Us vs. Them: Effects of individual acculturation orientation and host culture acculturation orientation on immigrant health behaviours and quality of life

by

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"It may seem strange to those in health that our beliefs affect us. The fact is, there is nothing of us but belief. It is the whole capital and stock in trade of man. It is all that can be changed, and embraces everything man has made or ever will make."

~Phineas Parkhurst Quimby, 1865
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Practitioner cultural competence definition taken from Hopkins Jackson (2015) and cited from previous research (Cross et al., 1989; S. Sue, Zane, Hall, & Berger, 2009) as: a practitioner who 'possesses cultural awareness, cultural knowledge and effective cross-cultural skills, has engaged in self-assessment for biases and stereotypes, and views all behavior in a cultural context'.

These orientations can refer to the immigrant’s attitudes about him or herself, or, a host culture member’s orientation in terms of what he or she expects of an individual immigrant or immigrant population. Here, acculturation orientation is based on this model, conceptualized in Table 1.

The entire quantitative aspect of the study included 171 participants, thus providing an adequate sample size for such analyses. The 10 quantitative acculturation orientation calculations reported in this paper are not to be taken as a full scale quantitative analyses, but rather as a first indication of the quantitative method used, which will be presented in later stages.
Abbreviations

AO: Acculturation orientation
PQOC: Perceived quality of care
SEM: Structural equation model(ing)

$N$ = Sample population size

$M$ = Mean

$SD$ = Standard deviation
Abstract

Current societal shifts are moving us into an increasingly globalized world. In order for such changes to be successful, a deeper understanding of individuals and their behaviours (e.g., immigrants or natives experiencing immigrants in their home country) is required. A key area where such an understanding is lacking is in the relationship and communication between doctors and immigrant patients, which is often challenging and can, as a result, negatively influence patients' health behaviours and perceived quality of life (Ng, 2011). One possibility regarding where communication problems can be improved, is in the attitudes (operationalized here as acculturation orientations) of the patients and doctors. While these attitudes may not be a fully conscious choice, they have been found to influence behaviours (Salant & Lauderdale, 2003), and may be changeable (Ward & Geeraert, 2016).

This PhD thesis explores attitudes and communication of immigrant patients and host culture doctors towards immigrants, and how these attitudes interrelate with immigrants’ health behaviours and quality of life. Main theoretical assumptions include the notion that attitudes toward and from members of a host culture can influence a migrant's behaviours, as proposed by Berry's acculturation orientations (Berry, 1998, 2001), and that behaviour change depends on environment, people and behaviour (Bandura, 1986; Ward & Geeraert, 2016).

Specifically, the acculturation orientations of immigrant patients and their host culture healthcare providers towards immigrant patients are examined for effects on (1) the perceived quality of care provided, (2) immigrants’ health behaviours, and (3) immigrants’ quality of life in their new culture. Measures were collected via interviews, medical visit video recordings, and questionnaires; health behaviours specifically focused on nutrition, physical activity, and medical advice adherence, while quality of life was measured via the established
World Health Organization Quality of Life Instrument (WHOQOL) (WHO, 1991). Semi-structured qualitative interviews were conducted to assess similar topics, albeit in much greater depth. Qualitative (Thematic Analysis and the Verona Coding System) and quantitative (ANOVA, regression and structural equation modelling) analyses were used.

In effect, these investigations provide some initial insights into how increased contact between cultures may impact health on an individual level, and how the inevitable misunderstandings that may arise can be acknowledged and potentially intervened upon, in an effort to minimize detrimental effects and foster improved functioning for the diverse members of a society.
Chapter 1

Introduction
1. Introduction

1.1. Immigration in Present Times

The increasing globalization of our world is both known and inevitable. As a result, immigration and intercultural living are and will continue to be increasingly common, and impact more people. The enormous recent immigration influx to Europe and other Western countries is currently in the spotlight, and represents a magnified example of the fact that it is imperative to develop the necessary awareness, knowledge and skills to properly adapt to large numbers of individuals with varied cultural backgrounds. Even prior to the so-called refugee crisis, immigration was already high and on the rise. According to the United Nations Population Fund (UNFPA), in 2010, 3% of the world’s population (roughly 214 million people) lived somewhere other than their country of origin (UNFPA, 2014). In 2010, 9.4% of the European population was born abroad (Eurostat, 2015). As of January 2015, there were 34.3 million people born elsewhere and living in the EU member states (Eurostat, 2015). In Canada, total numbers of immigrants entering the country, while fluctuating slightly, rose from 262, 245 in 2005 to 271, 660 in 2015 (Government of Canada, 2016). It is expected that the numbers of immigrants will continue to rise, as revealed in population growth projections from 1851-2061 (Statistics Canada, 2011; 2012). The purpose and process of immigration is complex, and many countries experience this rising rate of migrants for a variety of reasons. Aside from the current refugee crisis, immigrants to the United Kingdom, for example, were previously seeking jobs and education, but as of 2013, were primarily seeking asylum (United Kingdom Home Office: Department of National Statistics, 2013). In Germany on the other hand, a decreasing national birth rate and increasing reliance on immigrant workers led to a 13% increase in immigration from 2011 to 2012 (Destatis Statistisches Bundesamt,
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2013).

A case similar to Germany, and the country of focus for this research, is Canada.

Canada has long been established as a multicultural country, with immigrants arriving for various reasons throughout time. This number continues to increase (Government of Canada, 2016): in 2006, Canada’s immigrant population made up 1/5 of the country’s population, a number that is expected to reach at least 25% by 2031 (Malenfant, Lebel, & Martel, 2010). Like Germany, Canada currently also has a low national birthrate, and an increasing reliance on immigrants in the workforce, who are responsible for 2/3 of Canada’s 5.4% economic growth (Statistics Canada, 2013; Statistics Canada, 2014), and are, therefore, important contributors to the economic and other goals of the country (Beach, Green, & Reitz, 2003). The present day events and previously mentioned refugee crisis, have now led to a steeper projected increase than that calculated in 2010, suggesting that by 2031, 1/3 of people in the labour force may be foreign born, with this proportion being even higher in some provinces (Ontario and British Columbia) (Statistics Canada, 2014).

The rapidly growing rates of immigration, the resulting need for communal living among diverse populations, and the increasing reliance of many countries on immigrants for a strong workforce and economy, all highlight the importance of the current evidence in the literature: most immigrants, though a valuable part of the society, are in many aspects not treated as equal to the native population, such as in the workforce (Arai & Vilhelmsson, 2004), and in healthcare (Lorant, Van Oyan & Thomas, 2008; Saha, Arbelaez, & Cooper, 2003).

Rising numbers of immigrants means that increasingly more people are being affected by such inequalities. Inequality in immigrant healthcare is a particular area of concern, as it has been found that poorer quality of care for immigrants than people native to a country is a common occurrence (Krupic, Sadic, & Fatahi, 2016; Saha, Arbelaez, & Cooper, 2003; Wu,
Penning, & Schimmele, 2005; Zihindula, 2015), and can affect other life domains such as work (Arai & Vilhelmsson, 2004) and quality of life (Brzoska, Sauzet, Yilmaz-Aslan, Widera, & Razum, 2016). Numerous researchers point out, however, that it is not well understood why such disparities exist (Johnson, Roter, Powe, & Cooper, 2004; Shouten, Meeuwesen, & Harmsen, 2005; Shouten, Meeuwesen, Tromp & Harmsen, 2007).

To reduce the negative outcomes of poorer quality of care and health inequalities, it is crucial to understand and address the determinants and mechanisms of these disparities in greater depth.

The following sections will first provide an overview of the current state of research on immigrants and health in the scientific literature.

1.2. Background: The Importance of Improving and Maintaining Immigrant Health

The disparity in the quality of healthcare provision between immigrants and individuals native to a country has various consequences. Immigrants have been found to report poorer health behaviours and quality of life than the native population (Koochek, Montazeri, Johansson, & Sundquist, 2007; Nesterko, Braehler, Grande, & Glaesmer, 2013), doctors experience even more stress and strain than usual when working with immigrant patients (Marks, 2002; Villagran, Hajek, Zhao, Peterson, & Wittenberg-Leyles, 2012), and costs incurred by healthcare systems are steadily increasing. The increase in healthcare costs has many possible factors, but one potential contributor may be connected to the poorer health behaviours and quality of life of large immigrant populations, who then require more support and resources from the healthcare system (Solé-Auró, Guillén, & Crimmins, 2012). Germany, for example, spent €293.8 billion on healthcare in 2011, a €5.5 billion increase from 2010
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(Destatis Statistisches Bundesamt, 2013); in the same year the UK spent £142.8 billion on healthcare, averaging a 7.1% increase per year (United Kingdom Home Office: Department of National Statistics, 2013); and to consider the country of focus in this thesis, Canada has been experiencing an approximate $5 000 000 increase in healthcare costs per year since 2009 (Statistics Canada, 2013).

