), “medical doctors” (IQKB-06) and “relatives” (IQKB-12). First generation migrants utilise advisory pages on the Internet far more often than second generation migrants or people who do not have a migrant background. Furthermore, migrants in general (first and second generation) utilise medical doctors (IQKB-06) more frequently than persons without a migrant background. In regard to relatives (IQKB-12), most frequent usage was displayed by respondents of the second migrant generation, followed by participants without migrant background. Relatives are the least often used information source by migrants of the first generation. Further, the item IQKB-12 displayed high effect size, while showing the greatest impact of independent variable “migration”.

5.4.3 Results of the Third Research Question: “How do people rank health or rather health conscious behaviour specifically within their lives and do they know what is beneficial to health?”

The third research question (“How do people rank health or rather health conscious behaviour specifically within their lives and do they know what is beneficial to health?”) explored how people assess their own health status and further evaluate their own health behaviour, i.e. subjective health knowledge or rather interest in health as well as individual health promotion. In addition, the scale “Health Status and Health Behaviour”

⁹³ See Chapter 5.1.3.3 Single Factor-/ One-Way-/ Simple Analysis of Variance ANOVA.

⁹⁴ $(\sigma_{no\ migrant\ background}) = (\sigma_{1.generation}) = (\sigma_{2.generation})$.

⁹⁵ Tukey’s HSD procedure is a post hoc procedure of ANOVAs which compares the individual means with each other (see Chapter 5.1.3.3 Single Factor - / One-Way - / Simple Analysis of Variance ANOVA).

(GHSoz) evaluated the respondents' tendencies in regard to social desirability (items GHSoz-05 and GHSoz-12) and social support (items GHSoz-03 and GHSoz-4). As discussed in Chapter 6.2.1 Defining Minor Ailments: Insecurity, Frequencies and the Personally Received Necessity to Require Medical Care, social desirability items measure "socially desirable responding", i.e. a form of response bias where people tend to answer the questions in a way that casts them in a more positive light, in order to confirm to – what they think are – socially acceptable values (Lavrakas 2008, Van de Motel 2008). Following the suggestions made by experts of the field, the items investigating the tendency towards socially desirable responding were taken from the Social Desirability Scale-17 (SES-17) by Stöber (1999). Drawing on from the results of the pre-test⁹⁶, the utilised scale further comprised three items with reversed polarity⁹⁷ (GHSoz-04, GHSoz-10 and GHSoz-11) as displayed in Table 5.4.3 Scale "Health Status and Health Behaviour" (GHSoz) below. Analysis of research question three was performed by means of explorative analysis, a t-Test for independent samples as well as by a single factor ANOVA performed on the independent variable (i.e. factor) "migration". Additionally, two multifactor ANOVAs comprising the two independent variables "migration" and "education" and further "migration" and "sex" were performed.

Migrants of the second generation and Austrians without a migrant background stated to need less social support (see item GHSoz-04 in Table 5.4.3 Scale "Health Status and Health Behaviour" below) than migrants of the first generation. Further, second generation migrants are more satisfied with their health and suffer less often from long lasting or chronic diseases while feeling overall more comfortable than compared to people without a migrant background. First generation migrants are less satisfied with their health and suffer more often from long lasting or chronic diseases while feeling less comfortable than both of the other groups. Thus the first hypothesis of difference (3.1 H_0 : Interest in health, health conscious behaviour as well as individually perceived health status differs between people with and without migrant background and two generations of migrants) was confirmed for the individually perceived health status (GHSoz-09, GHSoz-10 and GHSoz-11) and the tendency for social support (GHSoz-03 and GHSoz-04). When comparing the two sexes in regard to the second hypothesis, it was found that females are more interested in health than men, while males are less dependent on social support, feel more comfortable, and in the questionnaire they tended less frequently towards socially desirable answers than women. Hence, the hypothesis 3.2 (H_0 : Interest in health, health conscious behaviour and individually perceived health status differs between male and female participants) could be confirmed for tendency towards social support, interest in health, individual health status and the tendency towards giving socially desirable answers. The third hypothesis related to the independent variable "education" (3.3 H_0 : Interest in health, health conscious behaviour as well as individually perceived health status differs between people who have a school leaving exam and those who do not) was only confirmed for individually received health status, since persons with a school leaving exam or higher education showed more comfort than people without a school leaving exam. Whereas non working people are more interested in health, working persons (including students and people in training) have more support from friends, feel more comfortable and tended less towards giving socially desirable answers. Thus and like the hypothesis 3.2, hypothesis of difference 3.4 (H_0 : Interest in health, health conscious behaviour as well as individually perceived health status differs between working and non working people) could be confirmed for tendency towards social support, interest in health, individual health status and towards giving socially desirable answers.

⁹⁶ See Chapter 5.2.2.2.4 Scale "Health Status and Health Behaviour" (GHSoz).

⁹⁷ Reverse-coded items or items with reversed polarity are commonly utilised to identify and also control acquiescence response bias, i.e. the respondents' tendency to agree with any statement, regardless of its content (Lavrakas 2008).

Table 5.4.3: Scale “Health Status and Health Behaviour” (GHSoz)

	1	2	3	4	5	6
	does not apply at all	does not apply	does rather not apply	rather applies	applies	fully applies
GHSoz-01 I take care of my physical and mental health everyday					1 2 3 4 5 6	
GHSoz-20 Many people think I am physically fit					1 2 3 4 5 6	
GHSoz-03 I have many friends and acquaintances that could support me when necessary					1 2 3 4 5 6	
GHSoz-04 I often need help and support ^a					1 2 3 4 5 6	
GHSoz-05 I sometimes have exploited others ^b					1 2 3 4 5 6	
GHSoz-06 I am very interested in health issues					1 2 3 4 5 6	
GHSoz-07 I always take care of increasing my health					1 2 3 4 5 6	
GHSoz-08 Whenever I have a personal goal (e.g.: losing weight, healthy diet, doing sports, no more alcohol/cigarettes etc.), I accomplish it					1 2 3 4 5 6	
GHSoz-09 I am very satisfied with my health condition					1 2 3 4 5 6	
GHSoz-10 I always suffer from long lasting or chronic diseases ^a					1 2 3 4 5 6	
GHSoz-11 I never feel fully comfortable ^a					1 2 3 4 5 6	
GHSoz-12 I sometimes lie in times of need ^b					1 2 3 4 5 6	
GHSoz-13 I am sure that my decisions (concerning my health) are always right					1 2 3 4 5 6	
GHSoz-14 I have a profound knowledge about health issues					1 2 3 4 5 6	
GHSoz-19 I am trying to exercise or do sports everyday					1 2 3 4 5 6	
GHSoz-21 My physical performance is always good					1 2 3 4 5 6	

^a reverse-poled items (1 to 6, 2 to 5, 3 to 4, 4 to 3, 5 to 2, 6 to 1)

^b social desirability item (the more it applies, the less tendency there is to social desirability)

Explorative analysis suggested moderate item difficulties for all items of the scale GHSoz and high tendencies towards social desirability (items GHSoz-05 and GHSoz-12) as well as significant correlations between these items. Hence, it was found that the lower the means of the social-desirability-items were, the more positively people reflected on their health status (GHSoz-09, GHSoz-11, GHSoz-13), interest in health or rather health knowledge (GHSoz-06, GHSoz-14) as well as health behaviour (GHSoz-01, GHSoz-07). Finally, the higher respondents scored on the items regarding the tendency for social support, the more they tended towards socially desirable answers (GHSoz-05).

Results of the t-Test⁹⁸ displayed a significant influence of the independent variables “sex”, “education” and “working status” on specific items of the scale GHSoz when determining differences of the means; homogeneity of variances was evaluated utilising a Levene’s Test¹. The independent variable “sex” impacted significantly on items GHSoz-04, GHSoz-06, GHSoz-11, GHSoz-12 and GHSoz-21. The results suggest that men are less likely to

⁹⁸ see Chapter 5.1.3.2 t-Test for Independent Samples/ Unpaired Two Sample t-Test

be reliant on social support (GHSoz-04) and feel more comfortable in general (GHSoz-11) while showing fewer tendencies towards socially desirable answers (GHSoz-12) than women, whereas women stated to be more interested in health (GHSoz-06) and they also scored higher than men when evaluating their own physical performances (GHSoz-21). The independent variable “education” only impacted significantly on item GHSoz-11, suggesting that people with a school leaving exam or higher education generally feel more comfortable than those without. Finally, the independent variable “working status” impacted significantly on items GHSoz-03, GHSoz-06, GHSoz-11 and GHSoz-12, suggesting that non working persons are more interested in health than working persons. Furthermore, people falling into category “working” seem to have more friends and acquaintances that could support them when necessary, they feel more comfortable in general and tended less frequently towards giving socially desirable answers (item GHSoz-12).

The simple ANOVA evaluated the impact of independent variable “migration” and its three sublevels on the scale “Health Status and Health Behaviour”, displaying significant results for the items GHSoz-03, GHSoz-04, GHSoz-09, GHSoz-10 and GHSoz-11. Differences of the means were determined by the single factor ANOVA, homogeneity of variances was evaluated utilising a Levene’s Test. The assumption of equal variances⁹⁹ had to be discarded for all impacting items except for item GHSoz-09 (“I am very satisfied with my health condition”). Hence, a Brown-Forsythe-Test needed to be utilised in order to verify significance of the differences via medians. Therefore and especially because of the varying sample sizes, the results of Tukey’s HSD post hoc-procedure need to be interpreted carefully (see Chapter 5.1.3 Methodology). Although differences of the means were not significant and variances were not homogeneous, results did suggest differences between the ancestral Austrian population, and the first and second migrant generation in regard to support provided by friends and acquaintances (i.e. item GHSoz-03) as laid out before.¹⁰⁰ In regard to effect size, migration impacted most on item GHSoz-11 (“I never feel fully comfortable”), displaying high effect size after Cohen and item GHSoz-04 (“I often need help and support”), displaying moderate effect size¹⁰¹.

5.4.4 Results of the Fourth Research Question: “How often do people experience minor ailments and how are they treated?”

The fourth research question (“How often do people experience minor ailments and how are they treated?”) focused on how frequently people experience minor ailments and what kinds of treatments are favoured. Options of treatment given in the questionnaire included seeing a doctor or undertaking Self Care¹⁰², such as utilising OTC-products¹⁰³, alternative forms of treatment¹⁰⁴ or home remedies¹⁰⁵, whereas minor ailments were

⁹⁹ $(\sigma_{no\ migrant\ background}) = (\sigma_{1.generation}) = (\sigma_{2.generation})$.

¹⁰⁰ When referring to need of support, migrants of the second generation and ancestral Austrians needed less support than migrants of the first generation. Moreover, migrants of the second generation were more satisfied with their health in general and less likely to suffer from long lasting or chronic diseases while feeling more comfortable in general than Austrians without a migrant background. First generation migrants were less satisfied with their health and suffered more often from long lasting or chronic diseases while feeling less comfortable with their own health than both of the other groups.

¹⁰¹ Effect sizes for simple ANOVA after Cohen: small ($.001 \leq \eta^2 < .060$); middle ($.060 \leq \eta^2 < .140$); large ($.140 \leq \eta^2$); see also Chapter 5.1.3.3 Single Factor Variance Analysis.

¹⁰² See also Chapter 1.2.2 The Concept of Self Care.

¹⁰³ OTC (Over the Counter)-products are medicines which are sold directly to the consumer without getting a prescription from a medical doctor (Burger & Wachter 1998).

¹⁰⁴ Alternative treatment, for this project, is defined as opposed to ‘modern’ conventional medicine and includes healing systems like Ayurveda, TCM Traditional Chinese Medicine, Homoeopathy, Bach Flower remedies or herbal treatment.

¹⁰⁵ For this project, homemade remedies are defined as traditionally used recipes made with natural ingredients which can be found at home, for example a wet pack using curd (Burger & Wachter 1998).

divided into five categories (i.e. common colds, digestive disorders, skin diseases, minor pain and minor injuries), as explained earlier¹⁰⁶. Due to the two-fold nature of this question, two different scales were used for analysis, as displayed in Table 5.4.3.1 Scale “Frequency of Experienced Minor Ailments” (HKB) and Table 5.4.3.2 Scale “Methods of Treatment” (VKB) below. The scale “Frequency of Experienced Minor Ailments” (HKB) was utilised in order to compare the frequency in which people experienced minor ailments, whereas the examination of methods of treatment used for minor ailments was performed applying the scale “Methods of Treatment” (VKB). Due to five different options of treatment, the scale VKB was subdivided into five subscales, namely “Non-prescription Medicine” (VKBrf), “Traditional Remedies” (VKBhm), “Alternative Treatment” (VKBam), “No Treatment” (VKBn) and “Doctors” (VKBa). As with research questions two and three, research question number four (including both scales) was analysed by means of explorative analysis, a t-Test for independent samples as well as by a single factor ANOVA performed on the independent variable (i.e. factor) “migration”. In addition, two multifactor ANOVAs comprising the two independent variables “migration” and “education” and further “migration” and “working status” were performed on the scale HKB (see Appendix 5.5.1 Results: Tables).

The first hypothesis of difference related to the fourth research question (4.1a H₀: Migrants of the first and second generation and people with and without migrant background differ in frequency in regard to experiencing minor ailments) could be confirmed for all categories except for “common colds”. Thus, there was no measured difference in frequency of experiencing common colds between migrants of the first and second generation and people with and without migrant background. Nevertheless, second generation migrants were more likely to report digestive problems than migrants of the first generation, while Austrians without a migrant background were least likely to do so. Moreover, migrants of the second generation reported skin diseases and minor injuries more frequently than first generation migrants or people without a migrant background. Hypothesis 4.2a (H₀: Females and males differ in frequency in regard to experiencing minor ailments) was only confirmed for the categories “skin diseases” as well as “minor injuries”, since the only difference between the sexes was that males were found to suffer more frequently from skin diseases and minor injuries than females. In regard to the independent variable “education”, statistical analysis delivered no results. Hence, hypothesis of difference 4.3a (H₀: People who have a school leaving exam and those who do not show different frequencies in regard to experiencing minor ailments) could not be confirmed. Hypothesis 4.4a (H₀: Working people and non working people show different frequencies in regard to experiencing minor ailments) could only be confirmed for category “minor injuries”, since the only difference between working and non working people was that respondents defined as “working”³ were more likely to report minor injuries than those defined as “non working”¹⁰⁷.

In regard to the choices of treatment when experiencing minor ailments (see Table 5.4.3.2 Scale “Methods of Treatment” (VKB) below), results suggest differences between people with and without migrant background and two generations of migrants referring to specific minor ailments. Thus, hypothesis 4.1b (H₀: The choice of treatment when experiencing minor ailments differs between people with and without migrant background and two generations of migrants) could be partially confirmed as followed: Differences could be found for item VKBhm-01 (common colds) when referring to the subscale “Traditional Remedies” (VKBhm), since second

⁷ Categories of minor ailments: “common colds (e.g. nasal congestion, cough, sore throat and light fever)”, “digestive problems (e.g. diarrhoea, constipation or heart burn)”, “minor skin diseases (e.g. swellings because of bug bites, athlete’s foot or nail fungus)”, “minor injuries (e.g. abrasions, cuts, bruises or strains)” and “minor pain (e.g. headache, backache or joint pain)”, see also Chapter 1.2.1 Minor Ailments and Chapter 5.2.1 Pre-test.

¹⁰⁷ See also Chapter 5.2 Instrument Design.

generation migrants apparently utilise traditional remedies more frequently than migrants of the first generation or Austrians without a migrant background when experiencing common colds. In regard to “Alternative Treatment” (i.e. subscale VKBam), differences were confirmed for the categories “skin diseases” and “minor injuries”, since first generation migrants and Austrians without a migrant background utilise alternative treatments more often for these conditions than second generation migrants. In regard to the subscale “No Treatment” (VKBn), differences were confirmed for all categories except for “minor injuries”. Generally speaking, it was found that respondents without a migrant background are more likely to use no treatment at all when experiencing minor ailments (i.e. common colds, digestive problems or skin diseases) than migrants overall. Further, first generation migrants stated to not use any treatment more frequently in the case of minor pain than second generation migrants and ancestral Austrians. In terms of consulting medical doctors when experiencing minor ailments (i.e. subscale VKBa), differences were found for all categories of minor ailments. This suggests that in general, persons without a migrant background are less likely to consult an MD when experiencing minor ailments than people with a migrant background¹⁰⁸. Since females use alternative methods for colds and minor injuries more frequently than males, and male respondents stated to not apply any treatment when experiencing minor pains more often than female participants, hypothesis of difference 4.2b (H_0 : The choice of treatment when experiencing minor ailments differs between males and females) could be confirmed for items VKBn-05, VKBam-01 and VKBam-04. In regard to hypothesis 4.3b (H_0 : The choice of treatment when experiencing minor ailments differs between people who have a school leaving exam and those who do not), differences could only be confirmed for item VKBam-05, saying that people without a school leaving exam stated to utilise alternative methods of treatment more frequently than people with a school leaving exam or higher (i.e. tertiary) education. The last hypothesis related to the independent variable “working status” (H_0 : The choice of treatment when experiencing minor ailments differs between working and non working people) was confirmed and thus, differences for all categories of minor ailments, but within different subscales, are suggested. For example, working people utilise non-prescription medicines and traditional remedies more often when experiencing minor injuries. They further utilise only non-prescription medicine more frequently when suffering from common colds, digestive problems, skin diseases or minor injuries than those non working. Finally, consulting a doctor when suffering from minor pains was more often listed by non working people than by working people.

5.4.4.1 Results of the scale “Frequency of Experienced Minor Ailments” (HKB)

As the first aspect of the fourth research question, evaluation of the frequencies in which people experience minor ailments was performed utilising the scale “Frequency of Experienced Minor Ailments” (HKB) as shown below. While the items HKB-01 to HKB-05 represented the theory based categories of minor ailments, scaling was transformed into 0 (for never) to 5 (for always) instead of 1 to 6 prior to analysis.

According to explorative analysis of the scale HKB, minor pains and common colds are the most commonly experienced minor ailments, whereas skin diseases are the rarest. Further, only item HKB-04 (skin diseases) displayed an approximately univariate normal distribution as displayed in the appendix section (see Appendix 5.5.2 Results: Graphs).

¹⁰⁸ For more details on the results regarding independent variable migration, see results of simple ANOVA for the scale VKB.

Table 5.4.4.1: Scale “Frequency of Experienced Minor Ailments” (HKB)

	1 never	2 seldom	3 sometimes	4 often	5 very often	6 always
How often do you suffer from the ailments listed below?						
HKB -01	cold (e.g. runny nose, cough, sore throat, light fever)					1 2 3 4 5 6
HKB -02	digestive problems (e.g. diarrhoea, constipation, heart burn)					1 2 3 4 5 6
HKB -03	skin diseases (e.g. swellings because of bug bites, athlete’s foot, nail fungus)					1 2 3 4 5 6
HKB -04	minor injuries (e.g. abrasions, cuts, bruises, strains)					1 2 3 4 5 6
HKB -05	minor pain (e.g. headache, backache, joint pain)					1 2 3 4 5 6

The impact of the independent variables “sex”, “education” and “working status” on the scale HKB was evaluated by means of a t-Test¹⁰⁹, displaying significant influences in regard to sex for items HKB-03 and HKB-04 and in regard to working status for the item HKB-04. Results suggest that men experience skin diseases (HKB-03) and minor injuries (HKB-04) more often than women, whereas working people stated to suffer more frequently from minor injuries (HKB-04) than non working people. Moreover, the independent variable “sex” showed the biggest effect within that sample when impacting on the item “skin diseases”(HKB-03), displaying a moderate effect size of $\hat{d} = 0.649110$.

A simple ANOVA evaluated the impact of the independent variable “migration” and its three sublevels “no migrant background”, “first” and “second generation of migrants” on the scale “Frequency of Experienced Minor Ailments”, displaying significant results for the items HKB-02, HKB-03, HKB-04 and HKB-05. Thus, it can be concluded that there is no difference in the frequency of experiencing common colds between migrants of the first and second generation and people with and without a migrant background. According to the results, second generation migrants reported digestive problems more often than migrants of the first generation, while Austrians without a migrant background were least likely to do so. Moreover, migrants of the second generation were more likely to report skin diseases and minor injuries than first generation migrants or people without a migrant background. By utilising simple factor ANOVA, the differences of the means were determined, while homogeneity of variances was evaluated utilising a Levene’s Test. Since the assumption of equal variances had to be discarded for all impacting items, however, a Brown-Forsythe-Test needed to be utilised in order to verify significance of the differences via medians. Hence and especially because of the varying sample sizes, the results of Tukey’s HSD post hoc-procedure need to be interpreted carefully (see Chapter 5.1.3.3 Single Factor Variance Analysis).

¹⁰⁹ While differences of the means were evaluated by the t-Test, homogeneity of variances was evaluated utilising a Levene’s Test; see Chapter 5.1.3.2 t-Test for Independent Samples/ Unpaired Two Sample t-Test.

¹¹⁰ After Cohen, effect sizes of Unpaired Two Sample t-Tests are subdivided into small ranging from 0.2 to 0.5 (i.e. $0.20 \leq \hat{d} < 0.50$), middle ranging from 0.5 to 0.8 (i.e. $0.50 \leq \hat{d} < 0.80$), and large effects bigger than 0.8 (i.e. $0.80 \leq \hat{d}$); see Chapter 5.1.3.2 t-Test for Independent Samples/ Unpaired Two Sample t-Test.

5.4.4.2 Results of the scale “Methods of Treatment” (VKB)

As the second aspect of the fourth research question, the examination of which methods of treatment are used for minor ailments was performed by applying the scale “Methods of Treatment” (VKB) as displayed below (see Table 5.4.4.2 Scale “Methods of Treatment”). Due to different theoretically derived options of treatment (see Chapter 1.2.2 The Concept of Self Care), the scale VKB was subdivided into the subscales “Non-prescription Medicine¹¹¹” (VKBrf), “Traditional Remedies¹¹²” (VKBhm), “Alternative Treatment¹¹³” (VKBam), “No Treatment” (VKBn) and “Doctors” (VKBa), as mentioned earlier. Further, all subscales included the theory based categories of minor ailments as items, namely “common colds”, “digestive disorders”, “minor injuries”, “minor pain” and “skin diseases”, while scaling was transformed into 0 (for never) to 5 (for always) instead of 1 to 6 prior to analysis.

Table 5.4.4.2: Scale “Methods of Treatment” (VKB)

	1 never	2 seldom	3 sometimes	4 often	5 very often	6 always
How often do you treat the listed ailments with non-prescription medicine (e.g. Aspirin +C)?						
VKBrf-01 cold (e.g. runny nose, cough, sore throat, light fever)					1 2 3 4 5 6	
VKBrf-02 digestive problems (e.g. diarrhoea, constipation, heart burn)					1 2 3 4 5 6	
VKBrf-03 minor injuries (e.g. abrasions, cuts, bruises, strains)					1 2 3 4 5 6	
VKBrf-04 skin diseases (e.g. swellings because of bug bites, athlete’s foot, nail fungus)					1 2 3 4 5 6	
VKBrf-05 minor pain (e.g. headache, backache, joint pain)					1 2 3 4 5 6	
How often do you treat the listed ailments with traditional domestic remedies (e.g. wet pack with vinegar)?						
VKBhm-01 cold (e.g. runny nose, cough, sore throat, light fever)					1 2 3 4 5 6	
VKBhm-02 digestive problems (e.g. diarrhoea, constipation, heart burn)					1 2 3 4 5 6	
VKBhm-03 skin diseases (e.g. swellings because of bug bites, athlete’s foot, nail fungus)					1 2 3 4 5 6	
VKBhm-04 minor injuries (e.g. abrasions, cuts, bruises, strains)					1 2 3 4 5 6	
VKBhm-05 minor pain (e.g. headache, backache, joint pain)					1 2 3 4 5 6	
How often do you treat the listed ailments with alternative treatments (e.g. Homeopathy, Bach Flowers, Traditional Chinese Medicine, etc.)?						
VKBam-01 cold (e.g. runny nose, cough, sore throat, light fever)					1 2 3 4 5 6	
VKBam-02 digestive problems (e.g. diarrhoea, constipation, heart burn)					1 2 3 4 5 6	

¹¹¹ i.e. OTC-products; see Chapter 1.2.2 The Concept of Self Care.

¹¹² For this project, homemade or also referred to as traditional remedies are defined as traditionally used recipes made with natural ingredients which can be found at home, for example a wet pack using curd (Burger & Wachter 1998).

¹¹³ Alternative treatment, for this project, is defined as opposed to ‘modern’ conventional medicine and includes healing systems like Ayurveda, TCM Traditional Chinese Medicine, Homoeopathy, Bach Flower remedies or herbal treatment.

VKBam-03	skin diseases (e.g. swellings because of bug bites, athlete's foot, nail fungus)	1	2	3	4	5	6
VKBam-04	minor injuries (e.g. abrasions, cuts, bruises, strains)	1	2	3	4	5	6
VKBam-05	minor pain (e.g. headache, backache, joint pain)	1	2	3	4	5	6

How often do you avoid treating the listed ailments?

VKBn-01	cold (e.g. runny nose, cough, sore throat, light fever)	1	2	3	4	5	6
VKBn-02	digestive problems (e.g. diarrhoea, constipation, heart burn)	1	2	3	4	5	6
VKBn-03	skin diseases (e.g. swellings because of bug bites, athlete's foot, nail fungus)	1	2	3	4	5	6
VKBn-04	minor injuries (e.g. abrasions, cuts, bruises, strains)	1	2	3	4	5	6
VKBn-05	minor pain (e.g. headache, backache, joint pain)	1	2	3	4	5	6

How often do you consult a doctor when you suffer from the listed ailments?

VKBa-01	cold (e.g. runny nose, cough, sore throat, light fever)	1	2	3	4	5	6
VKBa-02	digestive problems (e.g. diarrhoea, constipation, heart burn)	1	2	3	4	5	6
VKBa-03	skin diseases (e.g. swellings because of bug bites, athlete's foot, nail fungus)	1	2	3	4	5	6
VKBa-04	minor injuries (e.g. abrasions, cuts, bruises, strains)	1	2	3	4	5	6
VKBa-05	minor pain (e.g. headache, backache, joint pain)	1	2	3	4	5	6

In regard to exploratory analysis, results suggest different solutions for each subscale. Referring to subscale VKBrf, non-prescription medicine is most often utilised when experiencing common colds and minor pain, and is least often applied in the case of skin diseases and digestive problems. Likewise, traditional remedies are utilised most frequently when suffering from common colds as well as digestive problems, and were listed the least often for skin diseases and minor pain. Results referring to the subscale VKBam suggest alternative methods of treatment such as Homeopathy or Bach Flower remedies to be applied most frequently when experiencing common colds and minor pains, and least frequently for skin diseases and minor injuries. No treatment at all (subscale “no treatment”, VKBn) was mostly listed for minor pain as well as minor injuries, and only rarely for skin diseases, digestive problems and common colds. Finally, a doctor is mainly consulted when experiencing skin diseases or common colds, and more seldom in the case of minor pains and minor injuries. Out of the twenty-five items of scale VKB, only nine showed an approximately univariate normal distribution (i.e. VKBrf01, VKBrf04, VKB05, VKBhm01, VKBhm02, VKBhm04, VKBn01, VKBn02 and VKBn04; see also boxplots in Appendix 5.5.2 Results: Graphs).

Analysis of the scale VKB by means of a t-Test¹¹⁴ displayed significant influence of the independent variables “education”, “sex” and “working status”. The t-Test’s results related to the independent variable “working status” suggest differences for all categories of minor ailments, but spread within the five different subscales. For example, when experiencing minor injuries (VKBrf-04, VKBhm-04), working people utilise non-prescription

¹¹⁴ As explained in Chapter 5.1.3.2 t-Test for Independent Samples / Unpaired Two Sample t-Test’ statistical significance of t-values indicates whether the differences between sample averages are likely to represent actual differences between the two compared groups, while the sample’s effect size of Independent t-Tests (d) indicates whether the dimension of that effect is big enough to be practically meaningful.

medicines and traditional remedies more often than non working people. Further, working people apply non-prescription medicines more frequently in the case of common colds, digestive problems and skin diseases. Finally, non working people more often listed to consult a doctor when suffering from minor pains than working people. When comparing people with and without a school leaving exam (i.e. independent variable “education”), differences could only be confirmed for the item “minor pain”, since people without a school leaving exam more often stated to utilise alternative treatment when experiencing minor pain than people with a school leaving exam or higher (i.e. tertiary) education. According to the results of the t-Test in regard to the independent variable “sex”, significant differences could be found for the items VKBam-01 and VKBam-04 of subscale “Alternative Treatment” (VKBam) and for the item VKBn-05 of subscale “No Treatment” (VKBn). They suggest that female participants utilise alternative methods of treatment (subscale VKBam) for colds and minor injuries more frequently than male respondents, whereas males stated more frequently to not apply any treatment than females in regard to minor pain. Regarding effect sizes ($\hat{d}$), the independent variable “working status” impacted the greatest on the item “skin diseases” of subscale “Non-prescription Medicine” (VKBrf-03), displaying a moderate effect size of $\hat{d} = 0.725$, while the remaining effects were all evaluated as small. As suggested in Chapter 5.1.3.2 t-Test for Independent Samples, homogeneity of variances was evaluated utilising a Levene’s Test, whereas the differences of the means were determined utilising the independent t-Test.

Evaluation of the independent variable “migration” and its three specifications “no migrant background”, “first generation migrants” and “second generation migrants” impacting on the choice of information sources for minor ailments was performed utilising a single factor or also called simple analysis of variance (ANOVA)¹¹⁵. While differences of the means were determined by the single factor ANOVA, homogeneity of variances¹¹⁶ was evaluated utilising a Levene’s Test. While the assumption of equal variances needed to be discarded for all of the impacting items, significant differences of the medians were confirmed by the non-parametric Brown-Forsythe-Test. Hence, and yet again due to varying sample sizes, the results of Tukey's HSD procedure¹¹⁷ need to be interpreted carefully (Bühner & Ziehler 2009). Statistically significant results could be retrieved for all items of the subscale “Doctors” (VKBa) and almost all items of the subscale “No Treatment” (VKBn), whereas the subscales “Non-prescription Medicine” (VKBrf), “Traditional Remedies” (VKBhm) and “Alternative Treatment” (VKBam) could only sporadically deliver significant results for some items (see Table Simple ANOVA of Scale VKB: Significant Results in Appendix 5.5.1 Results: Tables).

In regard to home remedies for example, the independent variable “migration” impacted significantly on item VKBhm-01 only, suggesting that second generation migrants utilise traditional remedies more frequently than migrants of the first generation or Austrians without a migrant background when experiencing common colds. When looking at migration impacting on the subscale “Alternative Treatment”, two items displayed significant influence, suggesting that second generation migrants and Austrians without a migrant background utilise alternative treatments more frequently for skin diseases and minor injuries than second generation migrants. Furthermore, results suggest that second generation migrants utilise non-prescription medicines more often for the treatment of common colds as well as skin diseases (displaying a large effect size of $\eta^2 = 0.126$) than first generation migrants or Austrians without a migrant background. As mentioned above, significant results could be retrieved for all categories of the treatment option “no treatment”, except for minor injuries. Essentially, respondents without a migrant background said they are more likely to refrain from treatment when

¹¹⁵ See Chapter 5.1.3.3 Single Factor-/ One-Way-/ Simple Analysis of Variance ANOVA.

¹¹⁶ $(\sigma_{no\ migrant\ background}) = (\sigma_{1.generation}) = (\sigma_{2.generation})$.

¹¹⁷ Tukey's HSD procedure is a post hoc procedure of ANOVAs which compares the individual means to each other (see Chapter 5.1.3.3 Single Factor - / One-Way - / Simple Analysis of Variance ANOVA).

experiencing minor ailments (i.e. common colds, digestive problems or skin diseases) than migrants. In addition, first generation migrants stated to choose not treating minor pain more frequently than second generation migrants and ancestral Austrians, whereas migrants of the second generation rather tend to utilise treatment when suffering from skin diseases than first generation migrants. Within this subscale, migration impacted significantly on item VKBn-03 (skin diseases) displaying a moderate effect size of $\eta^2 = 0.106$. Nevertheless, results regarding the treatment option of consulting an MD suggest that in general, persons without a migrant background are less likely to consult an MD when experiencing minor ailments than people with a migrant background. Particularly the minor conditions common colds ($\eta^2 = 0.175$), digestive problems ($\eta^2 = 0.210$) and minor injuries ($\eta^2 = 0.120$) showed highly significant effects, displaying large effect sizes¹¹⁸ as indicated in parentheses. When comparing the two generations of migrants, second generation migrants are more likely to consult an MD when experiencing skin diseases or minor injuries than first generation migrants (or people without a migrant background for that matter). In the case of minor pain, the opposite turned out to be true, since migrants of the first generation are apparently more likely to consult an MD than those of the second generation (or people without a migrant background).

5.4.5 Results of the Fifth Research Question: “Do the different constructs ‘Information Sources’, ‘Medical Advice on’ and ‘the Frequency of Experiencing Minor Ailments’ impact on the constructs ‘Health or rather Health Behaviour’, ‘The Individually Perceived Necessity to Require Medical Care when Experiencing Minor Ailments’ and the ‘Types of Treatment Being Used’?”

Research question five evaluated the interaction of the in research questions two to four formulated constructs (namely “information sources on minor ailments”, “medical advice on and the frequency of experiencing minor ailments”) with the other, also during the survey compiled, constructs “health and health behaviour”, “individually perceived necessity to require medical care when experiencing minor ailments” and “type of treatment used when experiencing minor ailments”. In order to do so, it also included the scale “Personal Necessity to Require a Doctor’s Attention”(AFKB) and AIKB (“Medical Advice in Minor Ailments”). Statistical measurements included testing in regard to reliability and homogeneity, as well as structure review. Furthermore, all variables needed to be z-transformed prior to confirmatory factor analysis (CFA), meaning that the means and standard deviations were standardised, i.e. converted into a mean of 0 and a standard deviation of 1, while missing data were supplemented utilising the “serial-mean” in AMOS¹¹⁹ as explained earlier (see Chapter 5.1.3.5 Confirmatory Factor Analysis). Finally, all tables related to the fifth research question are displayed in the appendix section (see Results of the Fifth Research Question in Appendix 5.5.1 Results: Tables).

5.4.5.1 Fifth Research Question: Analysis of Reliability of the Scales IQKB, GHSoz and VKB

As mentioned before, analysis of reliability was performed on the scales “Information Sources on Minor Ailments” (IQKB), “Health Status and Health Behaviour” (GHSoz) and “Methods of Treatment” (VKB). It evaluated the first generation’s measures for reliability, i.e. selectivity (r_{ITC}), internal consistency (α , i.e. Cronbach Alpha Coefficient) and the mean correlation of the items ($\overline{r_{IC}}$), whereas the latter was based on bivariate item correlations but was not Fisher-Z-transformed¹²⁰ due to usage of the software package “AMOS”. The exclusion of items was performed according to the Cronbach Alpha Coefficients, since items were removed until there was no more improvement of the scale in regard to internal consistency. As mentioned before, the

¹¹⁸ Effect sizes for Simple ANOVA after Cohen: small ($.001 \leq \eta^2 < .060$); middle ($.060 \leq \eta^2 < .140$); large ($.140 \leq \eta^2$)

¹¹⁹ For this project, confirmatory factor analysis was calculated utilising “AMOS”, an additional package for the the “IBM SPSS Statistics” program, which is able to calculate structural equation models including CFAs.

¹²⁰ The Fisher-transformation (always in combination with another Index namely RSI) is utilised as an indicator for turnarounds (see Weiber & Mülhhaus 2010).

related table can be seen in the appendix section (see Results of the Fifth Research Question in Appendix 5.5.1 Results: Tables).

Analysis of the scale “Information Sources on Minor Ailments” (IQKB)¹²¹ offered significant solutions for nine out of the thirteen items, while displaying a moderate internal consistency (Cronbach Alpha Coefficient $\alpha = .755$). Overall, female friends and acquaintances (IQKB-10), female relatives (IQKB-13) and friends and acquaintances in general (IQKB-09) represented the best items for this scale. In contrast and according to selectivity (r_{ITC}), male relatives (IQKB-14), male friends and acquaintances (IQKB-11), advisory pages on the internet (IQKB-02) as well as relatives in general (IQKB-12) were only little representative for the scale. Hence, the scale IQKB was assumed to be a heterogeneous construct, which was also confirmed by moderate values for the mean correlation of the items (interval size for $\overline{r_{IIC}} = [.002; .694]$) and by further analysis (see 5.4.5.2 Fifth Research Question: Confirmatory Factor Analysis).

Out of the thirteen items of the scale “Health Status and Health Behaviour” (GHSoz)¹²², eleven items remained after item exclusion was performed, displaying a very high internal consistency of $\alpha = .871$. Further, all of those eleven items were found to be similarly representative for the scale, since selectivity displayed good values throughout the scale. Although the big interval size for the mean correlation of the items necessitated critical interpretation (interval size for $\overline{r_{IIC}} = [.107; .671]$), the scale GHSoz could be evaluated to be a homogeneous construct and was typified best by the items “I am trying to exercise or do sports everyday” (GHSoz-19), “I am sure that my decisions (concerning my health) are always right” (GHSoz-13), as well as “I have a profound knowledge about health issues” (GHSoz-14) and “My physical performance is always good” (GHSoz-21). Nevertheless, further analysis suggested a two factor solution for the scale GHSoz (see 5.4.5.2 Fifth Research Question: Confirmatory Factor Analysis), confirming the suspicion for the scale GHSoz of being a rather heterogeneous construct.

Due to five predetermined options of treatment, the scale “Methods of Treatment” (VKB) was further divided into the subscales “Non-prescription Medicine” (VKBrf), “Traditional Remedies” (VKBhm), “Alternative Treatment” (VKBam), “No Treatment” (VKBn) and “Doctors” (VKBa). Also, all subscales included the theory based categories of minor ailments as items, namely “common colds”, “digestive disorders”, “minor injuries”, “minor pain” and “skin diseases”, as explained before (see Chapter 1.2.1 Minor Ailments and Chapter 5.2.1 Pre-test). The scale “Methods of Treatment” (VKB) including all subscales is displayed in Chapter 5.4.3.2 Results of the scale “Methods of Treatment” (VKB).

Analysis of reliability in regard to the subscale “Non-prescription Medicine” (VKBrf) displayed high values for internal consistency ($\alpha = .801$), selectivity ($.522 < r_{ITC} < .654$) and mean correlation of the items (interval size for $\overline{r_{IIC}} = [.290; .632]$). Further, the items “non-prescription medicine for common colds” (VKBrf-01), “non-prescription medicine for digestive problems” (VKBrf-02) and “non-prescription medicine for minor injuries” (VKBrf-04) represented the best items for this scale. Due to the high values of the estimated first generation’s measures for reliability, results of the subscale “Non-prescription Medicine” (VKBrf) were evaluated as satisfying and was further analysed without adulteration. When investigating the subscale “Traditional Remedies” (VKBhm), it was represented best by “traditional remedies for minor injuries” (VKBhm-04), “traditional

¹²¹ For a visual of the scale IQKB, see Chapter 5.4.2 Results of the Second Research Question: “Where do people get informed about minor ailments?”

¹²² For a visual of the scale GHSoz, see Chapter 5.4.3 Results of the Third Research Question: “How do people rank health or rather health conscious behaviour in specific within their lives and do they know what is beneficial to health?”

remedies for digestive problems" (VKBhm-02), "traditional remedies for skin diseases" (VKBhm-03) and "traditional remedies for minor pain" (VKBhm-05). Moreover, analysis delivered very satisfying results, displaying high internal consistency ($\alpha = .846$), high degrees of selectivity ($.596 < r_{ITC} < .736$) as well as inter-item correlations (interval size for $\overline{r_{IIC}} = [.386; .630]$). Therefore, the subscale VKBhm necessitated no adulteration or item exclusion before undertaking the next step of analysis (see 5.4.5.2 Fifth Research Question: Confirmatory Factor Analysis). Likewise to subscale VKBhm, analysis of reliability in regard to the subscale "Alternative Treatment" (VKBam) displayed high internal consistency ($\alpha = .903$), very high degrees of selectivity ($.686 < r_{ITC} < .806$) as well as very high degrees of the mean correlation of the items (interval size for $\overline{r_{IIC}} = [.473; .768]$). Since all items were found to be representative for this scale, evaluation delivered very satisfying results in regard to "alternative treatments", thus, no adulteration prior to the next step of analysis was necessary. Analysis regarding the subscale "No Treatment" (VKBn) suggested high values for internal consistency ($\alpha = .836$) and selectivity ($.594 < r_{ITC} < .733$) as well as high degrees inter-item correlations (interval size for $\overline{r_{IIC}} = [.497; .707]$), but only after item "no treatment for minor pain" (VKBn-05) was removed. This means that all of the remaining items were representative for the subscale "No Treatment" (VKBn) and were included into the next step, i.e. structure analysis. Although the scale VKBa referring to the treatment option "doctors" was represented best by the item "doctors for digestive problems" (VKBa-02), overall findings related to analysis of reliability were disappointing. As can be seen in the related table (see Results of the Fifth Research Question in Appendix 5.5.1 Results: Tables), only low values could be found for internal consistency ($\alpha = .688$), while values for selectivity ($.431 < r_{ITC} < .557$) and the mean correlations of the items were rather moderate (interval size for $\overline{r_{IIC}} = [.226; .535]$). Nevertheless, and since no item exclusion was necessary, the whole scale was taken into account when performing CFA as described in the next chapter.

5.4.5.2 Fifth Research Question: Confirmatory Factor Analysis (CFA)

In order to validate the questionnaire and further test the three hypotheses of difference in regard to structure and relations between the latent variables underlying the data, structure review was performed utilising a confirmatory factor analysis¹²³. Results suggested a modified model involving twenty out of the initial sixty-four indicators (i.e. items) and nine factors, as displayed in Figure 5.4.3 Measurement Model for the 5th Research Question below. Within the developed model, scales were assumed to be representative in regard to factors (i.e. latent variables) and hence re-evaluated by means of analysis of reliability (see Chapter 5.4.5.1 Fifth Research Question: Analysis of Reliability of the Scales IQKB, GHSoz and VKB).