The above mentioned consequences are all problems currently being faced, and can negatively impact society on an even broader level. For instance, it has been found that immigrants tend to be in poorer health than the native population, which can lead to higher rates of unemployment or sick leave (Akhavan, Bildt, Franzen, & Wamala, 2004; Helgesson, Johansson, Wernroth, & Vingård, 2016). Considering that health is a basic human need (Maslow, 1943), that it is required for an acceptable quality of life, and that many countries rely on immigrants to help support the workforce and economy, it is imperative to ensure high quality and effective healthcare provision for these individuals, to help them maintain their health and quality of life. As stated previously, however, the immigrant population tends to receive poorer quality of care, and report poorer health and quality of life than the native population of a country (Koochek, Montazeri, Johansson, & Sundquist, 2007; Nesterko, Braehler, Grande, & Glaesmer, 2013).

The aim of this dissertation, therefore, is to investigate how attitudes and communication of immigrants and doctors might be investigated to understand and potentially improve quality of healthcare provision, and resulting health and health behaviours in the immigrant population.
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1.3 Background: Immigrant Health

As a result of growing immigration, there is not only an increased number of people requiring use of the healthcare system, but it also becomes more difficult to meet peoples’ needs when their values and background are not well understood (Marks, 2002). Discrepancies in health due to cultural differences and lack of integration can be seen in findings of a direct association between social integration and health (Berkman, 1995; Dressler & Bindon, 2000). Social integration refers to an immigrant’s social connections within a new society in terms of marital status, voluntary membership in associations, and interactions with friends or relatives. Berkman (1995) originally found better social integration to be associated with better health. This was supported by Dressler and Bindon (2000), who found social integration to be associated with lower blood pressure and fewer depressive symptoms, while poorer integration was associated with higher blood pressure and more depressive symptoms. Further, viewing the opposite side of social integration, perceived discrimination has been found to have negative effects on immigrant health (Borrell, Palència, Bartoll, Ikram, & Malmusi, 2015).

Although it is understood that culture, defined here as 'the integrated patterns of human behaviour that include language, thoughts, communications, actions, customs, beliefs, values and institutions of racial, ethnic, religious or social groups (Office of Minority Health, 2000 in Paez, Allen, Carson, & Cooper, 2008), plays a crucial role in immigrant health, there remains a lack of theoretical models connecting culture with individual (in this case, for example, doctor-patient interactions) and biological (in this case for example, health outcomes) elements (Dressler & Bindon, 2000; Marks, 2002). Still, a substantial amount of evidence exists to support the notion that culture seems to be a factor in both the quality of healthcare received by immigrant patients, as well as their health behaviours and quality of life, via a complex and poorly understood process that may ultimately play a role in their
overall health (Dunn & Dyck, 2000; Norredam, Nielsen, & Krasnik, 2009; Paez, Allen, Carson, & Cooper, 2008).

A country specific trend that is observed in immigrant health in Canada is the ‘healthy immigrant effect’: immigrants arrive to their new country relatively healthy – a requirement of the screening process for entrance – but this health declines over time. This is beyond what would be expected from age alone, as the decrease in health is more dramatic than what is observed in native populations due to age (Newbold, 2004; Ng, 2011). It should be noted that such an effect depends on the host country’s specific immigration requirements, but is nonetheless a fact to keep in mind, and highlights the disparity in health between immigrants and native populations.

While the exact reason for the healthy immigrant effect remains unknown, there are some potential avenues to explore, such as the stress of moving to a foreign place, lack of social support, adjustment to a ‘Western’ culture in terms of unhealthy processed food and a sedentary lifestyle, to name a few (Da Maio & Kemp, 2010; Higginbottom & Safipour, 2015).

Another avenue of exploration may be the doctor-patient relationship, and the resulting quality of care received by the immigrant patient, as this communication and interaction plays a crucial role in informing patients about their health and how to care for it. Language is already widely studied for its problematic role in doctor-immigrant patient communication, when immigrant patients are not fluent in the native language (Papic, Malak, & Rosenberg, 2012; Paternotte, van Dulmen, van der Lee, Scherpbier, & Scheele, 2015; van Rosse, de Bruijne, Suurmond, Essink-Bot, & Wagner, 2016). Hindered communication in the doctor-immigrant patient relationship, however, goes beyond just language (Higginbottom & Safipour, 2015).
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As an example, a study in the Netherlands found that general practitioners communicate differently with migrants compared to non-migrants, in that consultations with migrants were shorter, practitioners were more verbally dominant, and migrants were less demanding than patients native to the country. This suboptimal communication may result in misunderstandings and non-compliance (Norredam, Nielsen, & Krasnik, 2009).

Studies utilizing recorded treatment sessions or interviews have found that physicians native to a country tend to show less empathy toward immigrant patients, and that gaps of misunderstanding exist in doctor-immigrant patient communication (Newbold & Danforth, 2003; Shouten & Meeuwesen, 2006; Schouten, Meeuwesen, & Harmsen, 2005; Kagee & Delport, 2010; Kluge et al, 2012) and that such communication issues continue to be a concern, even for established immigrants (Higginbottom & Safipour, 2015). This may not necessarily be due to conscious discrimination, but rather the setting in which the interaction occurs: doctors are under extreme time pressure, high cognitive load, and stress. This may make them more likely to draw on stereotype assumptions when they come into contact with immigrant groups, rather than assessing actual individual characteristics, which requires much more time and energy (van Ryn & Burke, 2000).

Unfortunately, such disparities in understanding and proper communication have been linked to poorer reported quality of care (Ohana & Mash, 2015; Saha, Arbelaez, & Cooper, 2003). Further, poor quality of care for immigrants may result in them making less use of preventative healthcare measures such as cancer screening, regular check-ups, etc. (Newbold, 2004), experiencing a lower quality of life (Nesterko, Braehler, Grande, & Glaesmer, 2013), and not adhering to doctors' medical advice (Freccero, Sundquist, Sundquist, & Ji, 2016; Kagee & Delport, 2010; Villagran, Hajek, Zhao, Peterson, & Wittenberg-Leyles, 2011).
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It has been estimated, however, that if patients with chronic diseases did adhere to medical advice, it would result in approximately $7800 savings per person annually (Roebuck, Liberman, Gemmill-Toyama, & Brennan, 2011).

There is a large body of qualitative evidence that has found communication between doctors and immigrant patients to be less effective than that between doctors and patients native to a country, containing more misunderstandings and less compliance (Harmsen, Meeuweesen, van Wieringen, Bernsen, & Brudijnzeels, 2003; Jin & Acharya, 2015; Van Wieringen, Harmsen, & Bruijnzeels, 2002). One study reported that 33% vs. 13% of consultations with ethnic minorities vs. the indigenous population reveal poor mutual understanding between doctor and patient. This lack of mutual understanding was often related to non-compliance with prescribed therapy (Van Wieringen, Harmsen, & Bruijnzeels, 2002). Another study highlighted the importance of the doctor-patient relationship for compliance and self-management in diabetes (Brundisini, Vanstone, Hulan, DeJean, & Giacomini, 2015). It is intuitively plausible that less understanding in the doctor-patient relationship leads to poorer quality of care, and therefore a decrease in the health behaviours and quality of life of immigrant patients. There is, however, a lack of empirical evidence to measure and manage this challenge (Johnson, Roter, Powe, & Cooper, 2004; Kreps & Sparks, 2008). This is most likely because it is difficult to study such connections empirically, due to a large number of confounding variables present when studying medical and health related settings (Kiesler & Auerbach, 2006; Kreps & Sparks, 2008; Ohana & Mash, 2015).

It is thus essential to investigate this further, and for immigrants and healthcare providers to understand not only how an individual with a different culture background is affected by different beliefs, perspectives, and attitudes, but also how the attitudes of the healthcare providers themselves may interrelate with the immigrant patients' health behaviours.
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This study therefore seeks to explore how cultural attitudes influence the communication and relationship between doctors native to a country and immigrant patients, and if these attitudes and the doctor-patient relationship interrelate with the quality of care provided, and the resulting health behaviours and quality of life of the patient.

1.4. Theoretical background

Part of the theoretical background for this study is rooted in Social Cognitive Theory, which asserts that behaviour change and maintenance depend on an interaction between the environment, people and behaviour (Bandura, 1986). In this case, for example, *environmental factors* that may influence patients’ health behaviours refer to the healthcare setting; influential *people factors* may include the attitudes of (measured as acculturation orientations, and explained later in the chapter) and relationship between patients and doctors, and *behavioural factors* refer to the behaviours of both the patients and doctors (often manifestations of their attitudes). All three aspects influence each other, and are presumed to have some influence on the resulting health behaviours of the patients. More recently, in an effort to improve research relating to immigrant populations, Ward and Geeraert (2016) have supported the importance of context when studying intercultural contact. Throughout this research, different factors or aspects of contextual factors will be more or less emphasized, in an effort to examine specific interrelations more deeply. It is important to note that the study is not testing Social Cognitive Theory, but rather using it as a framework for observation and interpretation of the findings, within which any conclusions take into account all three: environmental, people and behavioural factors. Additionally, in the same sense, it is further considered how this framework can be utilized in interaction settings between immigrants and host country doctors, when seeking to create interventions to improve such interactions.
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At present there is an increasing value seen in the concept of cultural competence (Bahreman, & Swoboda, 2016), but cultural competence trainings to improve doctors' abilities and success in interacting with immigrant patients are also lack standardization. Such programs vary considerably in curricular focus, teaching methods, depth of experience and effectiveness (Ohana & Mash, 2015; Paez, Allen, Carson & Cooper, 2008). This could be improved with more empirical evidence on which to base trainings. This thesis seeks to contribute to building such an empirical evidence base.