In summary, analysis by means of structure review delivered highly satisfying results in regard to the assessment of model fit. Furthermore, the utilised scales were found to interrogate the constructs and sub-constructs as anticipated. Finally, relations between the latent variables underlying the data were evaluated in order to answer the fifth research question, i.e. the derived hypotheses¹²⁴. Since the three factors "Frequency of Experienced Minor Ailments" (HKB), "Personal Necessity to Require a Doctor's Attention" (AFKB) and "Doctor's Advice on Minor Ailments" (AIKB) needed to be removed in order to achieve an adequate model fit, no correlations could be verified for these factors. In order to optimise model fit, items were excluded by applying the AMOS¹²⁵ "modification index", until there was no further improvement of the scale possible in regard to internal consistency. While model fit was maximised, the overall model structure was simplified until the remaining model only covered the project's "core structure". The final factors which interacted with each other and were therefore involved in structure review were "Health Conscious Behaviour", "Health Status", "Internet"

¹²³ See Chapter 5.1.3.5 Confirmatory Factor Analysis.

¹²⁴ See Chapter 5.1.1 Research Questions.

¹²⁵ i.e. an additional package for the "IBM SPSS Statistics" program.

and “Friends and Acquaintances as Information Sources on Health”, as well as five factors representing the predefined options of treatment of the scale “Methods of Treatment” (i.e. “Non-prescription Medicine” (VKBrf), “Traditional Remedies” (VKBhm), “Alternative Treatment” (VKBam), “No Treatment” (VKBn) and “Doctors” (VKBa). Thus, the related hypotheses of difference, i.e. hypothesis 5.2 (H_0 : Medical advice on minor ailments impacts on the constructs health or rather health behaviour, individually perceived necessity to require medical care when experiencing minor ailments and type of treatment used.) as well as hypothesis 5.3 (H_0 : The frequency of experiencing minor ailments impacts on the constructs health or rather health behaviour, individually perceived necessity to require medical care when experiencing minor ailments and type of treatment used.), were rejected. Further, no correlations with other, remaining constructs (i.e. IQKB) could be calculated for the scale HKB. In regard to hypothesis 5.1 (H_0 : Information sources on minor ailments impact on the constructs health or rather health behaviour, individually perceived necessity to require medical care when experiencing minor ailments and type of treatment used.), information sources impacted on the options of treatment, since the more frequently people tended to get informed by utilising advisory pages on the Internet, the more they decided to apply OTC-products when treating digestive disorders. Further, the more people tended to consult friends and acquaintances as information sources on minor ailments, the better they evaluated their own health status (i.e. items GHSoz-10 and GHSoz-11). Hence, the first hypothesis, stating that information sources impacted on the other constructs, was confirmed for the remaining constructs health (status) as well as treatment options.

As a first step after analysis of reliability, indicators were correlated to their factors according to the results of the prior discussed item analyses. Thus, the initial model comprised sixty-four indicators on ten factors (i.e. scales IQKB, AFKB, AKB, GHSoz, HKB and VKBrf, VKBhm, VKBam, VKBn, VKBa)¹²⁶. Emanating from this primary structure, factors and their correlating items were adapted according to the “index of modification” of the statistics software AMOS¹²⁷, until a model with adequate fit was achieved. The adequacy of model fit to the dataset was determined by means of a chi-square test (CMIN)¹²⁸, the Root Mean Square Error of Approximation (RMSEA), the Standardized Root Mean Square Residual (SRMR), the Comparative Fit Index (CFI), the Normed Fit Index (NFI) and the Non-Normed Fit Index (also referred to as Tucker-Lewis index, TLI)¹²⁹. In order to support the CMIN-value which (or rather whose p-value) is strongly attached to sample size, the p-value of Bollen-Stine bootstrap (BSB)¹³⁰, was calculated. Overall model fit was evaluated by utilising the specifications as laid out in Table 5.4.5.2 CFA: Model Fit Requirements below. Based on the results, second generation’s measures for reliability, i.e. factor loading¹³¹ (λ), squared factor loading¹³² (λ^2) and factor reliability (Rel_{ϵ_j}) as well as DEV-Indices were estimated. Also referred to as the second generation’s measures for validity, estimated DEV-

¹²⁶ See also Chapter 5.4.5.1 Fifth Research Question: Item Analysis of the Scales IQKB, AFKB, GHSoz, HKB and VKB.

¹²⁷ For this project, confirmatory factor analysis was calculated utilising “AMOS”, an additional package for the the “IBM SPSS Statistics” program, which is able to calculate structural equation models including CFAs.

¹²⁸ AMOS reports the value of chi-square as CMIN (i.e. the likelihood ratio chi-square). A significant chi-square indicates lack of satisfactory model fit (Weiber & Mülhhaus 2010).

¹²⁹ For more information on Fit-Indices see Bühner 2011, Schreiber et al. 2006, Weiber & Mülhhaus 2010.

¹³⁰ Bootstrap is a statistical technique which estimates a sampling distribution of a statistic by taking repeated samples from the dataset. There are two forms: naive bootstrap for generating empirical estimates of standard errors and Bollen-Stine bootstrap for obtaining adjusted p values for the model fit statistic (Field 2009).

¹³¹ Factor loading is the regression coefficient of a variable for the linear model which describes a background factor (Field 2009; see also Chapter 5.1.3.4 Exploratory Factor Analysis).

¹³² Squared factor loading is the percentage of variance in the variable which is explained by a factor (Field 2009).

Indices included the average extracted variances per factor (DEV_{ϵ_j}) as well as the Fornell and Larcker criterion ($DEV > r_{\epsilon_{ij}}^2$)¹³³.

Figure 5.4.5 Measurement Model for the 5th Research Question below displays the final, “modified” model comprising twenty out of the initial sixty-four indicators (i.e. items) and nine factors. As already mentioned¹³⁴, the model below does not display the ten factors of the initial model, since the three factors “Frequency of Experienced Minor Ailments” (HKB), “Personal Necessity to Require a Doctor’s Attention” (AFKB) and “Doctor’s Advice on Minor Ailments” (AIKB) needed to be removed. Further, simulations suggested two-factor solutions for the initial factors “Health Status and Health Behaviour” (GHSoz) and “Information Sources on Minor Ailments” (IQKB). As depicted below, these comprised the subscales “Health Conscious Behaviour” (GHSoz-SELG) and “Health Status” (GHSoz-StaG) as modified factors for GHSoz and likewise, the subscales “Internet” (IQKB-I) and “Friends and Acquaintances” (IQKB-FB) as modified factors for IQKB. Hence, the involved factors were GHSoz-SELG, GHSoz-StaG, IQKB-I, IQKB-FB and further five factors representing the five subscales of the scale “Methods of Treatment”, i.e. “Non-prescription Medicine” (VKBrf), “Traditional Remedies” (VKBhm), “Alternative Treatment” (VKBam), “No Treatment” (VKBn) and “Doctors” (VKBa). There was no calculation of further, superior factors in regard to the depicted construct.

Figure 5.4.5: Measurement Model for the 5th Research Question

¹³³ See Farrell & Rudd 2009.

¹³⁴ See Chapter 5.4.5.1 Fifth Research Question: Item Analysis of the Scales IQKB, AFKB, GHSoz, HKB and VKB.

According to Schreiber et al. (2006) as well as Weiber and Mülhhaus (2010), background factors (i.e. latent or also unobserved variables) are graphically depicted by means of ovals, measurement errors (i.e. unique factors) are displayed as (small) circles and indicators (i.e. items or observed variable) are represented by rectangles in the graph below. Further, the curved arrow between latent variables indicates correlations, whereas the straight line pointing from a background factor (i.e. latent variable) to an indicator (i.e. observed variable or item) indicates the statistical causal effect of the latent variable on the observed variables (i.e. reflexive measurement (Eberl 2004)¹³⁵. In addition to the related tables, the model provides information about the indicators a factor is loading on, the amount of variance explained by a factor, estimated determinants of reliability, estimated determinants of validity and the relations between the factors as well as the amount of variance explained between the factors.

Table 5.4.5.2: CFA: Model Fit Requirements

Model Fit Index		Model Fit Index
$p_{(CMIN)} > .05$; $\frac{CMIN}{DF} < 2.00$		$d_i^M < 100.00$
$p_{(BSB)} > .05$ in 1000 simulations		$\lambda > 0$; $\lambda^2 > .05$ ($\lambda > .70$)
RMSEA < .05 with PCLOSE > .95 & LO90 < .05; HI90 < .05		standard deviation of partial regression coefficient λ_i : SE = [0.000; 0.200]
SRMR < .05		$Rel_{\epsilon_j} > .50$
CFI / NFI / TLI > .90		$DEV_{\epsilon_j} > .50$

Rel_{ϵ_j} factor reliability

DEV_{ϵ_j} average variance extracted (per factor)

λ factor loading

d_i^M multivariate excess distribution¹³⁶

(Bühner 2011, Eberl 2004, Schreiber et al. 2006, Suhr 2006, Weiber & Mülhhaus 2010)

In regard to testing of validity and reliability, it was found out that except for the factors IQKB-FB “friends and acquaintances as information sources on minor ailments” and VKBam (“alternative methods of treatment for minor ailments”), each of the factors included an item whose amount of variance explained by a factor (λ^2) was less than 50%. Nevertheless, “doctors as treatment option for minor ailments” (VKBa) was the only factor to not achieve the cut-off point ($Rel_{\epsilon_j} > .50$) when referring to factor reliabilities ($Rel_{\epsilon_j} = 0.49$). In terms of the average variance extracted (DEV_{ϵ_j}), cut-off point ($DEV_{\epsilon_j} > .50$) was not achieved by GHSoz-SELG (“health conscious behaviour”; $DEV_{\epsilon_j} = 0.42$), VKBrf (“non-prescription medicine”; $DEV_{\epsilon_j} = 0.44$), GHSoz-StaG (“Health Status”;

¹³⁵ As already mentioned, CFA investigates reflexive measurement models only (Eberl 2004; see also Chapter 5.1.3.5 Confirmatory Factor Analysis).

¹³⁶ The multivariate excess distribution reevaluates the multivariate normal distribution (Weiber & Mülhhaus 2010).

$DEV_{\epsilon_j} = 0.50$) and VKBa ($DEV_{\epsilon_j} = 0.33$). Likewise, the additionally calculated Fornell-Larcker criterion¹³⁷ which demands a DEV bigger than the maximum factor correlation ($r_{\epsilon_{ij}}^2$) of 0.529, was not fulfilled by both factors of the scale “Health and Health Behaviour” (i.e. GHSoz-SELG and GHSoz-StaG), the treatment options “doctors” and “non prescriptive medicines” (i.e. VKBrf and VKBa) as well as “Internet as information source” (IQKB-I). Nevertheless, the Fornell-Larcker criterion was confirmed when correlating only superior constructs, namely the scales GHSoz, IQKB and VKB ($r_{\epsilon_{ij}}^2 = 0.247$), assessing good overall structure of the measurement model. Moreover, the inferential statistical parameters (i.e. RMSEA and $p_{(BSB)}$) as well as all descriptive performance criteria (i.e. CMIN¹³⁸, SRMR, CFI, TLI) except for NFI (0.859 instead of NFI > .90) displayed adequate results when compared to the prior determined requirements as displayed in Table 5.4.5.2.1 CFA: Model Fit Requirements above. To sum up, almost all model fit parameters delivered very satisfying results, so that model fit to the dataset was assessed to be appropriate (RMSEA = 0.027). The according table is displayed in the appendix section (see Table CFA: Results of Model Fit Test in Appendix 5.5.1 Results: Tables).

Overall, best results were retrieved for IQKB-FB (“friends and acquaintances as information sources on minor ailments”), VKBam (“alternative methods of treatment for minor ailments”), VKBhm (“traditional remedies for minor ailments”) and VKBn (“no treatment for minor ailments”). According to the results, female friends and acquaintances are of specific importance as information source on minor ailments (item IQKB-10). Furthermore, alternative treatment is mainly utilised in the case of digestive disorders (VKBam-02) and minor pain (VKBam-05), whereas traditional remedies are mostly applied when experiencing minor injuries (VKBhm-04). Digestive disorders represent the minor condition which is unattended most often, meaning that no treatment is utilised at all. Moderate results were received for the factors “Internet as information source” (IGKB-I), “non-prescription medicine for minor ailments” (VKBrf) and “health status” (GHSoz-Stat). Thus, the Internet (i.e. advisory pages and the online source “Wikipedia”) is also a frequently utilised source when people are looking for information about minor ailments, whereas non-prescription medicine is mainly utilised when experiencing digestive disorders or minor injuries. Finally, the two factors “health conscious behaviour” and “doctors as treatment option for minor ailments” (i.e. GHSoz-SELG and VKBa) delivered the worst results, while the factor VKBa additionally loads on one item of factor VKBrf (i.e. VKBrf-05 “non-prescription medicine for minor pain”). Hence, minor pain could be assigned clearly to neither “non-prescription medicine”, “doctors” nor any other treatment option for minor ailments.

In regard to factor correlations, results can be divided into correlations within the scales and correlations between the scales. When looking at factor correlations within the scales, it was found that the more often people utilise the Internet, the more often they turn to female friends and acquaintances in order to get informed about minor ailments (i.e. IQKB; $r_{\epsilon_{ij}}^2 = .335$; $p < .01$). Moreover, the more satisfied they feel in regard to their health, the higher people evaluate their own physical performance (i.e. scale GHSoz; $r_{\epsilon_{ij}}^2 = .335$; $p < .01$). In regard to treatment methods which are applied when experiencing minor injuries (i.e. scale VKB), results suggest that the more often traditional remedies are applied, the more likely non-prescription medicine are utilised ($r_{\epsilon_{ij}}^2 = .529$; $p < .01$). Also, the more often traditional treatments are utilised in the case of minor injuries, the more often are they not treated at all ($r_{\epsilon_{ij}}^2 = .247$; $p < .01$). Lastly, the more often traditional remedies are used when treating minor injuries, the more often alternative methods of treatment are utilised in the case of digestive problems ($r_{\epsilon_{ij}}^2 = .451$; $p < .01$). Furthermore, it was also found that the more often people tend to

¹³⁷ ($DEV > r_{\epsilon_{ij}}^2$); see Farrell & Rudd 2009.

¹³⁸ The assumption of a multivariate normal distribution was only approximately met; therefore, the inferential statistic $p_{(CMIN)}$ could only be interpreted descriptively.

consult a doctor when experiencing digestive problems, they more often they tend to leave digestive problems unattended, utilising no treatment at all.

Referring to factor correlations between the scales, it was found that the more often advisory pages are consulted on the Internet, the more often digestive problems are treated by non-prescription medicine ($r_{\epsilon_{ij}}^2 = .259$; $p < .01$). Results further indicate that the more often people consult female friends and acquaintances in order to get informed about minor ailments, the more they tend to apply traditional remedies ($r_{\epsilon_{ij}}^2 = .207$; $p < .01$) when experiencing minor injuries ($r_{\epsilon_{ij}}^2 = .185$; $p < .05$).

Part III

Chapter 6: Discussion and Conclusion

6.1 Research Design, Test Quality Criteria and Model Fit

Undertaking research on issues related to health and health behaviour, such as the treatment of minor ailments, is complex and requires careful consideration in terms of method selection and research approach in order to be able to answer the research question adequately (Bowling 2009). The picture gets even more elaborate when looking at health behaviour of so-called “vulnerable groups” such as migrants (Brikci & Green 2007, Stewart et al. 2008). Utilizing the strengths of both qualitative and quantitative research by applying a sequential exploratory mixed methods design as explained in Chapter 3.3.3 Exploratory Mixed Methods Design, offered the best possible approach to building a more comprehensive insight into an issue that has only some previous evidence to guide research (see Chapter 1 Theoretical Foundation and Literature Review). While the initial qualitative approach (see Chapter 4 Qualitative Analysis) allowed enquiry into where people get informed about minor ailments, what kinds of treatments they apply and why they decide to choose a certain method, the ensuing quantitative approach (see Chapter 5 Quantitative Analysis) reassessed the findings while providing objective and comparable results for the whole target group. Clearly, the combination of both research approaches put together a more complete picture for the purpose of this research: in-depth knowledge of the patients’ health behaviour in regard to minor ailments as well as general trends and generalisations could be taken into account while subtleties could be clarified and findings cross-validated (Bowling 2002, Creswell & Clark 2007). Thus, the mixed methods approach provided an understanding that would most possibly have been missed if only a single method had been used, and further strengthened evidence through confirmation and substantiation of findings while the two different research approaches balanced out each others’ biases (Bazeley 2008, Bowling 2009, Creswell & Plano Clark 2007, Diekmann 2002, Rossman & Wilson 1991, Whittall & Jago & Fox 2011; see also Chapter 3.3.1 Advantages of Mixed Methods Design).

In contrast to other health research utilising already existing scales which have been thoroughly reassessed and thus verified (see Bowling 2008, Kazi & Khalid 2012), there was no adequate instrument (i.e. scale) in regard to minor ailments available. Hence, a questionnaire was developed following the suggestions as laid out in the literature concerning the design of an exploratory mixed methods research project (see Creswell & Plano Clark 2007, Kallus 2010). According to Creswell (2007), qualitative techniques are considered appropriate for studying sensitive and unexplored issues, and can help getting an understanding of different perspectives, such as varying cultural, ethical or social perspectives for example. Furthermore, applying qualitative methodologies is advised when learning about participants’ experiences relating to accessing health care and their own health needs (Bowling 2009, Brikci & Green 2007). Hence, qualitative techniques (i.e. preliminary informal discussions and semi-structured interviews) were utilised to identify the variables of interest and gain a deeper understanding of the issues surrounding the influence of culture and ethnicity on the process of decision making about how to cope with potentially self-treatable conditions. After analysing the results, qualitative hypotheses regarding minor ailments in general and the specific strategies of treatment used were formulated

(see Chapter 4.5.2 Generating the Hypotheses). According to the instrument development model of exploratory mixed methods design, insights from these data informed the design of the quantitative instrument, connecting the two parts through the development of items and scales for a questionnaire (Creswell & Plano Clark 2007, Greene et al. 1989, Morse 1991, Stewart et al. 2008). Thus, through qualitative research identified variables of interest such as migration, sex, education and working status were included as independent variables. Moreover, four of the qualitative key categories (i.e. sources of information on minor ailments, identifying minor ailments, treatment of minor ailments and measures that are beneficial to health, i.e. health status and health conscious behaviour) were further determined as dependent variables for quantitative research. Qualitative findings suggested high levels of insecurity and scepticism regarding the treatment of minor ailments in regard to Self-Care in general, irrespective of a participant's ethnicity. Thus, the independent variable "migration", which has been central to this research project, was investigated quantitatively in regard to "no migrant background" and "migrant background", which was further subdivided into the specification "first" and "second generation migrants", rather than investigating differences regarding the four ethnicities as such as performed in qualitative analysis (see Chapter 4.1.2 Target Group and Sampling). Further, the independent variable "education" showed two levels, namely "school leaving exam" and "no school leaving exam", in order to be able to differ between people who have acquired a higher, i.e. tertiary level of education and people who have completed compulsory schooling, while the independent variable "working status" differentiated between "working" and "non working", having category "working" also include people in training or studying.

Migrants' health issues are often associated with low social standard and weary life circumstances (Weiss 2008), which not only affect the lives of those who came as immigrants, but also the second and third generation issues (Goldberg 1993, Marks & Worboys 1997, Kelleher & Hillier 1996). Nevertheless, migrants or people with migrant backgrounds respectively, are not always necessarily disadvantaged in terms of health care status or accessing medical care (Fassmann 2007, Marks & Worboys 1997, Weiss 2008). While employment status and the level of education a person receives correlates positively with socio-economic status as well as health conscious behaviour and therefore with health status, these influences were found to be independent from ethnicity and cultural background (Cutler & Lleras-Muney & Vogl 2008, Biffl 2003, Fassmann 2007). Hence, issues of education and employment were important in order to be able to divide between people with migrant backgrounds who are associated with lower and higher social standard (Chen & Martin & Matthews 2005, Lampert et al. 2013) and find out whether or in what degree health behaviour specifically related to minor ailments is linked to socio-economic status, cultural background or generation membership. According to Jayaweera and Quigley (2010), improvement referring to socio-economic circumstances of migrant groups to not necessarily change health behaviour or result in better health outcomes, further raising questions in regard to providing linear acculturation models for migrants' health. Hence, findings need to be interpreted carefully, since one's health status additionally is strongly, but certainly not exclusively, dependent on socio-economic circumstances (Fassmann 2007, Jayaweera & Quigley 2010, Marks & Worboys 1997, Weiss 2008).

As there is a considerable correlation between language skills, health status and socio-economic circumstances, language issues are generally thought to represent one of the major barriers in accessing a country's health system (Eichler 2008, Marks & Worboys 1997, Weiss 2003). However, this was not reflected by the initial qualitative stage of this research project, where no language issues arose at all since all participants – regardless of age, gender and ethnicity – spoke German fluently and thus, the group discussions and interviews were performed in German. As mentioned, this most probably derived from the fact that five out of the six participants had a school leaving exam or higher education. Since the degree of education a person receives

impacts on socio economic standard (Chen & Martin & Matthews 2005, Lampert et al. 2013) and the risk to not succeed in terms of living a socially integrated life decreases with higher education (Biffl 2003, Weiss 2008), they could all be associated with higher social standards. According to Statistic Austria (2012) however, migrants with a background in former Yugoslavia and Turkey are disproportionately represented in low education levels. Nevertheless, developing adequate language skills is the key issue in order to get socially integrated, employment or education when living in foreign-language countries, all indicators of socio-economic status (Cutler & Lleras-Muney & Vogl 2008). For example, it is presumably difficult to find appropriate work when communication does not work well, and accordingly, health status is often worse than compared to others due to difficulties in communicating health problems (Esser 2006). Hence, good German language skills can therefore be associated with higher social standard in the widest sense (Herzog-Punzenberger & Bruneforth & Lassnigg 2012, Kehse 2009). Since the quantitative analysis focused on providing comparable results which are representative for the whole target group, it was of particular importance to address the language issue there, though, and further enable people who can be associated with a lower social standard to participate in the survey as well. This is why questionnaires in all four languages (namely Bosnian, Croatian, German and Turkish) were provided, which proved to be both necessary and effective with regard to the study's research design. Moreover, attention was given to the wording of questions and the overall language level used in the questionnaire during the whole design process. It was particularly difficult to design the German form, however, which was distributed to native Austrians and immigrants with a high level of German as well due to participants' manifold cultural and educational levels, since the target group included two different migrant generations and four different ethnic backgrounds. Thus, careful considerations were not only necessary in order to assemble understandable and feasible questions for all participants (see Chapter 3.2 Target Group), but proved to be crucial in order to provide a coherent and high-value research-instrument.

Following the suggestions discussed in the literature (see Bowling 2009, Edberg 2007, Eichler 2008 and Marks & Worboys 1997) and made by local migrant initiatives (see Haigl 2013, Mair 2011, Pfandl-Pichler 2011, Vasak 2010), the final version of the questionnaire was translated into Bosnian, Croatian and Turkish. Since successful translations require an understanding of the local context, specific issues and cultural meanings which language carry, it was important to win native speakers and professional translators who translated the questionnaires into the desired languages (Bowling 2009, Edberg 2007, Eichler 2008, Marks & Worboys 1997). As second step, all questionnaires were then translated back into German by other native speakers than before. This way, it was possible to maximise the translations' qualities while ensuring logical and adequate transfer of the items as well (see Kallus 2010).

Evaluation in regard to language issues found that, 51% of all participants and 36% people with migrant background assessed their German language skills as "excellent", whereas 34% stated to have "good/appropriate" skills. Moreover, only 9% rated their German as "insufficient" and almost 91% further indicated to speak German on a daily basis. Furthermore, more than 52% of all participants determined German as their native language, while people with a migrant background in Croatia and Bosnia-Herzegovina were most frequently bi- or multilingual, accounting for almost half of that share. In contrast, people with a migrant background in Turkey were most likely to rate their German language skills as less developed (i.e. "sufficient/insufficient"), thus, they also accounted for the biggest share of people not indicating German as native language. Consequently, almost half of the migrants with a background in former Yugoslavia decided to fill out the German questionnaire, whereas 47 out of the 49 persons with a Turkish migrant background decided to fill out the Turkish version. Thus, measures aiming at reducing language barriers were successful, since people chose their questionnaire according to their language skills, as German questionnaires were only filled

out by people assessing their German language skills as either “excellent” or “good/appropriate”, while those with lower language skills rather chose to respond to the questions in their native languages. Interestingly, persons with a migrant background in Croatia and Bosnia-Herzegovina who also stated German as their native language were found to prefer the German questionnaire, while bilingual German native speakers with a migrant background in Turkey rather tended to fill out the Turkish version. Furthermore, people with a migrant background in Turkey were found to account for the biggest share of people with deficient German skills (i.e. 20 out of 26 participants), indicating general language issues for this migrant group.

As stated by Statistic Austria (2012, 2011, 2010) and the Austrian Educational Report (Herzog-Punzenberger & Bruneforth & Lassnigg 2012), especially people with a migrant background in Turkey experience difficulties in obtaining an adequate degree of German language skills, which is reasoned by particularly low employment rates and degree of education. In turn, it may very well be that their low employment rates are also due to the limited language skills that people with a Turkish background face, as explained before. Analysis suggests a similar picture, displaying particularly high rates of unemployment for people with a migrant background in Turkey (77.5% do not work), whereas those with a background in Bosnia-Herzegovina or Croatia show similar employment rates to Ancestral Austrians (i.e. 72.2% are employed or in training)¹³⁹. Likewise, analysis in regard to educational background indicated particularly low levels of education for persons having a Turkish background (63.3% have no school leaving exam), while again, the levels of education in regard to people with a background in Bosnia-Herzegovina or Croatia rather converges to those of the Austrian population without a migrant background (i.e. 57.4% have a school leaving exam)¹⁴⁰. Since employment status and educational level correlates with socio-economic status, long-term unemployed persons and those with a lower degree of education can generally be associated with a lower standard of living (Cutler & Lleras-Muney & Vogl 2008, Fassmann 2007, Lampert et al. 2013). Since unemployment can trigger additional stress and thus, health problems (Eichler 2008, Biffl 2003), while employment helps people to establish social contacts (e.g. colleagues) and is hence not only considered to impact on language skills and emotional well-being, but also on health behaviour and health status (Esser 2006, Herzog-Punzenberger & Bruneforth & Lassnigg 2012), people with a migrant background in Turkey are considered as more vulnerable and marginalised (BMG 2011, Statistic Austria 2012). Thus and due to the findings in regard to gender before, especially females with a migrant background in Turkey are considered to require special attention in order to be empowered to fulfil their health role and ensure adequate health care for the whole family.

Despite all considerations and control measures, feedback from participants showed that the final questionnaire, which consisted of nine pages (see also Appendix 5.4 Full Sample: German Questionnaire), was hard to do for many people, independent of their language skills or the questionnaire’s language. Although they reported that readability and understanding in all versions (i.e. Bosnian, Croatian, German and Turkish) of the questionnaire was good and the biggest share required approximately twenty to thirty minutes, it took some participants up to one hour to complete the survey. When discussing time expenditure with the participants, it was found that most of those who answered the questions within meetings or course settings (see Chapter 5.3 Data Collection and Management) required less time, but at the same time also spent less time to reflect on the questions, while most of those who took the questionnaires back home tended to spend more time on

¹³⁹ Employment rates: BiH 69.4% working; HR 76.6% working; TR 22.5% working; ancestral Austrians 72.2% working (Statistic Austria 2012: former Yugoslavia 66% working; TR 59% working).

¹⁴⁰ Level of education: BiH 53.1% school leaving exam (SLE), 46.9% no SLE; HR 51.1% SLE, 48.9% no SLE; TR 36.7% SLE, 63.3% no SLE; ancestral Austrians 57.4% SLE, 42.6% no SLE (Statistic Austria 2012: former Yugoslavia 19.8% SLE, 80.2% no SLE; TR 7% SLE, 90% no SLE).

reflecting and thinking about the questions which lead to a higher time effort in filling out the form. Albeit being aware that answers can be wrong and responses can be biased if questions are interpreted differently (Kazi & Khalid 2012), these effects were not further investigated due to the successful validation of the research instrument in regard to validity and reliability as discussed prior and a consistently positive feedback from participants. Generally, providing the participants with the freedom to fill out the questionnaire at their own convenience, such as in their homes and at their own pace, is one of the benefits when utilising a self-administered questionnaire. Despite self-administered questionnaires are often associated with low response rates, they are particularly recommended when investigating sensitive topics (Tourangeau & Yan 2007). Hence, the entire survey, including the pre-test, was self-administered, meaning that all questionnaires were handed out and recollected in person (i.e. the researcher or supportive project management staff of the various organizations, in total 157 questionnaires) or via e-mail (43 questionnaires). Especially when utilising electronic distribution (i.e. e-mail), additional issues related to anonymity and confidentiality can be involved. Hence, the author was the only person distributing questionnaires via e-mail or as part of individually arranged meetings in person, as described in Chapter 5.3 Data Collection and Management. Moreover, issues related to a low response rate were counteracted by sending multiple follow-up letters and also providing self-addressed stamped envelopes for those participants who preferred the printed version (Kazi & Khalid 2012), resulting in a response rate of 99.5% (199 out of 200 questionnaires). This study further benefited from characteristic advantages of self-administered questionnaires, such as barely being susceptible to information bias and interviewer effect as well as enabling the researcher to cover population groups which are sometimes difficult to reach more easily (Kazi & Khalid 2012, Tourangeau & Yan 2007). Finally, undertaking a self-administered survey was more manageable in terms of costs, since - besides the researcher - no trained personnel was required as compared to other modes of administration participants.

Since the quantitative pre-test sample was only representative in regard to sex but not referring to education, immigrant generation membership and cultural background, pre-assessing the subsequent more elaborate questions from the questionnaire in regard to different cultural backgrounds and also varying educational levels was hardly possible. While aiming at getting an equal distribution in regard to the different ethnicities (i.e. 25% in each group), most participants in the pre-test were members of the ancestral Austrian population (66.7%; see Chapter 5.2.2.1 Pre-test Sample). With regard to generation membership, only 5.5% of the pre-test sample represented second generation migrants in contrast to the targeted 37.5%, which would have represented an equal distribution of first and second generation migrants. Also, more than 72% declared to have a school leaving exam or higher education, which clearly exceeded the targeted 30-50%. As a pre-test's main goal is to generally verify a questionnaire's quality in order to ensure that quality standards of test theory are met while also training the researcher, however, these issues were hardly relevant in terms of statistical instrument quality (Diekmann 2002, Kallus 2010, Malhotra & Birks 2007). In order to ensure the developed preliminary survey instrument (in German) measured the variables it was supposed to in a reliable way, validation included the assessment of the scales' dimensionalities utilising a factor analysis and testing the items in regard to validity by means of item analysis (Fuchs-Heinritz et al. 1995). This was of particular importance due to the exploratory nature of this research, as discussed before. Focusing on adequate fitness in regard to instrument reliability and validity, a modified version of the initial questionnaire was thus compiled according to the results of the pre-test (see Chapter 5.2.2.2 Evaluation of Test Quality). After careful consideration, adulterations included the exclusion of items or factors indicating issues in regard to validity and reliability (such as high item-difficulties or negative factor-correlations) and the restructuring of the scale "Health and Health Behaviour". As an outcome, the test instrument delivered overall satisfying results in regard to validity and reliability for almost

all scales, while further providing necessary information in regard to analysis and revaluation after the main sample.

As described within Chapter 5.1.2 Target Group and Sampling, the full sample consisted of altogether 199 people, comprising 49 persons with a migrant background in Bosnia-Herzegovina, 47 persons with a migrant background in Croatia and 49 persons with a Turkish migrant background, while the Austrian control group consisted of 54 people without any kind of migrant background. Since the quantitative research part aimed for an approximately equal distribution in regard to ethnicity, the full sample was therefore assessed for representativeness in regard to cultural and ethnic background. Likewise to qualitative analysis, an approximately even distribution in regard to age could be achieved (i.e. $52\% \leq 32$ years; $48\% > 32$ years), which was important in terms of comparability and further supplementation of data. In regard to immigrant generation membership, sex and socio-economic background, 42.5% males and 57.5% females, 26% second and 47% first generation migrants, 27% ancestral Austrians, 49.5% persons with and 50.5% persons without a school leaving exam as well as 60% working and 40% non working people were surveyed. Thus, the full sample was considered to be representative referring to all independent variables, i.e. “sex”, “education”, “migration” and “working status”¹⁴¹.

As discussed in Chapter 5.2.2 Final Questionnaire, the final questionnaire comprised two open questions at the beginning and six rating scales¹⁴². In order to validate the quantitative research instrument in regard to structure and relations between the latent variables underlying the data, a structural review was performed by means of structural equation modelling (SEM), utilising the technique of confirmatory factor analysis¹⁴³ (CFA) as suggested in the literature (see Crayen et al. 2011, Farrell & Rudd 2009, Schreiber et al. 2006). In order to ensure appropriate conditions prior to CFA, analysis of reliability assessed major (i.e. so called first generation’s) measures for reliability, including selectivity (r_{ITC}), internal consistency (α , i.e. Cronbach Alpha Coefficient) and the mean correlation of the items ($\overline{r_{ICC}}$). While results confirmed homogeneity for all treatment options (i.e. medical care, no treatment, alternative treatment, homemade remedies and OTC-products), the scales “Health Status and Health Behaviour” as well as “Information Sources on Minor Ailments” were found to be rather heterogeneous, suggesting two-factor solutions for both scales. Hence, the sequently applied CFA split both scales into their sub-scales, while displaying adequate solutions for “Health Conscious Behaviour” and “Health Status” as well as “Internet” and “Friends and Acquaintances as Information Sources on Health”.

Results in regard to the structural review displayed no satisfying solutions within the model for three initial factors (i.e. the scales “Frequency of Experienced Minor Ailments”, “Medical Advice on Minor Ailments” and “Personal Necessity to Require a Doctor’s Attention”) as well as for a big share of the initial sixty-four items. Since no relations to those questions were detected and factors did not appear as self-contained within the overall model either, the concerning variables needed to be removed from the model. As a consequence, the (from qualitative findings derived) assumption that medical advice on, the frequency of and the personally received necessity to require a doctor’s attention when experiencing minor ailments would interact with each other or with any of the other constructs¹⁴⁴ could not be confirmed and had to be discarded¹⁴⁵. In order to

¹⁴¹ See Table 5.2.1 Full Sample: Independent Variables in Chapter 5.2 Instrument Design.

¹⁴² AFKB “Personal Necessity to Require a Doctor’s Attention”, IQKB “Information Sources on Minor Ailments”, GHSoz “Health Status and Health Behaviour”, HKB “Frequency of Experienced Minor Ailments”, VKB “Methods of Treatment” and AIKB “Doctor’s Advice on Minor Ailments”; see Appendix 5.3 Full Sample: Scales of the Questionnaire in English

¹⁴³ See Chapter 5.1.3.5 Confirmatory Factor Analysis (CFA).

¹⁴⁴ i.e. “information sources on minor ailments”, “health and health behavior” and “type of treatment used when experiencing minor ailments”; see also Chapter 5.1.1 Research Questions.

optimise model fit, items were excluded by applying the AMOS¹⁴⁶ “modification index”, until there was no further improvement of the scale possible in regard to internal consistency. While model fit was maximised, the overall model structure was simplified until the remaining model only covered the project’s “core structure”, involving twenty items and nine factors¹⁴⁷, which suggested highly satisfying results in regard to model fit to the dataset. Thus, all important aspects of the prior defined key categories, including sources of information on and the treatment of minor ailments as well as beneficial measures to health (such as health conscious behaviour), were found to correlate as presumed while their related scales interrogate the underlying constructs as anticipated.

Since goodness of fit is generally related to sample size and the number of variables in the model, it is important to identify a structural model properly. If there is too little information available on the basis of the parameter estimates, then the model is said to be “under-identified”, and model parameters cannot be estimated appropriately. Furthermore, model fit refers to how well the estimated model accounts for the correlations between the variables (i.e. items) in the dataset. Hence, a model has “good fit” if there is no significant discrepancy between the proposed and the observed correlations. However, “good fit” only indicates that a model is plausible and represents one possible solution out of many and does not claim trueness or correctness of the model (Bühner 2011, Schreiber et al. 2006, Suhr 2006). Nevertheless, simple, i.e. less complex, models such as the one developed as part of this project increase subjectivity and should be preferred to more complex ones, since they generally produce a more subjective solution in regard to content and key elements (i.e. basic factors and indicators), as stated by Bühner (2011) and Weiber and Mülhhaus (2010). The final measurement model developed for this project evolved twenty observed and twenty-nine unobserved variables (i.e. 20 error-variables, 9 factors) in $\sum_{xx}(0)$, representing a relatively simple model, which is therefore properly identified.

Within the model, scales were assumed to be representative in regard to factors (Bühner 2011) and were thereon reevaluated by means of confirmatory factor analysis. To strengthen the results of confirmatory factor analysis, Farrell and Rudd (2009, p.5) suggest for researchers to “*not only evaluate a CFA based upon model fit statistics but [...] also pay close attention to factor loadings*”, while advising against utilising only CFA to assess convergent and discriminant validity since this “*is not the most stringent test for discriminant validity*”. Hence, further test quality criteria (i.e. second generation’s measures of reliability) were estimated within the context of CFA in order to reflect on the amount of factor loading and construct validity, describing the dimension of relations between a theoretical construct and the concept of empirical measures by convergent and discriminant validity (i.e. construct validity¹⁴⁸; see Bühner 2011). Calculated test quality criteria comprised factor loading (λ), the percentage of variance in the variable which is generally explained by a factor (i.e. squared factor loading, λ^2) and factor reliability (Rel_{ϵ_j}), i.e. second generations’ measures of reliability in order to reflect on reliability, while double-loading items were identified (Farrell & Rudd 2009).

¹⁴⁵ See Chapter 5.4.5 Results of the Fifth Research Question.

¹⁴⁶ i.e. an additional package for the “IBM SPSS Statistics” program.

¹⁴⁷ The final factors which interacted with each other and were therefore involved in structure review were “Health Conscious Behaviour”, “Health Status”, “Internet” and “Friends and Acquaintances as Information Sources on Health”, as well as five factors representing the predefined options of treatment of the scale “Methods of Treatment” (i.e. “Non-prescription Medicine” (VKBrf), “Traditional Remedies” (VKBhm), “Alternative Treatment” (VKBam), “No Treatment” (VKBn) and “Doctors” (VKBa)), as described in Chapter 5.4.5 Results of the Fifth Research Question.

¹⁴⁸ Construct validity refers to the validity of conclusions that observations or a research tool actually typifies or measures the construct being investigated (Polit & Beck 2012).

Since convergent validity illustrates the degree of correlation between the items (i.e. variables) of one construct and the latent background factors (i.e. the construct itself), convergent validity issues are experienced when variables do not correlate well with each other within their factor, meaning that the latent factor is not well explained by its observed variables. In that context, discriminant validity refers to the amount of certainty with which other constructs can be excluded from the evaluation of the investigated construct. If discriminant validity issues are experienced, the variables correlate more strongly with variables outside their parent factor, meaning that the latent background factor is better explained by variables from another factor than by its own observed variables. According to Bühner (2011) and Weiber & Mülhhaus (2010), establishing adequate validity¹⁴⁹ and reliability¹⁵⁰ of the factors is essential in order to be able to test a causal model when undertaking a confirmatory factor analysis. Therefore and in addition to the prior discussed determinants of reliability (i.e. factor loading, squared factor loading and factor reliability), the calculated test quality criteria of this project further involved estimating the average extracted variances per factor (DEV_{ϵ_j}) in order to reflect on convergent validity while assessing discriminant validity by applying the Fornell and Larcker criterion. The DEV-Indices (i.e. DEV_{ϵ_j} and the Fornell and Larcker criterion) are important software-based measures which can only be estimated by utilising structural equation modelling software such as “AMOS”. Since the Fornell and Larcker criterion demands a DEV bigger than the maximum factor correlation ($DEV > r_{\epsilon_{ij}}^2$) to be fulfilled, it is further a more stringent test for discriminant validity than the often utilised paired construct test and therefore strongly recommended when not undertaking an exploratory factor analysis as preliminary step for CFA (Farrell & Rudd 2009) as it was done within the measurement model developed for this project. However, the main advantage of applying second generations’ measures of reliability (i.e. λ , λ^2 and Rel_{ϵ_j}) and validity (i.e. DEV-Indices) is that these measures take into account the assumption of uncorrelated errors. Hence, the amounts of error variance (i.e. variance which cannot be explained) are estimated and measurement errors are displayed in the model (Bühner 2011, Weiber & Mülhhaus 2010).

Despite some factor loadings within this project were found to be very low and almost all factors contained at least one item with less than the required 50% of variance explained by a factor, out of all nine options only the treatment “Doctors” did not achieve the cut-off point for factor reliabilities. While these findings suggested only low affinities for “doctors as treatment option for minor ailments” to correlate with its related categories of minor ailments, all remaining factors displayed an affinity of more than 50% to correlate with their related items. Thus, all factors except for “Doctors” were evaluated to indicate an adequate degree of relations between factors and their associated variables, meaning that the assumed relations between factor and variables (i.e. items) do actually exist. Moreover, the factor “Doctors” was also found to additionally load on the item “non-prescription medicine for minor pain”, reflecting the people’s ambivalence in regard to minor pain and the treatment thereof, i.e. everybody has a different perception of minor pains, and pain in general is experienced differently (see Conner & Norman 2008). Nevertheless, almost all factors were found to display satisfying values in regard to internal consistency, so that overall, an adequate degree of reliability was established. Further indicating issues of convergent and discriminant validity for these constructs, the two treatment methods “Non-prescription Medicine” and “Doctors”, together with both factors of the scale “Health and Health Behaviour” did neither achieve cut-off point in regard to the average variance extracted (DEV_{ϵ_j}) nor fulfilled the Fornell and Larcker criterion. However, since all of these factors represented subordinate constructs, i.e. subscales, these results were of limited value, in regard to overall structure as well as content-

¹⁴⁹ Validity represents the degree of evidence that a test measures what it is supposed to measure (Field 2009).

¹⁵⁰ Reliability is the ability of an assessment tool to produce stable and consistent results even when conditions are changed (Field 2009).

wise. In addition, when calculating DEV_{ϵ_j} as well as the Fornell and Larcker criterion for the superior constructs only, namely the scales “Health and Health Behaviour”, “Information Sources on Minor Ailments” and “Methods of Treatment”, results assessed good overall structure of the measurement model ($r_{\epsilon_{ij}}^2 = 0.247$). Hence, convergent and discriminant validity could be affirmed for the overall structure of the measurement model, while minor pain was found to not be assignable clearly to neither “non-prescription medicine”, “doctors” nor any other treatment option for minor ailments. Overall, reliability and validity were successfully established for the applied model.

Goodness of Fit was assessed by estimating absolute and relative fit, while utilising both, inferential model fit parameters as well as also descriptive determinants in order to describe how well the produced statistical model fits into the set of observations (Field 2009, Schreiber et al. 2006, Suhr 2006, Weiber & Mülhhaus 2010).

Absolute or also called predictive fit, i.e. the assessment of how well an estimated model reproduced the data, was evaluated by the inferential parameters, i.e. chi-square, RMSEA and Bollen-Stine bootstrap¹⁵¹ (BSB), as well as by the descriptive parameter SRMR. Since AMOS-software reports the value of chi-square as CMIN, i.e. the likelihood ratio chi-square, a significant chi-square declares the observed and reproduced correlation matrix to not concur and thus indicates lack of satisfactory model fit (Weiber & Mülhhaus 2010). Within the described model, the assumption of a multivariate normal distribution was evaluated by means of multivariate excess distribution ($d_i^M < 100.00$) and was found to be only approximately met, meaning that the inferential statistic $p_{(CMIN)}$ could only be interpreted descriptively. Therefore and in order to support the CMIN-value whose p-value is strongly susceptible to sample size, the p-value of Bollen-Stine bootstrap (BSB) was calculated. Both determinants should be more than 0.05 ($p > .05$), which was fulfilled as displayed in Table 6.1 Structural Review: Discussion of Model Fit below. The Root Mean Square Error of Approximation (RMSEA) analysed the discrepancies between observed and (on the basis of optimally chosen) predicted covariance on the basis of optimally chosen parameter estimates. Thus, it avoided the issue of sample size while reaching a value of less than 0.08 (RMSEA = 0.027) as required to indicate acceptable model fit (Schreiber et al. 2006). Representing the squares root of the discrepancies between the sample's and the model's covariance matrix, the Standardized Root Mean Square Residual (SRMR) describes the discrepancy function¹⁵² in relation to model complexity, degrees of freedom and sample size (Weiber & Mülhhaus 2010). In order to indicate good fit, SRMR should be smaller than 0.05, which was also fulfilled for the described model.

Since more than one plausible model was being considered, the discrepancy between these two models was assessed by further estimating relative also called incremental or comparative fit. While representing how much of the variance has been accounted for in the covariance matrix, relative fit indices also include discrepancies from a "null" model by comparing the ideal model (i.e. default model) to the worst case model (i.e. independence model) related to a minimal discrepancy function (Field 2009, Schreiber et al. 2006, Suhr 2006, Weiber & Mülhhaus 2010). Estimated relative fit indices included the Normed Fit Index (NFI), the Non-Normed Fit Index (TLI), and the Comparative Fit Index (CFI). In order to assess adequate model fit, all relative fit indices should value at least 0.90, which was fulfilled for TLI and CFI, indicating adequate model fit. Since the Normed Fit Index analyses the discrepancy between the chi-square of the proposed model and the chi-square of the null

¹⁵¹ Bootstrap is a statistical technique which estimates a sampling distribution of a statistic by taking repeated samples from the dataset. There are two forms: naive bootstrap for generating empirical estimates of standard errors and Bollen-Stine bootstrap for obtaining adjusted p values for the model fit statistic (Field 2009).

¹⁵² A discrepancy function is a mathematical function describing the conformity between a structural model and the observed data (Weiber & Mülhhaus 2010).

model, it is strongly attached to sample size and not fulfilling this criterion (NFI = 0.859) is of limited value when set in context with the overall highly satisfying results of structural review (see Table 6.1 Structural Review: Discussion of Model Fit below).

Overall, structure review displayed highly satisfying results in regard to this exploratory project, which confirmed adequate quality in regard to reliability and validity for the developed research instrument, i.e. questionnaire. While the utilised scales were found to interrogate the constructs or sub-constructs as anticipated, determination of absolute and relative model fit parameters delivered satisfying results, so that model fit to the dataset was assessed to be appropriate as displayed below.

Table 6.1: Structural Review: Discussion of Model Fit

Identification of measurement model: 20 observed variables, 29 unobserved variables
(i.e. 20 error-variables, 9 factors) in $\Sigma_{xx}(0)$

Inferential Statistics		Descriptive Statistics	
CMIN ^a	152.45	CMIN/df ^a	1.146
$p_{(CMIN)}$	0.119	SRMR	0.044
df	133	CFI	0.978
$p_{(BSB)}$ ^b	0.479	NFI	0.859
RMSEA	0.027	TLI	0.969
PCLOSE	0.984	d_i^M	52.528
LO90 – HI90	0.000 – 0.045		

CMIN^a chi-square value reported by AMOS

$$p_{(CMIN)} > .05 ; \frac{CMIN}{df} < 2.00$$

df degrees of freedom

$p_{(BSB)}$ ^b p-value of Bollen-Stine bootstrap (number of bootstraps = 1000)

$p_{(BSB)} > .05$ in 1000 simulations

RMSEA Root Mean Square Error of Approximation

RMSEA < .05; with PCLOSE > .95 & LO90 < .05; HI90 < .05

LO90 – HI90 90% confidence interval for RMSEA

SRMR Standardized Root Mean Square Residual

SRMR < .05

CFI Comparative Fit Index

NFI Normed Fit Index

TLI Non-Normed Fit Index

CFI / NFI / TLI > .90

d_i^M multivariate excess distribution (revaluates the multivariate normal distribution)

$d_i^M < 100.00$

(Bühner 2011, Eberl 2004, Schreiber et al. 2006, Suhr 2006, Weiber & Mülhhaus 2010)

6.2 Discussion of the Research Problem

6.2.1 Defining Minor Ailments: Insecurity, Frequencies and the Personally Received Necessity to Require Medical Care

Regarding the question whether people can divide between self-treatable conditions and those that are not, the respective qualitative findings showed that people do experience difficulties in doing so. In order to reevaluate these findings and extract more detailed information, the first of two open questions right at the beginning of the questionnaire asked respondents to state diseases or symptoms they would categorise as minor ailments, while the second question specifically asked for minor ailments that do not require a medical doctor's attention (see Chapter 5.4.1 Results of the First Research Question: "How do people define minor ailments and can they differ between self-treatable conditions and those that are not?").

Although most people (178 out of 199) tended to list the exact same conditions when answering the two questions, this cannot be interpreted towards people being aware that every health condition which is a minor ailment is self-treatable (PAGB 2009 Fast facts about Self Care, PAGB 2011). In fact, these findings rather encourage the qualitative findings when results related to the third research question¹⁵³ are being considered. By investigating health status and health conscious behaviour, but also the respondents' tendencies in regard to social desirability as well as social support, results of the scale "Health Status and Health Behaviour" (GHSoz) suggest higher social desirability-tendency to be accompanied by more positive outcomes in health issues (see Chapter 6.2.3 Discussion of the Third Research Question). Since very low means of the social desirability-items indicate high tendencies towards social desirability, it can be concluded that most people tend to evaluate their own health status, health knowledge and health interest better than it may really be, performing what is called "socially desirable responding" (Van de Mortel 2008). According to Van de Mortel (2008, p. 41), this form of response bias¹⁵⁴ "is most likely to occur in responses to socially sensitive questions", such as those related to health research for example (Bowling 2008, Creswell 2007). As suggested by the literature, participants tending to socially desirable responding might want to avoid criticism or don't want to be socially excluded when displaying probably unpopular or socially not acceptable attitudes. Hence, they tend to answer the questions in a way that casts them in a more positive light, in order to confirm to – what they think are – socially acceptable values (Lavrakas 2008, Van de Motel 2008).

As stated by Mossialos, Mrazek and Walley (2004), people often feel insecure when experiencing minor ailments and tend to not know what to do in order to make themselves feel better. Likewise, qualitative findings indicated difficulties with differentiating between self-treatable and not self-treatable conditions, and suggested high levels of insecurity and scepticism referring to the treatment of minor ailments in relation to self-care in general (see Chapter 4.4 Discussion and Analysis). Taking into account that people may rather give fake information than the real facts when asked about their own health behaviour, health interest and such while drawing on from prior findings, this suggests that for many people, minor ailments and the treatment thereof are associated with issues related to insecurity and uncertainty. Hence, the tendency to answer questions in a socially desirable way can be understood as an indicator of the degree of uncertainty and insecurity related to minor ailments and the treatment thereof.

¹⁵³ See Chapter 5.4.3 Results of the Third Research Question: "How do people rank health or rather health conscious behaviour specifically within their lives and do they know what is beneficial to health?".

¹⁵⁴ Generally speaking, response bias describes conditions or factors which affect the way responses are provided in the process of answering a survey (Lavrakas 2008).

In that respect, the quantitative results showed that the tendency towards socially desirable responding is significantly correlated to working status and sex, displaying higher tendencies for females and people falling into the category “non working”. Although results suggested no impact of the independent variables “migration” and “education”, further analysis¹⁵⁵ was performed in order to gain information on possible interactions with the impacting independent variables.

These findings suggest that females experience higher degrees of uncertainty than males, further strengthening qualitative results by suggesting males to be more self-confident and less insecure in regard to minor ailments (Lavrakas 2008, Van de Motel 2008). Moreover, working people (including students and people in training) were found to experience less uncertainty in relation to minor ailments than non working persons. According to the literature, social desirability relates to demographic variables such as age and socio-economic status (i.e. decreases with higher age and socio-economic status), while females are said to be more sensitive to the contents of social desirability items in general (Nolte & Elsworth & Osborne 2013, Welte & Russel 1993). Since employment status correlates with socio-economic status, long-term unemployed persons can generally be associated with a lower standard of living (Cutler & Lleras-Muney & Vogl 2008, Fassmann 2007, Lampert et al. 2013), further strengthening the findings. Moreover, *“unemployment per se may act as a psychological stress factor and through that mechanism exacerbate health problems”* (Biffi 2003, p.16; see also Eichler 2008), further suggesting a connection between psychological, i.e. emotional or mental stress, health outcome and the tendency towards socially desirable responding. Moreover, employment helps people to establish social contacts and is hence not only considered to impact on language skills and emotional well-being, but also on health status and health behaviour (Esser 2006, Herzog-Punzenberger & Bruneforth & Lassnigg 2012). Nevertheless, the tendency towards socially desirable responding strongly and first of all depends on the context in which socially desirable responding is evaluated, suggesting varying solutions when diverse objects of interest are investigated (Becker & Cherny 1994, Nolte & Elsworth & Osborne 2013, Riketta 2005, Welte & Russel 1993). Hence, interpretations need to be made carefully when generalising the results, especially since minor ailments are already associated with issues of insecurity and bias (Mossialos & Mrazek & Walley 2004) while there is only little previous research available for comparing the evidence.

Although the level of education a person has is also said to correlate positively with socio-economic status as well as health conscious behaviour and therefore with health status (Cutler & Lleras-Muney & Vogl 2008, Biffi 2003, Fassmann 2007), this analysis displayed no connection between the degree of uncertainty in relation to minor ailments and education. Yet, the aforementioned follow-up analysis found females with higher education experience the highest levels of insecurity, followed by males, while females without a school leaving exam, i.e. only compulsory education, experience the lowest. The picture is reversed for males, since men without a school leaving exam tend to be less uncertain than those with a school leaving exam. Moreover, second generation immigrants or ancestral Austrian females tend to display higher degrees of uncertainty than compared to males. In contrast, female migrants of the first generation tend to experience lower levels of insecurity than first generation males. According to the qualitative findings, self-care is applied more often in the migrants’ countries of origin where females play a key role in regard to providing self-administered health care for the whole family (Eichler 2008, Sieverding & Kendel 2012, Wyn et al. 2003). Hence, it can be concluded

¹⁵⁵ During analysis, it was found that evaluating the interaction between the factors, albeit not part of the original research design, would be helpful in terms of interpreting the results overall and thus worth pursuing.. Hence, a Multifactor ANOVA (also referred to as F-Test) involving two or three factors, was performed on specific scales: Scale AFKB, GHSoz, HKB and IQKB. This investigation was performed in addition to the described methods (see Chapter 5.1.3 Methodology), thus they are not described within the methods section. However, the related results in form of tables are included in the appendix section (see Appendix 5.5.1 Results: Tables) as well as discussed within Chapter 6.2 Discussion of the Research Problem.

that female migrants of the first generation are more familiar and thus less insecure in regard to the concept of self-care for minor ailments than females of the second generation or ancestral Austrians.

In regard to defining minor ailments, it was found that generally speaking, participants listed the same conditions as minor ailments like those that derive from theory¹⁵⁶, while common colds were mentioned the most (more than 77%) and skin problems the least often (around 10%). Since skin diseases were also listed most frequently as requiring a doctor's attention while minor pain was listed the least frequently, these findings further add to the theory that issues related to minor ailments and the treatment thereof are subject to insecurity and uncertainty. Since 94.5% of all participants listed at least one condition or symptom of the prior defined minor ailments, while most respondents also gave two or three examples thereof (together 67%), it may be concluded that the majority is familiar with the concept of minor ailments and can give adequate examples. However, only six participants (i.e. 3%) were able to specify all categories, suggesting that although the majority is familiar with some minor ailments, most people still struggle with identifying more unfamiliar conditions which are self-treatable and making the distinction to those that are not. Furthermore, qualitative findings found that out of all five specific minor conditions which were the basis of questions during the interview, namely common colds, slight digestive disorders, minor strains, sprains and bruises and an athlete's foot¹⁵⁷, the common cold was the only condition where no insecurity or questions regarding the treatment arose. Therefore and as suspected due to quantitative findings, the degree of familiarity a person has in relation to the experienced condition can be identified as the decisive aspect whether or not to be or she defines a condition as a minor ailment. While minor pain and common colds are the most common minor conditions, followed by minor injuries and digestive problems, skin diseases are the rarest¹⁵⁸. Hence, people are more frequently confronted with common colds and minor pain than digestive disorders or skin diseases. As a result, they feel rather comfortable when referring to conditions they are familiar with when talking about minor ailments (e.g. common colds or minor pain), as opposed to referring to conditions where they are not really sure about what to do in terms of treatment, such as skin diseases (see also Table 6.2 Frequency of Listed and Experienced Minor Ailments below).

¹⁵⁶ Minor ailments are defined as potentially self-treatable and self-limiting health problems that do not necessarily need medical attention and include conditions such as common colds (e.g. a nasal congestion, cough, sore throat and light fever), digestive problems (e.g. diarrhoea, constipation or heart burn), skin diseases (e.g. swellings because of bug bites, an athlete's foot or nail fungus), minor injuries (e.g. abrasions, cuts, bruises or strains) and minor pains (e.g. headaches, backaches or joint pains; NPC 2004, NZSMI 2009, PAGB 2011, 2010, 2009 Fast facts about Self Care, RPSGB 2003).

¹⁵⁷ See also Chapter 4.3.5 Category V Minor Ailments.

¹⁵⁸ See Chapter 5.4.4.1 Results of the scale "Frequency of Experienced Minor Ailments" (HKB).

Table 6.2: Frequency of Listed and Experienced Minor Ailments

Listed Minor Ailments	skin diseases	minor injuries	digestive disorders	minor pain	common colds	Listed Minor Ailments
Frequency of Experienced Minor Ailments	skin diseases	digestive disorders	minor injuries	common colds	minor pain	Frequency of Experienced Minor Ailments

It was further found that sex, ethnicity and cultural background as well as generation membership influenced on the choice of listed conditions, whereas someone's level of education was not relevant at all. For example, common colds were more often listed by males, working people and second generation migrants as well as ancestral Austrians than by females, non working people or first generation migrants suggesting that the latter are more familiar with common colds than the others. Nevertheless, there was no significant influence detectable when investigating these correlations in relation to the frequency of experiencing common colds; hence, no differences could be confirmed in regard to generation membership, cultural background, sex, education and working status. When related to the fact that common colds are viral conditions, however, these findings are not surprising, as viral infections spread very fast while the risk to catch a viral infection rather depends on the individual susceptibility and immune defence than cultural background.

Even so, sex, working status and cultural background were found to influence on the connection between frequency of experience and identifying conditions as minor ailments in regard to minor injuries. Since quantitative analysis found males and second generation migrants to generally experience minor injuries more often than females, first generation or non-migrants, they also tend to be more familiar with these conditions and thus feel more comfortable when referring to minor injuries as minor ailments. This may derive from the fact that in general migrants with a migrant background in Turkey (69% manual workers) and former Yugoslavia (63% manual workers), but particularly males thereof (53%), are more likely to be manual workers than non-manual workers, whereas only 23% of the population without a migrant background represents manual workers (Statistic Austria 2012). Since manual workers are – on a daily basis - more exposed to physically strenuous work and a more hazardous work environment (Biffi 2003, Fassmann 2007), they have a generally higher risk to suffer from minor injuries, such as abrasions, cuts, bruises or strains for example.

Results further suggested no connection between the frequency of experience and listing the condition as a minor ailment in regard to digestive disorders: paradoxically, while people without a migrant background are most likely to define conditions related to digestive disorders as minor ailments, these conditions are generally experienced more often by migrants than by ancestral Austrian population, which was also confirmed by the literature (see also Biffi 2003). The situation was similar in regard to minor pain, since the independent variables' influence on the frequency of experiencing minor pain was not clearly determinable. However, women, ancestral Austrians and first generation migrants were found to be generally more likely to list minor pain as a minor ailment than men or second generation migrants, while there is no evidence whether or not

men and second generation migrants actually experience minor pain less often. Findings reflect the people's ambivalence in regard to pain and the ascription of health-attributes to it such as "minor", as suggested by Conner and Norman (2008) and Prager et al. (1999). Since everybody has a different perception of minor pains, and pain in general is experienced differently, a "minor" pain for one person might be "major" pain for another. Hence, evaluating the frequency of minor pain in an objective way is hardly possible, while pain as such is a very universal concept which everybody is familiar with. As a consequence, no patterns were found in regard to minor pain, as discussed in Chapter 6.1 Research Design, Test Quality Criteria and Model Fit.

Although findings reflect that most people are familiar with the concept of minor ailments, they still struggle with differentiating between conditions which are self-treatable and those that are not. Other listed conditions besides the ones associated with the prior defined categories of minor ailments (i.e. common colds, digestive problems, minor injuries, minor pain and minor skin conditions) were assembled in a separate category (i.e. "others"). Significantly, this category contained almost exclusively conditions that are not self-treatable, such as dental problems, ametropia or more serious conditions (e.g. influenza, mental conditions and unconsciousness). However, these conditions were mentioned more often than conditions associated with skin problems, most often in the context of "not requiring an MD's attention". Thus, people obviously experience difficulties with differentiating between conditions which necessitate a doctor's attention and are not self-treatable from those that do not require medical care and therefore allow for applying self-administered care.

As stated by Statistic Austria (2012) and Weiss (2003), people with a migrant background are twice as likely to not seek medical care for more severe health problems than people without migrant background, despite experiencing conditions which are persisting and unconditionally require medical care, such as dental problems for example. Nevertheless, qualitative findings suggest that most people with migrant backgrounds see their family physicians immediately or after a few days latest when experiencing minor ailments. Although most stressed that seeing a doctor is not really necessary when experiencing minor ailments, they further stated to consult a GP at least once for treatment – totally irrespective of sex, migrant generation membership and cultural or ethnic backgrounds. Hence, people with migrant background often do not seek medical care for more severe health problems which would require a doctor's attention (Statistic Austria 2012), while at the same time consult their family physicians constantly, even though they are experiencing self-treatable conditions which are familiar to them. While these findings further support the assumption that there are general issues in regard to identifying minor ailments and differentiating from those that require medical care by necessity, they more importantly indicate a higher degree of insecurity and uncertainty for people with migrant background than for people without migrant background. When put into context and due to qualitative findings, people with migrant background are hence expected to seek for medical care more often when experiencing minor ailments, even if the condition they experience is familiar and thus, they would be able to treat themselves, as discussed in the next paragraphs.

As explained before, since issues related to minor ailments and the treatment thereof were found to be subject to insecurity and uncertainty, it was found that the personally received necessity of requiring medical care when experiencing minor ailments is higher when talking about conditions that are rather unfamiliar (such as skin diseases for example) than when talking about conditions that are very common and therefore familiar conditions, such as minor pain for instance. Since qualitative analysis found that in cases when people are able to treat themselves but decide to call for a doctor instead, they most of the times call for a doctor when feeling unwell, even if they are convinced that seeing a doctor is not really demanded. Hence, it concluded that most people are not really sure about what to do when experiencing minor ailments, suggesting issues of insecurity and scepticism towards the concept of self care in regard to the treatment thereof. In order to reevaluate these

findings, the frequency and the degree of experienced insecurity, and the application of medical care were put into context by putting the frequency of experienced minor ailments in relation to the individually perceived necessity of requiring a doctor as can be seen in Table 6.3 Frequency of Minor Ailments and their Personally Received Necessity to Require Medical Care below. These findings were then correlated to the results of Subscale VKBa (“Doctors as Treatment Option for Minor Ailments”)¹⁵⁹, allowing for more comprehensive insight into the process of deciding whether or not to engage a doctor in the treatment of potentially self-treatable conditions.

Table 6.3: Frequency of Minor Ailments and their Personally Received Necessity to Require Medical Care

Frequency of Experienced Minor Ailments	skin diseases	digestive disorders	minor injuries	common colds	minor pain	Frequency of Experienced Minor Ailments
Necessity to Require Medical Care	skin diseases	digestive disorders	minor injuries	common colds	minor pain	Necessity to Require Medical Care

It was found that the more often people experience a certain minor condition, the less likely they feel the need to call for a doctor when actually experiencing it¹⁶⁰. As displayed above, conditions or symptoms related to minor skin diseases, digestive problems and minor injuries are generally seen as requiring an MD’s attention as opposed to those associated with common colds or minor pain.

Interestingly, sex has not influence in regard to the personally received necessity to require a doctor’s attention, while employment status does: non working people (including retired persons and persons unable to work) are generally more likely to think of a doctor’s visit as necessary when experiencing minor ailments than working or higher educated persons. This adds to the aforementioned finding that working people are less insecure in relation to minor ailments than working persons: since unemployment can potentially trigger additional stress (Biffi 2003, Eichler 2008) while employment helps people to establish social contacts (e.g. colleagues), occupation is hence not only considered to impact on language skills and emotional well-being, but also on health status and health behaviour (Esser 2006, Herzog-Punzenberger & Bruneforth & Lassnigg 2012). However, analysis could neither display a connection between a person’s level of education nor between the degree of uncertainty a person experiences in relation to minor ailments, nor the need to call for a doctor when actually experiencing it (as explained before). Thus, no evidence was found that underpinned the theoretically derived assumption that self care increases with the level of education the person has (see Biffi 2003, Eichler 2008, WHO 2010 and 2002).

Hence and in addition to supplementing qualitative findings in regard to working status, cultural background and generation membership (as discussed in the next paragraph), the lack of influence in regard to sex further

¹⁵⁹ See Chapter 5.4.4.2 Results of the scale “Methods of Treatment” (VKB).

¹⁶⁰ See Chapter 5.4.1.2 Results of Scale “Personal Necessity to Require a Doctor’s Attention” (AFKB).

strengthened qualitative results, as no patterns in regard to sex when seeing a doctor because of experiencing minor ailments were found, neither in qualitative nor quantitative analysis. Nevertheless, females are said to be more endangered to suffer from self-declared illness (OECD 2008), further implying higher degrees of health care utilisation or medical care respectively. However, these suggestions were not reflected by the investigations performed within the scope of this research.

As suggested by qualitative findings, quantitative results found second generation migrants and persons without a migrant background to show similar health behaviour in regard to minor ailments, due to the fact that second generation migrants are exposed to different health hazards than their parents and further tend to converge with the equivalent generation of the ancestral population that does not have a migrant background (see Statistic Austria 2012, 2010 and Weiss 2003). While the ancestral Austrian population in general evaluates minor conditions as “not requiring a doctor’s attention”, second generation migrants also assess common minor conditions, such as common colds or minor pains to not require medical care. Nevertheless, when put into relation with MD-consultations as the predominant treatment option, second generation migrants show only little differences to their parental generations. This means that while people without a migrant background rather tend to wait for them to get better or undertake self care (see also GfK Austria 2011), people with a migrant background are generally more likely to consult a doctor in the case of experiencing minor ailments. Hence, people with a migrant background even tend to consult a doctor when they are actually familiar with the condition they are experiencing and further, are certain that seeing a doctor is not really demanded (such as in the case of minor pain and common colds, i.e. the most common minor conditions).

Put into context, these findings suggest higher degrees of insecurity and scepticism towards self-administered care in regard to the treatment of minor ailments for people who have a migrant background than persons without a migrant background, independent of ethnicity, i.e. cultural background, generation membership or sex.

6.2.2 Undertaking Beneficial Measurements for Health: Health Status, Health Knowledge and Health Conscious Behaviour

According to the literature, people with a migrant background in Turkey and former Yugoslavia have higher health burdens than native Austrians, with chronic conditions such as headaches, back pain, digestive or dermatological conditions as well as emotional problems being the most common (Biffl 2003, Fassmann 2007, Gebhard 2011, Statistic Austria 2012, 2011). Qualitative analysis delivered similar findings in regard to chronic conditions, while particularly allergies were found to represent an additional health issue of second generation migrants. As stated by Statistic Austria (2011) and Weiss (2003), patterns of health can differ between sequent generations of migrants, since second generation migrants are exposed to different health hazards than their parental generation and in this context tend to converge with the equivalent generation of the ancestral population. In fact, quantitative analysis confirmed these observations of converging in regard to health status and health conscious behaviour, whose results form the basis of discussion regarding the impact of health related issues in relation to the social context of migration, as illustrated in the paragraphs below.

As opposed to the common assumption that especially older, first generation migrants suffer from a poor health status and poor health conscious behaviour (Fassmann 2007), qualitative analysis found all interviewees to promote their health actively, independent of generation membership or cultural background. However, since almost all participants have a school leaving exam or have received higher (i.e. tertiary) education and health conscious behaviour is known to increase with the level of education the person receives (Biffl 2003,

Eichler 2008), education, and not age, was found to be the determining factor here. In this context, qualitative results accord to the literature, since high school and university graduates converge in regard to displayed (health) behaviour regardless of social, ethnic and cultural background (Statistic Austria 2012, 2011) and are more likely to succeed in terms of living a socially integrated and healthy life than those who have only completed compulsory education (i.e. do not have a school leaving exam), due to similar social standard and living conditions (Biffl 2003, Weiss 2003). Moreover, findings may indicate that health is even stronger linked to one's level of education than thought, and thus, educating people on health issues is crucial in order to *"provide them with the necessary skills and resources to manage their health"*, so that they can *"benefit from greater control over their lives and improved outcomes"* (Porteous et al. 2006, p.911).

According to research (Fassmann 2007, Statistic Austria 2012, 2011, Weiss 2003), migrant background and generation membership directly impact on health status, finding first generation migrants to suffer more frequently from long lasting or chronic diseases while feeling less satisfied and less comfortable with their health than second generation migrants or people without a migrant background. Although it can be argued that responses given by second generation migrants and ancestral Austrians referring to health status and health behaviour in general may involve issues of response bias as discussed before, recent studies have shown that responses relating to self-administered evaluation in regard to chronic diseases is not biased by issues related to social desirability at all (Nolte & Elsworth & Osborne 2013). Furthermore, findings suggest that the health status as well as health behaviour of second generation migrants is converging towards that of the resident population without a migrant background. In fact, second generation migrants were found to be even more satisfied with their health and suffer less often from long lasting or chronic diseases while feeling more comfortable with their own health than people without a migrant background. According to Statistic Austria (2012, 2011) and Weiss (2003), second generation migrants' level of education and occupational status are approaching the education level of the ancestral population, while these determinants of socio-economic status further impact on health. This is particularly true for first generation migrants (WHO 2010 *Health of Migrants*), which was confirmed by this sample as well, since 64% of first generation migrants, but only 13% of the second generation and 23% of ancestral Austrian population stated to not work. Since personal reception correlates strongly with important health parameters, such as the utilisation of health care for example (RKI 2013), these findings further imply that first generation migrants are more likely to seek medical care than ancestral Austrians while second generation migrants are the least likely to do so. Nevertheless, results suggest that second generation migrants are almost as likely as their parental generation to consult a doctor in the case of experiencing minor ailments while people without a migrant background rather tend to wait for them to get better or undertake self care.

One possible solution explaining this ambivalence of second generation migrants' health behaviour regarding doctor's visits is the tendency towards social desirability, since in this study, second generation females and males displayed especially high tendencies towards socially desirable responding as illustrated above. Following this idea, findings imply that second generation migrants (unconsciously or consciously; see Paulhus 2002) feel the need to evaluate their own health status and health behaviour in a way that casts them in a more positive light, and confirm – what they think are – socially acceptable values (Lavrakas 2008, Van de Motel 2008). As suggested by the literature (Eichler 2008, Kelleher & Hillier 1996, Marks & Worboys 1997), issues of identification are highly problematic for second generation migrants in particular as they are torn between feeling a strong need for affiliation to their parents' ethnic group on the one hand, while- on the other hand and as a result of education and other factors such as environment for example, membership of that group is less central to their identity. According to Paulhus (2002), overly positive biased self-perceptions can either be

unconscious and honestly held or deliberately and therefore purposefully projected, while it has also been found that tendencies towards socially desirable responding increases with a rising motivation for positive self-presentation (Dodaj 2012). Since second generation migrants subconsciously may want to “blend in” with the ancestral population and therefore try to avoid criticism or social exclusion when displaying what may be considered unpopular or not socially acceptable attitudes, this (unconsciously) created bias impacts on their self-evaluation of health status and health behaviour, involving a potential to trigger overly positive self-description within this context. Hence, they tend to overly positive biased self-perceptions when determining their health status on the one hand, indicating low usage of medical care, while at the same time experiencing similar issues of insecurity and scepticism in regard to the treatment of minor ailments on the other hand. As a result, second generation migrants would be almost as likely as their parental generation to consult a doctor in the case of experiencing minor ailments.

Regarding the self-evaluation of health status, it was found that the way a person evaluates his/her health status and health behaviour depends on sex, working status and level of education. Although there were no such differences retrieved from the interviews, the quantitative questionnaires were able to show that generally, health and health behaviour differs between the sexes, as females are more likely to suffer from self-declared illness. According to the literature, this is due to gender roles and the broader determinants of health, such as socio-economic status, culture/ethnicity and social support networks, but also due to personal health practices and coping skills (MWIA 2013, OECD 2008, Sieverding & Kendel 2012, Wizemann & Pardue 2001). Women in general consider their health status poorer than men do (BMG 2011). Nevertheless, in this project, women were also found to rate their physical performance level better men's. However, this changed when they were supposed to estimate how others may perceive their physical fitness. While males seem more self-confident and think of others as generally rating their fitness level better than the one of females, particularly females of the second generation were found to assign only low values when evaluating their fitness through other persons' eyes. According to the Medical Women's International Association (MWIA 2013, pp.10), differences between males and females “*result from the complex interaction between biology and cultures*” and further include social roles and hierarchical structures of human society as the foundation of their argumentation. While sex and gender are interactive, gender roles, i.e. “*the particular economic, social roles and responsibilities considered appropriate for women and men in a given society*” vary across cultures and time, and are therefore sensitive to change (MWIA 2013, p.11). Thus, it can be argued here that second generation migrants not only have to deal with issues of identity in general, but females also have to do so with a change in regard to their gender role, since they have to merge opinions and beliefs of their parents' ethnic group about what is appropriate behaviour for young women with those of the ancestral population and may be torn between different roles as discussed earlier (RKI 2008, WHO Regional Office for Europe 2010). As females in general, but particularly those of the second generation, were found to display high tendencies towards socially desirable responding, this indicates high levels of insecurity and uncertainty in regard health issues such as minor ailments. Accordingly, women may be less self-confident, act less consciously and hence display more insecurity related to how others perceive them. As self-esteem influences self-evaluation, low self-esteem is usually associated with tendencies towards overly negative self-evaluation (Brown & Dutton & Cook 2001). According to Conner & Norman (2008), everybody has a different perception of health and evaluates its attributes differently. Hence, it may be concluded that the ambivalence regarding women's level of fitness as indicated by the results suggests gender issues related to evaluating health and its associated variables, respectively. Yet, when looking at the broader picture including issues of insecurity and based on the results, it was found that the tendency towards social desirability correlates with overly positive self-assessment in relation to females' self-assessment of physical performance (Van de Mortel 2008). Hence, the fact that women

rate their health status as poorer than men do is to be attributed to finding females more likely to perform socially desirable responding than men¹⁶¹. Issues related to gender and gender roles impact on every aspect of everyday life and are hence of high importance, especially when undertaking research on health (Bowling 2008, MWIA 2013, OECD 2008). Thus, looking more closely at issues related to self-evaluation in the context of gender and self care represents future research fields worth investigating.

Indeed, a higher level of education and being actively involved in working life correlate positively with health status (see Biffl 2003, Cutler & Lleras-Muney & Vogl 2008, WHO 2010). While unemployment is associated with mental stress and may therefore act as a trigger for health problems on the one hand (Biffl 2003, Eichler 2008), the “healthy worker effect” also roots in having easy access to other people and therefore offers more possibilities to establish social connections than the living environment of non working people on the other hand. Since establishing an adequate network of social support contacts is crucial in regard to an individual’s health and health outcome (MWIA 2013, Weiss 2003), this issue may be even more important for migrants or people with migrant a background as they generally have limited social networks. According to Eichler (2008), particularly female migrants are endangered to get socially excluded and are in need of more support - due to culturally derived gender roles leading to language issues and particularly low levels of employment rates. While the employment rates of women with a migrant background in former Yugoslavia (i.e. 61%) were rather similar to those of the female population without a migrant background (i.e. 69%), only 45% of women with a migrant background in Turkey and living in Austria do work, and more than one third of female migrants who have children are not employed (versus one fifth of mothers without a migrant background; see Statistic Austria 2012). Analysis retrieved similar results, further confirming the lowest rates of employment as well as most language issues for people with a migrant background in Turkey and living in Graz. As a result, women with a Turkish migrant background were identified as even more vulnerable group requiring special attention and care in order to fulfil their health needs adequately.

In that regard, it was confirmed that first generation migrants need more social support than those of the second generation or ancestral Austrian population. As especially older, i.e. first generation migrants are generally associated with worse language abilities than second generation migrants (Eichler 2008), while health literacy is specifically poor for migrants and declines with higher age (WHCA 2011), social support in form of translators in all kinds of everyday situation including health care is required more often (see Haigl 2013, Mair 2011, Pfandl-Pichler 2011, Vasak 2010). Since language skills are considered as “key for integration” (Esser 2006, Kehse 2009), it can therefore be argued that migrants of the first generation are probably not as well integrated as their children, who have been raised in Austria instead of growing up in their parents’ country of origin. In fact, language abilities of first generation migrants with a background in former Yugoslavia (i.e. Bosnia-Herzegovina and Croatia) were found to be rather indifferent from those of the second generation, since only five participants with that respective background indicated to have rather insufficient language skills, while the majority was found to be mostly bi- or multilingual, further indicating German as their native language. In contrast, people with a migrant background in Turkey were most likely to rate their German language skills as less developed (i.e. 43% indicated to have rather insufficient language skills). Hence, only 13 out of 49 second generation migrants with a Turkish background stated to speak German as a native language, whereas 50% of all people with a migrant background in former Yugoslavia and thus, all second generation migrants with that respective background were found to do so. Consequently, almost half of the migrants with a background in former Yugoslavia decided to fill out the German questionnaire, whereas 47 out of the 49 persons with a

¹⁶¹ See Chapter 6.2.1 Defining Minor Ailments: Insecurity, Frequencies and the Personally Received Necessity to Require Medical Care.

Turkish migrant background, including most native speakers, decided to fill out the Turkish version. Hence, German questionnaires which were filled out in German accounted for the biggest share (i.e. 98 forms), while the Bosnian and Croatian versions were utilised the least frequent (i.e. 25 and 26 forms). It can be concluded that overall, people with a Turkish migrant background and especially those of the first generation, experience difficulties in obtaining adequate language skills. Nevertheless, measurements in order to reduce barriers in regard to language were evaluated as successful, since all participants chose the language of the question form according to their own language skills.

As for the significance of employment status in regard to health, it is a fact that migrants with a background in Turkey and former Yugoslavia display lower employment rates than the population without a migrant background (Statistic Austria 2012)¹⁶², which is particularly true for first generation migrants (see also WHO 2010 *Health of Migrants*). This was further reflected by the sample, since 64% of first generation migrants, but only 13% of the second generation and 23% of ancestral Austrian population stated to not work. As stated before, since it is easier for working people to establish social contacts (e.g. colleagues), occupation is hence not only considered to impact on health status and health behaviour, but also on language skills, emotional well-being and self-assessment in regard to health (Esser 2006, Herzog-Punzenberger & Bruneforth & Lassnigg 2012). As suspected, the results indicate that first generation migrants generally have fewer social contacts they could ask for help and therefore display a higher need for social support than compared to second generation migrants or people without a migrant background, since it was found that working people generally stated to have more social support available than non-working people. Nevertheless, it, too, needs to be stated that employment rates also correlate with age – as Austrian legislation retires females 60 and males with 65 years. Nevertheless, only 18 people of the full sample were 60 years or older, comprising nine women who already stopped working as well as five men. Hence, having people fall into category “not working” due to being retired was assessed to have no influence on this investigation.

Health disparities of migrants are often explained through migration as they are associated with considerable health hazards such as stress, trauma and weary life circumstances (Fassmann 2007, Marks & Worboys 1997, Weiss 2008). Furthermore, and in addition to language issues complicating adequate communication in everyday-life, many people from ethnic minority backgrounds are experiencing difficulties in obtaining adequate housing, employment and education (Eichler 2008, Goldberg 1993, WHO Regional Office for Europe 2008). Moreover, cultural beliefs and concepts as well as culturally determined social roles influence on health decisions and therefore on health behaviour and outcome (BMG 2011, Kelleher & Hillier 1996, Mayer 2011, Subedi 2003). Hence, the health of migrants is dependent on the circumstances in their countries of origin, during the migration process as well as in their countries of immigration (Mayer 2011), which means that migrants or people with a migrant background respectively are not always disadvantaged in terms of accessing medical care (Fassmann 2007, Weiss 2003) and health status or health behaviour is not only dependent on socio-economic circumstances (Jayaweera & Quigley 2010, WHO Regional Office for Europe 2010). In that respect, education in regard to health literacy seems to play an important role when explaining health disparities and differences in health related behaviour.

In Austria, migrants with a background in former Yugoslavia and Turkey tend to be less formally educated and they do not promote their health actively (BMG 2011, Biffi 2003, Statistic Austria 2012). As stated by the World Health Communications Association (WHCA 2011) and Mayer (2011), vulnerable groups such as migrants and

¹⁶² Employment rates for people with a migrant background in Turkey are 59%, 66% for people with a migrant background in former Yugoslavia and 74% for Austrians without a migrant background (Statistic Austria 2012).

particularly those of lower educational levels are associated with poor health status and poor health literacy. In that regard, the concept of health literacy is defined as *“linked to literacy and encompasses people’s knowledge, motivation and competences to access, understand, appraise, and apply health information in order to make judgments and take decisions in everyday life concerning health care, disease prevention and health promotion to maintain or improve quality of life during the life course”* (Sorensen et al. 2012, p.3). Accordingly, outcomes of weak health literacy are poorer health choices including riskier behaviours, less use of preventive services and therefore more delayed diagnoses while at the same time, people adhere less to medical instructions, understand less of the provided information and have less health knowledge which results in poorer self-management skills and poorer physical and mental health. Ultimately, these issues then lead to an increased risk of hospitalisation and higher health costs, not only for the health system, but also for the individual persons WHCA (2011). Thus, issues such as knowledge on and interest in health as well as the choice of information sources on health not only impact on health and health behaviour but are moreover crucial in order to gain adequate skills to promote and maintain good health.

In regard to health interest it was found that overall, non working people and females show the most interest in health. This is shown by means of the scale “Health Status and Health Behaviour”, which explored how people assess their own health status and evaluate their own health behaviour (i.e. subjective health knowledge, interest in health as well as individual health promotion) and further included items assessing the respondents’ tendencies towards social desirability and social support¹⁶³. Since both groups also display high tendencies towards socially desirable responding, which is further accompanied by overly positive self-assessment in regard to interest in health, however, interpretations have to be made carefully. In general, it is often argued that unemployed people are normally associated with lower social standard (Cutler & Lleras-Muney & Vogl 2008, Fassmann 2007, Lampert et al. 2013) and a lower degree of health literacy (Bachler 2010, WHCA 2011), further involving a lower degree of interest in health. Yet, in this study, non working people were found to feel more need than employed persons to specify their own personal interest in health in a way that let themselves look better¹⁶⁴. Therefore, the by quantitative analysis reflected degree of their interest in health might appear higher than it actually is, as they may try to adhere to – what they think are – socially acceptable norms and beliefs. Since within this research, the tendency to answer questions in a socially desirable way can be understood as an indicator of the degree of uncertainty and scepticism related to minor ailments and the treatment thereof, this further suggests higher levels of insecurity for unemployed than for employed people, as discussed in Chapter 6.2.1 Defining Minor Ailments: Insecurity, Frequencies and the Personally Received Necessity to Require Medical Care.