In the following, acculturation orientation (AO) will be explained as the measure of choice for cultural attitudes. This measure has been selected for the following reason: although it would be ideal for doctors to have some knowledge of the diverse backgrounds of each immigrant patient they treat, this is a high and unrealistic demand. As mentioned, physicians already experience high cognitive load and stress (Villagran, Hajek, Zhao, Peterson, & Wittenberg-Leyles, 2012). It is therefore more practical and useful to measure a more fundamental factor like cultural attitude, as this is something that can be changed, but requires less detailed knowledge of specific cultural backgrounds. Further, research has found that ethnic minorities do in fact often differ in particular health beliefs from the native population, but this is not necessarily specifically associated with differences in mutual understanding between doctors and patients (Van Wieringen, Harmsen, & Bruijnzeels, 2002).

Assessing AO examines the attitudes and expectations of the doctor and the immigrant patient, rather than the details of cultural values and beliefs. Attitudes can have an influence on a person's perceptions (Conner, Godin, Sheerin, & Germain, 2013; Krupic, Garellick, Gordon, & Kärrholm, 2014; Vauclair, Hanke, Huang, & Abrams, 2016), and it has been found previously that patients' perceptions (for example, of the doctor-patient relationship) may influence their health behaviours (Logan, Koo, Kilmer, Blayney, & Lewis, 2015; Piccinino, Griffey, Gallivan, Lotenberg, & Tuncer, 2015).
Doctors’ expectations, perceptions and receptivity toward patients have also been shown to influence the doctor-patient relationship (Babitsch, Braun, Borde, & David, 2008; Shelley, Sussman, Williams, Segal, & Crabtree, 2009). AO may therefore provide a more basic avenue for creating a foundation for a good working interaction. According to Paez, Allen, Carson, & Cooper (2008), knowing a provider group's characteristics, in this case, AO, may provide some guidance for better tailoring cultural competence intervention content to the needs of a specific target group. For example, if both the patient and the doctor agree to fully accept the values of the host culture without taking into account the patient’s culture of origin, then it is not necessary to spend time and energy resources exploring the patient’s values from the previous culture. If, however, the patient wants to maintain some or all of the values from the previous culture, the doctor must recognize this and respond accordingly, with a certain amount of openness and understanding, and can then inquire into the details of what this means for the particular individual. This is in line with ideas of patient-centred care, which is gaining popularity, and advocates the view of patients and doctors as individuals with their own perceptions, attitudes and needs (Brzoska, Sauzet, Yilmaz-Aslan, Widera, & Razum, 2016; Kiesler & Auerbach, 2006;).

The approach taken with this research is based on awareness of each individual’s attitudes and behaviours, and can thus be applied to individuals of all backgrounds, making it both versatile and practical.

**Acculturation Orientation**

The exploration throughout this thesis of the interrelation between AO and quality of care, health behaviours and quality of life, is based on Berry’s acculturation model (Berry, 1998). This model is well established, and provides a useful method for operationalizing one’s cultural ‘attitude’, as it classifies an individual’s AO when moving to a new ‘host’ culture
into four categories. It does so by differentiating between the individual's desire to maintain his or her cultural heritage (Issue 1), and the desire to participate in and engage with the host society (Issue 2). Coping with these two issues results in four strategies, or AOs: Assimilation – immigrant chooses to abandon own ‘home’ culture and adopts all ways and customs of the new ‘host’ culture. Integration – immigrant chooses to maintain some customs of ‘home’ culture, and also adopt some customs of ‘host’ culture. Separation – immigrant chooses to maintain all customs of ‘home’ culture, and does not adopt customs of ‘host’ culture. Marginalization – immigrant does not maintain customs of ‘home’ culture, but also does not adopt customs of ‘host’ culture. Of these four AOs, Integration is often deemed as the most functional strategy, as it is related to better adapted individuals in the host society (e.g., better psychological well-being). Assimilation and Separation are usually associated with moderate levels of adaptation to the host society, and Marginalization most often with the lowest levels (Berry, Phinney, Sam, & Vedder, 2006). It is important to note that these orientations can refer to the immigrant’s attitudes about him or herself, or, to a host culture member’s orientation in terms of what he or she expects of an individual immigrant or immigrant population. This study will categorize AO based on this model, which is conceptualized in Table 1b.
Table 1. *Berry’s Acculturation Model*

<table>
<thead>
<tr>
<th>Cultural Maintenance (Of Immigrant OR Host Culture)</th>
<th>High</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>High</strong> Contact and Participation (Of Immigrant OR Host Culture)</td>
<td><strong>Integration</strong>&lt;br&gt;Interest in maintaining one’s original culture while also participating in daily and social activities of the dominant group and with other ethnic and cultural groups</td>
<td><strong>Assimilation</strong>&lt;br&gt;Individual does not wish to maintain his/her cultural identity and seeks daily interactions with other cultures</td>
</tr>
<tr>
<td><strong>Low</strong></td>
<td><strong>Separation</strong>&lt;br&gt;Individuals place a high value on holding onto their original culture and avoid interaction with others</td>
<td><strong>Marginalization</strong>&lt;br&gt;Little possibility or interest in having relationships with others and little interest in or possibility of cultural maintenance (due primarily to experiences with discrimination or institutionalized, forced separation from others)</td>
</tr>
</tbody>
</table>

(Berry, 1998)

Based on the above model, the Interactive Acculturation Model was created by Bourhis, Moise, Perrault, & Senecal (1997), to include *host culture* AOs as well, as part of a dynamic interplay between the host society and immigrants. The model seeks to predict the types of relationships that would be formed between the host culture population and immigrants, based on their respective AOs. It does so by considering the AO of the host country population, and the AO of the immigrant population, and predicting what kind of relationship will be formed based on the respective combined AOs of each group.

The Interactive Acculturation Model was originally intended to be used on a societal level scale in terms of host culture group and immigrant group. It was further modified by Kazarian and Evans (2001), however, to apply specifically to healthcare settings, in which form it is intended to be interpreted on the individual level.
Chapter 1: Introduction

This model, known as the health consumer/health practitioner model, is conceptualized in Table 2. It refers specifically to the relational outcomes of health consumer and health professional AOs, demonstrating which combinations are predicted to produce favourable and unfavourable relationships.

Table 2. Modification of Berry's Model: the Health Consumer/Health Practitioner Model

<table>
<thead>
<tr>
<th>Health Professional</th>
<th>Integration</th>
<th>Assimilation</th>
<th>Separation</th>
<th>Individualism (Marginalization)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Integration</td>
<td>Consensual</td>
<td>Problematic</td>
<td>Conflictual</td>
<td>Problematic</td>
</tr>
<tr>
<td>Assimilation</td>
<td>Problematic</td>
<td>Consensual</td>
<td>Conflictual</td>
<td>Problematic</td>
</tr>
<tr>
<td>Separation</td>
<td>Conflictual</td>
<td>Conflictual</td>
<td>Conflictual</td>
<td>Conflictual</td>
</tr>
<tr>
<td>Individualism</td>
<td>Conflictual</td>
<td>Conflictual</td>
<td>Conflictual</td>
<td>Conflictual</td>
</tr>
</tbody>
</table>

Note. The AO of the health consumer refers to immigrants’ attitudes regarding themselves, while the AO of the health professional refers to his or her attitude regarding whether the immigrant patient should be assimilated, integrated, separated or marginalized in the new culture.

(Kazarian & Evans, 2001)

The terms consensual, problematic, and conflictual refer to the type of doctor-patient relationship that can be expected from various combinations of AOs of doctors native to a country (host culture 'health professionals'), and immigrant patients (immigrant 'health consumers'). Consensual relationships suggest a shared understanding. Problematic relationships suggest no direct conflict in opinions, but also no common understanding. Conflictual relationships suggest a direct conflict of opinions. From the model, it becomes evident that very few (only two) combinations produce a consensual relationship.
Chapter 1: Introduction

It can be assumed that a positive (consensual) relationship between the doctor and immigrant patient may be related to a higher quality of care received, and subsequently better health behaviours and quality of life outcomes for the patient.

This study uses the modified version of Berry’s model above to observe if the proposed AO combinations interrelate with the doctor-immigrant patient relationships as expected in reality, and if they can provide some insight into how to improve the quality of care, health behaviours and quality of life of immigrant patients.

*Literature Gap and Current Project*

It is well studied that when an individual immigrates to a new country, his or her acculturation orientation (AO) – Assimilation, Integration, Separation, or Marginalization – (Berry, 1998) plays a significant role in determining his or her behaviours in the new country (Salant & Lauderdale, 2003). What has not yet been studied, is how the immigrant's AO relates to the doctor-patient relationship, specific health behaviours and quality of life of the patient, and how the AO of members of the *host culture* towards immigrant patients impacts the doctor-patient relationship, health behaviours and quality of life of the patients (Kazarian & Evans, 2001). It has been asserted in the literature that healthcare outcomes (e.g., compliance, satisfaction, etc.) are directly related to the degree of cognitive disparity between the explanatory models of practitioner and patient, as well as to the effectiveness of clinical communication (Van Wieringen, Harmsen & Bruijnzeels, 2002), thus highlighting this area as a potentially crucial factor in immigrant patient health outcomes, and thus an important area for research.