Although the picture in regard to social desirability is similar for females, the context of females’ interest in health appears to be quite different. On the one hand it needs to be argued that females play a central role in regard to family health care provision, representing the *“major coordinators of care and the link to the health care system for their families”* (Wyn et al. 2003, p.4). Further, women also play a key role in regard to providing self-administered health care for the whole family (BMG 2011, Eichler 2008, Sieverding & Kendel 2012, Wyn et al. 2003). These arguments were confirmed by qualitative findings, as women were found to take up a key role in passing on traditional knowledge between sequent generations and working as pivot point in regard to self care. In order to fulfil these gender-related caretaker roles it is further assumed that women in general are

¹⁶³ See also Chapter 5.4.3 Results of the Third Research Question: “How do people rank health or rather health conscious behaviour specifically within their lives and do they know what is beneficial to health?”.

¹⁶⁴ See also Item GHSoz-06 in Chapter 5.4.3 Results of the Third Research Question: “How do people rank health or rather health conscious behaviour specifically within their lives and do they know what is beneficial to health?”.

more health-conscious than men (BMG 2011, Eichler 2008) and hence show higher motivation to get informed on health issues. Since *“the ability to take responsibility for one’s own health as well as one’s family health and community health”* (Sorensen et al. 2012, p.1) implicates an adequate level of health literacy, a higher interest in health is therefore associated with better health literacy of females. This was evident in the results of this study in that women were found to actively take in their caretaker role and display a higher interest in health. Findings were also strengthened by the literature, which stated better health literacy for women than men (HLS- EU Consortium 2012). On the other hand, this particular “provider-role” in regard to family health care also involves the potential to put a strain on women (BMG 2011). As a result, the following significant ambivalence in regard to female migrants and health arises: while they are seen as particularly insecure and vulnerable in terms of health on the one hand, they are on the other hand also perceived as the key figures referring to family health care. In fact, this ambivalence is prevalent in other studies regarding migrants and health as well (Eichler 2008, Weiss 2003, MWIA 2013, WHCA 2011), which supports the conclusion that undertaking further research on the encounter of providing self-administered care in regard to minor ailments and gender specific aspects is needed to thoroughly investigate the interaction of gender and health in the context of migration.

Following the prior developed idea of the ambivalence in female migrants’ gender roles, women are further implied to mainly seek information on health issues in an unobtrusive way, so that they do not draw attention and hence are able to sustain their providing role towards their family. As explained before, females are expected to act as caregivers and hence know what to do. However, they might feel the need to act as if they do in order to fulfil their (by society) assigned role while basically, they do not (see BMG 2011). This behaviour, however, further raises issues of trust when it comes to needing advice on health issues. According to Nussbaum (2000) and Sieverding & Kendel (2012), trust represents a fundamental issue when it comes to health, making the nature of relationship between the person looking for information and the person providing the decisive whether or not and also what kind of information is shared. Accordingly, qualitative findings suggested female migrants to mainly depend on friends, family and/or co-workers in order to determine which measures are appropriate, while men rather utilise the Internet to read up or get informed by their family physicians. By reassessing these findings through quantitative analysis, women were found to be highly selective, utilising mainly female friends or family members, but also advisory pages and search engines on the Internet. In contrast, men in general were less selective, displaying their highest preferences also towards female family members, which may result from the fact that females are able to establish positive rapport quicker within everyday conversations and have a more expressive style to communicate while recognising nonverbal signals and emotions better than males (Sieverding & Kendel 2012). Due to culturally accepted values in regard to interpersonal contact for females (nonsexual same-sex interactions are considered appropriate across cultures, particularly due to the gender-specific organisations of family life and work (see Forschungspraktikum am Institut für Soziologie der Karl-Franzens-Universität Graz 2002/2003, Lorbeer 1994), females easily approach other female family members or female friends who often share their experiences. Since females may feel as if they should know exactly what to do but do not know, they might be ashamed of utilising external help and hence try to retrieve information on health issues from within their trusted circle of female relatives or the Internet. The results thus strengthen the prior discussed assumption that seeking information on health issues such as minor ailments may involve issues of gender-related bias in regard to the assortment of information sources.

While qualitative results suggested a high usage of the Internet for people with a migrant background, seeing a general practitioner (GP), mostly their family physicians, is not only quite popular but for many option number

one when looking for information on health issues. Quantitative findings further strengthened these findings since both first and second generation migrants were found to prefer MDs when trying to get informed. As various studies imply that migrants in general are more likely to particularly utilise GPs more frequently than people who do not have a migrant background (BMG 2011, Mair 2011, Weiss 2003, Statistic Austria 2012), findings are therefore consonant with the literature. It was further found that the Internet is utilised more often by the first generation than by the second generation of migrants or people without a migrant background, suggesting issues of misinformation due to the Internet's unregulated nature, as indicated by Mossialos, Mrazek and Walley (2004). However, people were found to be aware of that issue and therefore to not fully rely on the information retrieved. They either discuss their health issues with friends and/or family members or get a second opinion from a health professional, preferably their family physicians. However, as mentioned before, almost all participants in qualitative analysis had a school leaving exam or have completed even higher (i.e. tertiary) education, and health literacy and health conscious behaviour is known to increase with the level of education the person receives (Eichler 2008, WHCA 2011). Quantitative analysis further suggested a rather secondary role for the Internet as information source on health, further retrieving interesting findings in regard to the influence of education on the choice of information sources on health. While people with a higher degree of education (i.e. with a school leaving exam) were found to prefer the Internet to retrieve information on minor ailments, persons with less (i.e. compulsory) education seem to rather consult health experts, mainly utilising doctors but also pharmacists. Since distinguishing between reliable and unreliable sources can be tricky on the Internet, it is concluded that high degrees of health literacy are required in order to retrieve accurate and therefore usable information.

The most important role as information source on health, however, play families. According to the findings, particularly female family members are very frequently utilised when it comes to giving medical advice, whether or not they have received any medical training. As assumed, findings therefore strengthen the female key role in regard to family health care provision, since women are seen as the main coordinators of care who link their families to the health care system (Wyn et al. 2003). Interestingly, this is even more significant for migrants of the second generation than for ancestral Austrians, as they were found to tend to female family members far more often than to any other information source and than first generation migrants or people without a migrant background. It was thus concluded that female migrants of the prior generations may take over a more central health role within their family structures than older Austrians do. Further, women also play a key role in regard to providing self-administered health care for the whole family (BMG 2011, Eichler 2008, Sieverding & Kendel 2012, Wyn et al. 2003), since almost all people with a migrant background learned about traditional remedies from their mothers or grandmothers who have used their own recipes much more often than they do now. In that context, findings show that many people, and especially women, tend to buy a substantial share of medication following recommendations made by family members or friends without medical training at all and without consulting any kind of health professional as second opinion. Since people are convinced that they do not need further advice or information, this, however, involves a potential for issues of inappropriate self-medication leading to possible health hazards (Mossialos & Mrazek & Walley 2004).

Overall, findings suggest trust as the pivotal aspect in regard to selecting appropriate information sources on health, since people prefer to consult close friends or family members to health experts in general, irrespective of their level of medical expertise. However, seeing a doctor, i.e. mostly the family physician, is also one of the main strategies utilised, rather than consulting any other health professional such as pharmacists for example. Although people were found to know that pharmacists can provide professional and reliable counselling on various health issues, the lack of personal relationship and therefore trust lets many people refrain from

utilising pharmacies as information sources on minor ailments. Likewise, trust also represents the fundamental issue when it comes to doctors. According to the findings, migrants with a background in Bosnia-Herzegovina, Croatia and Turkey are ambitious to stay at their selected family physicians as long as possible (with ongoing doctor-patient relationships of seven years on average), while a family physician is selected pursuant to suggestions made by family or friends than according to the degree of a GP's language knowledge or other criteria such as reputation for example. As the relationship between a person looking for information and another one providing it represents the decisive aspect whether or not and also what kind of information is communicated (Nussbaum 2000, Sieverding & Kendel 2012), it can further be concluded that a stable and well established relationship between health professional and patient is crucial in order to be able to provide adequate and therefore individual care for migrants and people with a migrant background respectively.

6.2.3 Treating Minor Ailments: Self Care, Medical Care or No Care at all

Although treating minor, i.e. self-treatable conditions already implies that people should treat themselves when experiencing minor ailments such as a common cold for example, applying self care is not always their option of choice. As implied by the concept of health literacy of Gray, Cantrill and Noyce (2001), an adequate amount of information and knowledge on health can help to decide whether to employ medical or self care in the case of minor ailments. However, vulnerable groups such as migrants are generally associated with lower socio-economic status and lower health literacy (HLS-EU Consortium 2012, National Centre for Health Statistics 2010, WHCA 2011). Since big shares of written information on health as well as most preventive health care services (e.g.: vaccination service) are designed for persons with high textual and linguistic comprehension skills, however, less educated people and especially those who experience problems in communication due to language issues are experiencing barriers in accessing these services (Mayer 2011, WHCA 2011). Likewise, also in this study people who have a migrant background were found to display higher degrees of insecurity and uncertainty in regard to treating minor ailments than their ancestral Austrian counterparts.

Accordingly, it was found that migrants or people with a migrant background respectively access more curative than preventive care (see further the results of previous research by Eichler 2008, GfK Austria 2011, Statistic Austria 2012) and make GP consultations their main strategy utilised, whether only information on minor ailments or medical intervention is needed. Whereas people with a higher level of education (i.e. with a school leaving exam) and therefore higher health literacy rather retrieve information on health issues such as minor ailments from the Internet than from a GP, those who do not have a school leaving exam, i.e. persons with compulsory education, mostly consult a health professional (i.e. mainly doctors, but also pharmacists), in order to get informed on minor ailments. Furthermore, getting advice from particularly female family members or close friends was found to also represent a main strategy utilised – irrespective of sex, age, socio-economic status, cultural/ethnic background or migrant generation membership. Hence, it can be concluded that individual knowledge and the amount of trust, i.e. the kind of relationship between the person retrieving and the one providing information, or care respectively, is the one pivotal aspect regarding treatment and therefore co-decides whether self care is applied or a doctor is consulted in the event of a potentially self-treatable condition such as a common cold for example. Therefore and due to the current lack of trustworthy options other than a GP, many people, but especially vulnerable groups such as migrants or people with a migrant background were found to see their family physicians instead of trying to act on one's own initiative when experiencing minor ailments, independent from cultural/ethnic background or migrant generation membership, as implied by other research in the field (PAGB 2009 *Self Care in Practice*, WHCA 2011).

It was further found that the more often people experience a certain minor condition, the less likely they feel the need to call for a doctor when actually experiencing it. Hence, particularly conditions which are experienced very frequently, such as a common cold or minor pain are often treated by applying self-administered care while people wait until they get better. Less familiar conditions on the other hand (e.g. skin conditions or digestive disorders), are most of times either not treated at all, meaning that people just wait if the condition improves without applying any treatment as people are unsure and do not know what to do, or by consulting a doctor. Even so, migrants or people who have a migrant background respectively were found to consult a doctor when the experienced minor condition is familiar and they are certain that seeing a doctor is not really demanded, but feel unwell. In contrast, ancestral Austrians were found to rather do nothing and just wait until a minor condition gets better or undertake self care, irrespective of the degree of familiarity a person has with the conditions he or she is experiencing. Nevertheless, in all cases, lack of improvement after a few days of self-administered treatment leads to accessing medical care, preferably consulting the family physician than any other health which has been implied by other studies as well (see GfK Austria 2011 for example).

In any case, common colds take up a special role in this context, since they are experienced very frequently and are perceived as not requiring medical attention, while at the same time, they account for a substantial share of GP's minor ailments-workload. Since restoring from a viral infection, i.e. a common cold may usually take up more time, while associated symptoms such as a nasal congestion, cough, sore throat or light fever can reduce an individual's overall physical ability more than for example small bruises or minor headaches, it may be reasoned that people feel worse when experiencing common colds than when dealing with minor injuries. In fact, qualitative findings suggest that the more unwell people feel, the more likely they are to consult a doctor, which is why personal reception correlates strongly with the utilisation of health care. It is hence concluded that many experience a common cold as a more serious condition, which is in line with the results of other recent studies (such as RKI 2013). Hence, most people tend to require medical care when experiencing a common cold, even if they experience this condition more frequently than other minor ailments and have thus accumulated both, i.e. knowledge on this condition as well as adequate medical treatment.

As a result, the treatment of minor ailments accounts for a considerable amount of GPs workload. Resulting in too many patients in overcrowded waiting areas and long waiting periods, this kind of health behaviour takes time off medical practise every day. Even so, there is an ongoing dispute whether or not GPs are really "overwhelmed" by patients with minor ailments (Brimelow 2010, Cantrill, Hannay 2010, Morris & Weiss 2005). However, various studies confirm this overflow of patients suffering from only minor ailments in GPs clinics: According to studies carried out in the UK for instance, 20% of the 290 million GP-consultations per year involve conditions that do not necessarily require a doctor's attention and are thus self-treatable (PAGB 2009 Fast Facts about Self Care), while more than two billion Euros are spent on over 57 million GP consultations involving minor conditions during that time (Baqir et al. 2010). More recent studies indicate even higher numbers of 25% to 33% for family physicians in Ontario, Canada, with British Columbia spending \$95 million a year to treat minor ailments by general physicians (Noseworthy 2013). As a result, some countries have already set measurements in order to balance health expenditure and provide low-threshold primary care services such as prescribing pharmacists (ibid.), extended formulary nurse prescribers (Johnson & Hill-Smith & Ellis 2006) or Minor Illness and Injury Units (Rubin 2012). There are no special services related to minor ailments available in Austria, however.

In Austria, people either have to apply self care or consult a doctor when experiencing minor ailments. According to the World Health Organization (WHO), self care describes "*activities individuals, families and*

communities undertake with the intention of enhancing health, preventing diseases, limiting illness and restoring health. These activities are derived from knowledge and skills from the pool of both professionals and lay experience and are undertaken by lay people on their own behalf either separately or in participative collaboration with professionals” (NZSMI 2009, p.2). Importantly, this definition states very clearly that self care does not mean consumers are left alone; the idea of collaboration between the individual and a health care professional is vital to effective self care. If people were enabled to take over more responsibility for their own health-status by providing them with better health-education and hence better health literacy, they could lead a healthier life, save money for themselves and the health system and contribute to sustainability for the future (Porteous et al. 2006, WHCA 2011). Hence, in order to enable people to apply appropriate self care, educating the Austrian population on health issues represents an important task for the Austrian government.

In general, men, older people, persons experiencing long-term illness and those with bad self-reception of health show worse health literacy than others, recent studies show that health literacy does not directly correlate with the frequency of doctor’s visits as presumed (HLS-EU Consortium 2012). Hence, low health literacy does not automatically mean that people consult a doctor more frequently. There are, however, major connections between health literacy and health behaviour (including emergency service use or doctor’s visits) on the one hand and socio-economic determinants such as working status and level of education on the other (HLS-EU Consortium 2012, WHCA 2011). In fact, most of the time health services are confronted with over-proportional shares of patients with limited health literacy. This goes along with the results of this research project as migrants or people with a migrant background respectively, people with a lower level of education and those who are unemployed were found to see a doctor more frequently when experiencing minor ailments.

According to the European Health Literacy Report (HLS-EU Consortium 2012), 56% of all Austrian adults display rather poor health literacy, while 18% thereof even have inadequate health literacy. Compared to other EU member states (i.e. Bulgaria, Germany, Greece, Spain, Ireland, Netherlands, Poland), only Bulgaria and Spain show worse results, whereas Bulgaria was the only country displaying a bigger share of people with inadequate health literacy than Austria (HLS-EU Consortium 2012). Since these results suggest serious gaps in the health knowledge and thus limited health conscious behaviour for more than half of the Austrian population, limited health literacy in Austria can definitely not be seen as just a minority problem but as an issue that in contrast concerns the majority of citizens. Thus, educating Austrian people on health issues in order to provide them *“with the necessary skills and resources to manage their health”* (Porteous et al. 2006, p.911) therefore represents a crucial task of utmost importance for the Austrian government.

Regardless of their preference to generally seek medical treatment, almost all people in this study are familiar with the concept of self care and associated treatment options. As there are a variety of different approaches people may use in order to undertake self-administered measures (Subedi 2003), this project focuses on self care utilising OTC products (i.e. non-prescription medicine), homemade or also traditional remedies and further includes alternative forms of treatment, i.e. healing systems which can be defined as measures opposed to modern, conventional medicine, such as Traditional Chinese Medicine (TCM) or homeopathy. In order to reevaluate and also supplement the qualitative findings on treatment options of minor ailments, the scale “Methods of Treatment”¹⁶⁵ was based on all treatment options that were mentioned in the qualitative interviews and further added the option “no treatment” in the questionnaires, whereas minor ailments and their associated symptoms were divided into five categories (i.e. common colds, digestive disorders, skin

¹⁶⁵ See Chapter 5.4.4 Results of the Fourth Research Question: “How often do people experience minor ailments and how are they treated?”.

diseases, minor pain and minor injuries), as already explained earlier (see also Chapter 1.2 Minor Ailments and Self care). It was found that OTC products and homemade remedies are the most frequently applied treatment options for minor ailments, whereas alternative forms of treatment are only scarcely utilised. However, analysis revealed differences in regard to the fields of application: whereas non-prescription medicine is rather utilised for common colds, minor pain and minor injuries, alternative treatment and homemade remedies are almost exclusively applied when experiencing common colds. However, some also use homemade remedies for the treatment of digestive disorders, while many further stated to not apply any treatment when experiencing minor pain or small injuries. This goes along with the findings of many other studies (see AESGP 2012 or PAGB 2009 Making the Case for the Self Care of Minor Ailments) suggesting that OTC products account for the biggest share of utilised self-medication.

According to qualitative findings, alternative forms of treatment (such as TCM or homeopathy) in general are associated with high levels of scepticism and insecurity by people with a migrant background. As a consequence, they are only seldom utilised, namely almost exclusively to treat common colds and associated symptoms as mentioned before, while other minor ailments such as digestive or skin problems, minor pain and injuries are hardly ever treated by alternative forms of treatment. This may be explained by the fact that common colds account for one of the most frequently experienced and therefore most familiar conditions and frequency of experience was found to be directly connected with the experienced degree of insecurity in relation to a specific minor condition as explained earlier. Even though alternative treatments are often suggested by their trusted family physicians and irrespective of a specific cultural/ethnic background, people - irrespective of their cultural or else ethnic background, are in doubt about their medical efficacy. As a result, opinions on alternative forms of treatment are split: they are considered holistic and balanced with nature on the one hand, but also as expensive, incompatible with everyday life and not necessarily effective on the other.

In fact, the qualitative analysis found migrants of the second generation to hardly apply any kind of alternative treatment at all, whereas first generation migrants with children in the home actually prefer utilising homeopathy, TCM or herbal treatment when applying self care. Yet, quantitative analysis could not fully reflect this assumption, since differences in regard to cultural background and generation membership were only apparent in regard to minor skin conditions and minor injuries, suggesting more frequent usage of alternative methods of treatment for migrants of the first generation (and the ancestral Austrian population for that matter) than for second generation migrants. Moreover, alternative methods were assessed to be the preferred option of treatment for the Austrian population without a migrant background when experiencing minor injuries.

Further differences in regard to the application of alternative methods of treatment in the case of minor ailments were retrieved for the independent variables “sex” and “education”, although effect sizes for these differences were very small, suggesting only little magnitudes for the observed disparities in applying alternative forms of treatment. These results suggest more, yet still very little use of preferred alternative treatment methods such as homeopathy, TCM or herbal treatment for specific groups. While females were found to treat common colds and minor injuries more often with alternative treatments than males, analysis also suggested a more frequent usage for non-working than for working people in regard to minor pain. Nevertheless, effect sizes for these differences were very small, suggesting only little magnitudes for the observed disparities in applying alternative forms of treatment. Hence, results suggest more, yet still very little use of preferred alternative treatment methods such as homeopathy, TCM or herbal treatment for females and unemployed persons, as well as for ancestral Austrians and migrants of the first generation than for males,

employed people and second generation migrants. As the characteristic user profiles for people utilising alternative methods of treatment are health-oriented, middle-aged females of higher social standard and education and therefore health literacy (BMG 2011), it is however, not surprising that there are only small effects observable.

While various studies suggest “no treatment” as a quite popular treatment option for the Austrian population not having a migrant background when experiencing minor ailments (see BMG 2011, GfK Austria 2011), the findings of this study imply that migrants or people with a migrant background respectively hardly ever leave minor ailments unattended. This is why the questionnaires were also meant to record and assess which ailments are mostly left unattended and also learn about differences in not applying any care for minor ailments regarding the independent variables. It was found that Austrians without a migrant background are generally more likely to leave minor conditions unattended than migrants or people with a migrant background. The greatest statistical effects were retrieved in regard to the interaction of the population without a migrant background and common colds as well as digestive disorders, while the most frequently unattended conditions were minor pain and minor injuries. Hence, ancestral Austrians are far more likely than migrants or people with migrant background to not attend to common colds and digestive disorders. Overall, minor pain and small injuries are the conditions that are most frequently left unattended.

In that regard, no influence for the independent variable “migration” was found in relation to minor injuries, suggesting that symptoms such as abrasions, cuts, bruises or strains are indeed often left unattended, but independent of cultural/ethnic background or generation membership. Concerning differences between the migrant generations, first generation migrants were found to rather not apply any treatment when experiencing skin diseases, while second generation migrants were more likely to abstain from treatment when experiencing minor pain. However, these results are of limited value due to small effect sizes, the high degree of personally received necessity to require a doctor’s attention and finally the preference of consulting a doctor, which was found for both generations of migrants in regard to minor skin diseases. Thus, it is presumed that even though some might not treat skin diseases or undertake any measures whatsoever, the majority of people with a migrant background see a GP either immediately or after a few days. Moreover, findings reflect the people’s ambivalence in regard to pain and the ascription of health-attributes to it such as “minor”, as suggested by Conner and Norman (2008) and Prager et al. (1999). As everybody has a different perception of minor pain, and pain in general is experienced differently, a “minor” pain for one person might be “major” pain for another (as mentioned before), and thus approached with vastly different options of treatment. As a consequence, scientifically evaluating issues related to pain is hardly possible, while pain as such is a very universal concept which everybody is familiar with.

Nevertheless, findings suggest valid and significant results relating to the influence of sex and working status in regard to minor pain, since males and non-working people were found to leave minor pain unattended more frequently than working persons or females. As experiencing minor pain might be even more disturbing at the workplace or when studying than when being at home, it is therefore assumed that this is the reason why working persons rather apply care when experiencing minor pain than non-working. Gender differences may be explained due to the fact that findings suggest men to perceive themselves as more robust and less fragile than women with respect to their health condition, while women use health care services far more often than men. This is supported by studies saying that women account for two thirds of all in- and outpatient care, as well as provided pharmaceutical services (Nussbaum 2000). As a result, males tend to leave minor pain unattended, while females are more likely to undertake self-administered care or consult a doctor.

As the second favourite treatment option when undertaking self care, homemade remedies such as wet packs with curd, alcohol or liquid formulas made of honey were found to be generally perceived as highly effective. Although homemade remedies are frequently utilised for all minor ailments except for skin diseases, they are particularly often applied when experiencing common colds. Despite the fact that recipes for traditional remedies are perceived as complicated, time-consuming in preparation and sometimes also nauseating, they are also considered cheap, highly effective and easily available. Furthermore, usage of traditional remedies has declined due to an increasing number of more convenient and less intricate options of treatment. Consequently, homemade remedies are thought to be used more intensively where or else when people do not have many other options, such as in the migrants' countries of origin where people live far away from available health care or have no money to pay for it. This lack of options in treatment, however, can be seen as a general problem of rural areas and health systems with high out-of-pocket payments, since many countries, including Austria, struggle with macroeconomic factors, such as geography or poverty, influencing on one's access to health care (Fink 2010). Hence, hardly any differences in regard to cultural background or generation membership when treating minor ailments with homemade remedies were found. Nevertheless, results suggest a more frequent usage of homemade remedies in regard to common colds for migrants or people with a migrant background than for ancestral Austrians. Furthermore, also working people were found to treat minor injuries and related symptoms with homemade remedies more often than persons who do not work. Put into the context of the frequency of experiencing minor injuries as well as the highly perceived effectiveness of traditional treatments, it is assumed that working people treat minor injuries more often by applying homemade remedies because they are convinced that these measures are effective and because they experience this condition more often than non-working persons, as especially people with a migrant background are working in physically straining jobs (e.g.: construction work; see Statistic Austria). Contradicting the expectations drawn from the qualitative findings, no gender-specific patterns were found in regard to homemade remedies. According to the literature, females take in a central role in regard to family health care provision and play an important part in regard to providing self-administered care in form of homemade remedies (Eichler 2008, Wyn et al. 2003). Qualitative results confirmed these findings in regard to the treatment of minor ailments, since it was found that females play a key role in passing on traditional knowledge between sequent generations. Quantitative analysis, however, could not reflect these assumptions, suggesting rather similarities than differences between the two sexes in regard to utilising homemade remedies for the treatment of minor ailments. Hence, findings suggest homemade remedies as equally frequently applied by both sexes when experiencing minor ailments, in particular treating common colds and minor pain.

It can be concluded that overall, homemade remedies represent a trusted and familiar treatment strategy when experiencing minor ailments. Results did not display any differences in regard to sex, level of education or ethnic background concerning the use of homemade remedies as a treatment option for minor ailments. Hence, findings suggest that in general, homemade remedies are frequently utilised when treating minor ailments, while the decision whether or not to apply homemade remedies rather depends on individual circumstances than socio-economic determinants such as level of education, group membership or gender roles.

Regarding OTC products, they account for the biggest share of people's home-medicine-cabinets and are the most often utilised treatment when minor ailments are treated by self-administered care. Mainly common colds and minor pains, but also injuries were found to be particularly frequently treated by applying non-prescription medicines. As most people were found to rather seek for medical attention when experiencing skin diseases or digestive problems than applying self care, these conditions are hence less treated by OTC products. Because people are convinced of their medical effectiveness, various drugs are extensively accumulated, containing

ointments and other formulations in order to treat pain, digestive disorders, common colds and wounds. Second generation migrants (versus ancestral Austrians and migrants of the first generation) were found to prefer OTC products when experiencing skin diseases and common colds, while results suggested working people to be more likely of utilising OTC-products when experiencing minor ailments than non-working people. However, no further differences were found in regard to sex, working status, level of education or “migration”, indicating no significant differences between these groups. This means that OTC products are generally very frequently utilised when experiencing minor ailments, irrespective of a person’s cultural or ethnic background, sex, age or level of education. As various study confirm that OTC products are perceived as safe and efficient and are thus most often applied when people self-medicate (AESGP 2012, 2010, IGEPHA 2010, PAGB 2009 Annual Review), findings therefore add a valuable perspective of trans-cultural usage on the utilisation of OTC products as self-medication.

6.3 Limitations of Study

Although much research can be found in regard to migrants health and health behaviour on the one hand, as well as on minor ailments and self care on the other hand, no investigation was found related specifically to migrants' behaviour in regard to minor ailments and the treatment thereof. Hence, a mixed methods design was chosen for this exploratory research, as these usually balances most of the disadvantages associated with using exclusively either qualitative or quantitative approaches (see Chapter 3 Research Approach).

However, results are limited by a lack of differentiation between the various cultural/ethnic groups for the second, quantitative analysis. As a result, no representative statements in regard to varying behaviour between the different migrant groups can be made. However, the preceding preliminary qualitative analysis suggested only scarce differences in regard to health behaviour and the treatment of minor ailments. Hence, migrant groups were embraced within the category "migrants", as the independent variable "Migration" differed only between first generation migrants, second generation migrants and people not having a migrant background.

The results are further limited by the fact that qualitative research almost exclusively included highly educated people with a migrant background. Although data saturation appears to have been achieved at six interviews, it is, however, possible that conducting further interviews might have drawn more different perspectives. Nevertheless, undertaking more interviews after the qualitative analysis was completed would not have been manageable, as this is a single person's project and hence the author had to stick to a quite tight timetable in order to be able to develop the present project. Furthermore, gaining access to the target group for the purpose of the qualitative interviews, in particular to people with a Turkish background, was difficult and time-consuming, as some were interested at first, but later on decided to not take part when hearing about the personal face-to-face interviews. Hence, the author decided to move along the project's schedule as displayed in Chapter 3.4 Project Schedule and Work Procedure.

Moreover, data for both research approaches have been collected within a limited time frame: while qualitative interviews were conducted in November and December 2011, the quantitative survey was performed during March and April 2013. As the frequency of some minor ailments can vary depending on the time of year (e.g.: more colds and skin conditions during autumn and winter, more hay fever in spring and summer), collecting further data in the remaining seasons, i.e. summer and autumn would round up the data.

Furthermore, undertaking mixed methods research is generally associated with a large effort in regard to time and infrastructure, as it requires expertise and skills in regard to both, qualitative and quantitative methods (see Creswell & Plano Clark 2007). Although the author has undertaken every effort to expand her knowledge and followed all available suggestions from experts and the literature in order to ensure a comprehensive, high quality research, undertaking complex statistical investigations such as a factor analysis and structural review for example were found to be challenging and very demanding, especially in regard to the interpretation of data. Hence, there remains a potential that the author has missed details or aspects which more experienced researchers probably might have not, even though control persons, i.e. tutors were implemented.

Finally, this research represents the first thesis concerned with the social aspects of pharmacy in Austria and hence breaks new grounds for the area of Social Pharmacy. As such, possibilities to compare the data, discuss the issues involved or get expert advice on the design within The Karl Franzens University's setting were limited. Hence, the author collaborated closely with experts of the field (see Chapter 3.2.4 Collaborations) and elected

the tutor persons carefully in regard to their academic profession, research experience and affinity to social research on migrants, while keeping close contacts to the Department of Social Pharmacy at the Otago School of Pharmacy in New Zealand as well as to social pharmacy researchers all over the world. Nevertheless, resources in regard to infrastructure or financial support were hard to get, particularly during the first two years. As a result, issues of manageability and feasibility in regard to a one person's project remained present and thus influenced on the author's decisions and, consequently, the present investigation.

6.4 Conclusion

In order to come up with comprehensive results regarding the complex research questions and due to the fact there was no adequate research instrument available, an exploratory sequential mixed methods design was chosen (Creswell & Plano Clark 2007). While the initial qualitative approach involving interviews allowed enquiry into where people get informed about minor ailments, what kinds of treatment they apply and why they decide to choose a certain method of treatment over another, the ensuing quantitative approach drew on these results and reassessed the findings, while structure review confirmed adequate quality in regard to reliability and validity for the developed research instrument, i.e. the questionnaire. As a result, the utilised mixed methods approach strengthened evidence through the continuous review and substantiation of findings by providing an understanding that would most possibly have been missed if only a single method had been used. Furthermore, comparable results which are representative for the whole target group were provided, finally offering a more comprehensive insight into an issue that had only little previous evidence to guide research.

As analysis found minor ailments and the treatment thereof to be afflicted with issues of insecurity and uncertainty, the degree of familiarity a person has in relation to the experienced condition was identified as the most decisive aspect whether or not to be or she defines a condition as a minor ailment. It was found that the majority of persons with a migrant background is familiar with the concept of minor ailments and can give adequate examples, yet most people still struggle with identifying more unfamiliar conditions which are self-treatable and making the distinction to those that are not. As a result, more frequently experienced conditions (e.g. common colds or minor pains) are often treated by applying self-administered care, involving mostly OTC products or homemade remedies such as wet packs, while less familiar conditions (e.g. skin conditions or digestive disorders) are most of the time either not treated at all or a doctor is consulted. Even so, due to a lack of trusted alternatives as well as sound individual knowledge, particularly vulnerable groups such as migrants or people having a migrant background were found to even consult a doctor when the experienced minor condition is familiar and they are certain that seeing a doctor is not really demanded, but feel unwell. So even though results indicate that most of the time, knowledge on self care methods exists and that trust in the attending doctor decreases with an increasing number of patients and waiting periods, especially people with a migrant background tend to generally call for a doctor instead of trying to act on one's own initiative.

In contrast, ancestral Austrians were found to rather do nothing and just wait until a minor condition gets better or undertake self care than consult a doctor, irrespective of the degree of familiarity a person has with the conditions he or she is experiencing. However, for all groups, lack of improvement after a few days of self-administered treatment leads to accessing medical care, preferably consulting the family physician as opposed to any other health professional. Consequently, it was concluded that similar to other developed countries in and outside of Europe (i.e. Canada, New Zealand, UK and USA; see Baqir et al. 2010, Noseworthy 2013, PAGB 2009 Fast Facts about Self Care, Tera Medica 2012), the treatment of minor ailments accounts for a considerable amount of Austrian GPs workload. Resulting in too many patients waiting in overcrowded waiting areas and long waiting periods, this kind of health behaviour generally not only costs a lot of money, but it also takes time off medical practice every day.

It can therefore be concluded that regarding persons with a migrant background, the treatment of self-treatable conditions such as common colds for example does not necessarily mean that people are actually treating themselves, since applying self care is not always their first choice when experiencing minor ailments.

Nevertheless, almost all of them are familiar with the concept of self care and associated treatment options such as OTC products, traditional remedies or alternative forms of treatment (e.g. healing systems such as TCM or homeopathy), with OTC products and homemade remedies representing the most frequently and alternative forms of treatment the least frequently applied treatment options for minor ailments when undertaking self care. Even so, analysis revealed differences in regard to the fields of application: whereas OTC products are mainly utilised for common colds, minor pains and minor injuries, alternative treatments and homemade remedies are almost exclusively applied when experiencing common colds; in contrast, many stated to not apply any treatment when experiencing minor pains or small injuries, however.

Moreover, findings suggest varying preferences for the two different migrant generations and the population without a migrant background in regard to the utilised treatment options when undertaking self care. While persons without a migrant background prefer to not utilise any treatment when experiencing common colds, digestive disorders, skin diseases or minor pains, they were also found to apply alternative methods as their favourite option of treatment when experiencing minor injuries. In contrast, second generation migrants are more likely to utilise homemade remedies or OTC products when suffering from common colds or skin diseases, while minor pain was the only condition where second generation migrants passed on treatment. No distinct patterns in the treatment of minor ailments were found in regard to first generation migrants, however. While those with children in the home stated to prefer utilising homeopathy, TCM or herbal treatment when applying self care, homemade remedies are generally preferred when experiencing common colds, whereas skin diseases involve issues of insecurity and are thus either not treated at all or by consulting a doctor.

As people are generally convinced about the effectiveness and safety of homemade remedies and OTC products, these treatments are the most frequently applied when actively undertaking self care, irrespective of sex, levels of education, employment status, ethnic/cultural background or generation membership. Furthermore, non prescriptive medicines were found to account for the biggest share within the people's home-medicine-cabinets, which seemed to be a random selection of various drugs. This may raise a potential for issues of inappropriate self-medication however, as people may be convinced that merely taking these medicines without proper advice is sufficient and thus do not consult any health professional beforehand.

According to the idea of self care, people can lead a healthier life, save money for themselves and the health system and contribute to sustainability for the future if they are enabled to take over more responsibility for their own health-status, and their health literacy is improved by better health-education (NZSMI 2009, WHCA 2011, Sorensen 2012). However, besides lower socio-economic status and language issues, vulnerable groups such as migrants are generally associated with a lower degree of health literacy as well (HLS-EU Consortium 2012, WHCA 2011). Also in this study, migrants or people with a migrant background respectively, were found to experience considerable barriers in accessing health care related to minor ailments. Likewise, as part of this project, many people associated with limited health literacy, i.e. persons with a migrant background, people with a lower level of education and those who are unemployed were found to see a doctor more frequently when experiencing minor ailments. These findings are significant as they support the call for a more comprehensive health-education for particularly members of marginal groups in order to increase health literacy in Austrian society.

In that regard, it was essential to reduce potential barriers due to language by translating all questionnaires into Bosnian, Croatian and Turkish. Since the quantitative analysis focused on providing comparable results which are representative for the whole target group, it was of particular importance to do this in order to eliminate

the level of language competence so people irrespective of their proficiency in the German language could participate in the survey. As people chose their questionnaire according to their language skills, it can be concluded that measures aiming at reducing language barriers were successful. However, the mere fact that people with a migrant background chose a questionnaire in German versus another does not necessarily imply that they speak German fluently - it may also relate to issues of social desirability. Nevertheless, findings suggested only few language issues for migrants or people having a migrant background in Bosnia-Herzegovina or Croatia (22% were German native speakers), while people with a migrant background in Turkey were found to account for the biggest share of people with deficient German skills (i.e. 20 out of 26 participants). Furthermore, almost all second generation migrants with a Turkish background chose the Turkish questionnaire within the survey, indicating language issues, even if they all claimed to be native speakers. In contrast, all second generation migrants with a background in Bosnia-Herzegovina and Croatia who were German native speaker filled out the German version, while many of the first generation did so too, even if they were not German native speakers. Moreover, migrants with a Turkish background displayed particularly low rates of employment (22.5% did work) and a generally lower level of education (63.3% had no school leaving exam), whereas those with a background in Bosnia-Herzegovina or Croatia showed rather similar results to ancestral Austrians (i.e. 70% or more did work, 51% or more had a school leaving exam)¹⁶⁶, results reflect considerable issues of integration which are typically associated with Turkish migrant groups, as suggested in the literature (Binder & Rasuly-Paleczek & Six-Hohenbalken 2005, Forschungspraktikum am Institut für Soziologie der Karl-Franzens-Universität Graz 2002/2003, Herzog-Punzenberger & Bruneforth & Lassnigg 2012, Statistic Austria 2012). Particularly women with a Turkish migrant background were found to display low rates of employment while at the same time experiencing most language issues. As a result, women with a Turkish migrant background were identified as a particularly vulnerable group living in Graz, requiring special attention in order to be able to fulfil their health needs adequately. It can be concluded that although analysis suggests considerable language issues for people with a migrant background in Turkey only and despite the fact that second generation migrants were found to display even better health status and health behaviour than the ancestral Austrian population, seeing a doctor is the primary strategy utilised, whether only information on health or medical intervention is needed. Hence, all people having a migrant background were found to experience higher degrees of insecurity and uncertainty in regard to minor ailments than compared to ancestral Austrian population - irrespective from specific cultural/ethnic background or generation membership.

What was interesting to find out was that particularly older female family members, whether or not they have received any medical training, play an essential role as information source well as in regard to health issues in general, whereas the Internet plays a more secondary role. Significantly, this trend is stronger for migrants of the second generation than for ancestral Austrians of the same age group, reflecting a different social status for older women since findings suggest for female migrants of prior generations to take over a more central health role within their family structures than Austrians do. Truly, findings strengthen the idea of women's key role in regard to family health care provision, since women are generally seen as the *"major coordinators of care"* (Wyn et al. 2003, p.4), consuming two thirds of all medical care by organising care (Nussbaum 2000), with many women also assuming an important caregiver-role for relatives who are sick, disabled, or elderly (BMG 2011).

¹⁶⁶ Employment rates and the levels of education which have been found during analysis go along with the overall rates of employment and education as collected by Statistic Austria (2012), which are indicated in parentheses below:

* Employment rates: BiH 69.4% working; HR 76.6% working; TR 22.5% working; ancestral Austrians 72.2% working (Statistic Austria 2012: former Yugoslavia 66% working; TR 59% working).

* Level of education: BiH 53.1% school leaving exam (SLE), 46.9% no SLE; HR 51.1% SLE, 48.9% no SLE; TR 36.7% SLE, 63.3% no SLE; ancestral Austrians 57.4% SLE, 42.6% no SLE (Statistic Austria 2012: former Yugoslavia 19.8% SLE, 80.2% no SLE; TR 7% SLE, 90% no SLE).

Analysis further reflected the presumed woman's key role in regard to providing self-administered health care for the whole family (see further BMG 2011, Eichler 2008, Sieverding & Kendel 2012), since almost all participants have learnt about traditional remedies from their mothers or grandmothers who have been using or used their homemade health remedies much more often than their (grand)children. As this implies that a family's health can only be improved when the family's mother receives appropriate support and education, health initiatives focusing on migrants or people with a migrant background need to target and empower women first as they represent the link to health care for their whole family. Without appropriate health education and professional support, females with a migrant background might experience difficulties to provide adequate care and treatment, especially when language issues are involved and women have only little education. Moreover, families were found to share beliefs and ideas on health and ill health, influencing strongly on each other in regard to health behaviour and health care utilisation (Cardol et al. 2004). Hence, by empowering women first and support them in learning about health, health care provision in their country of residence as well as health promoting behaviour, they are equipped with the skills and tools they need in order to make informed, responsible health decisions and thus enhance access to better care and a healthier life for themselves and their families.

In relation to the aforementioned gender roles one must note the potential for imposing pressure on and particularly immigrant women given the ambivalence that while on the one hand they are seen as particularly insecure and vulnerable in terms of health on the one hand, they are on the other hand also perceived as in the centre referring to family health care. Based on the assumption that women are more health-conscious than men due to their role as particular "female provider-role" in regard to family health care (BMG 2011), it is safe to further assume that they show higher motivation to get informed on health issues. Since *"the ability to take responsibility for one's own health as well as one's family health and community health"* (Sorensen et al. 2012, p.1) implicates an adequate level of health literacy, a higher interest in health is therefore associated with better health literacy of females (BMG 2011, HLS- EU Consortium 2012). Nevertheless, findings showed that many women with a migrant background, but irrespective of age and generation membership, tend to randomly buy a substantial share of medication without consulting any kind of health professional as second opinion or knowing the details on their fields of applications or side effects. Since women are convinced that they do not need further advice or information, this, however, involves a potential for issues of inappropriate self-medication leading to possible health hazards (Mossialos & Mrazek & Walley 2004). As these findings were also confirmed by the literature (Eichler 2008, MWIA 2013, Weiss 2003, WHCA 2011), undertaking further research on the encounter of providing self-administered care in regard to minor ailments and gender specific aspects is suggested.

More importantly, the results of this study support the call for reducing barriers in accessing health related services in regard to self care and minor ailments by means of strengthening people's health literacy, i.e. [...] *"people's knowledge, motivation and competences to access, understand, appraise, and apply health information in order to make judgments and take decisions in everyday life concerning healthcare, disease prevention and health promotion to maintain or improve quality of life during the life course"* (Sorensen et al. 2012, p.3). As health outcomes of weak health literacy are poorer health choices including riskier behaviours for example, people adhere less to medical instructions, understand less of the provided information and have less health knowledge which at the same time results in poorer self-management skills and ultimately in poorer health status. In fact, knowledge on and interest in health as well as the choice of information sources on health not only impact on health status, but are crucial in order to gain adequate skills to distinguish between

conditions that are self-treatable and hence do not require a doctor's attention, and those that are more serious and therefore necessitate medical care.

The conclusion drawn from this is that educating people on health issues in order to provide them *"with the necessary skills and resources to manage their health"* (Porteous et al. 2006, p.911) represents a crucial task of utmost importance for every country, including Austria. In fact, 56% of all Austrians display rather poor health literacy, while 18% thereof even have inadequate health literacy, a big share thereof accounting for migrants¹⁶⁷ or people with a low educational level (HLS-EU Consortium 2012). In that context, the findings of this study also suggest high levels of insecurity and scepticism regarding the treatment of minor ailments self care in general - irrespective of ethnicity or cultural background. According to the World Health Organization, self care describes *"activities that are derived from knowledge and skills from the pool of both professionals and lay experience and are undertaken by lay people on their own behalf either separately or in participative collaboration with professionals"* (NZSMI 2009, p.2). Importantly, this definition states very clearly that self care does not mean patients are being left alone; on the contrary, the idea of collaboration between the individual and a healthcare professional is vital to effective self care. Accordingly, in order to be able to make informed health decisions, an adequate level of health literacy and comprising health knowledge, but also interest in health and the motivation to get actively involved, is essential when undertaking self care.

According to the World Health Communication Associates Action Guide for Health Literacy (WHCA 2011), enhancement interventions for health literacy and therefore for the development of adequate skills necessary to undertake self care include four areas: First of all, providing written health information which is attractive and easy to understand, while at the same time educating people on important health decisions or potential health hazards is crucial in order to be able to 'spread the word' so to speak. Moreover, health information needs to be simplified for people experiencing language issues due to a foreign background or inadequate literacy as well as translated into all locally spoken languages in order to reach particularly vulnerable groups such as migrants. Another intervention in order to improve health literacy skills is seen in utilising technology-based communication techniques such as the Internet. This, however, also entails issues of misinformation, as the Internet is not regulated, and hence it is often difficult for especially those associated with lower health literacy, such as a lower level of education or poor language skills, to distinguish between reliable and unreliable sources. While other studies have shown that *"seeking information on health is said to be the fourth most common use of the World Wide Web"* (Mossialos & Mrazek & Walley 2004, p.168), further implying that getting informed on health issues by utilising the Internet is widely common, however, was not reflected by the findings of this study, as the Internet was found to play a rather subordinate role as information source on minor ailments, almost exclusively being utilised by people with a higher health literacy as mentioned before.

The potential effects of cultural differences on the communication process and also understanding of health information represent particularly important issues when trying to strengthen migrant groups' competencies in regard to health literacy (ibid.). As health systems in general are complex and thus, gaining information about what services are available where can be difficult, the installation of navigators or so-called 'key persons' is recommended. By providing adequate health education, helping to interpret health information and assisting in accessing health services, such navigators or key persons reduce financial, communicative and medical system-related barriers in accessing health related services. Especially people with a migrant background benefit from these services, since health or ill health is especially closely linked to a person's cultural background as every

¹⁶⁷ According to the utilised methodology, the European Health Literacy Survey excluded all populations of non-EU migrants. Hence, only migrants with an EU-background were taken into account (HLS-EU Consortium 2012).

culture has its own concepts and beliefs about what health measures are appropriate (Subedi 2003). As ‘key persons’ are meant to be mediators with the same cultural background and are not only able to speak the needed language, but are further familiar with culture-specific beliefs and health behaviour, they can reduce barriers resulting from “intercultural misconceptions” and hence, improve intercultural competency of health care services (Mayer 2011, WHCA 2011). In fact, as recommended by research, many local migrant organisations successfully work by means of this approach evolving around social support and administrative formalities, but also health issues such as nutrition (e.g. Caritas Graz, DANAIDA, SOMM). Nevertheless, no service involving “key persons” in regard to the treatment of minor ailments was found, which may prove to be particularly helpful when working with migrant groups. Since today’s societies are becoming increasingly multicultural, issues related to intercultural competency, including adequate communication and inter-personal behaviour are gaining more and more importance, particularly in the health care sector (WHCA 2011). Therefore, communication training for health workers not only needs to focus on improving clinician communication skills but also on an understanding of cultural sensitivities in order to promote the learning experience, the process of partnership-building, collaborative goal-setting and finally, a change in health behaviour leading to a more active role in obtaining and maintaining good health through the application of self-administered care.

It can be concluded that in Austria, migrants and people with a migrant background experience inequalities in health status and health behaviour while at the same time utilising different strategies in order to cope with potentially self-treatable conditions. However and in contrast to the ancestral population, consulting a medical doctor is the main strategy utilised, even if the condition is familiar and people therefore have knowledge on the course of the condition as well as on treatment. Since in addition, the European Health Literacy Survey found 56% of all Austrians (including migrants with a background in an EU-country, i.e. Croatia) display rather poor health literacy, undertaking measures to improve health literacy and thus empower people to make more informed health decisions is considered crucial in order to improve health behaviour when experiencing minor ailments.

6.5 Implications for Future Research

As an exploratory study which utilised both, qualitative and quantitative methods within a sequential mixed methods design, this research adds a valuable insight into the treatment of minor ailments by people with a migrant background in Bosnia-Herzegovina, Croatia and Turkey and living in Graz.

The “female provider-role” in regard to family health care was found to involve the potential to impose pressure and hence represent strain for women (BMG 2011). As a result, severe ambivalence in regard to female migrants arises: while they are seen as particularly insecure and vulnerable in terms of health on the one hand, they are on the other hand also perceived as in the centre referring to family health care. As these findings were also confirmed by the literature (Eichler 2008, MWIA 2013, Weiss 2003, WHCA 2011), undertaking further research on the encounter of providing self-administered care in regard to minor ailments and gender specific aspects is suggested.

According to the European Health Literacy Report (HLS-EU Consortium 2012), more than half of the Austrian population display rather poor health literacy, while findings further specifically indicated issues related to health literacy in regard to migrants with a Turkish background. As a result, investigating issues of health literacy in regard to migrants and people with a migrant background respectively is necessary. Moreover and in order to provide all Austrian people with a better health education, extensive research should be undertaken in regard to the development and promotion of more appropriate health education after the Dutch role model (see Cardol et al. 2004).

Finally, these efforts may result in a concept for a pharmacy-based minor ailment scheme after the UK role model, an advisory centre in regard to minor ailments and self care, or other services designed specifically for assisting, guiding and educating people while helping them to find their path for helping themselves, i.e. applying self care. In a society where life-expectancy is continuously rising, the so called “lifestyle-diseases”, caused by leading an unnatural, stressful lifestyle, present a major problem. If people would be enabled to take more responsibility for their own health-status by providing them with better health-education and more options, they will possibly lead a healthier life, save money, time and cause sustainable effects not only for their own life, but also for the lives of their children. Aiming at a broadening of modern pharmacists’ role according to the internationally ongoing changes (see Chapter 1 Theoretical Foundation and Literature Review), extensive research on the treatment of minor ailment, utilisation of self care as well as a possible scope of practice for pharmacists in Austria is therefore suggested.

6.6 Summary of Research

An emphasis on primary health care and easy access to the first point of contact within a country's health system for every human being are defined as high priorities in healthcare across the world (WHO 2010 *Poverty and Social Exclusion in the WHO European Region*). However, barriers in access to health remain and especially vulnerable groups such as migrants display substantial differences in regard to health conscious behaviour as well as health status when compared to the ancestral population (Fassmann 2007, WHO 2010 *Health of migrants*, Statistic Austria 2012). While countries are struggling to balance the needs of their people with a continuous rise in health expenditure, they are at the same time trying to live up to the demands of increasingly multicultural societies, providing both opportunities and challenges for health professionals (Fink 2010, Mayer 2010). As various studies clearly show that potentially self-treatable conditions account for an extensive part of GPs' work load and involve issues of health conscious behaviour and health literacy, some countries in- and outside of Europe have already implemented measurements in order to balance financial pressure and provide low-threshold primary care services (Baqir et al. 2010, MinuteClinic 2013, Noseworthy 2013, NZ Pharmacy Council 2013, Tera Medica 2012). According to the idea of self care, people can lead a healthier life, save money for themselves and the health system, and contribute to sustainability for the future if they are enabled to take over more responsibility for their own health-status and their health literacy is improved by better health-education (NZSMI 2009, WHCA 2011, Sorensen 2012). However, besides lower socio-economic status and language issues, vulnerable groups such as migrants are generally associated with a lower degree of health literacy (HLS-EU Consortium 2012, WHCA 2011). Since a person's health behaviour and hence health status as well as health literacy is strongly affected by his or her cultural background (Bischoff & Wanner 2004, HLS-EU Consortium 2012, National Centre for Health Statistics 2010, WHCA 2011), it is safe to assume that the treatment of minor ailments also relates to culture and ethnicity, and hence results in different health beliefs and/or approaches of treatment.

Aiming at a better understanding of and a greater commitment to the needs of a continuously growing multicultural society, this project explores health behaviour among migrant cultures and ethnicities of sequent generations living in the city of Graz, Austria. While learning about the impact of culture and ethnicity on the processes of decision making when experiencing minor ailments, it further investigates similarities and differences between different ethnic groups (i.e. citizens of the Austrian city of Graz with an ethnic background in Croatia, Bosnia-Herzegovina and Turkey, and an ancestral Austrian control group) and two sequent generations of migrants. For the purpose of getting access to the respective target groups, close collaborations with local organisations working in the health and migrant sector were sought.

In order to do find out about issues related to minor ailments and the treatment thereof, this project utilised an exploratory sequential mixed methods design which was formally reviewed and approved by the Ethical Commission of the Karl-Franzens-University of Graz, Austria. While the initial qualitative approach employed informal discussions and semi-structured interviews that allowed enquiry into where people get informed about minor ailments, what kinds of treatments they apply and why they decided to choose a certain method of treatment, the ensuing quantitative approach reassessed the findings while providing objective and comparable results for the whole target group as part of a quantitative questionnaire. Thus, the mixed methods approach offered a more comprehensive insight into an issue that had little previous evidence to guide research, while further strengthening evidence through confirmation and also substantiation of findings (Bazeley 2008, Diekmann 2002, Whitall & Jago & Fox 2011). By developing the questionnaires according to the qualitative results, the two parts were connected by means of the compilation of quantitative items and scales before the

forms were validated quantitatively in a pre-test-phase and then translated into Bosnian, Croatian and Turkish. Finally, a survey was performed on a full sample comprising 199 people, with a response rate of 99.5%. While purposeful sampling was performed, the sample was confirmed to be representative referring to all independent variables, i.e. “sex”, “education”, “migration” and “working status”.

According to the results, applying self care, i.e. treating oneself when experiencing potentially self-treatable conditions such as common colds for example, is not always people’s first choice. Nevertheless, almost all participants are familiar with the concept of self care and associated treatment options. As there is a variety of different approaches people may use in order to undertake self-administered measures (Subedi 2003), this project focuses on self care utilising OTC products (i.e. non-prescription medicine), homemade or also traditional remedies and further includes alternative forms of treatment, i.e. healing systems which can be defined as measures opposed to modern, conventional medicine, such as Traditional Chinese Medicine or homeopathy for example. Analysis revealed differences in regard to the fields of application, suggesting different preferences for the utilised treatment related to the kind of conditions experienced as well as the person’s ethnic background. It was found that OTC products and homemade remedies are the most frequently applied options of treatment for minor ailments, whereas alternative forms of treatment are only seldom utilised.

Due to a lack of trusted alternatives as well as sound individual knowledge, many people were found to perceive a high necessity to require medical care when experiencing minor conditions and thus see an M.D. instead of trying to act on one’s own initiative, independent of cultural background or migrant generation membership. It was found, however, that the more often people experience a certain minor condition, the less likely they feel the need to call for a doctor when actually experiencing it. Even so, people with a migrant background were found to even consult a doctor when the experienced minor condition is familiar and they are certain that seeing a doctor is not really demanded, but feel unwell. In contrast, ancestral Austrians were found to rather tend to do nothing and just wait until a minor condition gets better or undertake self care than consult a doctor, irrespective of the degree of familiarity a person has with the conditions they are experiencing. Nevertheless, if there is no improvement after a few days of self-administered treatment, medical care is accessed, preferably consulting the family physician than any other health professional. Moreover, findings strengthen the idea of women’s key role in regard to family health care as many females not only assume a caregiver-role for relatives who are sick, disabled, or elderly, but in this study turned out to be the ones in charge of the home medicine cabinet as well as the propagation of home remedies and other treatment options.

As a conclusion, the results of this study provide a significant contribution to basic research in Social Pharmacy in Austria, which up to this point is a field merely scarcely represented in both research and teaching. As findings confirm the assumption that there are, indeed, culture-specific patterns in the treatment of minor ailments when it comes to different cultural or else ethnic groups, a follow-up study may look into the details of these differences between the different cultural groups in question, but also people with a background in other countries to paint a more elaborate picture regarding the use of medicines. In light of the results of *Reducing Barriers – Migrations, Minor Ailments, and Medicines* and reflecting international standards, enhancing the role of pharmacists in Austria as well as promoting them as one vital first point of contact as part of the country’s health system appears both reasonable and desirable.

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4.1 Interview Guide and Data Sheets

Thank you very much for taking the time for this interview. My project deals with health behaviour of migrants living in Graz, therefore I will ask you various questions regarding health / illness and your personal medical beliefs.

The interview will take about one hour, and it will be tape recorded. All of your data (such as your name for instance) will be anonymised which means that they will be kept confidential and will not be published. Do you have questions about confidentiality?

- I) Have you ever participated in a survey? What experiences did you have?
- II) As this interview is about your personal opinions, there are no wrong answers. If you don't understand something or are not sure how to respond, please ask me.
- III) OPENING QUESTION:
When did you last feel unwell?
 - 1) Why?
 - 2) What did you do?

IV) MEASURES THAT ARE BENEFICIAL TO HEALTH:

What do you do in order to stay healthy?

E.g. physical exercise (how often?), healthy diet (what's healthy?) etc.

- 1) What measures do you take with your children / your family?
- 2) What healthy behaviours do you consider to be the most important?
- 3) Do your religious beliefs play a role in issues regarding health?

Example: Jehovah's Witnesses and blood transfusions

V) M.D.:

Where do you seek medical advice?

(Health centres, M.D., pharmacist, nurse, druggist, etc.)

- a. Generally regarding health questions (e.g. pregnancy or defective vision) / in case of ill health
- 1) Do you have friends or family/relatives that are medically trained (M.D., pharmacist, nurse, druggist, etc.)?
- 2) How often do you see an M.D. (every month)?
 - a. Do you have chronic illnesses? / Are you in long-term therapy right now?
- 3) What was the reason for your last doctor's appointment?
- 4) Do you have your own General Practitioner (GP)?
 - a. How long have you been seeing this GP?
 - b. Why are you seeing this particular GP?
 - c. How long does an appointment at your GP take on average?
 - d. When was your last appointment at your GP?
 - e. What was the reason for your last GP appointment?

VI) INFORMATION REGARDING HEALTH ISSUES:

Where do you get most information regarding medical topics or else issues regarding your health?

(E.g. also defective vision, joint malalignments such as knock knees, spinal distortions in children, migraines, mental/psychological problems, pregnancy, not only acute “illnesses”)

- 1) What other facilities regarding questions or consultations concerning health issues do you know?
 - a. Which ones do you use yourself?
- 2) Have you ever searched for information regarding medical questions on the internet?
 - a. What were your experiences?
 - b. Have you ever sought advice in a pharmacy?
 - c. What were your experiences?
- 3) Are you familiar with facilities for migrants in Graz (ZEBRA, OMEGA, ISOP, SOMM, Peregrina, Danaida..)?
 - a. Do you know what services they offer?
(Continuing education and training, career counselling, legal advice, health services, translation services, youth welfare services, childcare services, meet up groups etc.)
 - b. Have you ever made use of their health services?
(OMEGA Health Centre, Marienambulanz (Marien Clinic), Women’s Health Centre, Native-Language Social and Health Assistance RAHMA, Nutrition Coaching SOMM, Refugee Residence Mitterstraße, etc.)
 - c. What were your experiences?
- 4) What experiences did you have in general with consultations regarding health issues in Graz?

VII) ALTERNATIVE METHODS:

- 1) As opposed to ‘modern’ conventional medicine, are you familiar with alternative methods of treatment? (Ayurveda, TCM, Homoeopathy, Bach Flower Remedies,..)
- 2) Which alternative remedies do you use yourself?
 - a. Which ailments do you treat using these remedies for? Where do you get advice in this matter?

VIII) MEDICINE CHEST:

Do you keep medicines in the home at all times? / Do you have a home medicine cabinet?

- 1) What is in your home medicine cabinet?
 - a. Why do you do so? (Remains, specifically purchased, OTC-Products,...)
 - b. Where did you obtain these medicines?
- 2) Who uses your home medicine chest?
- 3) Who stocks your home medicine chest?

IX) MINOR AILMENTS:

What do you consider ‘minor ailments’?

- a. Can you give me examples?

Which measures would you take in case of minor ailments?

- a. Based on your own experience, can you give me an example?
- 1) How would you treat the following for instance?
 - a. Common cold / sore throat or minor ear aches / a touch of fever / hoarseness
 - b. Slight Diarrhoea
 - c. Sharp shooting pains in the heart / high fever
 - d. Minor strains / sprains / bruises

- e. Fungal infection of the nail or foot
- f. Head or back pains
- g. Swellings after insect stings or bites
- h. Rashes

X) HOME REMEDIES:

What do you consider to be home remedies / traditional remedies?

- a. Can you give me some examples?
- 1) Do you yourself use home remedies / traditional remedies?
 - a. Which home remedies / traditional remedies do you use?
 - b. For what symptoms do you use home remedies?
 - c. Which of your family members (also) use home remedies?
- 2) Where does your knowledge about home remedies/ traditional remedies come from?

XI) HOUSEHOLD:

- 1) How many persons live in your household?
 - a. What is their relationship to you?
- 2) Do you have children?
 - a. Do your children live in your household?
 - b. How old are your children?

XII) We have now come to the end of this interview. Is there anything that was unclear or did not make sense to you?

XIII) Do you have other additional remarks or comments? Is there anything else of importance to you regarding this topic?

XIV) I would like to thank you very much for your participation and your time. (If in the subject's home: I would also like to thank you for having me in your home and your hospitality.)

XV) This concludes our conversation. I would once again like to thank you and wish you a good day.

INFORMATION SHEET / CONSENT FORM

Thank you very much for taking the time for this interview!

This project deals with health behaviour of migrants living in Graz, therefore the interviewer will ask you various questions regarding health / illness and your personal medical beliefs.

The interview takes about one hour and is tape recorded. All of your data (such as your name for instance) will be anonymised which means that they will be kept confidential and will not be published.

Please provide basic demographic data as asked below:

Name:

Gender:

Age:

Country of birth:

Parents' countries of birth:

Grandparents' countries of birth:

Native Language(s):

Ethnic group that you identify with:

Citizenship:

Highest completed Education:

Profession:

By signing this consent form you agree to participate in this interview and to have it audio recorded in regard to the terms listed above. You can withdraw from participating any time.

Date:

Signature:

4.2 Coding Agenda

Sub-Category 1.1	Definition	Examples	Rules for Coding	Code
doing sports	Statements regarding any kind of physical exercise (e.g. biking, walking, going to a fitness centre, doing dance classes, walking stairs instead of using the lift).	I: Ja super! Also einmal in der Woche, sozusagen regelmäßig, solange es Spaß macht?	Evaluation: Doing sports is an important part in the person's life. The person thinks that without sports it is not possible to lead a healthy lifestyle.	S1
		IE: Genau. Also diesen Zwanzigerblock möchte ich schon ausnutzen und schauen, ob es mir Spaß macht. (Transcription Interview 8 November 2011_1)	For the person, exercising regularly is important, but other things are as well.	S2
		IE: Ich würde mal sagen, wenn man alles in einer bestimmten Menge konsumiert. - Mh. -- Muss nichts Besonderes; Ich muss dann keine Diäten machen, keinen Sport betreiben – Sport ein bisschen, ist nicht schlecht, damit man raus geht, damit man, keine Ahnung, irgendwie das Ganze aktiviert. Aber wenn ich wirklich normal esse, die normale Menge, das ist dann das A und O. Denke ich mir. (Transcription Interview 8 November 2011_1)	The person does sports only to stay healthy; exercising is more obligation than fun to him/her.	S3
			The person exercises to reduce weight only.	S9
			Intensity: The person exercises three times per week or more.	
			The person exercises at least one time, at maximum three times per week.	S4
			The person exercises at maximum one time per week.	S5
			The person exercises regularly but wants to do more.	S6
			The person doesn't exercise at all.	S7
				S8

Sub-Category 1.2	Definition	Examples	Rules for Coding	Codes
Nutrition	<p>All statements regarding eating and drinking (nutrition behaviour, amount of food, nutrition habits and else).</p> <p>Indication is needed:</p> <p>Does the person have special nutrition habits?</p> <p>e.g.: vegetarian / no alcohol</p> <p>Is the person also responsible for his/her family's nutrition?</p> <p>e.g.: cooks for family three times per week</p>	<p>IE: Ich muss ehrlich sagen, ich nasche sehr gerne. Ich bin schon immer eine Naschkatze gewesen, und ich hab vor vier Jahren aufgehört zu rauchen und seitdem hat sich – das erste Jahr war es doppelt, das zweite Jahr auch, aber mittlerweile esse ich dreifache Menge an Süßigkeiten wie vor drei, vier Jahren. -- Das ist aber nicht gut!</p> <p>(Transcription Interview 8 November 2011_1)</p>	<p><u>Evaluation:</u></p> <p>E3: The person thinks that eating healthy is an important part to maintain overall health and that without healthy nutrition it is not possible to lead a healthy lifestyle.</p> <p>E2: The person thinks that eating healthy is important, but other things are as well; the most important thing is to maintain an overall balance.</p> <p>E1: The person eats or drinks whatever she/he likes and doesn't care much about a healthy nutrition.</p> <p><u>Nutrition Habits:</u></p> <p>The person eats healthy food only and on an everyday basis (low in sugar and fat, high in fibres and carbohydrates, no junk food); exceptions are rare.</p> <p>The person tries to eat and drink healthy but has some soft spots (e.g. for chocolate).</p> <p>The person eats unhealthy (e.g. fast food) more than three times per week.</p> <p><u>Amount of Food:</u></p> <p>Generally speaking, the person thinks he/she eats too much.</p> <p>Generally speaking, the person thinks he/she eats too less.</p>	<p>N1</p> <p>N2</p> <p>N3</p> <p>N4</p> <p>N5</p> <p>N6</p> <p>N7</p> <p>N8</p>

Sub-Category 1.3	Definition	Examples	Rules for Coding	Codes
Smoking	<p>All statements regarding smoking, even if the person has already quit.</p> <p>If the person is smoking on a regular basis, he/she is defined as a smoker within this project.</p>	<p>IE: Und genau so war es! Und seitdem habe ich nie mehr geraucht, und ich habe auch kein Verlangen. Vielleicht im ersten Jahr, ungefähr nach einem Jahr, wo ich mich nicht s o wohl und glücklich gefühlt habe, habe ich mir gedacht: Mah, das wäre jetzt gut, eine zu rauchen – hab eine angezündet und einmal gezogen und das war es. Ging einfach nicht. Also, ja, ich hoffe, dass es dabei auch bleibt. Weil ich habe eine Freundin, die hat nach sechs Jahren Pause wieder angefangen.</p> <p>(Transcription Interview 8 November 2011_1)</p> <p>„Geschmeckt schon, aber es kostet viel und auch da im Zimmer stinkt es immer, überall so – beim Essen, und dann sofort wieder rauchen, irgendwo nach draussen gehen, und jetzt ist überall Rauchverbot.“</p> <p>(Transcription Interview 17 Dec 2011)</p>	<p><u>Evaluation:</u></p> <p>Smoking is important to the person; he/she doesn't want to miss it.</p> <p>The person doesn't need a regular smoke, but sometimes it feels nice e.g. to go with a cup of coffee. She/he wouldn't have difficulties to quit entirely but feels no need to.</p> <p>The person doesn't need cigarettes at all anymore; quitting has been a satisfying decision.</p> <p>The person thinks of smoking as unhealthy and as a bad habit.</p> <p><u>Intensity:</u></p> <p>Smokes regularly during a day on an everyday basis.</p> <p>Smokes sometimes, not every day (e.g. only when going out).</p> <p>The person quit smoking already.</p> <p>The person never smoked.</p>	<p>Sm1</p> <p>Sm2</p> <p>Sm3</p> <p>Sm8</p> <p>Sm4</p> <p>Sm5</p> <p>Sm6</p> <p>Sm7</p>

CATEGORY 2: GETTING MEDICAL ADVICE

Sub-Category 2.1	Definition	Examples	Rules for Coding	Codes
Using the Internet	Statements regarding usage of the internet as information source for advice on any kind of health issues.	IE: Na, es kann sein, dass ich vielleicht; – Aber wie gesagt, trotzdem bleibt die erste Quelle was im Internet durchzulesen, weil das geht schnell, ruck zuck.(...)Wenn die ein paar gute [Anmerkung: Bücher] hätten, wo ich sicher sein kann, dass es super Informationen sind, dann wäre es mir egal, aber so einfach Geld auszugeben für nichts und wieder nichts. Mmh. ((ablehnend))	Evaluation: Looking on the internet for medical information is the first thing the person does before doing anything else, and no matter which measures will be undertaken later on.	In1
		(Transcription Interview 8 November 2011_1)	Looking on the internet is one of many possibilities to gather information on health and is sometimes (not always!) utilised.	In2
		I Haben Sie schon einmal im Internet sich erkundigt -- zu irgendwelchen Erkrankungen oder zu irgendwelchen Sachen? Haben Sie da schon im Internet einmal nach Informationen gesucht?	No use of the internet as information source on health at all or only very randomly.	In3
		IE Nein! ((Vehement))	Intensity: The person fully relies on the information she/he gets from the internet. Additional advice is being sought when suggested by that information.	In4
		(Transcription Interview 17 Dec 2011)	The person is not really sure about the quality of the information and often seeks further advice when feeling insecure.	In5
			The person doesn't trust the internet in terms of information's quality and if he/she uses the internet at all, always gets a second opinion from a health professional.	In6

Sub-Category 2.2	Definition	Examples	Rules for Coding	Codes
Medically trained personnel within family / friends	A medically trained person within the person's family or friends.	I: Wenn Sie medizinischen Rat brauchen; Sie haben ein Problem und brauchen medizinischen Rat. Wo würden Sie da hingehen?	<u>Evaluation:</u> There is a M.D. within the person's family or circle of friends.	Md1
	A medically trained person is any kind of health professional like a M.D., pharmacist, nurse, druggist or else.	IE: Die Antwort würden Sie sicher am wenigsten erwarten: Ich greife zum Telefon und rufe meine Schwester an. I: Gut.	There is any other medically trained person (nurse, pharmacist, druggist or else) within the person's family or circle of friends.	Md2
	Indication is necessary:	IE: Weil meine Schwester ist Ärztin. (Transcription Interview 8 November 2011_1)	There is no medically trained person within the person's family or friends.	Md3
	Who is the medically trained person?	I Gibt es in deiner Familie oder in deinem Freundeskreis eine Ärztin oder einen Arzt?	<u>Intensity:</u> Getting in touch with the health professional he/she knows is the first thing the person does before doing anything else, and no matter which measures will be undertaken later on.	Md4
	What profession does he/she belong to?	IE Nein – in meinem Freundeskreis gibt es eine, die macht die Krankenschwesternschule, die sich da ein bisschen auskennt, aber sonst (sonst nicht?)-	The person sometimes (not always!) tries to get advice from the health professional he/she knows but isn't always sure about the information's quality.	Md5
	e.g.: sister, M.D.	(Transcription Interview 1 Dec 2011)	The person doesn't utilise the medically trained friend or family member as information source at all.	Md6

Sub-Category 2.4	Definition	Examples	Rules for Coding	Codes
Using facilities for migrants	Any statements regarding facilities for migrants in Graz and the health service they offer.	IE: In diesen Organisationen nein. Ich meine in diesen, also Zebra, Omega?	<u>Evaluation:</u> The person knows about various facilities for migrants in Graz and also about the service they offer.	MF1
		I: Ja genau, innerhalb dieser Angebote.		
		IE: Nein. Ich habe diese Dienstleistungen, diesen Service nie in Anspruch genommen. – Ich -- weiß es nicht, ich kann das nicht sagen. ((ungeduldig werdend))	The person knows about some facilities for migrants in Graz or has heard of any.	MF2
		(Transcription Interview 8 November 2011_1)	The person doesn't know about any facilities for migrants in Graz.	MF3
		I Diese Gesund-, also diese Einrichtungen für Migranten in Graz, kennst du da irgendwelche, also so speziell migrantenspezifische Einrichtungen, kennst du da welche?	<u>Intensity:</u> The person has already utilised health services of facilities for migrants.	MF4
		IE Nein, kenne ich nicht. (Transcription Interview 1 Dec 2011)	The person has already utilised facilities for migrants, but not any health service.	MF5
			The person has not yet utilised any facilities for migrants in Graz.	MF6

Sub-Category 2.3	Definition	Examples	Rules for Coding	Codes
Using Pharmacies	Statements regarding usage of pharmacies as information source for advice on any kind of health issues.	I: Und diese eine Apotheke, in die Sie öfter gehen; da gehen Sie auch hin, um Sich wirklich beraten zu lassen, oder um was zu fragen, oder?	<u>Evaluation:</u> The person uses pharmacies on a regular basis to get informed.	P1
		IE: Nicht wirklich. Nicht wirklich, wenn ich was kaufen kann ohne ärztlichen Rezept, dann frage ich was die glauben, was da besser ist, oder ob sie was gegen das oder das haben und dann sagen sie okay, das ist gut oder das ist nicht gut oder das ist besser oder was weiß ich, aber ansonsten hole ich mir ein Rezept vom Arzt und berate mich nicht.	Most of the time the person just goes to a pharmacy to buy medicine, but randomly he/she also tries to get advice there.	P2
		(Transcription Interview 8 November 2011_1)	Pharmacies are never used as information source; the person goes there to buy medicine only.	P3
		IE Nein, eben also in Apotheken oder so bin ich halt gegangen, wenn ich irgendein Medikament, wenn ich Grippe gehabt habe oder so, dann-- laufe ich nicht unbedingt immer gleich zum Arzt, weil da weiß ich, ich kann auch in die Apotheke gehen und die können mir sagen, was mir hilft, aber so in die Apotheke gehen und nachfragen, wo ich mich informieren kann oder so habe ich eigentlich noch nicht gemacht.	<u>Intensity:</u> In a pharmacy, the person looks for professional advice on health issues, information about additional options of treatment or medicines.	P4
		(Transcription Interview 1 Dec 2011)	In a pharmacy, the person looks for professional advice on cosmetics or skin care products.	P5
			The person knows exactly what to buy and doesn't want any further advice.	P6
			<u>Experiences:</u> The person's experiences with pharmacies are more or less positive.	P7
			The person's experiences with pharmacies are more or less negative.	P8

CATEGORY 3: MEDICAL DOCTORS

Sub-Category 3.1	Definition	Examples	Rules for Coding	Codes
Seeing an M.D. SMD	<p>Any statements regarding seeing an M.D.</p> <p>Indication is needed:</p> <p>Is the person in a long-term therapy? / Does the person have chronic illnesses?</p> <p>e.g.: long-term therapy</p> <p>Indicate how often the person sees an M.D. and if it is a GP or specialist, if stated!</p> <p>e.g.: GP twice a month</p> <p>When was the last M.D.-consultation and why?</p> <p>e.g.: last specialist in Dec 2011, fever</p> <p>Indicate duration of M.D.-consultation and waiting period if stated!</p>	<p>IE: Nein. Zum Beispiel, ich bekomme regelmäßig Kopfschmerzen und da geh ich nicht zum Arzt. -- Wirklich, wenn was Schlimmes ist, wenn ich richtige Schmerzen habe irgendwo, dann gehe ich zum Arzt. Oder wenn es Vorsorge ist.</p> <p>I: Also nicht regelmäßig?</p> <p>IE: Nein.</p> <p>(Transcription Interview 8 November 2011_1)</p> <p>„Also in dem Jahr öfter als sonst ((lachend)), weil – ich viele Verletzungen, also Sportverletzungen, gehabt habe, und oft Verkühlungen und so. Also in dem Jahr waren es sicher, war ich schon, einmal im Monat kommt schon hin. Also in dem Jahr jetzt. Und davor war es seltener, vielleicht alle zwei, drei Monate. Ungefähr.“</p> <p>(Transcription Interview 1 Dec 2011)</p>	<p>Evaluation:</p> <p>Seeing an M.D. is the first thing the person does when he/she feels uneasy.</p> <p>After utilising his/her medically trained friend/family member, seeing an M.D. is the first thing the person does when feeling uneasy.</p> <p>The person sees the M.D. only if he/she thinks it is really necessary.</p> <p>The person sees the M.D. if he/she thinks it is not avoidable.</p> <p>Intensity:</p> <p>When information on health issues is needed the person goes to see an M.D.</p> <p>The person sometimes asks the M.D. for medical advice, but only when he/she is already there.</p> <p>The person asks the M.D. for medical advice after reading up, to double-check the own knowledge.</p> <p>Annual Check-ups:</p> <p>The person does all the annual check-ups regularly.</p> <p>The person does the annual check-ups only if he/she thinks about it.</p> <p>The person does no annual check-ups.</p> <p>Duration of Consultation:</p> <p>The person often experiences long waiting periods and sometimes hasty examinations.</p> <p>The person often experiences long waiting periods, but doesn't think that examinations are hasty.</p>	<p>SMD 1</p> <p>SMD 2</p> <p>SMD 15</p> <p>SMD 3</p> <p>SMD 4</p> <p>SMD 5</p> <p>SMD 6</p> <p>SMD 7</p> <p>SMD 8</p> <p>SMD 9</p> <p>SMD 10</p> <p>SMD 11</p> <p>SMD</p>

	e.g.: specialist 15min, 20min waiting period		<p>The person sometimes experiences long waiting periods, but the examinations are never hasty.</p> <p><u>M.D.'s performance:</u></p> <p>If the person is not satisfied with an M.D.'s performance, he/she goes to see another M.D.</p> <p>If the person is unsecure regarding an M.D.'s performance, he/she gets a second opinion.</p>	<p>12</p> <p>SMD 13</p> <p>SMD 14</p>
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Sub-Category 3.2	Definition	Examples	Rules for Coding	Codes
Family physician FP	Any statements regarding the family physician.	<p>IE: ((nachdenklich)) Von Anfang an. Also, es ist nicht nur – es ist einerseits Gewohnheit, hm, weil er mich schon auswendig kennt. Mh, die Ordinationsgehilfinnen kenn ich auch gut, mittlerweile. - Es ist einerseits, wie gesagt, Gewohnheit, andererseits weil er mich so kennt. -- Das dritte: er ist nett. Also, ich hab ihn noch nie böse gesehen oder schlecht gelaunt, oder - er war nie unfreundlich. Also ich habe keinen Grund, außer meine Schwester wird irgendwann mal eine Ordination haben, dann verliert er mich. ((lachend))</p> <p>(Transcription Interview 8 November 2011_1)</p> <p>IE Genau, das stimmt. Vor allem, ich habe einen Termin gemacht, bin hingekommen, habe einmal eine Stunde gewartet, bis ich überhaupt drangekommen bin, und, ja – und dann war ich fünf Minuten drinnen und der – also – das war – ich habe mich überhaupt nicht wohl gefühlt dort, das war furchtbar für mich.</p> <p>(Transcription Interview 1 Dec 2011)</p>	Why:	FP1
	Why does the person always consult this GP?		The person consults this GP because he/she thinks that the doctor acts very professionally.	FP2
	For how long has the person been consulting his/her FP?		The person consults this GP because he/she likes it there (e.g. the doctor is nice, friendly secretaries or else).	FP3
	How long does it take to see his/her FP?		The person consults this GP because the doctor already knows the person.	FP4
	Indication is needed:		The person consults this GP because his/her family or friends suggested doing so.	FP5
	Indicate duration of FP-consultation and waiting period if stated!		The person consults this GP because the doctor speaks his/her native language.	FP6
	e.g.: FP 15min, 20min waiting period		The person does not have a family physician (sees different GPs).	FP13
	Indicate for how long the person has been seeing this GP if stated!		The person consults this GP because the consultation office is nearby.	FP7
	e.g.: FP since coming to Austria		For how long:	FP8
			The person has been seeing this GP since coming to Austria or since he/she was a child.	FP9
			The person has been seeing this GP for more than one year.	FP10
			The person has been seeing this GP for less than one year.	FP11
			Duration of Consultation:	
			The person often experiences long waiting periods and sometimes hasty examinations.	
			The person often experiences long waiting periods, but doesn't think that examinations	

			<p>are hasty.</p> <p>The person sometimes experiences long waiting periods, but the examinations are never hasty.</p>	<p>FP12</p>
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Sub-Category 3.3	Definition	Examples	Rules for Coding	Codes
Medical Questionnaires MQ	Any statements regarding medical questionnaires.	IE: Ja, ja. Also das ist entweder beim ersten Besuch oder beim Facharzt, aber da komme ich gut klar.	<u>Evaluation & Language Issues:</u> The person has already had to fill out medical questionnaires and never experienced any problems due to medical terminology.	MQ1
	Has the person already had to fill out any medical questionnaires?	(Transcription Interview 8 November 2011_1)	The person has already had to fill out medical questionnaires and also experienced problems due to medical terminology.	MQ2
	Has the person experienced any language issues due to medical terminology?	IE Also für mich ist es verständlich, also ich habe keine Probleme das zu verstehen, aber was ich mir oft gedacht habe, ist, ob sich das die Leute dort wirklich anschauen ((lachend)), weil man füllt das dort vor der Untersuchung aus, und dann kommst du dann direkt zur Untersuchung. Und das schaut sich ja vorher nicht wirklich jemand an, wahrscheinlich danach.	The person has never had to fill out any medical questionnaires. <u>Help:</u>	MQ3
	Has the person been offered any help and has he/she enlisted the assistance?		The person has been offered help with filling out the medical questionnaire and has also enlisted the assistance.	MQ4
	Indication is needed:		The person has been offered help with filling out the medical questionnaire but has not needed it.	MQ5
	Indicate where (and where not) the person has already had to fill out any medical questionnaires if stated!	(Transcription Interview 1 Dec 2011)	The person has not been offered help with filling out the medical questionnaire but would have needed the assistance.	MQ6
	e.g.: specialist, dentist, not GP		The person has not been offered help with filling out the medical questionnaire and also wouldn't have needed the assistance.	MQ7

CATEGORY 4: SELF CARE

Sub-Category 4.1	Definition	Examples	Rules for Coding	Codes
Alternative Methods of Treatment AT	<p>Any statements regarding the usage of alternative methods of treatment.</p> <p>Alternative Treatment, for this project, is defined as opposed to 'modern' conventional medicine and includes healing systems like Ayurveda, TCM Traditional Chinese Medicine, Homoeopathy, Bach Flower Remedies or herbal treatment.</p> <p>Indication is needed:</p> <p>Indicate for how long and what kind of alternative treatment the person has used or generally uses if stated!</p> <p>e.g.: homeopathics (one year), TCM (only once)</p>	<p>IE: ((zögernd)) Nur was ich gehört habe, beziehungsweise gesehen habe. – ((nachdenkend)) Aber vielleicht habe ich nur einmal homöopathische Mittel verwendet. - Ich weiß nicht, wofür und habe gesagt, na, das! ((ablehnend))</p> <p>(Transcription Interview 8 November 2011_1)</p> <p>IE Ja, also gehört habe ich schon viel von so Sachen, so, oder durch Medien, durch Fernsehen und so gesehen, aber selber ausprobiert habe ich es nie. -- Also ((lachend))- Weiß ich nicht, bin ich irgendwie nie dazu gekommen. Ich muss ehrlich sagen, so g a n z vertraue ich dem auch nicht, und deswegen habe ich mich auch nie wirklich mit dem sehr viel beschäftigt. Und – ja, deswegen –</p>	<p>Knowledge:</p> <p>The person has heard of various alternative methods of treatment and also knows some details about them.</p> <p>The person has heard of some alternative methods of treatment but doesn't know any details about them.</p> <p>The person has never heard of any alternative methods of treatment before.</p> <p>Usage:</p> <p>The person already uses alternative methods of treatment on a more or less regular basis.</p> <p>The person has already tried alternative methods of treatment and might use it again.</p> <p>The person has already tried alternative methods of treatment but won't use it again.</p> <p>The person has not yet tried alternative methods of treatment but wants to try them.</p> <p>The person has not yet tried alternative methods of treatment and also doesn't want to try them.</p> <p>Information source:</p> <p>The person has been informed about alternative methods of treatment by an M.D.</p> <p>The person has been informed about alternative methods of treatment by a pharmacist.</p>	<p>AT1</p> <p>AT2</p> <p>AT3</p> <p>AT 4</p> <p>AT 5</p> <p>AT 6</p> <p>AT 7</p> <p>AT8</p> <p>AT9</p> <p>AT 10</p>

		(Transcription Interview 1 Dec 2012)	<p>The person has been informed about alternative methods of treatment by any other health professional.</p> <p>The person has been informed about alternative methods of treatment by family/friends.</p> <p>The person has heard about alternative methods of treatment from the media.</p> <p>The person has got the information about alternative methods of treatment on the internet.</p> <p><u>Evaluation:</u></p> <p>The person thinks of alternative forms of treatment in a basically enthusiastic way.</p> <p>The person thinks of alternative forms of treatment in a basically sceptical way.</p> <p>The person thinks of alternative forms of treatment as expensive.</p> <p>The person thinks of alternative forms of treatment as time consuming.</p>	<p>AT 11</p> <p>AT 16</p> <p>AT 12</p> <p>AT 13</p> <p>AT 14</p> <p>AT 15</p> <p>AT 17</p> <p>AT 18</p>
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Sub-Category 4.2	Definition	Examples	Rules for Coding	Codes
Home Medicine Cabinet HMC	Any statements regarding medicines which are kept in the house at all times.	IE: Das was ich haben darf ohne Rezept, das habe ich; - Entweder besorgt es mir meine Schwester oder ich kaufe es in der Apotheke, u n d zum Beispiel wenn ich Kopfschmerzen, weil ich habe ständig Kopfschmerzen. Und dann hole ich mir halt ein Rezept von dem Arzt und hole es mir von der Apotheke. - Oder meine Schwester bringt es mir und ich lasse mir ein Rezept vom Hausarzt ausstellen oder so.	<u>What:</u> There is a basic first aid kit at home including plasters, bandages, and wound treatment. The person has various painkillers in form of pills and ointments at home. The person has something to treat digestive disorders (diarrhoea, congestion, heartburn) in his/her home medicine cabinet. Within his/her home medicine cabinet, the person has got drugs to treat a common cold like for example nasal sprays, cough mixtures, medicinal teas or else. The person has an extensive accumulation of various drugs, ointments and other medicines in his/her home medicine cabinet.	HMC 1
	What kind of medicines are kept in the house at all times ?			HMC 2
	Why are specifically these medicines kept in the HMC?			HMC 3
	Where did the person get these medicines?	(Transcription Interview 8 November 2011_1)		HMC 4
	Who uses the home medicine cabinet?	„Also Medikamente nicht. Ich habe so ein – Schmerz-mittel, weiß jetzt nicht, wie das heißt. Wenn ich mich wirklich stark verletze, und wenn mir wirklich was weh tut, dann nehme ich das. Und ich habe zuhause so Sachen, so vorbeugende, wie so eine Kühsalbe, Verbände, so ein Tape. So etwas habe ich immer zuhause, weil ich (...), ich bin oft verletzt, und habe auch oft immer wieder blaue Flecken und so, das gehört dazu, und – zuhause habe ich solche Sachen schon,		HMC 5
	Who stocks the home medicine cabinet (e.g. wife)?		<u>Why:</u> The person integrated his/her first aid kit(s) for travelling into the home medicine cabinet. The person wants exactly this kind of medical treatment to be at home permanently because the person thinks these products help the most. The medicines in the person’s home medicine cabinet consist largely of prescription-leftovers.	HMC 6
				HMC 7
				HMC 8
			<u>Where from:</u> The person often buys medical treatment that has been recommended by family/friends (no medical training). The person often buys medical treatment that has been suggested by family/friends that are medically trained.	HMC 9
			The person sometimes buys medical	HMC 10

		ja.” (Transcription Interview 1 Dec 2012)	<p>treatment that has been recommended by family/friends (no medical training).</p> <p>The person sometimes buys medical treatment that has been suggested by family/friends that are medically trained.</p> <p>The person often buys OTC¹⁶⁸-products that have been suggested by a pharmacist.</p> <p>The person sometimes buys OTC-products that have been suggested by a pharmacist.</p> <p>The person buys the medicines in a pharmacy, but knows exactly what he/she wants and doesn't need to consult a pharmacist.</p> <p>If the person needs a medicine, he/she goes to see an M.D. to get prescription.</p> <p><u>Who uses the HMC:</u></p> <p>The HMC is used by the person and his/her family.</p> <p>The HMC is used by the person only.</p> <p><u>Who stocks the HMC:</u></p> <p>The person stocks the HMC his/herself.</p> <p>The HMC is stocked by somebody else living in the person's household.</p>	<p>11</p> <p>HMC 12</p> <p>HMC 13</p> <p>HMC 14</p> <p>HMC 15</p> <p>HMC 16</p> <p>HMC 17</p> <p>HMC 18</p> <p>HMC 19</p> <p>HMC 20</p>
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¹⁶⁸ OTC (Over The Counter)-products are medicines which are sold directly to the consumer without getting prescription from an M.D. (Burger & Wachter 1998).