Based on the above information, this project therefore explores both the AOs of immigrant patients *and* the AOs of a specific host culture group (doctors) towards these immigrant
patients, and how this affects (1) the perceived quality of care received, (2) the immigrants’ health behaviours and (3) the immigrants’ quality of life in their new culture.

Canada is the country of study for this research, due to its multicultural population, its current economic reliance on an immigrant population, and the research evidence that its migrants do not receive equal quality of care, and often demonstrate poorer health behaviours and quality of life than the native population. Host culture AO within a healthcare setting is assessed in doctors, since the attitudes of such professionals are likely to relate to the health behaviours and quality of life of immigrants (Babitsch, Braun, Borde, & David, 2008; Shelley, Sussman, Williams, Segal, & Crabtree, 2009).

For that reason, this group provides a good starting point, from which the study can be tested, evaluated, and eventually expanded to other healthcare professionals (e.g. physiotherapists, dieticians, nurses, chiropractors, dentists, etc.), and non-healthcare related professionals, as well as people of different cultural backgrounds, and in different countries.

1.5. Research Questions and Hypotheses

Methodology

This study utilizes a mixed methods approach.

Based on the above review of the literature, both qualitative and quantitative data were collected and analyzed to answer the following research questions:

1. Does the AO of doctors and immigrant patients interrelate with their relationship and communication based on the health consumer/health practitioner model?
2. How does the AO of immigrant patients interrelate with:
   a) Patients' perceived expectations of their doctors
   b) The perceived quality of care received
   c) The patients’ reported health behaviours and
   d) The patients’ reported quality of life?

3. How does the AO of immigrant patients and the AO of their doctors interrelate with:
   a) Patients' perceived expectations of their doctors
   b) The perceived quality of care received
   c) The patients’ reported health behaviours and
   d) The patients’ reported quality of life?

4. Is AO a useful practical measurement for understanding and improving immigrant
   health behaviours and quality of life?

From these research questions, the following hypotheses were included:

1. a) The quality of the doctor-patient relationship and the nature of doctor-patient
   communication are influenced by the combined AOs of the doctor and patient.
   b) Patients and doctors who share the same AO will report a consensual relationship.
   c) Other AO combinations will report a conflictual/problematic relationship.
   (Chapter 2, qualitative data).

2. a) An ‘Integration’ or ‘Assimilation’ AO of the patient will have a positive
   interrelation with patients' perceived expectations of their doctor, perceived quality of
   care, health behaviours and quality of life (Chapter 3, quantitative data).
   b) A 'Marginalization' or 'Separation' AO of the patient will have a negative
interrelation with patients' perceived expectations, perceived quality of care, health 
behaviours and quality of life (*Chapter 3, quantitative data*).

3. a) Concordance between patient and doctor AOs, as predicted by the health 
consumer/health practitioner model, will be associated with better perceived quality 
of care, health behaviours and quality of life for the patient 
(*Chapter 4, quantitative data*).

b) Discrepancy between patient and doctor AOs, as predicted by the health 
consumer/health practitioner model, will be associated with poorer perceived quality 
of care, health behaviours and quality of life for the patient 
(*Chapter 4, quantitative data*).

4. a) Consensual relationships between doctors and their immigrant patients will 
positively interrelate with the patients’ and doctors' personal experiences 
(*Chapter 2, qualitative data*).

b) Conflictual/problematic relationships between doctors and their immigrant patients 
will negatively interrelate with the patients’ and doctors' personal experiences 
(*Chapter 2, qualitative data*).

5. AO is a useful practical measurement for understanding and improving immigrant 
health behaviours and quality of life (*Chapter 5, quantitative data*).

The purpose of these measures is to achieve a better understanding of the role that cultural 
attitudes play in understanding and interaction in a healthcare setting. In particular, this refers 
to how the AOs of immigrant patients and AOs of doctors native to the culture relate to the 
doctor-immigrant patient relationship, immigrant patient health behaviours (nutrition, 
physical activity and medical advice adherence) and their quality of life. Such knowledge
may provide a basis for improved healthcare provision via practical interventions, by incorporating the essential aspect of cultural understanding through policy on a societal level, and cultural sensitivity between doctors native to a country and immigrant patients on an individual level. This may take a step toward more equal treatment of immigrant patients in healthcare settings, and improved health and quality of life in global populations. Not only is this research needed and valuable for improving the health and quality of lives for individuals, but may also contribute to improving the effectiveness and efficiency of the healthcare system, which would lower costs and systematic problems.

*Studies in this thesis*

This research received approval from the ethics board at St. Mary's Hospital, in the culturally diverse city of Montreal, Canada. Under a strict confidentiality agreement, the researcher was granted access to the hospital department of family medicine.

Inclusion criteria for the patients included being at least 18 years of age, and having a migration background (immigrated to Canada after the age of 16). Inclusion criteria for the doctors included no migration background (born and trained in Canada. If migrated, then before the age of 16).

The outlined hypotheses in this study are addressed in the following four papers, each of which contributes findings relating to a particular aspect(s).

Combined, they address the hypotheses in their entirety.

The division is as follows:

*Paper 1 (Chapter 2): Qualitative data study: exploring whether doctor and patient AOs combine and predict relationships as outlined by the health consumer/health practitioner*
model, and which types of relationships between doctors and their immigrant patients positively or negatively interrelate with the patients’ and doctors' personal experiences: addressing H1a-d) and H4.

Population

N = 5 (4 females, 1 male) general practice doctors, each with one patient (4 females, 1 male) participated in a video recording of one medical visit per doctor-patient pair, followed by a brief questionnaire assessment of patients’ and doctors’ respective AOs, and semi structured interviews with: 1) doctors, to evaluate their experience and cultural competence, and 2) patients, to evaluate their interactions with doctors, perceived quality of treatment, and overall health care experience.

Recruitment

Family medicine doctors were invited face-to-face to participate in the study. Those who agreed provided a list of their immigrant patients to be invited for participation.

Patients who had a regular medical visit scheduled in the near future were invited to participate via phone call. Patients were assured that the doctor would not be informed about their personal answers, and that all information would be kept confidential.

Procedure and Measures

Patients and doctors participated in a video-recorded medical visit and follow-up interview. All participants signed provided informed consent forms (Appendices A1 and A2). One regular medical visit for each patient/doctor dyad was video-recorded.

Patients later took part in an audio-recorded semi-structured interview separately at a time of their convenience, to evaluate their experience of their interactions with healthcare providers.
and perceived quality of treatment (Appendix B1). At the beginning of the interview, the patient completed a short acculturation questionnaire to determine his or her AO (Appendix C1, Part I) (the questionnaire was comprised of three behaviour items from the general ethnicity questionnaire (Tsai, Ying, & Lee, 2000), one item on communication from the sociocultural adaptation scale (Searle & Ward, 1990), and three identity items (Roccas, Sagiv, Schwartz, Halevy, & Eidelson, 2008)). Prior to analysis, alphanumerical coding was utilized on the interview and recording data, to maintain anonymity while enabling connection to be made between doctors and patients. Video recording data was analyzed using the Verona Coding System, while interview data was analyzed using Thematic Analysis.

Doctors also later took part in an audio-recorded semi-structured interview separately at a time of their convenience, to evaluate their experience of the interaction, and cultural competence with immigrant patients (Appendix B2). At the beginning of the interview, the doctor completed a similar short acculturation questionnaire to determine his or her AO towards immigrant patients (Appendix C2) (the questionnaire was comprised of three behaviour items from the general ethnicity questionnaire (Tsai, Ying, & Lee, 2000), one item on communication from the sociocultural adaptation scale (Searle & Ward, 1990), and three identity items (Roccas, Sagiv, Schwartz, Halevy, & Eidelson, 2008)), and tailored to address the doctors’ AOs in terms of their expectations toward immigrants.

*Paper 2 (Chapter 3): Quantitative data study: addressing immigrant patients' AOs, and their relation to these patients' perceptions of doctors' expectations, perceived quality of care, health behaviours and quality of life: addressing H2 a) and b).*
Chapter 1: Introduction

Population

$N = 12$ doctors ($M = 38.88$ years, $SD = 13.42$, Range = 27-66, 83% female) and $N = 171$ immigrant patients of various ethnic backgrounds ($M = 54.38$ years, $SD = 17.94$, Range = 23-96, 74.3% female) completed paper and pencil questionnaires, to evaluate the interrelation between AOs of immigrant patients and AOs of doctors native to a country with quality of care, health behaviours and quality of life of the patient.

Each patient was a patient of one of the 12 participating doctors.

Recruitment

Recruitment involved mailing invitations by post to patients for participation in the survey. This was a systematic method, beginning with an invitation letter to the patient, a follow up phone call for permission to mail the questionnaire, mailing of the questionnaire with a $2$ incentive, and a reminder letter if the questionnaire was not promptly returned. This process followed the well-established 'Tailored Design Method' (Dillman, Smyth, & Christian, 2009). The details of this process can be found in Whittal & Lippke (2015) (Chapter 3).

Procedure and Measures

If they had not already done so, doctors completed the short paper-based acculturation questionnaire to determine his or her AO towards immigrant patients (Appendix C2) (the questionnaire was comprised of three behaviour items from the general ethnicity questionnaire (Tsai, Ying, & Lee, 2000), one item on communication from the sociocultural adaptation scale (Searle & Ward, 1990), and three identity items (Roccas, Sagiv, Schwartz, Halevy, & Eidelson, 2008)). Patients of these doctors completed a paper-based questionnaire assessing AO, perceived expectations of their doctor, health behaviours (nutrition, physical activity, medical advice adherence), perceived quality of care and quality of life (Appendix C1) (the questionnaire included AO items (Tsai, Ying & Lee, 2000; Searle & Ward, 1990;
Chapter 1: Introduction

Roccas, Sagiv, Schwartz, Halevy, & Eidelson (2008), items assessing perceived and actual expectations, health behaviour items regarding physical activity, nutrition, medical advice adherence (Lippke, Ziegelmann, Schwarzer, & Velicer, 2009), the World Health Organization quality of life questionnaire (WHQL-BREF) (WHO, 1991), items assessing perceived quality of medical treatment (Richmond, Smith, Heisel, & McCroskey, 1998), and items assessing adherence to medical advice (Hays, 2002).

An alphanumerical coding process was utilized on the completed questionnaires to maintain anonymity, while still allowing analyses to connect patients with their doctors.

Survey responses were analyzed with SPSS 20 and Amos 22.

Paper 3 (Chapter 4): Quantitative data study: addressing immigrant patients' AOs and doctors' AOs, and their relation to these patients' perceptions of doctors' expectations, quality of care, health behaviours and quality of life; forming a more comprehensive model: addressing H3 a) and b).

Population, recruitment and procedure: same as paper 2. Different analyses (structural equation modeling) were used, although with the same statistical programs.

Paper 4 (Chapter 5): Quantitative data study: addressing AO as a practical and useful measurement tool for understanding the immigrant population. Applying the AO construct to a different dataset, examining mechanisms of AO and health behaviour more deeply: addressing H5.

Population

Eighty four university students (M= 20.49 years, SD= 2.63, Range= 17-38, 68.7% female) of various cultural backgrounds in Bremen, Germany, participated in an online survey to investigate the relationship between AOs and students’ health behaviours and quality of life.
Chapter 1: Introduction

Recruitment

Students were recruited via invitation emails and reminders to their university accounts, asking them to participate in an online study. They were offered an incentive in the form of entry into a random draw to receive an online gift voucher after completion of the survey.

Procedure and Measures

The questionnaire assessed students' AOs, health behaviours (physical activity and nutrition), perceived quality of life, and demographic characteristics. Like the patient and doctor questionnaires, the student acculturation questionnaire was comprised of three behaviour items from the general ethnicity questionnaire (Tsai, Ying, & Lee, 2000), one item on communication from the sociocultural adaptation scale (Searle & Ward, 1990), and three identity items (Roccas, Sagiv, Schwartz, Halevy, & Eidelson, 2008). Nutrition and physical activity items addressed behaviour stage of change (Lippke, Ziegelmann, Schwarzer, & Velicer, 2009), self-efficacy, outcome expectancies, planning and social support. Survey responses were analysed with SPSS 20 and Amos 22.

The four papers are presented in the next four chapters (2-5), after which an integrated presentation of the final results, discussion and conclusions will follow (Chapter 6).

The overall investigation can be visualized in the following model (Figure 1). This model will appear at the beginning of each empirical chapter, highlighting in blue which aspects of the model that particular chapter is focusing on.
**Figure 1.** Overview of research content throughout the chapters in this thesis
Chapter 2

The importance of immigrant patient and doctor attitudes on the doctor-patient relationship and communication
2. Paper 1

This chapter focuses on qualitative measurements. As a first step in the research, it examines whether the health consumer/health practitioner model can actually predict the quality of the doctor-patient relationship. Acculturation orientations of doctors and patients are assessed. Interview and video recording data is then used to investigate the quality of the doctor-immigrant patient relationship, and whether it corresponds to the predictions made by the health consumer/health practitioner model.
2. Paper 1

Effects of individual immigrant attitudes and host culture attitudes on doctor-immigrant patient relationships and communication in Canada.

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Chapter 3

Relationships between patient and doctor attitudes, the doctor-patient relationship and health outcomes
3. Paper 2

Figure 1b. Focus on patient acculturation orientation only, quality of the doctor patient relationship, health behaviours and perceived quality of life

This chapter focuses on quantitative measurements. Delving deeper into the research, it begins to examine acculturation orientations further, by analyzing their role in the quality of the doctor-immigrant patient relationship, health behaviours and quality of life of the immigrant patient. Acculturation orientations of doctors are not yet included. Rather, the chapter looks first only at the role of the patients’ acculturation orientations. Survey data are used to conduct analyses on a variety of items hypothesized to be interrelated with acculturation orientation.
3. Paper 2

Investigating patients with an immigration background in Canada: relationships between individual immigrant attitudes, the doctor-patient relationship, and health outcomes P57

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Chapter 4

The importance of immigrant patient and doctor attitudes on medical advice adherence
4. Paper 3

Figure 1c. Focus on patient and doctor acculturation orientation only, quality of the doctor-patient relationship, medical advice adherence and perceived quality of life

This chapter focuses again on quantitative measurements. It again examines acculturation orientations by analyzing their role in the quality of the doctor-immigrant patient relationship, health behaviours and quality of life of the immigrant patient. This time, acculturation orientations of doctors are included. The acculturation orientations of both patients and doctors are included into the analyses, to investigate how they interrelate with the doctor patient relationship, health behaviours and quality of life of the immigrant patient. Survey data are used. Specifically at this stage, medical advice adherence and quality of life are the main outcome variables.
4. Paper 3

Investigating acculturation orientations of patients with an immigration background and doctors in Canada: implications for medical advice adherence.

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Chapter 5

How useful is acculturation orientation as a practical measurement for immigrant health?
Figure 1d. Focus on patient acculturation orientation only, health behaviours and perceived quality of life

This chapter focuses again on quantitative measurements, but seeks to further test the usefulness of acculturation orientation as a practical measure, by applying it to a new sample with a high proportion of individuals with a migration background. Thus, acculturation orientations are investigated, in terms of how they interrelate directly with health behaviours and quality of life, without the aspect of the doctor-patient relationship.
How useful is Acculturation orientation as a practical measurement for immigrant health?

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Abstract:

**Background:** Increasing immigration calls for methods to empirically examine and understand how to facilitate the best functioning of such populations. Among the myriad of important aspects to consider, health is a main one. Acculturation orientation (AO) provides a potential avenue for empirically examining relevant interrelations with immigrant health. AOs are measured based on the degree of cultural maintenance and contact an immigrant maintains within a host society. Many studies have both utilized and criticized this measurement method and very few could be found interrelating AO and health behavior. Thus, this paper seeks to acknowledge its challenges, while highlighting its potential usefulness regarding health behaviors and quality of life in an intercultural setting.

**Methods:** Online survey data was collected from culturally diverse students (N=84) in Germany. Linear regressions examined links between AO, health behaviors and quality of life. Structural equation modeling (SEM) investigated findings more deeply in the domain of physical activity.

**Results:** Interrelations were found between AO, health behaviors and quality of life. Integration played a role in physical activity self-efficacy, which is important for behavior.

**Conclusion:** AO relates to health behaviors and quality of life. It appears both to be a relatively straightforward concept and a complex empirical structure. Despite such challenges, it can be empirically measured and used. In light of this, when interpreted with contextual awareness, it may provide a valuable practical measurement that can aid in enabling increased understanding of growing immigrant populations.

**Key Words:** Immigrant health, acculturation orientation, culture, health
Chapter 5: AO as a practical measurement for immigrant health

Background

Immigrant Health

As immigration and globalization become increasingly commonplace in the world today, understanding processes of immigrant adaptation into new communities becomes progressively more imperative for successful functioning of individuals and societies (Hoti, Heinzmann, Müller, & Buholzer, 2015; Schwartz et al., 2015).

A particular domain of importance regarding immigrants is health. Acculturation research, which investigates immigrant adaptation, has acknowledged that connections between acculturation (explained below) and health have not been extensively studied, but should be (Schwartz & Zamboanga, 2008). Immigrants tend to report a poorer quality of health than native populations (Koochek, Montazeri, Johansson, & Sundquist, 2007) and poorer quality of life (Nesterko, Braehler, Grande, & Glaesmer, 2003). This requires attention not only for the rights of individuals to good health and quality of life, but also so that immigrants can fulfill roles as valuable members of society - if they remain unhealthy they are likely to take more sick leave and be less productive than their native counterparts (Akhavan, Bildt, Franzen, & Wamala, 2004) and be less of a strain on the healthcare system, many of which are currently experience increasing costs annually (Statistics Canada, 2013). The adaptation of the immigrant population is thus an avenue that should be investigated as a potential factor related to immigrant health. Measuring such adaptation empirically poses many challenges, but it a necessary step to create a better understanding of this population in many domains, and in this case, in terms of health. Before moving into the research itself, an understanding of the empirical approach to measure adaptation is necessary, and is therefore elaborated upon in the following section.
Chapter 5: AO as a practical measurement for immigrant health

Theoretical Framework

Perhaps the most widely recognized research regarding the theory and assessment of immigrant adaptation is John Berry’s conceptual model of four acculturation orientations, established in 1980 (Berry, 1980, 1997). The model classifies an individual’s acculturation orientation (AO) when moving to a new ‘host’ culture into four categories (Table 1).