Sub-Category 4.3	Definition	Examples	Rules for Coding	Codes
Home-made Remedies HR	<p>Any statements regarding homemade remedies.</p> <p>Where does the knowledge come from?</p> <p>What are the homemade remedies being used for?</p> <p>Where do they come from?</p> <p>For this project, homemade remedies are defined as traditionally used recipes made with natural ingredients which can be found at home (Burger & Wachter 1998).</p> <p>e.g.: wet pack using curd</p> <p>Indication is needed:</p> <p>Indicate what kind of homemade remedies the person uses, how it is used and why (if stated)!</p> <p>e.g.: honey onto lips helps to get soft lips</p> <p>Indicate what kind</p>	<p>IE: Das, was ich zuhause machen kann. Wie zum Beispiel gestern, wegen dieser Verbrennungsgeschichte. Also, was im Haus vorhanden ist. -- Nicht Apotheke, sondern zum Beispiel in der Küche, oder Seife. Was man griffbereit hat, um was zusammenzustellen.</p> <p>(Transcription Interview 8 November 2011_1)</p> <p>„Oder zum Beispiel auf die Lippen einen Honig schmieren. ---- Oder ---- [überlegt länger] Was gibt es denn noch ---- Für die Fingernägel Zitrone, mit Zitrone einschmieren. Wenn man irgendeine Entzündung hat oder so, oder die Nagelhaut-“</p> <p>(Transcription Interview 1 Dec 2012)</p>	<p>Knowledge:</p> <p>The person has no knowledge about homemade remedies.</p> <p>The person knows his/her homemade remedies from his/her grandma.</p> <p>The person knows his/her homemade remedies from his/her mother.</p> <p>The person knows his/her homemade remedies from other female relatives.</p> <p>The person knows his/her homemade remedies from any male relatives.</p> <p>The person knows his/her homemade remedies from the media.</p> <p>The person got the information about homemade remedies on the internet.</p> <p>The person knows his/her homemade remedies because they have been recommended by family/friends (no medical training).</p> <p>The person knows his/her homemade remedies because they have been suggested by family/friends that are medically trained.</p> <p>The person was informed about homemade remedies by a pharmacist.</p> <p>The person was informed about homemade remedies by his/her FP.</p> <p>The person was informed about homemade remedies by any other health professional.</p> <p>Usage:</p> <p>The person already uses homemade remedies on a more or less regular basis.</p> <p>The person has already tried homemade remedies and might use it</p>	<p>HR1</p> <p>HR2</p> <p>HR3</p> <p>HR 4</p> <p>HR 5</p> <p>HR 6</p> <p>HR 7</p> <p>HR8</p> <p>HR9</p> <p>HR 10</p> <p>HR 11</p> <p>HR 12</p> <p>HR 13</p> <p>HR 14</p>

	of media has been used to gain knowledge about homemade remedies! e.g.: newspaper		again. The person has already tried homemade remedies but won't use it again. The person has never tried any homemade remedies but wants to try them. The person has never tried any homemade remedies and also doesn't want to try them. <u>Evaluation:</u> Basically the person thinks of homemade remedies in a more or less enthusiastic way. Basically the person thinks of homemade remedies in a more or less sceptical way. The person thinks that homemade remedies are used more intensively in his/her homeland country.	HR 15 HR 16 HR 17 HR 18 HR 19 HR 20
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CATEGORY 5: MINOR AILMENTS

Sub-Category 5.1	Definition	Examples	Rules for Coding	Codes
Minor Ailments MA	Any statements regarding how the person defines and treats minor ailments (in general).	I: Was verstehen Sie unter geringfügigen Beschwerden? Was stellen Sie sich da darunter vor, unter kleineren Beschwerden?	Definition: The person knows how to define minor ailments and can easily give at least three examples without hesitating.	MA1
	Minor ailments are defined as potentially self-treatable and self-limiting health problems that do not necessarily need medical attention (PAGB 2009, Fast facts about Self Care, PAGB 2011).	IE: ((nachdenkend)) Mh, keine Ahnung, so Stechen vielleicht?	The person knows how to define minor ailments and can at least give three examples, but only after hesitating and thinking about it for a while.	MA2
		((lachend)) - Nein, aber ich kann mir das schon so ungefähr; -- Geringfügig kann nicht so viel sein!	The person has not heard of minor ailments before yet can give at least three examples, but only after the definition of minor ailments has been given.	MA3
	Indication is needed:	- Was kann das sein? Vielleicht Schwierigkeiten beim Schlucken oder so? Ich weiß es nicht, keine Ahnung! Bitte erklären Sie mir, was das ist! ((lacht))	The person has not heard of minor ailments before but can give two examples (at maximum) after the definition of minor ailments has been given.	MA 4
	Indicate what kind of treatment the person uses when treating minor ailments by him/herself if stated!	(Transcription Interview 8 November 2011_1)	Treatment: The person treats minor ailments by reducing the overall stress amount as well as workload, mental and physical activity.	MA 5
	e.g.: alternative treatments ¹⁶⁹ : homeopathics and/or ayurveda		The person treats minor ailments by using alternative kinds of treatment.	MA 6
			The person treats minor ailments by using home remedies.	MA 7
			The person treats minor ailments by using medicines from the home medicines cabinet.	MA 8

¹⁶⁹ Alternative Treatment, for this project, is defined as opposed to 'modern' conventional medicine and includes healing systems like Ayurveda, TCM Traditional Chinese Medicine, Homoeopathy, Bach Flower Remedies or herbal treatment.

	Indicate for how long the person waits before seeing a GP if stated! e.g.: GP after three weeks	IE Also gesundheitlich? -- - Kleinere Beschwerden, das sind für mich Schnupfen, Halsweh, Bauchweh, Kopfschmerzen. (Transcription Interview 1 Dec 2011)	The person treats minor ailments by using OTC ¹⁷⁰ products he/she buys at the pharmacy.	MA 9
			The person treats minor ailments by doing nothing and waits until it gets better.	MA 10
			<u>Seeing an M.D.:</u> The person thinks that seeing an M.D. is not necessary when experiencing minor ailments.	MA 11
			The person tends to see an M.D. after treating minor conditions by him/herself without improvement.	MA 12
			The person thinks that after treating minor conditions by him/herself without improvement, seeing an M.D. is necessary.	MA 13
			The person prefers consulting an M.D. when experiencing minor ailments to treat him/herself.	MA 14
			The person is not sure how to treat minor ailments by him/herself and tends to see an M.D. instead.	MA 15

¹⁷⁰ OTC (Over The Counter)-products are medicines which are sold directly to the consumer without getting prescription from an M.D. (Burger & Wachter 1998).

Sub-Category 5.2	Definition	Examples	Rules for Coding	Codes
Common Cold CC	Any statements regarding how the person treats a common cold including the following symptoms: nasal congestion, sour throat, hoarseness, light fever.	IE: Genau. Oder wenn ich Halsweh habe: Tee, Aspro C oder solche Sachen? (Transcription Interview 8 November 2011_1)	<u>Treatment:</u> The person treats a common cold by reducing the overall stress amount as well as workload, mental and physical activity.	CC1
	Indication is needed: Indicate what kind of treatment the person uses when treating these symptoms by him/herself if stated! e.g.: alternative treatments ¹⁷¹ : homeopathics and/or ayurveda Indicate for how long exactly the person waits before seeing a GP if stated! e.g.: GP after three weeks	Nein, was Fieber angeht, finde ich sollt -- ist nicht zum Spassen, weil das kann auch schnell einmal was, irgendwas, -- da kann man auch nie wissen, was der Grund dafür ist. Und da kann man auch erhöhtes Fieber auf einmal kriegen. Also da, also zwei Tage ist dann schon einmal Ruhepause und so, wo ich dann viel Tee trinke und so, und vielleicht einmal ein Aspirin nehme, und wenn es nicht besser geht, dann gehe ich schon zum Arzt. (Transcription Interview 1 Dec 2011)	The person treats a common cold by using alternative kinds of treatment.	CC2
			The person treats a common cold by using home remedies.	CC3
			The person treats a common cold by using medicines from the home medicines cabinet.	CC 4
			The person treats a common cold by using OTC ¹⁷² products he/she buys at the pharmacy.	CC 5
			The person treats a common cold by doing nothing and waits until it gets better.	CC 6
			<u>Seeing an M.D.:</u> The person thinks that seeing an M.D. is not necessary when experiencing a common cold.	CC 7
			The person tends to see an M.D. after treating a common cold by him/herself without improvement.	CC8
			The person thinks that after treating a common cold by him/herself without improvement, seeing an M.D. is necessary.	CC9
			The person prefers consulting an M.D. when experiencing a common cold to treat him/herself.	CC10
			The person is not sure how to treat a common cold by him/herself and	CC11

¹⁷¹ Alternative Treatment, for this project, is defined as opposed to 'modern' conventional medicine and includes healing systems like Ayurveda, TCM Traditional Chinese Medicine, Homoeopathy or Bach Flower Remedies.

¹⁷² OTC (Over The Counter)-products are medicines which are sold directly to the consumer without getting prescription from an M.D. (Burger & Wachter 1998).

			tends to see an M.D. instead.	
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Sub-Category 5.3	Definition	Examples	Rules for Coding	Codes
Slight Digestive Disorders DD	<p>Any statements regarding how the person treats slight digestive disorders with one of the following symptoms:</p> <p>slight diarrhoea, congestion, heartburn.</p> <p>Indication is needed:</p> <p>Indicate what kind of treatment the person uses when treating these symptoms by him/herself if stated!</p> <p>e.g.: alternative treatments¹⁷³: homeopathics and/or ayurveda</p> <p>Indicate for how long exactly the person waits before seeing a GP if stated!</p> <p>e.g.: GP after three weeks</p>	<p>E: Hm. --- ((denkt lange nach)) Ja, ich meine; -- Wenn ich meine Schwester nicht habe, werde ich wahrscheinlich selbst wieder im Internet recherchieren und dann wirklich zum Arzt gehen, wenn es nicht mehr <u>normal</u> ist.((zögernd))</p> <p>(Transcription Interview 8 November 2011_1)</p>	<p><u>Treatment:</u></p> <p>The person treats slight digestive disorders by reducing the overall stress amount as well as workload, mental and physical activity.</p> <p>The person treats slight digestive disorders by using alternative kinds of treatment.</p> <p>The person treats slight digestive disorders by using home remedies.</p> <p>The person treats slight digestive disorders by using medicines from the home medicines cabinet.</p> <p>The person treats slight digestive disorders by using OTC¹⁷⁴ products he/she buys at the pharmacy.</p> <p>The person treats slight digestive disorders by doing nothing and waits until it gets better.</p> <p><u>Seeing an M.D.:</u></p> <p>The person thinks that seeing an M.D. is not necessary when experiencing slight digestive disorders.</p> <p>The person tends to see an M.D. after treating slight digestive disorders by him/herself without improvement.</p> <p>The person thinks that after treating slight digestive disorders by him/herself without improvement, seeing an M.D. is necessary.</p> <p>The person prefers consulting an M.D. when experiencing slight digestive disorders to treat</p>	<p>DD1</p> <p>DD2</p> <p>DD3</p> <p>DD 4</p> <p>DD 5</p> <p>DD 6</p> <p>DD 7</p> <p>DD8</p> <p>DD9</p> <p>DD10</p>

¹⁷³ Alternative Treatment, for this project, is defined as opposed to 'modern' conventional medicine and includes healing systems like Ayurveda, TCM Traditional Chinese Medicine, Homoeopathy or Bach Flower Remedies.

¹⁷⁴ OTC (Over The Counter)-products are medicines which are sold directly to the consumer without getting prescription from an M.D. (Burger & Wachter 1998).

			<p>him/herself.</p> <p>The person is not sure how to treat slight digestive disorders by him/herself and tends to see an M.D. instead.</p>	DD11
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Sub-Category 5.4	Definition	Examples	Rules for Coding	Codes
Minor strains, sprains & bruises SSB	<p>Any statements regarding how the person treats light minor strains, sprains and bruises.</p> <p>Indication is needed:</p> <p>Indicate what kind of treatment the person uses when treating these symptoms by him/herself if stated!</p> <p>e.g.: alternative treatments¹⁷⁵: homeopathics and/or ayurveda</p> <p>Indicate for how long exactly the person waits before seeing a GP if stated!</p> <p>e.g.: GP after three weeks</p>	<p>E: Hm. --- ((denkt lange nach)) Ja, ich meine; -- Wenn ich meine Schwester nicht habe, werde ich wahrscheinlich selbst wieder im Internet recherchieren und dann wirklich zum Arzt gehen, wenn es nicht mehr <u>normal</u> ist.((zögernd))</p> <p>(Transcription Interview 8 November 2011_1)</p>	<p><u>Treatment:</u></p> <p>The person treats minor strains, sprains and bruises by reducing the overall stress amount as well as workload and physical activity.</p> <p>The person treats minor strains, sprains and bruises by using alternative kinds of treatment.</p> <p>The person treats minor strains, sprains and bruises by using home remedies.</p> <p>The person treats minor strains, sprains and bruises by using medicines from the home medicines cabinet.</p> <p>The person treats minor strains, sprains and bruises by using OTC¹⁷⁶ products he/she buys at the pharmacy.</p> <p>The person treats minor strains, sprains and bruises by doing nothing and waits until it gets better.</p> <p><u>Seeing an M.D.:</u></p> <p>The person thinks that seeing an M.D. is not necessary when experiencing minor strains, sprains and bruises.</p> <p>The person tends to see an M.D. after treating minor strains, sprains and bruises by him/herself without improvement.</p> <p>The person thinks that after treating minor strains, sprains and bruises by him/herself without improvement, seeing an M.D. is</p>	<p>SSB 1</p> <p>SSB 2</p> <p>SSB 3</p> <p>SSB 4</p> <p>SSB 5</p> <p>SSB 6</p> <p>SSB 7</p> <p>SSB8</p> <p>SSB9</p>

¹⁷⁵ Alternative Treatment, for this project, is defined as opposed to 'modern' conventional medicine and includes healing systems like Ayurveda, TCM Traditional Chinese Medicine, Homoeopathy or Bach Flower Remedies.

¹⁷⁶ OTC (Over The Counter)-products are medicines which are sold directly to the consumer without getting prescription from an M.D. (Burger & Wachter 1998).

			<p>necessary.</p> <p>The person prefers consulting an M.D. when experiencing minor strains, sprains and bruises to treat him/herself.</p> <p>The person is not sure how to treat minor strains, sprains and bruises by him/herself and tends to see an M.D. instead.</p>	<p>SSB10</p> <p>SSB11</p>
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5.1 Pre-test version of questionnaire in English

Dear Sir or Madam,

I am very pleased that you participate in my project.

For the purposes of my dissertation project at the institute of pharmacy I am currently conducting a survey about the health care habits of migrants living in Graz. Hence, the survey is about health, diseases and medicine.

The results of the survey and further Information about it can be found on the project's homepage: <http://www.reducingbarriers.jimdo.com>.

This inquiry exclusively serves scientific purposes. The collected data is made anonymous, meaning that it is treated confidential and not disclosed to the public.

You will find enclosed the questionnaire. Please take your time to read through the questions carefully and try to pick the most suitable answer.

Work your way through the survey in the prescribed order and please do not skip any question. Please bear in mind that there is no right or wrong answer.

As soon as you finished the questionnaire and the concluding data sheet, I am going to collect both.

Thank you for your participation!

In order to guarantee a correct data evaluation, it is necessary that the information has to be clearly attributable to the respective questionnaire. Thus, we generate a special code, which consists of the initial letter of your first name and of your last name, of your year of birth and of your gender (see figure). All information provided by the participants is anonymous and kept in confidence.

Example:

First name:	Sabine	S	B	78	w
Last name:	Bauer				
Year of birth:	1978				
Sex:	female				
		Initial letter of first name	Initial letter of last name	Year of birth	Sex w.... female m.... male

Please fill in your code here!

Initial letter of first name	Initial letter of last name	Year of birth	Sex w.... female m.... male

What do you understand by minor ailments? Please list some diseases or symptoms which you would categorize as minor ailments.

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There are many minor ailments in our daily life – some can be self-treated and some demand the consultation of a doctor. Please list some minor conditions that – in your opinion – do NOT make consulting a doctor necessary.

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comments, notes or obscurities regarding the questions:

The following questions refer to information sources of minor ailments. Such minor conditions (e.g. having a cold) are, in most cases, being self-treated or treated by a doctor. We would like to know where you currently get your information about minor ailments from and also where you got them from in the past.

Do the following statements apply to you? Please mark with a cross where applicable.

Example: I sing when having a shower.

1	X	3	4	5	6
never	seldom	sometimes	often	very often	always

Whenever I need information about minor ailments (e.g. cold, joint pain, digestive problems, etc.) , I obtain it from...

a doctor's homepage	never	1	2	3	4	5	6	always
advisory pages on the internet	never	1	2	3	4	5	6	always
the online source „Wikipedia“	never	1	2	3	4	5	6	always
search engines on the internet	never	1	2	3	4	5	6	always
pharmacies	never	1	2	3	4	5	6	always
a doctor	never	1	2	3	4	5	6	always
hospitals or clinics	never	1	2	3	4	5	6	always
public health care centers (e.g. public health office)	never	1	2	3	4	5	6	always
friends or acquaintances	never	1	2	3	4	5	6	always
female friends or acquaintances (e.g. coworkers)	never	1	2	3	4	5	6	always
male friends or acquaintances (e.g.. coworkers)	never	1	2	3	4	5	6	always
relatives	never	1	2	3	4	5	6	always
female relatives (e.g. mother, sister)	never	1	2	3	4	5	6	always
male relatives (e.g. father, brother)	never	1	2	3	4	5	6	always
daily newspapers	never	1	2	3	4	5	6	always
magazines	never	1	2	3	4	5	6	always
TV-Shows	never	1	2	3	4	5	6	always
other health professionals (e.g. nurses, chemists)	never	1	2	3	4	5	6	always
health care centers specifically oriented towards migrants (e.g. OMEGA)	never	1	2	3	4	5	6	always
nowhere, I already have enough information	never	1	2	3	4	5	6	always

comments, notes or obscurities regarding the questions:

The following questions refer to your behaviour when it comes to minor ailments and to behaviour patterns concerning doctor's visits. **To what extent do the following statements apply to you? Mark with a cross where applicable.**

Example: My doctor always prescribes me ethical drugs.

1	X	3	4	5	6
does not apply at all	does not apply	does rather not apply	rather applies	applies	fully applies

Whenever I suffer from minor ailments (e.g. having a cold) ...

	increasing approval →					
... I ask friends and acquaintances for advice	1	2	3	4	5	6
... I ask relatives for advice	1	2	3	4	5	6
... I treat myself on my own	1	2	3	4	5	6
... I always consult a doctor	1	2	3	4	5	6
... I know how to treat myself	1	2	3	4	5	6
... I consult a doctor in case of no signs of recovery after a few days	1	2	3	4	5	6
... I only consult a doctor if I do not know how to treat myself efficiently	1	2	3	4	5	6

The following questions refer to your doctor :

	increasing approval →					
My doctor tells me how to treat myself efficiently	1	2	3	4	5	6
I always consult my doctor first in case I feel sick	1	2	3	4	5	6
I only consult my doctor if it is absolutely necessary	1	2	3	4	5	6

comments, notes or obscurities regarding the questions:

The following questions refer to your doctor and to information about various forms of treatments.

Please mark where applicable.

Example: My doctor tells me that whenever I have a cold, I should drink tea.

1	2	3	4	X	6
does not apply at all	does not apply	does rather not apply	rather applies	applies	fully applies

My doctor offers me information about traditional domestic remedy (e.g. wet pack with vinegar etc.) whenever I have ...

	increasing approval →					
... a cold (e.g. runny nose, cough, sore throat, light fever)	1	2	3	4	5	6
... digestive problems (e.g. diarrhoea, constipation, heart burn)	1	2	3	4	5	6
... skin diseases (e.g. swellings because of bug bites, athlete's foot, nail fungus)	1	2	3	4	5	6
... minor injuries (e.g. abrasions, cuts, bruises, strains)	1	2	3	4	5	6
... minor pain (e.g.. headache, backache, joint pain)	1	2	3	4	5	6

My doctor offers me information about non- prescriptive medicine (e.g. Aspirin) whenever I have ...

	increasing approval →					
... a cold (e.g. runny nose, cough, sore throat, light fever)	1	2	3	4	5	6
... digestive problems (e.g. diarrhoea, constipation, heart burn)	1	2	3	4	5	6
... skin diseases (e.g. swellings because of bug bites, athlete's foot, nail fungus)	1	2	3	4	5	6
... minor injuries (e.g. abrasions, cuts, bruises, strains)	1	2	3	4	5	6
... minor pain (e.g.. headache, backache, joint pain)	1	2	3	4	5	6

My doctor offers me information about alternative treatment (e.g. homeopathy, Bach flowers, Traditional Chinese Medicine, etc.) whenever I have ...

	increasing approval →					
... a cold (e.g. runny nose, cough, sore throat, light fever)	1	2	3	4	5	6
... digestive problems (e.g. diarrhoea, constipation, heart burn)	1	2	3	4	5	6
... skin diseases (e.g. swellings because of bug bites, athlete's foot, nail fungus)	1	2	3	4	5	6
... minor injuries (e.g. abrasions, cuts, bruises, strains)	1	2	3	4	5	6
... minor pain (e.g.. headache, backache, joint pain)	1	2	3	4	5	6

comments, notes or obscurities regarding the questions:

My doctor prescribes me medication whenever I have...

	increasing approval →					
... a cold (e.g. runny nose, cough, sore throat, light fever)	1	2	3	4	5	6
... digestive problems (e.g. diarrhoea, constipation, heart burn)	1	2	3	4	5	6
... skin diseases (e.g. swellings because of bug bites, athlete's foot, nail fungus)	1	2	3	4	5	6
... minor injuries (e.g. abrasions, cuts, bruises, strains)	1	2	3	4	5	6
... minor pain (e.g. headache, backache, joint pain)	1	2	3	4	5	6

The following questions refer to your assessment of minor ailments occurring in daily life. As stated above, some can be self-treated, whilst others demand the consultation of a doctor. **Please state your assessment by marking the number that applies with a cross.**

Example: sunburn

1	2	X	4	5	6
self-treatable					medical care

	increasing necessity for medical care →					
minor pain (e.g. headache, backache, joint pain)	1	2	3	4	5	6
cold (e.g. runny nose, cough, sore throat, light fever)	1	2	3	4	5	6
digestive problems (e.g. diarrhoea, constipation, heart burn)	1	2	3	4	5	6
skin diseases (e.g. swellings because of bug bites, athlete's foot, nail fungus)	1	2	3	4	5	6
minor injuries (e.g. abrasions, cuts, bruises, strains)	1	2	3	4	5	6

comments, notes or obscurities regarding the questions:

The following questions refer to information sources of minor ailments. Such minor conditions (e.g. having a cold) are, in most cases, being self-treated or treated by a doctor. We would like to know where you got your information about minor ailments from (in the last 6 months).

Over a period of 6 months, how often have you obtained information from the sources listed below? Please write down the applicable number.

Example: During the last 6 months I played tennis ...7...

Over the last 6 months I obtained information because of minor ailments (e.g. cold, joint pain, digestive problems,...) from

a doctor's homepage	.....
advisory pages on the internet	.....
the online source „Wikipedia“	.....
search engines on the internet	.....
pharmacies	.....
a doctor	.....
hospitals or clinics	.....
public health care centers (e.g. public health office)	.....
friends or acquaintances	.....
female friends or acquaintances (e.g. coworkers)	.....
male friends or acquaintances (e.g.. coworkers)	.....
relatives	.....
female relatives (e.g. mother, sister)	.....
male relatives (e.g. father, brother)	.....
daily newspapers	.....
magazines	.....
TV-Shows	.....
other health professionals (e.g. nurses, chemists)	.....
health care centers specifically oriented towards migrants (e.g. OMEGA)	.....
nowhere, I already have enough information	.....

comments, notes or obscurities regarding the questions:

The following questions refer to behavioural patterns concerning health and everyday life. **To what extent do the following statements apply to you? Mark with a cross where applicable.**

Example: Do you tend to be unpunctual?

1	X	3	4	5	6
does not apply at all	does not apply	does rather not apply	rather applies	applies	fully applies

	increasing approval →					
I take care of my physical and mental health everyday	1	2	3	4	5	6
I feel that I can shape my life the way I want	1	2	3	4	5	6
I have many friends and acquaintances that could support me when necessary	1	2	3	4	5	6
I often need help and support	1	2	3	4	5	6
I sometimes exploit others	1	2	3	4	5	6
I am very interested in health issues	1	2	3	4	5	6
I always take care of increasing my health	1	2	3	4	5	6
Whenever I have a personal goal, (z.B. losing weight, healthy diet, doing sports, no more alcohol/cigarettes etc.) I accomplish it	1	2	3	4	5	6
I am very satisfied with my health condition	1	2	3	4	5	6
I always suffer from long lasting or chronic diseases	1	2	3	4	5	6
I never feel fully comfortable	1	2	3	4	5	6
I sometimes lie	1	2	3	4	5	6
I am sure that my decisions (concerning my health) are always right	1	2	3	4	5	6
I have a profound knowledge about health issues	1	2	3	4	5	6
I always know exactly why I like something	1	2	3	4	5	6
I always eat healthy	1	2	3	4	5	6
I do not drink much alcohol	1	2	3	4	5	6
I smoke everyday	1	2	3	4	5	6
I am trying to exercise or do sports everyday	1	2	3	4	5	6
Many people think I am physically fit	1	2	3	4	5	6
My physical performance is always good	1	2	3	4	5	6

comments, notes or obscurities regarding the questions:

The following questions refer to having minor ailments and how you treat them (forms of therapy).
To what extent do the following statements apply to you? Mark with a cross where applicable.

Example: I often suffer from earache.

1 X 3 4 5 6
 never seldom sometimes often very often always

How often do you suffer from the ailments listed below?

		increasing approval →					
cold (e.g. runny nose, cough, sore throat, light fever)	never	1	2	3	4	5	6 always
digestive problems (e.g. diarrhoea, constipation, heart burn)	never	1	2	3	4	5	6 always
skin diseases (e.g. swellings because of bug bites, athlete's foot, nail fungus)	never	1	2	3	4	5	6 always
minor injuries (e.g. abrasions, cuts, bruises, strains)	never	1	2	3	4	5	6 always
minor pain (e.g.. headache, backache, joint pain)	never	1	2	3	4	5	6 always

How often do you treat the listed ailments with non-prescriptive medicine (e.g. Aspirin +C)?

		increasing approval →					
cold (e.g. runny nose, cough, sore throat, light fever)	never	1	2	3	4	5	6 always
digestive problems (e.g. diarrhoea, constipation, heart burn)	never	1	2	3	4	5	6 always
skin diseases (e.g. swellings because of bug bites, athlete's foot, nail fungus)	never	1	2	3	4	5	6 always
minor injuries (e.g. abrasions, cuts, bruises, strains)	never	1	2	3	4	5	6 always
minor pain (e.g.. headache, backache, joint pain)	never	1	2	3	4	5	6 always

comments, notes or obscurities regarding the questions:

How often do you treat the listed ailments with traditional domestic remedy (e.g. wet pack with vinegar)?

		increasing approval →						
cold (e.g. runny nose, cough, sore throat, light fever)	never	1	2	3	4	5	6	always
digestive problems (e.g. diarrhoea, constipation, heart burn)	never	1	2	3	4	5	6	always
skin diseases (e.g. swellings because of bug bites, athlete's foot, nail fungus)	never	1	2	3	4	5	6	always
minor injuries (e.g. abrasions, cuts, bruises, strains)	never	1	2	3	4	5	6	always
minor pain (e.g.. headache, backache, joint pain)	never	1	2	3	4	5	6	always

How often do you treat the listed ailments with alternative treatment (e.g. homeopathy, Bach flowers, Traditional Chinese Medicine, etc.)?

		increasing approval →						
cold (e.g. runny nose, cough, sore throat, light fever)	never	1	2	3	4	5	6	always
digestive problems (e.g. diarrhoea, constipation, heart burn)	never	1	2	3	4	5	6	always
skin diseases (e.g. swellings because of bug bites, athlete's foot, nail fungus)	never	1	2	3	4	5	6	always
minor injuries (e.g. abrasions, cuts, bruises, strains)	never	1	2	3	4	5	6	always
minor pain (e.g.. headache, backache, joint pain)	never	1	2	3	4	5	6	always

How often do you avoid treating the listed ailments?

		increasing approval →						
cold (e.g. runny nose, cough, sore throat, light fever)	never	1	2	3	4	5	6	always
digestive problems (e.g. diarrhoea, constipation, heart burn)	never	1	2	3	4	5	6	always
skin diseases (e.g. swellings because of bug bites, athlete's foot, nail fungus)	never	1	2	3	4	5	6	always
minor injuries (e.g. abrasions, cuts, bruises, strains)	never	1	2	3	4	5	6	always
minor pain (e.g.. headache, backache, joint pain)	never	1	2	3	4	5	6	always

How often do you consult a doctor when you suffer from the listed ailments?

increasing approval →

cold (e.g. runny nose, cough, sore throat, light fever)	never	1	2	3	4	5	6	always
digestive problems (e.g. diarrhoea, constipation, heart burn)	never	1	2	3	4	5	6	always
skin diseases (e.g. swellings because of bug bites, athlete's foot, nail fungus)	never	1	2	3	4	5	6	always
minor injuries (e.g. abrasions, cuts, bruises, strains)	never	1	2	3	4	5	6	always
minor pain (e.g.. headache, backache, joint pain)	never	1	2	3	4	5	6	always

comments, notes or obscurities regarding the questions:

In the following questions we would like to know how often you have suffered from minor conditions over the last 6 months and which forms of therapy you chose.

Please state the applicable number onto the dotted line.

Over the last 6 months, how often have you suffered from the ailments listed below?

cold (e.g. runny nose, cough, sore throat, light fever)	.....
digestive problems (e.g. diarrhoea, constipation, heart burn)	.....
skin diseases (e.g. swellings because of bug bites, athlete's foot, nail fungus)	.....
minor injuries (e.g. abrasions, cuts, bruises, strains)	.....
minor pain (e.g.. headache, backache, joint pain)	.....

Over the last 6 months, how often have you treated the ailments listed below with non-prescriptive medicine (e.g. Aspirin +C)?

cold
(e.g. runny nose, cough, sore throat, light fever)

digestive problems
(e.g. diarrhoea, constipation, heart burn)

skin diseases
(e.g. swellings because of bug bites, athlete's foot, nail fungus)

minor injuries
(e.g. abrasions, cuts, bruises, strains)

minor pain
(e.g.. headache, backache, joint pain)

Over the last 6 months, how often have you treated the ailments listed below with traditional domestic remedy (e.g. wet pack with vinegar)?

cold
(e.g. runny nose, cough, sore throat, light fever)

digestive problems
(e.g. diarrhoea, constipation, heart burn)

skin diseases
(e.g. swellings because of bug bites, athlete's foot, nail fungus)

minor injuries
(e.g. abrasions, cuts, bruises, strains)

minor pain
(e.g.. headache, backache, joint pain)

Over the last 6 months, how often have you treated the ailments listed below with alternative treatment (e.g. homeopathy, Bach flowers, Traditional Chinese Medicine, etc.)?

cold
(e.g. runny nose, cough, sore throat, light fever)

digestive problems
(e.g. diarrhoea, constipation, heart burn)

skin diseases
(e.g. swellings because of bug bites, athlete's foot, nail fungus)

minor injuries
(e.g. abrasions, cuts, bruises, strains)

minor pain
(e.g.. headache, backache, joint pain)

Over the last 6 months, how often didn't you treat the ailments listed below at all?

cold

(e.g. runny nose, cough, sore throat, light fever)

digestive problems

(e.g. diarrhoea, constipation, heart burn)

skin diseases

(e.g. swellings because of bug bites, athlete's foot, nail fungus)

minor injuries

(e.g. abrasions, cuts, bruises, strains)

minor pain

(e.g.. headache, backache, joint pain)

Over the last 6 months, how often have you consulted a doctor whenever you suffered from the ailments below?

cold

(e.g. runny nose, cough, sore throat, light fever)

digestive problems

(e.g. diarrhoea, constipation, heart burn)

skin diseases

(e.g. swellings because of bug bites, athlete's foot, nail fungus)

minor injuries

(e.g. abrasions, cuts, bruises, strains)

minor pain

(e.g.. headache, backache, joint pain)

comments, notes or obscurities regarding the questions:

Personal Information

Nationality:

Native Country:

Parent's native country:

Grandparent's native country:

Spoken Language(s):

Mother tongue(s):

How good are your English skills? Please mark with a cross where applicable.

fluent good satisfying sufficient insufficient

Occupation? Please mark where applicable.

in training
job-seeking
employed
self-employed
retired
inactive (e.g. maternity/parental leave,
housewife/husband, ..)
others

Highest degree of school education? Please mark where applicable.

no compulsory school
compulsory school (9 years)
apprenticeship
professional school
matriculation
college, university
others

Marital status? Please mark with a cross where applicable.

Single
In a relationship
Married

Number of children?

Number of children in the household?.....

Number of persons in the household?

Thank you for your participation!!!