Table 1. Berry’s Acculturation Model

<table>
<thead>
<tr>
<th>Cultural Maintenance (Of Immigrant OR Host Culture)</th>
<th>High</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Contact and Participation (Of Immigrant OR Host Culture)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>Integration</td>
<td>Assimilation</td>
</tr>
<tr>
<td>Integration</td>
<td>Interest in maintaining one’s original culture while also participating in daily and social activities of the dominant group and with other ethnic and cultural groups</td>
<td>Individual does not wish to maintain his/her cultural identity and seeks daily interactions with other cultures</td>
</tr>
<tr>
<td>Low</td>
<td>Separation</td>
<td>Marginalization</td>
</tr>
<tr>
<td>Separation</td>
<td>Individuals place a high value on holding onto their original culture and avoid interaction with others</td>
<td>Little possibility or interest in having relationships with others and little interest in or possibility of cultural maintenance (due primarily to experiences with discrimination or institutionalized, forced separation from others)</td>
</tr>
</tbody>
</table>

(Berry, 1998)

These categories, defined in Table 1, are based on how much an immigrant maintains contact with his/her previous culture, and how much he/she engages with the new host culture.

The model has undergone numerous modifications by Berry and others over the years, seeking accurate ways of defining and measuring acculturation. These various ways of understanding acculturation have emerged as different types of models, two of which are the most prominent in the literature (Cabassa, 2003). One, the unidimensional model, views
acculturation as a continuous process, whereby an immigrant is first fully part of the home culture, but slowly loses aspects of the home culture and gains aspects of the host culture through acculturation (Gordon, 1964). This is limiting, however, as it does not leave space for the immigrant to have aspects of both cultures within their attitudes, behaviours, etc. (Cabassa, 2003). The model developed by Berry (shown in Table 1) is a bi-dimensional model, and overcomes the mentioned limitation, by viewing acculturation on two separate dimensions; maintenance of one's previous culture and contact/participation with the new culture (Berry, 1997; Ryder, Alden, & Paulhus, 2000). Maintenance of one's previous culture refers to the extent to which an individual keeps aspects of their culture of origin (Berry, 1997, 1998), while contact/participation with the new culture refers to the extent to which an individual engages with their new host culture (Berry, 1997).

The focus of this paper is on Berry's model, which is one of the most recognized and used bi-dimensional models in this research domain (Sullivan et al., 2007).

One noteworthy problem in measuring acculturation is that agreement on definitions of terms is still lacking (Hunt, Schneider, & Comer, 2004; Rudmin, 2008; Thomson & Hoffman-Goetz, 2009), but it requires a separate piece of literature to examine this in detail. For the purposes of this paper, it is acknowledged that there is currently no solid consensus on these terms, although there should be. At this stage of acculturation research, there must be an awareness of potentially different interpretations of terms, and they should therefore be defined within individual research to avoid ambiguity. Here, acculturation indicates the combination of to what degree an individual immigrant maintains his/her previous culture, and to what degree he/she adopts the new host culture. Acculturation orientation (AO) refers precisely to ‘the four categories describing acculturation, as determined by Berry's model (Berry, 1998) (Table 1).
Past and current scientific discourse both utilizes (Jasinskaja-Lahti, Liebkind, Horenczyk, & Schmitz, 2003; Jian, 2012; Sullivan et al., 2007) and criticizes acculturation as a mode of empirical measurement (Hunt, Schneider, & Comer, 2004; Rudmin, 2009; Thomson & Hoffman-Goetz, 2009). Various methods of measuring the bi-dimensional model of AO and dividing data into the four categories have been tried, many with challenges and drawbacks (for a full description, see Arends-Tóth and Van de Vijver, 2006).

Despite these existing challenges, the measure of AO has been used in many different studies, suggesting it may be of practical value in assessing an individual's adaption to a new country. A further issue that becomes evident in these studies, however, is that due to the complex nature of AO definitions and measurements, and lack of consensus regarding any solution, many of the studies have constructed their own scales, creating a large array of culture and context specific AO scales and calculation procedures (Celenk & Van de Vijver, 2011; Rudmin, 2009; Salant & Lauderdale, 2003; Thomson & Hoffman-Goetz, 2009). As a result, although one AO scale will not be generally appropriate for all groups, there is a need for concise scales that can be used across different cultures and populations (Demes & Geeraert, 2014). While this research does not seek to introduce a new scale, it does utilize a combination of some of the more established items, in an effort to make more appropriate for a variety of groups.

In order for the AO measure to be used most optimally, a strong understanding regarding why it is useful, and how it can be accurately utilized empirically, is necessary. Many researchers have considered ways of improving the AO measurement via creation of new scales, or tackling the above mentioned problems (Kim & Abreu, 2001; Lopez-Class, Castro, & Ramirez, 2011). While such efforts are undoubtedly valuable, this paper takes a different, equally valuable approach: The intent is to explore the notion that in a world of increasing
immigration, measures that enable the study and understanding of such phenomena are essential. AO, even with its difficulties, is a potentially viable option that can be practically utilized (Lopez-Class, Castro, & Ramirez, 2011).

This study therefore aims to investigate whether AO can be used as a viable measurement for understanding immigrant populations, by focusing on its role in health behaviors and reported quality of life. It uses the AO measurement currently often advocated - the proximity or Euclidean distance method (Möllering, Schiefer, Knafo, & Boehnke, 2013). This measurement method is advantageous, because it assesses orientations to the home and host cultures separately, and creates two continuous variables for each AO, for each participant (Arends-Tóth & Van de Vijver, 2006; Demes & Geeraert, 2014; Ryder, Alden, & Paulhus, 2000). The current study next examines a domain which may be related to acculturation, namely physical activity (Pichon et al., 2007; Van Wieren, Roberts, Arellano, Feller, & Diaz, 2011) more deeply, in an effort to understand the mechanisms between AO and health. This assessment of previous literature regarding the concept and measurement of AO, and immigrant health being often suboptimal, combine to form analyses seeking to help examine the practical value of AO as an empirical measure. The following research questions and hypothesis will be included:

Research question (R1): To what extent does AO interrelate with health behaviors and quality of life (QoL)?

Research question (R2): To what extent does AO function within existing theoretical mechanisms of physical activity behavior?

From R2, it was hypothesized: Integration and Assimilation will be related to higher physical activity self-efficacy and physical activity stage of change, while Marginalization and Separation will be related to lower physical activity self-efficacy and stage of change.
Methods

Participants

Eighty four university students ($M= 20.49$ years, $SD= 2.63$, Range= 17-38, 68.7% female) of various cultural backgrounds in Bremen, Germany, participated in an online survey to investigate the relationship between AOs and students' health behaviors and quality of life. Table 11 outlines participant characteristics.
Table 11. Participant characteristics

<table>
<thead>
<tr>
<th></th>
<th>Total ($N = 84$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of men (%)</td>
<td>25 (31.3)</td>
</tr>
<tr>
<td>Mean age (SD), range</td>
<td>20.49 (2.63), 17-38</td>
</tr>
</tbody>
</table>

**Marital status**

<table>
<thead>
<tr>
<th>Marital status</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Single (%)</td>
<td>40 (51.3)</td>
</tr>
<tr>
<td>Close relationship, not living together (%)</td>
<td>28 (35.9)</td>
</tr>
<tr>
<td>Close relationship, living together (%)</td>
<td>10 (12.8)</td>
</tr>
<tr>
<td>Married/in common law relationship (%)</td>
<td></td>
</tr>
<tr>
<td>Divorced (%)</td>
<td></td>
</tr>
<tr>
<td>Widowed (%)</td>
<td></td>
</tr>
</tbody>
</table>

**Occupational status**

<table>
<thead>
<tr>
<th>Occupational status</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Employed, full time (%)</td>
<td>1 (1.3)</td>
</tr>
<tr>
<td>Employed, part time (%)</td>
<td>10 (12.8)</td>
</tr>
<tr>
<td>Student/ in training (%)</td>
<td>61 (78.2)</td>
</tr>
<tr>
<td>Unemployed/Job searching (%)</td>
<td>2 (2.6)</td>
</tr>
<tr>
<td>In pension/retired (%)</td>
<td></td>
</tr>
<tr>
<td>Housewife/husband (%)</td>
<td></td>
</tr>
<tr>
<td>Other (%)</td>
<td>4 (5.1)</td>
</tr>
</tbody>
</table>

**Education**

<table>
<thead>
<tr>
<th>Education</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>None (yet) (%)</td>
<td></td>
</tr>
<tr>
<td>Primary School (%)</td>
<td></td>
</tr>
<tr>
<td>Secondary School (%)</td>
<td></td>
</tr>
<tr>
<td>High School (%)</td>
<td>54 (69.2)</td>
</tr>
<tr>
<td>Junior College (%)</td>
<td>3 (3.8)</td>
</tr>
<tr>
<td>University or Above (%)</td>
<td>20 (25.6)</td>
</tr>
<tr>
<td>Other (%)</td>
<td>1 (1.3)</td>
</tr>
</tbody>
</table>

**Home culture**

<table>
<thead>
<tr>
<th>Home culture</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Western Europe (%)</td>
<td>13 (18.1)</td>
</tr>
<tr>
<td>Asia (%)</td>
<td>8 (11.1)</td>
</tr>
<tr>
<td>Mediterranean (%)</td>
<td>4 (5.6)</td>
</tr>
<tr>
<td>Africa (%)</td>
<td>13 (18.1)</td>
</tr>
<tr>
<td>America/Australia/New Zealand (%)</td>
<td>34 (47.2)</td>
</tr>
<tr>
<td>Eastern Europe (%)</td>
<td></td>
</tr>
</tbody>
</table>
Chapter 5: AO as a practical measurement for immigrant health

Data Collection

The sampling strategy involved sending invitation emails to the university accounts of all students at the Jacobs University Bremen campus, asking them to participate in an online study. They were offered an incentive in the form of entry into a random draw to receive an online gift voucher after completion of the survey. Email reminders were sent out on a weekly basis for the duration of time (two months) that the survey was open.