5.2.1 Pre-test Results

5.2.1.1 Pre-test Results: Tables

Scale “Information Sources on Minor Ailments” (IQKB)

Principal Axis Analysis of Scale “Information Sources on Minor Ailments” (IQKB) with Standardised Items

R^2 = Estimated Communalities

h^2 = Communalities
(accords to the item’s common variance explained by the other items of this factor)

λ = Factor Loading
(accords to the correlation between factor and item; should be less or equal 0.500)

λ^2 = Random Variance
(item’s variance explained by the factor)

VA = Explained variance
(Bühner 2011)

								Factor correlation	
Factor	Subscale	Items	R^2	h^2	λ	λ^2	VA	Factor 2	Factor 3
1: Friends, Acquaintances and Relatives	IQKB-FBFam	friends and acquaintances	.820	.810	.781	.610	41.65%	.466	.473
		female friends, acquaintances	.798	.669	.619	.383			
		male friends, acquaintances	.649	.506	.572	.327			
		relatives	.800	.794	.962	.925			
		female relatives	.813	.767	.943	.889			
		male relatives	.636	.384	.661	.437			
2: Internet	IQKB-I	advisory pages on the internet	.697	.662	.761	.579	13.22%		.324
		the online source Wikipedia	.776	.724	.900	.810			
		search engines on the internet	.649	.506	.572	1.006			
3: Health Professionals	IQKB-FL	pharmacies	.315	.318	.435	.189	7.07%		
		doctors	.360	.186	.360	.130			
		other health professionals (e.g. nurses, chemists)	.425	.652	.876	.767			

Item Analysis of Scale “Information Sources on Minor Ailments” (IQKB) with Un-standardised Items: Standard Deviation, Selectivity and Internal Consistency

$\overline{r_{IIC}}$ = mean correlation of items

r_{ITC} = selectivity

α = internal consistency (Cronbach Alpha Coefficient)

Factor	Subscales	Items	r_{ITC}	α	α^S	$\overline{r_{IIC}}$
1: Friends, Acquaintances and Relatives	IQKB-FBFam	friends and acquaintances	.786	.877	.875	.369 [.047 - .847]
		female friends, acquaintances	.758			
		male friends, acquaintances	.649			
		relatives	.800			
		female relatives	.813			
		male relatives	.636			
2: Internet	IQKB-I	advisory pages on the internet	.597			
		the online source Wikipedia	.492			
		search engines on the internet	.597			
3: Other Health Professionals	IQKB-FL	pharmacies	.440			
		doctors	.302			
		other health professionals (e.g. nurses, chemists)	.333			

Scale “Doctor’s Advice on Minor Ailments” (AIKB)

Principal Axis Analysis of Scale “Doctor’s Advice on Minor Ailments” (AIKB) with Standardised Items

R^2 = Estimated Communality

h^2 = Communality

(accords to the item’s common variance explained by the other items of this factor)

λ = Factor Loading

(accords to the correlation between factor and item; should be less or equal 0.500)

λ^2 = Random Variance

(item’s variance explained by the factor)

VA = Explained variance (Bühner 2011)

Factor	Subscale	Items	R^2	h^2	λ	λ^2	VA	Factor correlation		
								Factor 2	Factor 3	Factor 4
1: Traditional or Homemade Remedies	AIKB-HM	common cold	.873	.773	.773	.597	43.03%	.497	.473	.594
		digestive problems	.872	.811	.921	.848				
		minor skin diseases	.746	.583	.700	.490				
		minor injuries	.905	.824	.937	.878				
		minor pain	.916	.899	.929	.863				
2: Alternative	AIKB-AH	common cold	.897	.684	.813	.660	20.87%		-.109	.478

Forms of Treatment		digestive problems	.907	.831	.859	.738				
		minor skin diseases	.921	.896	.889	.790				
		minor injuries	.903	.807	.889	.790				
		minor pain	.890	.725	.864	.746				
3: Prescriptive Medicine	AIKB-RPM	common cold	.720	.569	.660	.610	8.78%			.254
		digestive problems	.897	.863	.895	.383				
		minor skin diseases	.887	.930	1.01	.327				
		minor injuries	.897	.889	.962	.925				
		minor pain	.796	.655	.943	.889				
4: Non-prescriptive Medicine	AIKB-RFM	common cold	.820	.810	.781	.610	6.52%			
		digestive problems	.798	.669	.619	.383				
		minor skin diseases	.649	.506	.572	.327				
		minor injuries	.800	.794	.962	.925				
		minor pain	.813	.767	.943	.889				

Item Analysis of Scale “Doctor’s Advice on Minor Ailments” (AIKB) with Un-standardised Items: Standard Deviation, Selectivity and Internal Consistency

$\overline{r_{IIC}}$ = mean correlation of items

r_{ITC} = selectivity

α = internal consistency (Cronbach Alpha Coefficient)

Factor	Subscales	Items	r_{ITC}	α	α^S	$\overline{r_{IIC}}$
1: Traditional or Homemade Remedies	AIKB-HM	common cold	.744	.919	.921	.368 [-.238 - .886]
		digestive problems	.664			
		minor skin diseases	.616			
		minor injuries	.645			
		minor pain	.706			
2: Alternative Forms of Treatment	AIKB-AH	common cold	.532			
		digestive problems	.596			
		minor skin diseases	.598			
		minor injuries	.479			
		minor pain	.506			
3: Prescriptive Medicine	AIKB-RPM	common cold	.383			
		digestive problems	.350			
		minor skin diseases	.376			
		minor injuries	.313			
		minor pain	.313			
4: Non-prescriptive Medicine	AIKB-RFM	common cold	.758			
		digestive problems	.780			
		minor skin diseases	.785			
		minor injuries	.815			
		minor pain	.694			

Scale “Methods of Treatment” (VKB)

Principal Axis Analysis of Scale “Methods of Treatment” (VKB) with Standardised Items

R^2 = Estimated Communalities

h^2 = Communalities

(accords to the item’s common variance explained by the other items of this factor)

λ = Factor Loading

(accords to the correlation between factor and item; should be less or equal 0.500)

λ^2 = Random Variance

(item’s variance explained by the factor)

VA = Explained variance

(Bühner 2011)

Factor	Subscale	Items	R^2	h^2	λ	λ^2	VA	Factor correlation	
								Factor 2	Factor 3
1: Alternative Forms of Treatment	VKB-am	common cold	.797	.752	.846	.716	38.02%	.380	.224
		digestive problems	.893	.834	.907	.823			
		minor skin diseases	.929	.923	.959	.920			
		minor injuries	.883	.858	.943	.889			
		minor pain	.870	.855	.924	.854			
2: Traditional or Homemade Remedies	VKB-hm	common cold	.897	.684	.813	.660	17.37%		.275
		digestive problems	.907	.831	.859	.738			
		minor skin diseases	.921	.896	.889	.790			
		minor injuries	.903	.807	.889	.790			
		minor pain	.890	.725	.864	.746			
3: Non-prescriptive Medicine	VKB-rf	common cold	.774	.828	.926	.857	13.11%		
		digestive problems	.559	.504	.688	.473			
		minor skin diseases	.633	.460	.620	.384			
		minor injuries	.678	.664	.758	.575			
		minor pain	.717	.561	.763	.582			

Principal Axis Analysis of Subscale “No Therapy” (VKB-n) with Standardised Items

Factor	Subscale	Items	R^2	h^2	λ	λ^2	VA
1: No Therapy	VKB-n	common cold	.686	.700	.837	.701	62.42%
		digestive problems	.711	.699	.836	.699	
		minor skin diseases	.632	.674	.821	.674	
		minor injuries	.408	.452	.673	.453	
		minor pain	.565	.545	.739	.546	

Item Analysis of Scale “Methods of Treatment” (VKB) with Un-standardised Items: Standard Deviation, Selectivity and Internal Consistency

$\overline{r_{IIC}}$ = mean correlation of items

r_{ITC} = selectivity

α = internal consistency (Cronbach Alpha Coefficient)

Factor	Subscales	Items	r_{ITC}	α	α^S	$\overline{r_{IIC}}$
1: Alternative Forms of Treatment	VKB-am	common cold	.622	.883	.886	.340 [-.042 - .912]
		digestive problems	.628			
		minor skin diseases	.635			
		minor injuries	.605			
		minor pain	.636			
2: Traditional or Homemade Remedies	VKB-hm	common cold	.379			
		digestive problems	.529			
		minor skin diseases	.598			
		minor injuries	.611			
		minor pain	.622			
3: Non-prescriptive Medicine	VKB-rf	common cold	.450			
		digestive problems	.470			
		minor skin diseases	.465			
		minor injuries	.551			
		minor pain	.397			

Item Analysis of Subscale “No Therapy” (VKB-n) with Un-standardised Items: Standard Deviation, Selectivity and Internal Consistency

$\overline{r_{IIC}}$ = mean correlation of items

r_{ITC} = selectivity

α = internal consistency (Cronbach Alpha Coefficient)

Factor	Subscales	Items	r_{ITC}	α	α^S	$\overline{r_{IIC}}$
1: No Therapy	VKB-n	common cold	.767	.885	.886	.606 [.514 - .765]
		digestive problems	.768			
		minor skin diseases	.763			
		minor injuries	.635			
		minor pain	.692			

Scale “Health Status and Health Behaviour” (GHSoz)

Principal Axis Analysis of Scale “Health Status and Health Behaviour” (GHSoz) with Standardised Items

R^2 = Estimated Communalities

h^2 = Communality

(accords to the item’s common variance explained by the other items of this factor)

λ = Factor Loading

(accords to the correlation between factor and item; should be less or equal 0.500)

λ^2 = Random Variance

(item’s variance explained by the factor)

VA = Explained variance

(Bühner 2011)

Factor	Subscale	Items	R^2	h^2	λ	λ^2	VA	Factor 2
1: Health Knowledge and Interest	WIG	I am very interested in health issues	.380	.515	.714	.510	28.45%	.048
		I always take care of increasing my health	.418	.589	.759	.576		
		I have a profound knowledge about health issues	.333	.430	.653	.426		
2: Health Status	StaG	I am very satisfied with my health condition	.356	.498	.638 ¹	.407	22.64%	
		I always suffer from long lasting or chronic diseases ³	.329	.472	.626 ²	.392		
		I never feel fully comfortable ³	.360	.562	.748	.559		
3: Health Conscious Behaviour	SELG	I feel that I can shape my life the way I want	.281	.511	.715	.511	41.70%	
		I am sure that my decisions (concerning my health) are always right	.179	.275	.524	.275		
		I always know exactly why I like something	.267	.456	.675	.456		

¹ Positive, two-barreled loading on first factor “health knowledge and interest” ($\lambda = .272$).

² Negative, two-barreled loading on first factor “health knowledge and interest” ($\lambda = .316$).

³ Reversed items

Item Analysis of Scale “Health Status and Health Behaviour” (GHSoz) with Un-standardised Items: Standard Deviation, Selectivity and Internal Consistency

$\overline{r_{IIC}}$ = mean correlation of items

r_{ITC} = selectivity

α = internal consistency (Cronbach Alpha Coefficient)

Factor	Subscale	Items	r_{ITC}	α	α^S	$\overline{r_{IIC}}$
1: Health Knowledge and Interest	WIG	I am very interested in health issues	.245	.567	.596	.197 [-.250 - .529]
		I always take care of increasing my health	.393			
		I have a profound knowledge about health issues	.359			
2: Health Status	StaG	I am very satisfied with my health condition	.518			
		I always suffer from long lasting or chronic diseases	.051			
		I never feel fully comfortable	.387			
3: Health Conscious Behaviour	SELFG	I feel that I can shape my life the way I want	.516	.666	.664	.404 [-.353 - .483]
		I am sure that my decisions (concerning my health) are always right	.423			
		I always know exactly why I like something	.503			

5.2.1.2 Pre-test Results: Graphs

Scale "Information Sources on Minor Ailments" (IQKB)

Scale “Doctor’s Advice on Minor Ailments” (AIKB)

Scale "Methods of Treatment" (VKB)

Scale "Health Status and Health Behaviour" (GHSoz)

5.3 Full Sample: Scales of the Questionnaire

OPEN QUESTIONS

(Research Question 1)

- What do you understand by minor ailments? Please list some diseases or symptoms which you would categorize as minor ailments.
- There are many minor ailments in our daily life – some can be self-treated and some demand the consultation of a doctor. Please list some minor conditions that – in your opinion – do NOT make consulting a doctor necessary.

SCALE AFKB “Personal Necessity to Require a Doctor’s Attention“

(Research Question 1)

The following questions refer to your assessment of minor ailments occurring in daily life. As stated above, some can be self-treated, whilst others demand the consultation of a doctor.

Please state your assessment by marking the number that applies with a cross.

Example: sunburn

1	2	X	4	5	6
self-treatable					medical care

increasing necessity for medical care →

minor pain (e.g. headache, backache, joint pain)	1	2	3	4	5	6
cold (e.g. runny nose, cough, sore throat, light fever)	1	2	3	4	5	6
digestive problems (e.g. diarrhoea, constipation, heart burn)	1	2	3	4	5	6
skin diseases (e.g. swellings because of bug bites, athlete’s foot, nail fungus)	1	2	3	4	5	6
minor injuries (e.g. abrasions, cuts, bruises, strains)	1	2	3	4	5	6

SCALE IQKB “Information Sources on Minor Ailments”

(Research Question 2)

The following questions refer to information sources of minor ailments. Such minor conditions (e.g. having a cold) are, in most cases, being self-treated or treated by a doctor. We would like to know where you currently get your information about minor ailments from and also where you got them from in the past.

Do the following statements apply to you? Please mark with a cross where applicable.

Example: I sing when having a shower.

1 X 3 4 5 6
 never seldom sometimes often very often always

Whenever I need information about minor ailments (e.g. cold, joint pain, digestive problems, etc.), I obtain it from...

friends or acquaintances	never	1	2	3	4	5	6	always
advisory pages on the internet	never	1	2	3	4	5	6	always
female relatives (e.g. mother, sister)	never	1	2	3	4	5	6	always
pharmacies	never	1	2	3	4	5	6	always
relatives	never	1	2	3	4	5	6	always
the online source „Wikipedia“	never	1	2	3	4	5	6	always
other health professionals (e.g. nurses, chemists)	never	1	2	3	4	5	6	always
female friends or acquaintances (e.g. coworkers)	never	1	2	3	4	5	6	always
search engines on the internet	never	1	2	3	4	5	6	always
a doctor	never	1	2	3	4	5	6	always
male friends or acquaintances (e.g. co-workers)	never	1	2	3	4	5	6	always
health care centres specifically oriented towards migrants (e.g. OMEGA)	never	1	2	3	4	5	6	always
male relatives (e.g. father, brother)	never	1	2	3	4	5	6	always

SCALE GHSoz “Health Status and Health Behaviour” (Research Question 3)

The following questions refer to behavioural patterns concerning health and everyday life. **To what extent do the following statements apply to you? Mark with a cross where applicable.**

Example: Do you tend to be unpunctual?

1 X 3 4 5 6
 does not apply at all does not apply does rather not apply rather applies applies fully applies

increasing approval →

I take care of my physical and mental health everyday	1	2	3	4	5	6
Many people think I am physically fit	1	2	3	4	5	6
I have many friends and acquaintances that could support me when necessary	1	2	3	4	5	6
I often need help and support	1	2	3	4	5	6
I sometimes have exploited others	1	2	3	4	5	6
I am very interested in health issues	1	2	3	4	5	6
I always take care of increasing my health	1	2	3	4	5	6
Whenever I have a personal goal, (z.B. losing weight, healthy diet, doing sports, no more alcohol/cigarettes etc.) I accomplish it	1	2	3	4	5	6
I am very satisfied with my health condition	1	2	3	4	5	6
I always suffer from long lasting or chronic diseases	1	2	3	4	5	6

I never feel fully comfortable	1	2	3	4	5	6
I sometimes lie in times of need	1	2	3	4	5	6
I am sure that my decisions (concerning my health) are always right	1	2	3	4	5	6
I have a profound knowledge about health issues	1	2	3	4	5	6
I am trying to exercise or do sports everyday	1	2	3	4	5	6
My physical performance is always good	1	2	3	4	5	6

SCALE HKB “Frequency of Experienced Minor Ailments” (Research Question 4)

The following questions refer to having minor ailments and how you treat them (forms of therapy). To what extent do the following statements apply to you? Mark with a cross where applicable.

Example: I often suffer from earache.

1	X	3	4	5	6
never	seldom	sometimes	often	very often	always

How often do you suffer from the ailments listed below?

increasing approval →

cold (e.g. runny nose, cough, sore throat, light fever)	never	1	2	3	4	5	6	always
digestive problems (e.g. diarrhoea, constipation, heart burn)	never	1	2	3	4	5	6	always
skin diseases (e.g. swellings because of bug bites, athlete's foot, nail fungus)	never	1	2	3	4	5	6	always
minor injuries (e.g. abrasions, cuts, bruises, strains)	never	1	2	3	4	5	6	always
minor pain (e.g.. headache, backache, joint pain)	never	1	2	3	4	5	6	always

SCALE VKB “Methods of Treatment” (Research Question 4 & 5)

How often do you treat the listed ailments with non-prescriptive medicine (e.g. Aspirin +C)?

Increasing approval →

minor pain (e.g.. headache, backache, joint pain)	never	1	2	3	4	5	6	always
cold (e.g. runny nose, cough, sore throat, light fever)	never	1	2	3	4	5	6	always

skin diseases (e.g. swellings because of bug bites, athlete's foot, nail fungus)	never	1	2	3	4	5	6	always
minor injuries (e.g. abrasions, cuts, bruises, strains)	never	1	2	3	4	5	6	always
digestive problems (e.g. diarrhoea, constipation, heart burn)	never	1	2	3	4	5	6	always

How often do you treat the listed ailments with traditional domestic remedy (e.g. wet pack with vinegar)?

increasing approval →

cold (e.g. runny nose, cough, sore throat, light fever)	never	1	2	3	4	5	6	always
minor injuries (e.g. abrasions, cuts, bruises, strains)	never	1	2	3	4	5	6	always
minor pain (e.g.. headache, backache, joint pain)	never	1	2	3	4	5	6	always
digestive problems (e.g. diarrhoea, constipation, heart burn)	never	1	2	3	4	5	6	always
skin diseases (e.g. swellings because of bug bites, athlete's foot, nail fungus)	never	1	2	3	4	5	6	always

How often do you treat the listed ailments with alternative treatment (e.g. homeopathy, Bach flowers, Traditional Chinese Medicine, etc.)?

increasing approval →

cold (e.g. runny nose, cough, sore throat, light fever)	never	1	2	3	4	5	6	always
digestive problems (e.g. diarrhoea, constipation, heart burn)	never	1	2	3	4	5	6	always
skin diseases (e.g. swellings because of bug bites, athlete's foot, nail fungus)	never	1	2	3	4	5	6	always
minor injuries (e.g. abrasions, cuts, bruises, strains)	never	1	2	3	4	5	6	always
minor pain (e.g.. headache, backache, joint pain)	never	1	2	3	4	5	6	always

How often do you avoid treating the listed ailments?

increasing approval →

cold (e.g. runny nose, cough, sore throat, light fever)	never	1	2	3	4	5	6	always
digestive problems (e.g. diarrhoea, constipation, heart burn)	never	1	2	3	4	5	6	always
skin diseases (e.g. swellings because of bug bites, athlete's foot, nail fungus)	never	1	2	3	4	5	6	always
minor injuries (e.g. abrasions, cuts, bruises, strains)	never	1	2	3	4	5	6	always
minor pain (e.g. headache, backache, joint pain)	never	1	2	3	4	5	6	always

How often do you consult a doctor when you suffer from the listed ailments?

increasing approval →

skin diseases (e.g. swellings because of bug bites, athlete's foot, nail fungus)	never	1		3	4	5	6	always
minor injuries (e.g. abrasions, cuts, bruises, strains)	never	1	2	3	4	5	6	always
minor pain (e.g.. headache, backache, joint pain)	never	1	2	3	4	5	6	always
cold (e.g. runny nose, cough, sore throat, light fever)	never	1	2	3	4	5	6	always
digestive problems (e.g. diarrhoea, constipation, heart burn)	never	1	2	3	4	5	6	always

SCALE AIKB “Doctor’s Advice on Minor Ailments”

(Research Question 5)

The following questions refer to your doctor and to information about various forms of treatments.
Please mark where applicable.

Example: My doctor tells me that whenever I have a cold, I should drink tea.						
1	2	3	4	X		6
does not apply at all	does not apply	does rather not apply	rather applies	applies		fully applies

My doctor offers me information about traditional domestic remedy (e.g. wet pack with vinegar etc.) whenever I have ...

increasing approval →

... skin diseases (e.g. swellings because of bug bites, athlete's foot, nail fungus)	1	2	3	4	5	6
... minor pain (e.g.. headache, backache, joint pain)	1	2	3	4	5	6
... a cold (e.g. runny nose, cough, sore throat, light fever)	1	2	3	4	5	6
... digestive problems (e.g. diarrhoea, constipation, heart burn)	1	2	3	4	5	6
... minor injuries (e.g. abrasions, cuts, bruises, strains)	1	2	3	4	5	6

My doctor offers me information about non-prescriptive medicine (i.e. OTC-products, e.g. Aspirin) whenever I have ...

	increasing approval →					
... minor injuries (e.g. abrasions, cuts, bruises, strains)	1	2	3	4	5	6
... a cold (e.g. runny nose, cough, sore throat, light fever)	1	2	3	4	5	6
... digestive problems (e.g. diarrhoea, constipation, heart burn)	1	2	3	4	5	6
... skin diseases (e.g. swellings because of bug bites, athlete's foot, nail fungus)	1	2	3	4	5	6
... minor pain (e.g.. headache, backache, joint pain)	1	2	3	4	5	6

My doctor offers me information about alternative treatment (e.g. homeopathy, Bach flowers, Traditional Chinese Medicine, etc.) whenever I have ...

	increasing approval →					
... a cold (e.g. runny nose, cough, sore throat, light fever)	1	2	3	4	5	6
... digestive problems (e.g. diarrhoea, constipation, heart burn)	1	2	3	4	5	6
... skin diseases (e.g. swellings because of bug bites, athlete's foot, nail fungus)	1	2	3	4	5	6
... minor injuries (e.g. abrasions, cuts, bruises, strains)	1	2	3	4	5	6
... minor pain (e.g.. headache, backache, joint pain)	1	2	3	4	5	6

My doctor prescribes me medication whenever I have...

	increasing approval →					
... digestive problems (e.g. diarrhoea, constipation, heart burn)	1	2	3	4	5	6
... minor pain (e.g.. headache, backache, joint pain)	1	2	3	4	5	6
... a cold (e.g. runny nose, cough, sore throat, light fever)	1	2	3	4	5	6
... skin diseases (e.g. swellings because of bug bites, athlete's foot, nail fungus)	1	2	3	4	5	6
... minor injuries (e.g. abrasions, cuts, bruises, strains)	1	2	3	4	5	6

5.4 Full Sample: Questionnaire in German

Sehr geehrte Damen und Herren,

ich freue mich, dass Sie an meiner Studie teilnehmen!

Im Rahmen meines Dissertationsprojektes am Institut für Pharmazie führe ich Befragungen zum Gesundheitsverhalten von in Graz lebenden Migrantinnen und Migranten durch, es geht also um Fragen in Bezug auf Gesundheit, Krankheit und Medizin.

Die Ergebnisse sowie Informationen zur Studie finden Sie im Internet auf der Projekthomepage unter <http://www.reducingbarriers.jimdo.com>.

Diese Erhebung dient rein wissenschaftlichen Zwecken und alle gewonnenen Daten werden anonymisiert, d.h. werden selbstverständlich vertraulich behandelt und nirgendwo veröffentlicht werden.

Beiliegend finden Sie den Fragebogen. Bitte nehmen Sie sich Zeit, um die Fragen genau durchzulesen und die für Sie jeweils am besten passende Antwort auszuwählen.

Arbeiten Sie die Fragen in der vorgegebenen Reihenfolge ab, lassen Sie bitte keine Frage aus, und denken Sie daran: Es gibt keine richtigen oder falschen Antworten!

Sobald Sie den Fragebogen und das abschließende Datenblatt fertig ausgefüllt haben, sammle ich beides wieder ab.

Vielen Dank für Ihre Mithilfe!

Für eine fehlerfreie Auswertung der Daten müssen die Informationen den jeweiligen Fragebogen eindeutig zuordnungsbar sein. Dafür generieren wir einen Code, der sich aus den Anfangsbuchstaben Ihres Vor- bzw. Familiennamens, Ihrem Geburtsjahr sowie Ihrem Geschlecht zusammensetzt (siehe Beispiel). Alle gemachten Angaben bleiben selbstverständlich völlig anonym und werden vertraulich behandelt!

Beispiel!

<u>Vorname:</u> Sabine	<div>S</div> <div>B</div> <div>78</div> <div>W</div>
<u>Nachname:</u> Bauer	
<u>Geburtsjahr:</u> 1978	
<u>Geschlecht:</u> weiblich	

Anfangsbuchstabe des Vornames	Anfangsbuchstabe des Familiennamens	Die letzten beiden Zahlen des Geburtsjahres	Das Geschlecht w... für weiblich m... für männlich
----------------------------------	--	---	--

Bitte hier Ihren Code eintragen!

--	--	--	--

Anfangsbuchstabe des Vornames	Anfangsbuchstabe des Familiennamens	Die letzten beiden Zahlen des Geburtsjahres	Das Geschlecht w... für weiblich m... für männlich
----------------------------------	--	---	--

Was verstehen Sie unter geringfügigen oder kleineren Beschwerden? Bitte zählen Sie einige Erkrankungen bzw. Symptome auf, welche Sie als geringfügige oder kleinere Beschwerden definieren würden.

.....

.....

.....

.....

.....

.....

.....

.....

Es gibt viele alltägliche Beschwerden - manche sind selbst, d.h. ohne ärztliche Unterstützung, behandelbar, andere wiederum benötigen ärztliche Aufmerksamkeit. Bitte zählen Sie einige alltägliche Beschwerden auf, die ihrer Meinung nach KEINER ärztlichen Fürsorge bedürfen.

.....

.....

.....

.....

.....

.....

.....

.....

Anmerkungen, Unklarheiten oder Ergänzungen zu den Fragen:

Die folgenden Fragen beziehen sich auf Informationsquellen zu geringfügigen Beschwerden. Solche kleineren Beschwerden (z.B. Erkältungen) werden meist entweder von Ihnen selbst oder unter Aufsicht einer Ärztin / eines Arztes behandelt. Wir möchten gerne wissen, woher Sie Ihre Informationen zu kleineren Beschwerden beziehen bzw. in der Vergangenheit bezogen haben.

Treffen die folgenden Aussagen auf Sie zu? Bitte kreuzen Sie die entsprechende Zahl an.

Beispiel: Ich singe unter der Dusche.

1 X 3 4 5 6
 nie selten manchmal oft sehr oft immer

Wenn ich Informationen zu kleineren Beschwerden (z.B. Erkältung, Gelenksschmerzen, Verdauungsprobleme, etc.) benötige, informiere ich mich ...

bei Freunden oder Bekannten	nie	1	2	3	4	5	6	immer
auf Ratgeberseiten im Internet	nie	1	2	3	4	5	6	immer
bei weiblichen Familienangehörigen (z.B. Mutter, Schwester)	nie	1	2	3	4	5	6	immer
in Apotheken	nie	1	2	3	4	5	6	immer
bei Familienangehörigen	nie	1	2	3	4	5	6	immer
im Internet auf Wikipedia	nie	1	2	3	4	5	6	immer
bei anderen Fachleuten (z.B. KrankenpflegerInnen, DrogistInnen)	nie	1	2	3	4	5	6	immer
bei weiblichen Freunden oder Bekannten (z.B. Arbeitskollegin)	nie	1	2	3	4	5	6	immer
im Internet über Suchmaschinen	nie	1	2	3	4	5	6	immer
bei einer Ärztin bzw. einem Arzt	nie	1	2	3	4	5	6	immer
bei männlichen Freunden oder Bekannten (z.B. Arbeitskollege)	nie	1	2	3	4	5	6	immer
bei migrantenspezifischen Gesundheitseinrichtungen (z.B. OMEGA)	nie	1	2	3	4	5	6	immer
bei männlichen Familienangehörigen (z.B. Vater, Bruder)	nie	1	2	3	4	5	6	immer

Die folgenden Fragen beziehen sich auf Ihr Verhalten bei kleineren Beschwerden und auf allgemeine Verhaltensweisen bei Arztbesuchen. Bewerten Sie bitte die Aussagen je nachdem, wie weit diese auf Sie zutreffen und kreuzen Sie die entsprechende Zahl an.

Die folgenden Fragen beziehen sich auf Ihre Ärztin / Ihren Arzt

steigende Zustimmung →

Meine Ärztin / mein Arzt sagt mir, wie ich kleine Beschwerden selbst behandeln kann	1	2	3	4	5	6
Meine Ärztin / mein Arzt ist meine erste Anlaufstelle wenn ich mich krank fühle	1	2	3	4	5	6
Nur wenn es absolut notwendig ist, suche ich einen Ärztin / einen Arzt auf	1	2	3	4	5	6

Die folgenden Fragen beziehen sich auf Ihr Verhalten bei kleineren Beschwerden und auf allgemeine Verhaltensweisen bei Arztbesuchen. Bewerten Sie bitte die Aussagen je nachdem, wie weit diese auf Sie zutreffen und kreuzen Sie die entsprechende Zahl an.

Beispiel: Meine Ärztin / mein Arzt verschreibt mir immer rezeptpflichtige Medikamente.

1	X	3	4	5	6
trifft überhaupt nicht zu	trifft nicht zu	trifft eher nicht zu	trifft eher zu	trifft zu	trifft voll und ganz zu

Wenn ich an kleineren Beschwerden wie z.B. Erkältungssymptomen leide ...

steigende Zustimmung →

...erkundige ich mich bei Freunden, Bekannten oder Familienmitgliedern was ich tun soll

1 2 3 4 5 6

...behandle ich mich selbst

1 2 3 4 5 6

...suche ich immer sofort eine Ärztin bzw. einen Arzt auf

1 2 3 4 5 6

...weiß ich genau, wie ich mich selbst behandeln kann

1 2 3 4 5 6

...suche ich eine Ärztin bzw. einen Arzt auf, wenn sich meine Beschwerden nach einigen Tagen nicht gebessert haben

1 2 3 4 5 6

...suche ich nur dann eine Ärztin bzw. einen Arzt auf, wenn ich nicht weiß wie ich mich selbst behandeln soll

1 2 3 4 5 6

Die folgenden Fragen beziehen sich auf Ihre Einschätzung von alltäglichen Beschwerden. Wie erwähnt, sind manche selbst behandelbar, während andere ärztliche Aufmerksamkeit verlangen. Bitte geben Sie Ihre Einschätzung der angeführten Erkrankungen durch Ankreuzen des entsprechenden Zahlenwertes an.

Beispiel: Sonnenbrand

1	2	3	X	5	6
selbst behandelbar				ärztliche Fürsorge	

steigende Notwendigkeit für ärztliche Fürsorge →

Leichte Schmerzen (z.B. Kopfschmerzen, Rückenschmerzen, Gelenkschmerzen)

1 2 3 4 5 6

Erkältung (z.B. Schnupfen, Husten, Halsschmerzen, leichtes Fieber)

1 2 3 4 5 6

Verdauungsprobleme (z.B. leichter Durchfall, leichte Verstopfung, Sodbrennen)

1 2 3 4 5 6

Hauterkrankungen (z.B. Schwellungen nach Insektenstichen, Fußpilz, Nagelpilz)

1 2 3 4 5 6

Leichte Verletzungen (z.B. Schürfwunden, Schnittwunden, Prellungen, Zerrungen)

1 2 3 4 5 6

Die folgenden Fragen beziehen sich auf Ihre Ärztin / Ihren Arzt und auf Information zu unterschiedlichen Therapieformen. Bitte geben Sie Ihre Zustimmung über Ankreuzen des entsprechenden Zahlenwertes bekannt.

Beispiel: Meine Ärztin / mein Arzt sagt mir, dass ich bei Erkältungen Tee trinken soll.

1	2	3	4	X	6
trifft überhaupt nicht zu	trifft nicht zu	trifft eher nicht zu	trifft eher zu	trifft zu	trifft voll und ganz zu

Meine Ärztin / mein Arzt informiert mich zu traditionellen Hausmitteln wie z.B. Essigwickel bei

	steigende Zustimmung →					
... Hauterkrankungen (z.B. Schwellungen nach Insektenstichen, Fußpilz, Nagelpilz)	1	2	3	4	5	6
... leichten Schmerzen (z.B. Kopfschmerzen, Rückenschmerzen, Gelenkschmerzen)	1	2	3	4	5	6
... einer Erkältung (z.B. Schnupfen, Husten, Halsschmerzen, leichtes Fieber)	1	2	3	4	5	6
... Verdauungsproblemen (z.B. leichter Durchfall, leichte Verstopfung, Sodbrennen)	1	2	3	4	5	6
... leichten Verletzungen (z.B. Schürfwunden, Schnittwunden, Prellungen, Zerrungen)	1	2	3	4	5	6

Meine Ärztin / mein Arzt informiert mich zu rezeptfreien Medikamenten (z.B. Aspirin C) bei

	steigende Zustimmung →					
... leichten Verletzungen (z.B. Schürfwunden, Schnittwunden, Prellungen, Zerrungen)	1	2	3	4	5	6
... einer Erkältung (z.B. Schnupfen, Husten, Halsschmerzen, leichtes Fieber)	1	2	3	4	5	6
... Verdauungsproblemen (z.B. leichter Durchfall, leichte Verstopfung, Sodbrennen)	1	2	3	4	5	6
... Hauterkrankungen (z.B. Schwellungen nach Insektenstichen, Fußpilz, Nagelpilz)	1	2	3	4	5	6
... leichten Schmerzen (z.B. Kopfschmerzen, Rückenschmerzen, Gelenkschmerzen)	1	2	3	4	5	6

Meine Ärztin / mein Arzt informiert mich zu alternativen Heilmethoden (z.B. Homöopathie, Bachblüten, Traditionelle Chinesische Medizin, etc.) bei ...

	steigende Zustimmung →					
... einer Erkältung (z.B. Schnupfen, Husten, Halsschmerzen, leichtes Fieber)	1	2	3	4	5	6
... Verdauungsproblemen (z.B. leichter Durchfall, leichte Verstopfung, Sodbrennen)	1	2	3	4	5	6
... Hauterkrankungen (z.B. Schwellungen nach Insektenstichen, Fußpilz, Nagelpilz)	1	2	3	4	5	6
... leichten Verletzungen (z.B. Schürfwunden, Schnittwunden, Prellungen, Zerrungen)	1	2	3	4	5	6
... leichten Schmerzen (z.B. Kopfschmerzen, Rückenschmerzen, Gelenkschmerzen)	1	2	3	4	5	6

Anmerkungen, Unklarheiten oder Ergänzungen zu den Fragen:

Meine Ärztin / mein Arzt verordnet mir Medikamente auf Rezept bei ...

	steigende Zustimmung →→					
... Verdauungsproblemen (z.B. leichter Durchfall, leichte Verstopfung, Sodbrennen)	1	2	3	4	5	6
... leichten Schmerzen (z.B. Kopfschmerzen, Rückenschmerzen, Gelenkschmerzen)	1	2	3	4	5	6
... einer Erkältung (z.B. Schnupfen, Husten, Halsschmerzen, leichtes Fieber)	1	2	3	4	5	6
... Hauterkrankungen (z.B. Schwellungen nach Insektenstichen, Fußpilz, Nagelpilz)	1	2	3	4	5	6
... leichten Verletzungen (z.B. Schürfwunden, Schnittwunden, Prellungen, Zerrungen)	1	2	3	4	5	6

Die folgenden Fragen beziehen sich auf allgemeine Verhaltensweisen rund um Gesundheit und Alltag. Bewerten Sie bitte die Aussagen je nachdem, wie weit diese auf Sie zutreffen und kreuzen Sie die entsprechende Zahl an.

Beispiel: Sind Sie hin und wieder unpünktlich?

1 X 3 4 5 6
trifft überhaupt nicht zu trifft nicht zu trifft eher nicht zu trifft eher zu trifft zu trifft voll und ganz zu

	steigende Zustimmung →→					
Ich achte jeden Tag sehr auf meine körperliche und emotionale Gesundheit	1	2	3	4	5	6
Viele Leute halten mich für außergewöhnlich fit	1	2	3	4	5	6
Ich habe viele Freunde und Bekannte, die mich bei Bedarf unterstützen können	1	2	3	4	5	6
Ich bin oft auf Unterstützung angewiesen	1	2	3	4	5	6
Ich habe gelegentlich mal jemanden ausgenutzt	1	2	3	4	5	6
Das Thema Gesundheit interessiert mich sehr	1	2	3	4	5	6
Ich achte immer darauf, meine Gesundheit zu fördern	1	2	3	4	5	6
Wenn ich ein persönliches Ziel (z.B. Gewichtsabnahme, gesündere Ernährung, Sport, Aufgeben von Alkohol / Zigaretten etc.) habe, erreiche ich es immer	1	2	3	4	5	6
Ich bin mit meiner Gesundheit sehr zufrieden	1	2	3	4	5	6
Ich leide ständig unter lang dauernden oder chronischen Erkrankungen	1	2	3	4	5	6
Ich fühle mich nie rundum wohl	1	2	3	4	5	6
Zur Not lüge ich auch schon mal	1	2	3	4	5	6
Ich bin mir sicher, dass meine Entscheidungen (betreffend meiner Gesundheit) die richtigen sind	1	2	3	4	5	6
Ich habe ein sehr gutes Wissen zum Thema Gesundheit	1	2	3	4	5	6
Ich achte jeden Tag darauf, mich viel zu bewegen	1	2	3	4	5	6
Meine körperliche Leistungsfähigkeit ist immer gut	1	2	3	4	5	6

Die folgenden Fragen beziehen sich auf das Vorliegen kleinerer Beschwerden und darauf, wie Sie kleinere Beschwerden behandeln (Therapieformen). Treffen die folgenden Aussagen auf Sie zu? Bitte kreuzen Sie die entsprechende Zahl an.

Beispiel: Ich leide häufig an Ohrenschmerzen.

1 2 3 4 5 6
nie selten manchmal oft sehr oft immer

Wie häufig leiden Sie unter den angeführten Beschwerden?

steigende Zustimmung →

Erkältung

(z.B. Schnupfen, Husten, Halsschmerzen, leichtes Fieber)

nie 1 2 3 4 5 6 immer

Verdauungsprobleme

(z.B. leichter Durchfall, leichte Verstopfung, Sodbrennen)

nie 1 2 3 4 5 6 immer

Hauterkrankungen

(z.B. Schwellungen nach Insektenstichen, Fußpilz, Nagelpilz)

nie 1 2 3 4 5 6 immer

Leichte Verletzungen

(z.B. Schürfwunden, Schnittwunden, Prellungen, Zerrungen)

nie 1 2 3 4 5 6 immer

Leichte Schmerzen

(z.B. Kopfschmerzen, Rückenschmerzen, Gelenkschmerzen)

nie 1 2 3 4 5 6 immer

Wie häufig behandeln Sie die angegebenen Beschwerden mit rezeptfreien Medikamenten (z.B. Aspirin C)?

Leichte Schmerzen

(z.B. Kopfschmerzen, Rückenschmerzen, Gelenkschmerzen)

steigende Zustimmung →

nie 1 2 3 4 5 6 immer

Erkältung

(z.B. Schnupfen, Husten, Halsschmerzen, leichtes Fieber)

nie 1 2 3 4 5 6 immer

Hauterkrankungen

(z.B. Schwellungen nach Insektenstichen, Fußpilz, Nagelpilz)

nie 1 2 3 4 5 6 immer

Leichte Verletzungen

(z.B. Schürfwunden, Schnittwunden, Prellungen, Zerrungen)

nie 1 2 3 4 5 6 immer

Verdauungsprobleme

(z.B. leichter Durchfall, leichte Verstopfung, Sodbrennen)

nie 1 2 3 4 5 6 immer

Wie häufig suchen Sie bei den angegebenen Beschwerden eine Ärztin / einen Arzt auf?

Hauterkrankungen

(z.B. Schwellungen nach Insektenstichen, Fußpilz, Nagelpilz)

steigende Zustimmung →

nie 1 2 3 4 5 6 immer

Leichte Verletzungen

(z.B. Schürfwunden, Schnittwunden, Prellungen, Zerrungen)

nie 1 2 3 4 5 6 immer

Leichte Schmerzen

(z.B. Kopfschmerzen, Rückenschmerzen, Gelenkschmerzen)

nie 1 2 3 4 5 6 immer

Erkältung

(z.B. Schnupfen, Husten, Halsschmerzen, leichtes Fieber)

nie 1 2 3 4 5 6 immer

Verdauungsprobleme

(z.B. leichter Durchfall, leichte Verstopfung, Sodbrennen)

nie 1 2 3 4 5 6 immer

Wie häufig behandeln Sie die angegebenen Beschwerden mit **traditionellen Hausmitteln** (z.B. Essigwickel)?

steigende Zustimmung →

Erkältung (z.B. Schnupfen, Husten, Halsschmerzen, leichtes Fieber)	nie	1	2	3	4	5	6	immer
Leichte Verletzungen (z.B. Schürfwunden, Schnittwunden, Prellungen, Zerrungen)	nie	1	2	3	4	5	6	immer
Leichte Schmerzen (z.B. Kopfschmerzen, Rückenschmerzen, Gelenkschmerzen)	nie	1	2	3	4	5	6	immer
Verdauungsprobleme (z.B. leichter Durchfall, leichte Verstopfung, Sodbrennen)	nie	1	2	3	4	5	6	immer
Hauterkrankungen (z.B. Schwellungen nach Insektenstichen, Fußpilz, Nagelpilz)	nie	1	2	3	4	5	6	immer

Wie häufig behandeln Sie die angegebenen Beschwerden mit **alternativen Heilmethoden** (z.B. Homöopathie, Bachblüten, Traditionelle Chinesische Medizin, etc.)?

steigende Zustimmung →

Erkältung (z.B. Schnupfen, Husten, Halsschmerzen, leichtes Fieber)	nie	1	2	3	4	5	6	immer
Verdauungsprobleme (z.B. leichter Durchfall, leichte Verstopfung, Sodbrennen)	nie	1	2	3	4	5	6	immer
Hauterkrankungen (z.B. Schwellungen nach Insektenstichen, Fußpilz, Nagelpilz)	nie	1	2	3	4	5	6	immer
Leichte Verletzungen (z.B. Schürfwunden, Schnittwunden, Prellungen, Zerrungen)	nie	1	2	3	4	5	6	immer
Leichte Schmerzen (z.B. Kopfschmerzen, Rückenschmerzen, Gelenkschmerzen)	nie	1	2	3	4	5	6	immer

Wie häufig behandeln Sie die angegebenen Beschwerden **gar nicht**?

steigende Zustimmung →

Hauterkrankungen (z.B. Schwellungen nach Insektenstichen, Fußpilz, Nagelpilz)	nie	1	2	3	4	5	6	immer
Leichte Verletzungen (z.B. Schürfwunden, Schnittwunden, Prellungen, Zerrungen)	nie	1	2	3	4	5	6	immer
Erkältung (z.B. Schnupfen, Husten, Halsschmerzen, leichtes Fieber)	nie	1	2	3	4	5	6	immer
Verdauungsprobleme (z.B. leichter Durchfall, leichte Verstopfung, Sodbrennen)	nie	1	2	3	4	5	6	immer
Leichte Schmerzen (z.B. Kopfschmerzen, Rückenschmerzen, Gelenkschmerzen)	nie	1	2	3	4	5	6	immer

Angaben zu Ihrer Person

Staatsangehörigkeit:

Geburtsland:

Geburtsland der Eltern:

Geburtsland der Großeltern:

Gesprochene Sprache(n):

Muttersprache(n):

Wie gut sind Ihre Deutschkenntnisse? Bitte kreuzen Sie das für Sie Zutreffende an.

sehr gut gut befriedigend genügend ungenügend

Berufliche Stellung? Bitte kreuzen Sie das für Sie Zutreffende an.

In Ausbildung

Arbeitssuchend

Angestellt

Selbstständig

Pensionistin / Pensionist

Nicht erwerbstätig (z.B. Karenz, Hausfrau, etc.)

Sonstiges

Höchste abgeschlossene Schulbildung? Bitte kreuzen Sie das für Sie Zutreffende an.

Kein Pflichtschulabschluss

Pflichtschule (9 Schuljahre)

Lehre

Mittlere Schule / Fachschule

Matura

Hochschule / Universität

Sonstiges

Familienstand? Bitte kreuzen Sie das für Sie Zutreffende an.

Alleinstehend

In Partnerschaft lebend

Verheiratet

Anzahl der Kinder?

Anzahl der Kinder im Haushalt?

Anzahl der Personen im Haushalt?

Vielen Dank für Ihre Mitarbeit!!!

5.5 Results of the Questionnaire

5.5.1 Results: Tables

First Research Question

Significant Results of the Open Questions

	categories of minor ailments					
	common colds	digestive problems	skin diseases	minor injuries	minor pain	other
observed frequency ¹	154 (45)	76 (123)	21 (178)	58 (141)	145 (54)	40 (159)
expected frequency ²	99.5	99.5	99.5	99.5	99.5	99.5
χ^2	59.70*	11.01*	123.86*	34.62*	41.61*	71.16*
df	1	1	1	1	1	1
	number of called categories					
	0 category	1 category	2 categories	3 categories	4 categories	5 categories
observed frequency ³	11	34	68	66	14	6
expected frequency ⁴	33.2	33.2	33.2	33.2	33.2	33.2
$\chi^2 = 117.25^*$						

df degrees of freedom

χ^2 empirical chi-square distributions number, i.e. test statistic for Independent t-Test

¹ number of persons listing this category; (number of respondents not listing this category)

² sample size = 199 = 99.5 + 99.5; equal for persons listing (not listing) this category

³ number of persons calling 0-5 categories

⁴ sample size = 199, number of categories = 6, thus $\frac{199}{6} = 33.2$; equal for categories 1 -5

Exploratory Analysis: Significant Results of the Scale “Personal Necessity to Require a Doctor’s Attention” (AFKB)

Item	Means ($\bar{x}_i$) ¹	SEM	SD	Median ²	Skewness ³	Kurtosis ⁴	Missing (%)
AFKB-01	1.15 ^m	0.10	1.42	1.00	1.286	0.959	1 (0.5)
AFKB-02	1.38 ^m	0.11	1.56	1.00	0.901	- .334	1 (0.5)
AFKB-03	1.74 ^m	0.11	1.61	2.00	0.615	- .700	1 (0.5)
AFKB-04	2.35 ^m	0.13	1.83	2.00	0.097	- 1.39	1 (0.5)
AFKB-05	1.48 ^m	0.11	1.57	1.00	0.846	- .426	1 (0.5)

SEM standard error of the mean (spread of means)

SD standard deviation

¹ item difficulties: ^d difficult: $\bar{x} \leq 1$; ^m moderate: $1 < \bar{x} < 4$; ^e easy: $4 \leq \bar{x}$

- 2 50% of distribution below, 50% above
3 left-skewed: skewness < 0; right-skewed: skewness > 0
4 wider than standard deviation: kurtosis < 1; narrower than standard deviation: kurtosis > 1

t-Test of the Scale AFKB: Significant Results

	Levene's Test ¹	t-Test ²	Means ($\bar{x}_i$)		Effect Size ³
education					
Item			school leaving exam	no school leaving exam	$\hat{d}$
AFKB-02	13.626 ^{**}	- 2.278 [*]	1.133	1.630	.323 ^s
AFKB-03	3.353 ^(ns.)	- 2.109 [*]	1.500	1.980	.300 ^s
AFKB-05	17.295 ^{**}	- 2.621 ^{**}	1.194	1.770	.372 ^s
working status					
Item			working	not working	$\hat{d}$
AFKB-01	22.918 ^{**}	- 3.398 ^{**}	0.857	1.595	.559 ^m
AFKB-02	6.225 [*]	- 3.198 ^{**}	1.092	1.823	.481 ^s
AFKB-04	3.340 ^(ns.)	- 2.164 [*]	2.126	2.696	.314 ^s
AFKB-05	2.554 ^(ns.)	- 2.017 [*]	1.302	1.759	.293 ^s

- ^{**} p (type I error probability) $\leq .01$
^{*} p (type I error probability) $\leq .05$
^(ns.) p (type I error probability) $> .05$
¹ significant, if items are marked with ^{*}
² significant, if items are marked with ^{**} or ^{*}
³ Cohen: small ($0.20 \leq \hat{d} < 0.50$); middle ($0.50 \leq \hat{d} < 0.80$); large ($0.80 \leq \hat{d}$)

Simple ANOVA of the Scale AFKB: Significant Results

	Levene ⁰	BF ¹	ANOVA ²	Means ($\bar{x}_i$) ³			Effect Size ³
Migration							
Item			(F)	no migrant background	second generation	first generation	(η^2)
AFKB-01	27.116 ^{**}	23.098 ^{**}	22.902 ^{**}	0.630 (54)	0.510 (51)	1.806 (93)	.235 ^l
AFKB-02	16.758 ^{**}	20.773 ^{**}	17.117 ^{**}	0.685 (54)	0.980 (51)	2.011 (93)	.176 ^l
AFKB-03	6.419 ^{**}	14.719 ^{**}	13.260 ^{**}	0.833 (54)	2.039 (51)	2.107 (93)	.136 ^m
AFKB-04	6.404 ^{**}	3.667 [*]	3.341 [*]	1.889 (54)	2.255 (51)	2.678 (93)	.034 ^s

- ^{**} p (type I error probability) $\leq .01$
^{*} p (type I error probability) $\leq .05$
^(ns.) p (type I error probability) $> .05$
⁰ significant, if items are marked with ^{*}
¹ significant, if items are marked with ^{**} or ^{*}

- ² significant, if items are marked with ** or *
- ³ sample sizes are indicated in parentheses
- ⁴ Cohen: small ($.001 \leq \eta^2 < .060$)^s; middle ($.060 \leq \eta^2 < .140$)^m; large ($.140 \leq \eta^2$)^l

Multifactor ANOVA of the Scale AFKB: Significant Results

Migration x Sex: Item AFKB-05

	F- Test			means ($\bar{x}_i$) ²			
Levene ¹	migration	sex	migration x sex	no migrant background	second generation	first generation	
3.225**	2.039 ^(ns.)	0.442 ^(ns.)	^a 4.633 *	1.538 (ab)	1.216 (ac)	1.727	male
$\eta^2_{part.}$	0.021	0.002	0.046	0.929 (bd)	2.500 (cd)	1.549(d)	female

- $\eta^2_{part.}$ effect size of sample
Cohen: small ($.001 \leq \eta^2 < .060$)^s; middle ($.060 \leq \eta^2 < .140$)^m; large ($.140 \leq \eta^2$)^l
- ** p (type I error probability) $\leq .01$
- * p (type I error probability) $\leq .05$
- (ns.) p (type I error probability) $> .05$
- SDI items of social desirability
- ¹ significant, if items are marked with *
- ² same letters indicate significant differences
- ^a results should be interpreted with caution

Second Research Question

Exploratory Analysis: Significant Results of the Scale “Information Sources on Minor Ailments” (IQKB)

Subscale	Item	Means ($\bar{x}$) ¹	SD	Median ²	Modus	Skewness ³	Kurtosis ⁴	Missing (%)
IQKB-I	IQKB-02	1.25 ^m	1.51	1.00	0.00	1.163	.396	1 (0.5)
	IQKB-03	0.86 ^d	1.28	0.00	0.00	.686	2.252	3 (1.5)
	IQKB-04	1.56 ^m	1.56	1.00	0.00	.686	-.585	1 (0.5)
IQKB-FL	IQKB-05 ⁵	2.18 ^m	1.53	2.00	2.00	.325	-.808	1 (0.5)
	IQKB-06 ⁵	2.52 ^m	1.70	2.00	2.00	.165	-1.24	1 (0.5)
	IQKB-18	1.02 ^m	1.40	0.00	0.00	1.468	1.389	3 (1.5)
IQKB-FB	IQKB-09	1.84 ^m	1.50	2.00	0.00	0.477	-.699	1 (0.5)
	IQKB-10	1.52 ^m	1.43	1.00	0.00	0.699	-.381	1 (0.5)
	IQKB-11	0.75 ^d	1.04	0.00	0.00	1.259	0.715	1 (0.5)
IQKB-Fam	IQKB-12	2.63 ^m	1.58	3.00	4.00	-.096	-1.11	2 (1.0)
	IQKB-13	2.80 ^m	1.50	3.00	2.00	-.181	-.919	1 (0.5)
	IQKB-14	1.13 ^m	1.46	1.00	0.00	1.239	.532	1 (0.5)
	IQKB-19	0.22 ^d	0.78	0.00	0.00	4.311	20.04	3 (1.5)

- SD standard deviation
- ¹ item difficulties: ^d difficult: $\bar{x} \leq 1$; ^m moderate: $1 < \bar{x} < 4$; ^e easy: $4 \leq \bar{x}$
- ² 50% of distribution below, 50% above

- ³ left-skewed: skewness < 0; right-skewed: skewness > 0
⁴ wider than standard deviation: kurtosis < 1; narrower than standard deviation: kurtosis > 1
⁵ approximate univariate normal distribution: Symmetry, Skewness $\leq |0.5|$, Kurtosis $\leq |3.00|$

t-Test of the Scale IQKB: Significant Results

	Levene's Test ¹	t-Test ²	Means ($\bar{x}_i$)		Effect Size ³
sex					
Item			male	female	$\hat{d}$
IQKB -02	15.604 ^{**}	- 2.360 [*]	0.976	1.460	.325 ^s
IQKB -04	6.326 [*]	- 2.115 [*]	1.298	1.754	.295 ^s
IQKB -10	5.383 [*]	- 5.379 ^{**}	0.953	1.956	.744 ^m
IQKB -11	1.924	3.468 ^{**}	1.035	0.531	.498 ^s
IQKB -13	0.134	- 2.012 [*]	2.553	2.982	.289 ^s
IQKB -14	4.920 ^{**}	- 2.628 ^{**}	1.447	0.894	.384 ^s
education					
Item			school leaving exam	no school leaving exam	$\hat{d}$
IQKB -04	1.106	3.275 ^{**}	1.918	1.210	.465 ^s
IQKB -05	3.625	- 2.542 [*]	1.909	2.454	.361 ^s
working status					
Item			working	not working	$\hat{d}$
IQKB -11	4.496 [*]	2.818 ^{**}	.0908	0.506	.392 ^s
IQKB -12	0.327	3.209 ^{**}	2.916	2.192	.468 ^s
IQKB -14	8.126 ^{**}	2.242 [*]	1.311	0.861	.311 ^s

- ** p (type I error probability) $\leq .01$
* p (type I error probability) $\leq .05$
¹ significant, if items are marked with *
² significant, if items are marked with ** or *
³ Cohen: ^s small ($0.20 \leq \hat{d} < 0.50$); ^m middle ($0.50 \leq \hat{d} < 0.80$); ^l large ($0.80 \leq \hat{d}$)

Simple ANOVA of the Scale IQKB: Significant Results

	Levene ¹	BF ²	ANOVA ²	Means ($\bar{x}_t$) ³			Effect Size ³
Migration							
Item			(F)	no migrant background	second generation	first generation	(η^2)
IQKB-02	15.547 ^{**}	8.515 ^{**}	7.124 ^{**}	0.944 (54)	0.823 (51)	1.667 (93)	.073 ^m
IQKB -06	6.025 ^{**}	10.510 ^{**}	9.662 ^{**}	1.722 (54)	2.596 (52)	2.946 (92)	.099 ^m
IQKB -12	4.769 [*]	19.313 ^{**}	17.268 ^{**}	2.698 (53)	3.558 (52)	2.065 (92)	.178 ^l

- ** p (type I error probability) $\leq .01$
 * p (type I error probability) $\leq .05$
 (ns.) p (type I error probability) $> .05$
 1 significant, if items are marked with *
 2 significant, if items are marked with ** or *
 3 sample sizes are indicated in parentheses
 4 Cohen: small ($.001 \leq \eta^2 < .060$)^s; middle ($.060 \leq \eta^2 < .140$)^m; large ($.140 \leq \eta^2$)^l

Multifactor ANOVA of the Scale IQKB: Significant Results

Migration x Education: Item IQKB-10 and IQKB-11

	F- Test			means ($\bar{x}_i$) ²			
Levene ¹	migration	education	migration x education	no migrant background	second generation	first generation	
IQKB-10							
0.843 ^(ns.)	1.031 ^(ns.)	1.687 ^(ns.)	3.158 [*]	1.903 (ad)	1.345 (a)	1.526	male
$\eta^2_{part.}$	0.011	0.009	0.032	0.913 (bd)	1.273 (c)	1.764 (bc)	female
IQKB-11							
2.615 [*]	1.478 ^(ns.)	3.226 ^(ns.)	^a 8.593 ^{**}	1.161 (ac)	0.931	0.605 (a)	male
$\eta^2_{part.}$	0.015 ^s	0.017 ^s	0.031 ^s	0.348 (bc)	0.909 (b)	0.618	female

Sex x Working Status: Item IQKB -05 and IQKB-09

	F- Test			means ($\bar{x}_i$) ²		
Levene ¹	migration	working status	migration x working status	male	female	
IQKB -05						
0.768 ^(ns.)	0.525 ^(ns.)	0.168 ^(ns.)	9.103 [*]	1.906 (ab)	2.500 (ac)	working
$\eta^2_{part.}$	0.001 ^s	0.000	0.049 ^s	2.450 (b)	2.086 (c)	not working
IQKB-09						
0.246 ^(ns.)	2.564 ^(ns.)	3.184 ^(ns.)	5.336 ^{**}	1.594 (a)	2.491 (ab)	working
$\eta^2_{part.}$	0.013 ^s	0.016 ^s	0.027 ^s	1.714	1.552 (b)	not working

- $\eta^2_{part.}$ effect size of sample
 Cohen: small ($.001 \leq \eta^2 < .060$)^s; middle ($.060 \leq \eta^2 < .140$)^m; large ($.140 \leq \eta^2$)^l
 ** p (type I error probability) $\leq .01$
 * p (type I error probability) $\leq .05$
 (ns.) p (type I error probability) $> .05$

- SDI items of social desirability
 1 significant, if items are marked with *
 2 same letters indicate significant differences
 a results should be interpreted with caution

Third Research Question

Exploratory Analysis: Significant Results of the Scale “Health Status and Health Behaviour” (GHSoz)

Item	Means ($\bar{x}$) ¹	SD	Median ²	Modus	Skewness ³	Kurtosis ⁴	Missing (%)
GHSoz-01 ⁵	2.95 ^m	1.41	3.00	3.00	-.360	-.507	3 (1.5)
GHSoz-03	3.26 ^m	1.36	3.00	3.00	-.609	-.164	1 (0.5)
GHSoz-04	3.66 ^m	1.40	4.00	5.00	-.901	-.053	3 (1.5)
GHSoz-05 ^{SDI}	1.31 ^m	1.45	1.00	0.00	0.921	-.158	7 (3.5)
GHSoz-06	3.36 ^m	1.44	4.00	5.00	-.474	0.344	1 (0.5)
GHSoz-07 ⁵	3.09 ^m	1.38	3.00	3.00	-.286	-.503	3 (1.5)
GHSoz-08 ⁵	2.98 ^m	1.41	3.00	3.00	-.354	-.521	0 (0.0)
GHSoz-09 ⁵	3.39 ^m	1.31	4.00	4.00	-.477	-.630	1 (0.5)
GHSoz-10	3.93 ^m	1.47	5.00	5.00	-1.29	0.554	2 (1.0)
GHSoz-11	3.72 ^m	1.46	4.00	5.00	-1.06	-.013	0 (0.0)
GHSoz-12 ^{SDI}	1.57 ^m	1.47	1.00	0.00	0.576	-1.707	6 (3.0)
GHSoz-13 ⁵	3.15 ^m	1.38	3.00	3.00	-.476	-.417	1 (0.5)
GHSoz-14 ⁵	2.93 ^m	1.27	3.00	3.00	-.069	-.420	1 (0.5)
GHSoz-19 ⁵	2.88 ^m	1.53	3.00	3.00	-.231	-.923	0 (0.0)
GHSoz-20 ⁵	2.51 ^m	1.49	3.00	3.00	-.025	-.850	4 (2.0)
GHSoz-21 ⁵	3.18 ^m	1.29	3.00	3.00	-.293	-.466	2 (1.0)

- SD standard deviation
 1 item difficulties: ^d difficult: $\bar{x} \leq 1$; ^m moderate: $1 < \bar{x} < 4$; ^e easy: $4 \leq \bar{x}$
 2 50% of distribution below, 50% above
 3 left-skewed: skewness < 0; right-skewed: skewness > 0
 4 wider than standard deviation: kurtosis < 1; narrower than standard deviation: kurtosis > 1
 5 approximate univariate normal distribution: Symmetry, Skewness $\leq |0.5|$, Kurtosis $\leq |3.00|$
 SDI items of social desirability

Items of Social Desirability of the Scale GHSoz: Significant Results

Items	GHSoz-01	GHSoz-04 ^{SS}	GHSoz-06	GHSoz-07	GHSoz-09	GHSoz-11	GHSoz-13	GHSoz-14
GHSoz-05 ^{SDI}		-.312 ^{**}			-.173 [*]	-.151 [*]	-.177 [*]	
GHSoz-12 ^{SDI}	-.179 [*]		-.248 ^{**}	-.226 ^{**}	-.184 [*]		-.264 ^{**}	-.170 [*]

- ^{**} p (type I error probability) $\leq .01$
^{*} p (type I error probability) $\leq .05$
 (ns.) p (type I error probability) $> .05$
 SDI items of social desirability; $r_{(GHSoz-05, GHSoz-12)} = .241^{**}$
 SS item of social support (reverse-poled)

t-Test of the Scale GHSoz: Significant Results

	Levene's Test ¹	t-Test ²	Means ($\bar{x}_i$)		Effect Size ³
sex					
Item			male	female	$\hat{d}$
GHSoz-04	14.303 **	3.299 **	4.012	3.387	.458 ^s
GHSoz -06	2.177 ^(ns.)	4.726 **	2.821	3.754	.680 ^m
GHSoz -11	0.752 ^(ns.)	2.124 *	3.977	3.535	.304 ^s
GHSoz -12	0.963 ^(ns.)	3.151 **	1.940	1.284	.457 ^s
GHSoz -21	1.123 ^(ns.)	2.141 *	3.405	3.009	.309 ^s
education					
Item			school leaving exam	no school leaving exam	$\hat{d}$
GHSoz -11	14.603 **	2.696 **	4.000	3.450	.382 ^s
working status					
Item			working	not working	$\hat{d}$
GHSoz -03	5.335 *	2.117 *	3.437	3.000	.325 ^s
GHSoz -06	0.896 ^(ns.)	-2.721 **	3.134	3.696	.395 ^s
GHSoz-11	10.853 **	3.438 **	4.017	3.278	.519 ^m
GHSoz -12	0.241 ^(ns.)	1.999 *	1.733	1.301	.297 ^s

- ** p (type I error probability) $\leq .01$
 * p (type I error probability) $\leq .05$
 (ns.) p (type I error probability) $> .05$
 1 significant, if items are marked with *
 2 significant, if items are marked with ** or *
 3 Cohen: small ($0.20 \leq \hat{d} < 0.50$); middle ($0.50 \leq \hat{d} < 0.80$); large ($0.80 \leq \hat{d}$)

Simple ANOVA of the Scale GHSoz: Significant Results

	Levene ¹	BF ²	ANOVA ² (F)	Means ($\bar{x}_t$) ³			Effect Size ³
Migration							
Item				no migrant background	second generation	first generation	(η^2)
GHSoz -03	8.980 **	4.426 *	3.663 *	3.558 (54)	2.989 (52)	3.263 (92)	.036 ^s
GHSoz -04	7.054 **	14.365 **	12.425 **	3.887 (53)	4.269 (52)	3.176 (91)	.114 ^m
GHSoz -09	1.661 ^(ns.)	4.105 *	3.799 *	3.463 (54)	3.750 (52)	3.141 (92)	.037 ^s
GHSoz -10	10.289 **	3.530 *	3.127 *	3.852 (54)	4.372 (51)	3.750 (92)	.031 ^s
GHSoz -11	26.804 **	23.374 **	20.514 **	3.518 (54)	4.730 (52)	3.279 (93)	.173 ^l

- ** p (type I error probability) $\leq .01$
 * p (type I error probability) $\leq .05$
 (ns.) p (type I error probability) $> .05$
 1 significant, if items are marked with *
 2 significant, if items are marked with ** or *
 3 sample sizes are indicated in parentheses
 4 Cohen: small ($.001 \leq \eta^2 < .060$)^s; middle ($.060 \leq \eta^2 < .140$)^m; large ($.140 \leq \eta^2$)^l

Multifactor ANOVA of the Scale GHSoz: Significant Results

Migration x Education: Item GHSoz-11

	F- Test			means ($\bar{x}_i$) ²			
Levene ¹	migration	education	migration x education	no migrant background	second generation	first generation	
^a 10.878 **	21.276 **	4.287 *	3.542 *	3.869 (ae)	4.600 (ab)	3.553 (bf)	school leaving exam
$\eta^2_{part.}$	0.181	0.022	0.035	2.913 (ce)	4.909 (cd)	3.091 (df)	no school leaving exam

Sex x Education: Item GHSoz-05

	F- Test			means ($\bar{x}_i$) ²		
Levene ¹	sex	education	migration x education	male	female	
3.731 *	0.336 (ns.)	1.157 (ns.)	12.023 **	1.872 (ac)	1.034 (ad)	school leaving exam
$\eta^2_{part.}$	0.002	0.006	0.060	0.932 (bc)	1.529 (bd)	no school leaving exam

Migration x Sex: Items GHSoz-04/-05/-06/-12/-20

	F- Test			means ($\bar{x}_i$) ²			
Levene ¹	migration	sex	migration x sex	no migrant background	second generation	first generation	
GHSoz-04							
2.958 *	4.633 **	1.004 (ns.)	9.710 *	3.500 (abe)	4.297 (a)	4.136 (bf)	male
$\eta^2_{part.}$	0.011	0.005	0.093	4.259 (ce)	4.200 (d)	2.870 (cdf)	female
GHSoz-05							

^a 5.254 **	1.808 (ns.)	3.848 (ns.)	8.593 **	1.320 (e)	1.621 (af)	1.000 (ag)	male
$\eta^2_{part.}$	0.019	0.051	0.085	0.679 (bce)	0.200 (bdf)	1.758 (cdg)	female
GHSoz-06							
2.376 *	0.800 (ns.)	19.525 **	5.975 **	3.520 (ab)	2.513 (ad)	2.545 (be)	male
$\eta^2_{part.}$	0.008	0.092	0.059	3.429 (c)	4.200 (cd)	3.789 (e)	female
GHSoz-12							
^a 4.393 **	0.540 (ns.)	10.136 **	5.751 **	1.600 (a)	2.270 (ae)	1.773 (f)	male
$\eta^2_{part.}$	0.006	0.051	0.058	1.741 (bc)	0.467 (bde)	1.284 (cdf)	female
GHSoz-20							
^a 4.979 **	3.844 *	3.593 (ns.)	4.027 *	3.192 (ae)	2.714 (bf)	2.045 (ab)	male
$\eta^2_{part.}$	0.039	0.019	0.041	2.571 (ce)	1.600 (cdf)	2.464 (d)	female

$\eta^2_{part.}$ effect size of sample
Cohen: small ($.001 \leq \eta^2 < .060$)^s; middle ($.060 \leq \eta^2 < .140$)^m; large ($.140 \leq \eta^2$)^l
** p (type I error probability) $\leq .01$
* p (type I error probability) $\leq .05$
(ns.) p (type I error probability) $> .05$
SDI items of social desirability
1 significant, if items are marked with *
2 same letters indicate significant differences
^a results should be interpreted with caution

Fourth Research Question

Significant Results of the Scale “Frequency of Experienced Minor Ailments” (HKB)

Exploratory Analysis: Significant Results of the Scale HKB

Item	Means ($\bar{x}_i$) ¹	SD	Median ²	Modus ³	Skewness ⁴	Kurtosis ⁵	Missing (%)
HKB-01	1.92 ^m	1.09	2.00	2.00	0.645	0.661	0 (0.0)
HKB-02	1.59 ^m	1.25	1.00	1.00	0.859	0.242	1 (0.5)
HKB-03	1.08 ^d	1.25	1.00	0.00	1.273	1.273	1 (0.5)
ⁿ HKB-04	1.69 ^m	1.35	1.00	1.00	0.524	0.524	0 (0.0)
HKB-05	2.67 ^m	1.44	3.00	2.00	0.133	0.133	0 (0.0)

SD standard deviation
1 item difficulties: ^d difficult: $\bar{x} \leq 1$; ^m moderate: $1 < \bar{x} < 4$; ^e easy: $4 \leq \bar{x}$
2 50% of distribution below, 50% above
3 most frequent value
4 left-skewed: skewness < 0 ; right-skewed: skewness > 0
5 wider than standard deviation: kurtosis < 1 ; narrower than standard deviation: kurtosis > 1
ⁿ approximate univariate normal distribution: Symmetry, Skewness $\leq |0.5|$, Kurtosis $\leq |3.00|$

t-Test of the Scale HKB: Significant Results

	Levene's Test ¹	t-Test ²	Means ($\bar{x}_i$)		Effect Size ³
sex					
Item			male	female	$\hat{d}$
HKB -03	34.877 **	4.225 **	1.518	0.734	.649 ^m
HKB -04	0.516 ^(ns.)	3.042 **	2.023	1.447	.436 ^s
working status					
Item			working	not working	$\hat{d}$
HKB -04	0.733 ^(ns.)	3.161 **	1.933	1.329	.458 ^s

- ** p (type I error probability) $\leq .01$
 * p (type I error probability) $\leq .05$
 (ns.) p (type I error probability) $> .05$
 1 significant, if items are marked with *
 2 significant, if items are marked with ** or *
 3 Cohen: small ($0.20 \leq \hat{d} < 0.50$); middle ($0.50 \leq \hat{d} < 0.80$); large ($0.80 \leq \hat{d}$)

Simple ANOVA of the Scale HKB: Significant Results

	Levene ¹	BF ²	ANOVA ² (F)	Means ($\bar{x}_t$) ³			Effect Size ³
Migration							
Item				no migrant background	second generation	first generation	(η^2)
HKB-02	3.481 [*]	3.964 [*]	3.964 [*]	1.204 (54)	1.846 (52)	1.663 (92)	.039 ^s
HKB-03	1.943 ^(ns.)		7.583 ^{**}	0.924 (53)	1.635 (52)	0.849 (93)	.072 ^m
HKB-04	1.564 ^(ns.)		6.902 ^{**}	1.556 (54)	2.269 (52)	1.452 (93)	.066 ^m
HKB-05	0.302 ^(ns.)		3.440 ^{**}	2.481 (54)	2.365 (52)	2.946 (93)	.034 ^s

- ** p (type I error probability) $\leq .01$
 * p (type I error probability) $\leq .05$
 (ns.) p (type I error probability) $> .05$
 1 significant, if items are marked with *
 2 significant, if items are marked with ** or *
 3 sample sizes are indicated in parentheses
 4 Cohen: small ($.001 \leq \eta^2 < .060$)^s; middle ($.060 \leq \eta^2 < .140$)^m; large ($.140 \leq \eta^2$)^l

Multifactor ANOVA of the Scale HKB: Significant Results

Migration x Education: Item HKB-02

	F- Test			means ($\bar{x}_i$) ²			
Levene ¹	migration	education	migration x education	no migrant background	second generation	first generation	
HKB-02							
^a 2.565 *	3.360 *	0.724 (ns.)	3.601 *	0.871 (abc)	1.833 (a)	1.868 (b)	school leaving exam
$\eta^2_{part.}$	0.034	0.004	0.036	1.652 (c)	1.864	1.518	no school leaving exam

Migration x Working Status: Item HKB-05

	F- Test			means ($\bar{x}_i$) ²			
Levene ¹	migration	education	migration x education	no migrant background	second generation	first generation	
^a 2.740 (ns.)	0.085 (ns.)	3.287 *	3.693 *	0.694 (ad)	1.762 (abe)	0.976 (b)	working
$\eta^2_{part.}$	0.028	0.000	0.037	1.412 (cd)	1.100 (e)	0.745 (c)	not working

$\eta^2_{part.}$ effect size of sample

Cohen: small ($.001 \leq \eta^2 < .060$)^s; middle ($.060 \leq \eta^2 < .140$)^m; large ($.140 \leq \eta^2$)^l

** p (type I error probability) $\leq .01$

* p (type I error probability) $\leq .05$

(ns.) p (type I error probability) $> .05$

SDI items of social desirability

¹ significant, if items are marked with *

² same letters indicate significant differences

^a results should be interpreted with caution

Significant Results of the Scale “Methods of Treatment” (VKB)

Exploratory Analysis: Significant Results of the Scale VKB

Subscale	Item	Means ($\bar{x}$) ¹	SD	Median ²	Modus	Skewness ³	Kurtosis ⁴	Missing (%)
non-prescriptive medicine	VKBrf -01	2.95 ^m	1.76	3.00	5.00	-.294	-1.26	0 (0.0)
	VKBrf-02	1.90 ^m	1.74	1.00	0.00	0.550	-1.01	2 (1.0)
	VKBrf-03	1.89 ^m	1.82	1.00	0.00	0.533	-1.13	1 (0.5)

	VKBrf -04	2.08 ^m	1.68	2.00	1.00	0.434	-1.03	1 (0.5)
	VKBrf -05	2.82 ^m	1.68	3.00	5.00	- .182	-1.17	0 (0.0)
traditional treatment	VKBhm -01	2.62 ^m	1.79	3.00	5.00	- .105	- 1.33	0 (0.0)
	VKBhm -02	2.06 ^m	1.76	2.00	0.00	0.367	-1.20	0 (0.0)
	VKBhm -03	1.19 ^d	1.57	0.00	0.00	1.206	0.246	0 (0.0)
	VKBhm -04	1.83 ^m	1.65	2.00	0.00	0.454	0.344	1 (0.5)
	VKBhm -05	1.76 ^m	1.69	0.00	0.00	0.582	1.389	0 (0.0)
alternative methods	VKBam -01	1.56 ^m	1.78	1.00	0.00	0.745	- .888	0 (0.0)
	VKBam -02	1.03 ^d	1.50	0.00	0.00	1.294	- .846	0 (0.0)
	VKBam -03	0.64 ^d	1.30	0.00	0.00	2.152	0.542	0 (0.0)
	VKBam -04	0.78 ^d	1.38	0.00	0.00	1.752	2.045	1 (0.5)
	VKBam -05	1.10 ^d	1.55	0.00	0.00	1.264	0.471	1 (0.5)
no treatment	VKBn -01	1.94 ^m	1.45	2.00	2.00	0.216	- .951	1 (0.5)
	VKBn -02	1.94 ^m	1.66	2.00	0.00	0.345	-1.12	0 (0.0)
	VKBn -03	1.72 ^m	1.77	1.00	0.00	0.636	- .964	2 (1.0)
	VKBn -04	2.03 ^m	1.64	2.00	1.00	0.355	-1.11	0 (0.0)
	VKBn -05	2.39 ^m	1.63	2.00	4.00	- .045	-1.23	0 (0.0)
doctor	VKBa -01	1.53 ^m	1.45	1.00	0.00	0.708	- .417	1 (0.5)
	VKBa -02	1.46 ^m	1.64	1.00	0.00	0.853	- .501	0 (0.0)
	VKBa -03	1.70 ^d	1.84	1.00	0.00	0.723	- .959	0 (0.0)
	VKBa -04	1.10 ^m	1.35	1.00	0.00	1.351	1.114	0 (0.0)
	VKBa -05	1.24 ^m	1.39	1.00	0.00	1.141	0.705	1 (0.5)

SD standard deviation

¹ item difficulties: ^d difficult: $\bar{x} \leq 1$; ^m moderate: $1 < \bar{x} < 4$; ^e easy: $4 \leq \bar{x}$

² 50% of distribution below, 50% above

³ most frequent value

⁴ left-skewed: skewness < 0 ; right-skewed: skewness > 0

⁵ wider than standard deviation: kurtosis < 1 ; narrower than standard deviation: kurtosis > 1
(approximate univariate normal distribution: Symmetry, Skewness $\leq |0.5|$, Kurtosis $\leq |3.00|$)

t-Test of the Scale VKB: Significant Results

	Levene's Test ¹	t-Test ²	Means ($\bar{x}_i$)		Effect Size ³
sex					
Item			male	female	$\hat{d}$
VKBam-04	11.418 **	-3.033 **	1.141	1.877	.421 ^s
VKBam-06	11.510 **	-2.230 *	0.541	0.965	.309 ^s
VKBn-05	1.923 ^(ns.)	2.054 *	2.659	2.184	.294 ^s
education					
Item			school leaving exam	no school leaving exam	$\hat{d}$
VKBam-05	7.377 **	-2.026 *	0.878	1.320	.287 ^s
working status					
Item			working	not working	$\hat{d}$
VKBrf-01	2.939 ^(ns.)	2.279 *	3.183	2.608	.330 ^s
VKBrf-02	1.805 ^(ns.)	2.031 *	2.101	1.590	.296 ^s

VKBrf-03	11.134 **	5.204 **	2.387	1.139	.725 ^m
VKBrf-04	0.295 (ns.)	2.816 **	2.342	1.667	.410 ^s
VKBhm-04	0.011 (ns.)	2.245 *	2.050	1.519	.326 ^s
VKBa-05	5.570 **	-2.075 *	1.067	1.500	.231 ^s

- ** p (type I error probability) $\leq .01$
 * p (type I error probability) $\leq .05$
 (ns.) p (type I error probability) $> .05$
 1 significant, if items are marked with *
 2 significant, if items are marked with ** or *
 3 Cohen: small ($0.20 \leq \hat{d} < 0.50$); middle ($0.50 \leq \hat{d} < 0.80$); large ($0.80 \leq \hat{d}$)

Simple ANOVA of the Scale VKB: Significant Results

		Levene ¹	BF ²	ANOVA ² (F)	Means ($\bar{x}_l$) ³			Effect Size ³
Migration								
Subscale	Item				no migrant background	second generation	first generation	(η^2)
non-prescriptive medicine	VKBrf-01	0.483 ^(ns.)		10.590 ^{**}	2.333 (54)	3.808 (52)	2.839 (93)	.098 ^m
	VKBrf-03	1.345 ^(ns.)		14.078 ^{**}	1.811 (53)	2.923 (52)	1.355 (93)	.126 ^m
traditional treatment	VKBhm-01	2.186 ^(ns.)		22.672 ^{**}	2.167 (54)	3.404 (52)	2.462 (93)	.071 ^m
alternative methods	VKBam-03	20.112 ^{**}	4.624 [*]	7.367 [*]	0.889 (54)	0.192 (52)	0.742 (93)	.044 ^s
	VKBam-04	14.256 ^{**}	3.729 [*]	6.803 [*]	0.981 (54)	0.346 (52)	0.913 (92)	.036 ^s
no treatment	VKBn-01	1.074 ^(ns.)		7.483 [*]	2.352 (54)	1.615 (52)	1.880 (92)	.036 ^s
	VKBn-02	1.072 ^(ns.)		22.034 ^{**}	2.667 (54)	1.423 (52)	1.806 (93)	.081 ^m
	VKBn-03	10.453 ^{**}	12.673 ^{**}	32.499 ^{**}	2.453 (54)	0.885 (52)	1.772 (92)	.106 ^m
	VKBn-05	4.459 [*]	3.749 [*]	8.870 [*]	2.518 (54)	2.788 (52)	2.086 (93)	.034 ^s
doctors	VKBa-01	11.081 ^{**}	24.048 ^{**}	36.366 ^{**}	0.556 (54)	1.769 (52)	1.978 (92)	.175 ^l
	VKBa-02	30.111 ^{**}	28.323 ^{**}	55.787 ^{**}	0.296 (54)	2.269 (52)	1.677 (93)	.210 ^l
	VKBa-03	9.639 ^{**}	9.173 ^{**}	26.864 ^{**}	0.981 (54)	2.404 (52)	1.731 (93)	.080 ^m
	VKBa-04	10.295 ^{**}	12.465 ^{**}	21.742 ^{**}	0.611 (54)	1.846 (52)	0.968 (93)	.120 ^l
	VKBa-03	5.526 ^{**}	10.217 ^{**}	16.109 ^{**}	0.722 (54)	1.038 (52)	1.652 (92)	.84 ^m

- ** p (type I error probability) $\leq .01$
 * p (type I error probability) $\leq .05$
 (ns.) p (type I error probability) $> .05$
 1 significant, if items are marked with *
 2 significant, if items are marked with ** or *
 3 sample sizes are indicated in parentheses
 4 Cohen: small ($.001 \leq \eta^2 < .060$)^s; middle ($.060 \leq \eta^2 < .140$)^m; large ($.140 \leq \eta^2$)^l

Fifth Research Question

Item Analysis of the Scales IQKB, GHSoz and VKB: Standard Deviation, Selectivity and Internal Consistency

Factor	Items		r_{IRC}	α	$\overline{r_{IC}}$
IQKB (Information Sources on Minor Ailments)	IQKB-I-02	advisory pages	.379	.755	.255 [.002; .694]
	IQKB-I-03	online source „Wikipedia“	.443		
	IQKB-I-04	search engines	.419		
	IQKB-FB-09	friends or acquaintances	.529		
	IQKB-Fam-10	female relatives	.557		
	IQKB-FB-11	male friends or acquaintances	.358		
	IQKB-Fam-12	relatives	.393		
	IQKB-Fam-13	female relatives	.499		
	IQKB-Fam-14	male relatives	.333		
GHSoz (Health Status and Health Behaviour)	GHSoz-01	health conscious behaviour	.565	.871	.380 [.107; .671]
	GHSoz-03	availability of support	.451		
	GHSoz-06	interest in health	.488		
	GHSoz-07	individual health promotion	.646		
	GHSoz-08	achieving a personal goal	.597		
	GHSoz-09	health condition (self-evaluation)	.567		
	GHSoz-13	certitude regarding health decisions	.632		
	GHSoz-14	profound knowledge on health	.620		
	GHSoz-19	exercising daily	.686		
	GHSoz-20	physically fitness (assumed external evaluation)	.442		
	GHSoz-21	physical performance (self-evaluation)	.600		
VKBhm	VKBhm -01	common cold	.596	.846	.524 [.386; .630]
	VKBhm -02	digestive problems	.670		
	VKBhm -03	minor injuries	.640		
	VKBhm -04	minor skin diseases	.736		
	VKBhm -05	minor pain	.629		
VKBn	VKBn -01	common cold	.699	.836	.561 [.497; .707]
	VKBn -02	digestive problems	.733		
	VKBn -03	minor injuries	.645		
	VKBn -04	minor skin diseases	.594		
VKBrf	VKBrf -01	common cold	.654	.801	.446 [.290; .632]
	VKBrf -02	digestive problems	.603		
	VKBrf -03	minor injuries	.522		
	VKBrf -04	minor skin diseases	.610		
	VKBrf -05	minor pain	.532		
VKBam	VKBam -01	common cold	.686	.903	.650 [.473; .768]
	VKBam -02	digestive problems	.789		
	VKBam -03	minor injuries	.734		

	VKBam -04	minor skin diseases	.806		
	VKBam -05	minor pain	.774		
VKBa	VKBa -01	common cold	.431	.688	.356 [.226; .535]
	VKBa -02	digestive problems	.557		
	VKBa -03	minor injuries	.450		
	VKBa -04	minor skin diseases	.450		

$\overline{r_{IIC}}$ = mean correlation of items

r_{ITC} = selectivity

α = internal consistency (Cronbach Alpha Coefficient)

Structural Review of the Fifth Research Question: Evaluation of Model Fit Parameters

Inferential Statistics ^a		Descriptive Statistics ^a	
CMIN	152.45	CMIN/df	1.146
$p_{(CMIN)}$	0.119	SRMR	0.044
df	133	CFI	0.978
$p_{(BSB)}^d$	0.479	NFI	0.859
RMSEA ^b	0.027	TLI	0.969
PCLOSE	0.984	multivariate excess distribution d_i^M	52.528
LO90 – HI90 ^c	0.000 – 0.045		

df degrees of freedom

^a measurement model: 20 observed variables, 29 unobserved variables (i.e. 20 error-variables, 9 factors) in $\sum_{xx}(0)$

^b H_0 : RMSEA $\leq$ 0.05

^c 90% confidence interval for RMSEA

^d number of bootstraps = 1000

Structural Review of the Fifth Research Question: Factors, Indicators and Reliabilities

Factor	Indicator	λ	SE	λ^2	Factor	Indicator	λ	SE	λ^2
IQKB-I $Rel_{\epsilon_j} = 0.67$ $DEV_{\epsilon_j} = 0.52$	IQKB-02	0.85	0.111	0.72	IQKB-FB $Rel_{\epsilon_j} = 0.67$ $DEV_{\epsilon_j} = 0.52$	IQKB-09	0.79	0.080	0.62
	IQKB-03	0.56	0.091	0.32		IQKB-10	0.88	0.082	0.77
GHSoz-SELG $Rel_{\epsilon_j} = 0.66$ $DEV_{\epsilon_j} = 0.42$	GHSoz-01	0.39	0.090	0.15	GHSoz-StaG $Rel_{\epsilon_j} = 0.67$ $DEV_{\epsilon_j} = 0.50$	GHSoz-10	0.68	0.130	0.46
	GHSoz-08	0.63	0.094	0.40		GHSoz-11	0.74	0.139	0.55
	GHSoz-21	.084	0.108	0.71					
VKB-rf $Rel_{\epsilon_j} = 0.68$ $DEV_{\epsilon_j} = 0.44$	VKB-rf-02	0.71	0.074	0.50	VKB-hm $Rel_{\epsilon_j} = 0.74$ $DEV_{\epsilon_j} = 0.59$	VKBhm-02	0.67	0.076	0.45
	VKB-rf-04	0.82	0.074	0.67		VKBhm-04	0.85	0.079	0.72
	VKB-rf-05	0.38	0.083	0.14					
VKB-am $Rel_{\epsilon_j} = 0.79$ $DEV_{\epsilon_j} = 0.66$	VKBam-02	0.83	0.091	0.69					
	VKBam-05	0.79	.090	0.62					

VKB-n					VKB-a				
$Rel_{\epsilon_j} = 0.77$	VKBn-02	0.96	0.156	0.92	$Rel_{\epsilon_j} = 0.49$	VKBa-02	0.60	0.104	0.36
$DEV_{\epsilon_j} = 0.64$	VKBn-03	0.60	0.113	0.36	$DEV_{\epsilon_j} = 0.33$	VKBa-03	0.54	0.098	0.29
						VKBa-05	0.24	0.098	0.05

- λ factor loading
 (standardised values correspondence to un-standardised values)
 λ^2 item reliability
 (item's variance explained by the factor)
 SEM standard error
 Rel_{ϵ_j} factor reliability
 DEV_{ϵ_j} average variance extracted (per factor)

Structural Review of the Fifth Research Question: Factors Correlations

		IQKB	GHSoz		VKB				
		FB	SELG	StaG	rf	hm	am	n	a
IQKB	I	.335 **	- .115	.025	.259 **	- .088	.207 *	.024	.209
	FB		.198 *	.246 **	.155	.185 *	.071	.247 **	- .199
GHSoz	SELG			.315 **	- .072	.031	- .124	- .004	.058
	StaG				.114	.093	- .059	.025	.101
VKB	rf					.529 **	.161	- .155	.310 **
	hm						.451 **	.036	- .026
	am							.001	.116
	n								- .318 **

- ** p (type I error probability) $\leq .01$
 * p (type I error probability) $\leq .05$

5.5.2 Results: Graphs

First Research Question

Significant Results of Scale “Personal Necessity to Require a Doctor’s Attention” (AFKB)

Second Research Question

Significant Results of the Scale “Information Sources on Minor Ailments” IQKB

Third Research Question

Significant Results of the Scale “Health Status and Health Behaviour” (GHSoz)

Fourth Research Question

Significant Results of the Scale “Frequencies of Minor Ailments” HKB

Significant Results of the Scale “Methods of Treatment” (VKB)

Boxplots for the Subscales VKBam (“alternative treatment”) VKBhm (“home remedies”) and VKBrf (“non-prescriptive medicine”)

Boxplots of Subscales VKBn ("no treatment") and VKBa ("doctors")

Fifth Research Question

Measurement Model for the 5th Research Question