Participation was voluntary and kept anonymous, and therefore ethically acceptable.

Measures

The questionnaire assessed students' AOs, health behaviors (physical activity and nutrition), perceived quality of life, and demographic characteristics.

As mentioned, many previous studies developed their own, usually culture-specific, measurement tools, in order to target specific facets of AO, such as identity, behavior or adaptation (Taras, 2008). The scale used here was that created by Whittal and Lippke (2015), which combines some of the more established measurement tools available into one short scale, in order to create a measure including behavior, communication and identity items. Specifically, the AO scale included three behavior items from the general ethnicity questionnaire (Tsai, Ying, & Lee, 2000), one communication item from the sociocultural adaptation scale (Searle & Ward, 1990), and three identity items (Roccas, Sagiv, Schwartz, Halevy, & Eidelson, 2008) adapted from their original measure (Möllering, Schiefer, Knafo & Boehnke, 2013). The scale was adapted to refer to Germany as the host culture, and thus assessed students’ AOs towards the host culture (Germany), and their home culture. Final items provide information about patients' AOs towards the host culture (Germany), including items like, for example, “it is important to me to see myself as German”, and towards their
home culture, including items like, for example, “it is important to me to see myself as part of my home culture” (Möllering, Schiefer, Knafo & Boehnke, 2013). Cronbach's Alpha scores were good for all seven items regarding attitude toward the host culture (α=.83) and all seven items regarding attitude toward the home culture (α=.86).

All items were used to create an AO score for each individual.

Other survey items assessed nutrition and physical activity self-efficacy, outcome expectancies, planning and social support. Individual stage of change of physical activity behavior was also measured, which is a categorical variable that determines an individual's 'stage' of physical activity; respondents are classified as not engaging in the behavior and not intending to, thinking about engaging in the behavior, seriously considering engaging in the behavior, engaged in the behavior but only for a short period of time, or engaging in the behavior continuously for a long period of time (Lippke, Ziegelmann, Schwarzer, & Velicer, 2009). For a thorough description of items, see Whittal and Lippke (2015). Acceptable Cronbach's Alpha scores were found for all physical activity (α =.77) and nutrition (α =.79) items.

The quality of life questionnaire was used to assess perceive quality of life (α =.86) (WHO, 1991).

**Analysis**

AOSs were calculated for each individual participant using the Euclidean Distance method, as suggested by (Arends-Tóth & Van de Vijver, 2006), which provides a continuous score for each participant on each of the four orientations, showing which they lean toward the most.
Most of participants in this sample were mainly classified into Marginalization (66%), followed by Separation (14%), Integration (12%) and Assimilation (8%).

Linear regressions were run with IBM SPSS20 to examine relationships between AO and students' reported quality of life, nutrition and physical activity behaviors. Age, gender and education were included as control variables.

Structural equation modelling was run with Amos (23), to investigate AO and existing theoretical mechanisms of physical activity behavior.

**Results**

Table 12 presents the results relating to R1 (To what extent does AO interrelate with health behaviors and quality of life (QoL)?)

<table>
<thead>
<tr>
<th></th>
<th>Marginalization</th>
<th>Integration</th>
<th>Assimilation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality of life</td>
<td>$b = -0.25^{*}$</td>
<td>$b = 0.39^{**}$</td>
<td></td>
</tr>
<tr>
<td>Physical activity outcome expectancies</td>
<td></td>
<td></td>
<td>$b = 0.46^{**}$</td>
</tr>
<tr>
<td>Physical activity motivational self-efficacy</td>
<td>$b = 0.28^{*}$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical activity maintenance self-efficacy</td>
<td></td>
<td></td>
<td>$b = 0.32^{**}$</td>
</tr>
<tr>
<td>Physical activity perceived support</td>
<td>$b = -0.29^{*}$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nutrition maintenance self-efficacy</td>
<td></td>
<td></td>
<td>$b = 0.36^{**}$</td>
</tr>
</tbody>
</table>

*Note.** $p < .01$, * $p < .05$; Separation is not listed here, since there were no significant findings.

Linear regression results revealed that AO was related to QoL and some health behaviors. Specifically for QoL, Integration interrelated with an improved general quality of life ($b = 0.39$, $t(2.85)$, $p<0.01$, $R^2=.15$), while Marginalization interrelated with a lower general quality of life ($b = -0.26$, $t(-2.37)$, $p<0.05$, $R^2=.12$). Specifically for health behaviors, Assimilation
interrelated with better physical activity outcome expectancies ($b = .25, t(2.17), p<0.05, R^2 = .08$) and better physical activity maintenance self-efficacy ($b = .33, t(3.04), p<0.01, R^2 = .19$). Integration interrelated with improved physical activity motivation self-efficacy ($b = .38, t(3.49), p<0.01, R^2 = .17$), and improved nutrition maintenance self-efficacy ($b = .27, t(2.48), p<0.05, R^2 = .17$). Marginalization was related to lower perceived physical activity support ($b = -.24, t(-2.09), p<0.05, R^2 = .10$). Separation showed no significant relationship to any health behaviors.

Figure 6 displays results relating to $R^2$ (To what extent does AO function within existing theoretical mechanisms of physical activity behavior?) and the hypothesis (Integration and Assimilation will be related to improved physical activity self-efficacy and physical activity stage of change, while Marginalization and Separation will be related to lower physical activity self-efficacy and stage of change).

![Diagram showing the relationships between AO, physical activity, and self-efficacy](image)

*Note:* Standardized beta weights; $\chi^2$/df = 1.43, CFI = .99, TLI = .97, RMSEA = .07; **$p<.01$; *$p<.05$.

*Figure 6.* Integration, physical activity self-efficacy and physical activity stage of change
SEM results investigated the role of AO in the relationship between self-efficacy, and physical activity stage of change. Physical activity stage of change was found to be positively correlated with quality of life (rho = .35, p < .001).

Integration was found to play a significant positive role for physical activity stage of change. Specifically, Integration was significantly positively related to motivation self-efficacy (the belief in oneself to do something, even if it is difficult) (β = .38, B = .42, SE = .11, p < .01), which was positively related to physical activity stage of change (β = .42, B = .55, SE = .14, p < .01). That is, higher motivation self-efficacy was related to a higher stage of change (bringing an individual toward being adequately active regularly).

The model fits the data well (χ²/df = 1.43, CFI = .99, TLI = .97, RMSEA = .07). Physical activity maintenance self-efficacy was positively related to physical activity stage of change (β = .36, B = .57, SE = .18, p < .01), but Integration was not related to physical activity maintenance self-efficacy.

**Discussion**

This study examined whether AO can be used as a practical measurement for understanding immigrant populations, by assessing its interrelation with health behaviors, and perceived quality of life among a population of culturally diverse students in Germany, of which a high proportion had a migration background.

For R1 (To what extent does AO interrelate with health behaviors and quality of life (QoL)?), it was found that AO interrelates with QoL and some health behaviors, namely physical activity outcome expectancies, physical activity maintenance self-efficacy, physical activity motivation self-efficacy, physical activity support, and nutrition maintenance self-efficacy.
For R2 (to what extent does AO function within existing theoretical mechanisms of physical activity behavior?), it was found that Integration was positively related to physical activity stage of change, via physical activity motivation self-efficacy. Since regressions revealed Integration to be beneficial and related to self-efficacy, and self-efficacy is an important motivator for many aspects of individuals' lives, including health behavior (Guntzwiller, King, Jensen, & Davis, 2016; Olander et al., 2013), these two factors were focused on, and the hypothesis (Integration and Assimilation will be related to improved physical activity self-efficacy and physical activity stage of change, while Marginalization and Separation will be related to lower physical activity self-efficacy and stage of change) was explored.

Interrelations were also found between AO and quality of life, (Marginalization had a negative relationship to QoL, and Integration had a positive relationship to it) and other health behaviors. Most notably, Marginalization appears to have the least positive interrelations for immigrants, while Integration appears to have the most. This is in line with previous research findings (Berry, 1998; Berry, 2005; Peeters & Oerlermans, 2009), and suggests that one way of improving health behaviors and quality of life of immigrants may be to limit Marginalization and foster Integration AOs. While a large part of the AO strategy depends on the individual, contextual factors that may lead to Marginalization (i.e., discrimination, isolation) may be improved and organized efforts to provide information and support to immigrants may help foster Integration. This could come from deliberate attempts to increase the services, or make more visible those that are already available, to encourage immigrants to get more involved socially with the society. Welcome events, sports groups, social groups, information evenings, all with a welcoming message, could substantially contribute to this.

It was further found that AO was interrelated with motivational self-efficacy, which is
important for health behavior stage of change. Better Integration was associated with improved self-efficacy, and improved physical activity self-efficacy was related to individuals being more engaged in physical activity regularly. This provides some support for the hypothesis, and supports previous research that suggests self-efficacy is an important motivator for health behaviors (Guntzwiller, King, Jensen, & Davis, 2016; Kao, Lupiya, & Clemen-Stone, 2014; Olander et al., 2013).

These results support the notion that AO may be a useful, measurable construct when working with immigrant populations (Cabassa, 2003; Lopez-Class, Castro, & Ramirez, 2011). The findings here explore a link between attitudes (AOs) and health behaviors, which begins to fill the lack in acculturation research of examining connections between attitudes and behavior (Arends-Tóth J & Van de Vijver, 2006).

Although some literature questions whether Marginalization actually exists or is the construct it is described to be (Schwartz & Zamboanga, 2008) and that Integration still needs a more precise definition (Arends-Tóth J & Van de Vijver, 2006), the evidence here suggests that they both exist, and are related to health behaviors and quality of life. This finding should be questioned and examined further, particularly because it is in contrast to existing research, and occurs within a small and particular sample. Nonetheless, it raises a flag that more probing is needed.

In previous research, Marginalization was always endorsed by a very small proportion of the participants. Thus, it is an interesting finding that when it comes to the health domain, Marginalization was endorsed by the majority of the sample. This could be interpreted as contact maintenance issues – either to the host or home – are not really in the health domain, since Marginalization indicates that neither contact to the home nor host culture are sought.
The association between Marginalization with quality of life is, however, consistent with the literature. AOs are attitudes that can be measured and used in research seeking to understand and improve different aspects of individuals with an immigration background (in this case, health and quality of life). While useful, AO should also always be interpreted cautiously, taking into account the sample, the context (Alegria et al., 2007; Jasinskaja-Lahti, Liebkind, Horenczyk, & Schmitz, 2003) and potential measurement errors in capturing the intended factors. For example, it has been pointed out in previous literature that 'acculturation conditions' (e.g. characteristics of the host and home cultures, society characteristics) can affect the acculturation process (Celenk & Van de Vijver, 2011).

This study was particularly focused on health. It is worth exploring AO in other life domains, given the existing consensus in the literature that acculturation entails 'domain specificity', that is, it can vary across different life domains (Celenk & Van de Vijver, 2011)).

What do these findings mean for research and practical purposes? They can be seen as a step forward in building a foundation of tools that can help understanding challenges in immigrant populations. Although claims regarding concrete mechanisms cannot be made yet, the findings reveal some noticeable trends. The presence of Marginalization and Integration as two AOs consistently showing negative and positive interrelations, respectively, can provide useful information. Marginalization is consistently negatively related to the domain measured, and Integration is consistently positively related to it.

From a broad perspective, previous literature has found acculturation to be related to health (Behrens, del Pozo, Großhennig, Sieberer, & Graef-Calliess; Delvari, Sønderlund, Swinburn, Mellor, & Renzaho, 2013; Van Hook & Baker, 2010). This study provides further support for an existing relation of AO to various health behaviors. Additionally, it makes novel
contributions in two aspects: 1. acculturation research focuses largely on Hispanic immigrants in the United States. This research found evidence for a relation between AO and health behaviors in a sample of students with varied ethnic backgrounds. 2. This study looked more in depth at where specifically AO might play a role in an existing health behavior framework of physical activity. The findings revealed that Integration seems to be important for self-efficacy, which has long been known to be an important motivator for successful health behavior (Guntzwiller, King, Jensen, & Davis, 2016; Kao, Luiya, & Clemen-Stone, 2014; Olander et al., 2013). This is an aspect that can be acted upon practically, to improve health behaviors of immigrants.

Limitations

There are limitations of this study that should be recognized. First of all, the sample size of students was small. Larger samples would be needed to produce more robust and reliable results. Second, cross-sectional data cannot determine causality, so for stronger results, future research could try to collect longitudinal data. The use of the health domain is both a strength and a limitation, since it provides valuable information to that particular setting, but does not allow anything to be said about different domains. Future studies should expand this research to other domains and explore whether any generalizability exists. Further, the analyses used here provide only initial insights into the mechanisms at play, and can therefore only suggest potential avenues to explore further. For instance, it may be useful to compare fits of different models as opposed to using only one, to gain a better understanding of how AO functions a measurement related to health.

Finally, although a step was made in understanding the mechanisms between AO, health behaviors and quality of life more deeply, more research is needed to uncover the concrete mechanisms at work.
Chapter 5: AO as a practical measurement for immigrant health

Conclusion

This research sought to examine whether AO can be used as a practical measurement for understanding immigrant populations, in terms of health behaviors and perceived quality of life. Results revealed that AO is related to health behaviors and quality of life, particularly Integration and Marginalization. Integration seems to be important for self-efficacy, which is essential for performing behaviors (Guntzwiller, King, Jensen, & Davis, 2016; Kao, Lupiya, & Clemen-Stone, 2014; Olander et al., 2013), such as physical activity and other health behaviors. The research opens the door to the notion that AO may be a useful measurement for immigrant health and other domains of the population. Future research investigating this further may contribute to methods of understanding growing immigrant populations.
References


Chapter 5: AO as a practical measurement for immigrant health


http://www.who.int/mental_health/publications/whoqol/en/
Chapter 6

Discussion
6.1. Results Summary

Taken together, the results of the studies presented in chapters 2 – 5 are summarized in Table 13.

Table 13. Summary of results and conclusions

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Hypotheses</th>
<th>Results</th>
<th>Conclusions</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>The quality of the doctor-patient relationship and the nature of doctor-patient communication are influenced by the combined AOs of the doctor and patient.</td>
<td>It appeared to be beneficial when the doctor leaned toward Separation or Marginalization, and when the patient leaned toward Integration.</td>
<td>AO appears to play a role in the doctor patient relationship, albeit in ways different from that predicted by the health consumer/health practitioner model.</td>
</tr>
<tr>
<td></td>
<td>Patients and doctors who share the same AO will report a consensual relationship.</td>
<td>These AO combinations between doctor and immigrant patient fostered a well-working relationship, and high quality of care, as reported by both doctors and patients in interviews, and as observed during the video recording of medical visits.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Other AO combinations will report a conflictual/problematic relationship.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Consensual relationships between doctors and their immigrant patients will positively interrelate with the patients’ and doctors' personal experiences.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Conflictual/problematic relationships between doctors and their immigrant patients will negatively interrelate with the patients’ and doctors' personal experiences.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>An ‘Integration’ or ‘Assimilation’ AO of the patient will have a positive interrelation with patients' perceived expectations of their doctor, perceived quality of care, health behaviours and quality of life. A 'Marginalization' or 'Separation' AO of the patient will have a negative interrelation with patients' perceived expectations, perceived quality of care, health behaviours and quality of life.</td>
<td>Marginalization was negatively related to both the perception that the doctor expects the immigrant patient to become part of the Canadian culture and the perception that the doctor accepts if the patient wants to keep his/her home culture. Integration was positively correlated with both the perception that the doctor expects the patient to become part of the Canadian culture, and the perception that the doctor accepts if the patient wants to keep his/her home culture. The patient's perception that the doctor accepts if the patient wants to keep his/her home culture was positively related to patients' perceived quality of care. Perceived quality of care was associated with improved adherence to doctors' recommendations. Reported quality of life was negatively correlated with Marginalization, but positively correlated with Integration. The AO construct is valid. AO seems to play a role in patients' perceived expectations of their doctors, health behaviours and quality of life. Integration seems to be the most beneficial AO for patients in a healthcare setting, while Marginalization seems to be the least beneficial.</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Discrepancy between patient and doctor AOs, as predicted by the health consumer/health practitioner model, will be associated with poorer perceived quality of care, health behaviours and quality of life for the patient.</td>
<td>The perception that the doctor accepts if the patient wants to keep their own culture was positively related to perceived quality of care, which was positively related to medical advice adherence. Doctors' AOs showed no significance.</td>
<td>Marginalization was less beneficial in this path for the immigrant patients, while Integration was more beneficial. AOs of the doctors do not seem to be significant for medical advice adherence.</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>5</td>
<td>AO is a useful practical measurement for understanding and improving immigrant health behaviours and quality of life.</td>
<td>Integration was related with a higher general quality of life, higher physical activity motivation self-efficacy and higher nutrition maintenance self-efficacy. Marginalization was related with a lower general quality of life and lower perceived physical activity support. Integration was positively related to motivation self-efficacy, which was positively related to physical activity stage of change. Physical activity stage of change was positively related to quality of life.</td>
<td>AO may be a useful, measurable construct when seeking to understand and improve health behaviours and quality of life of the immigrant population. Marginalization seems to be less beneficial in health-related situations, while Integration seems to be more beneficial.</td>
</tr>
</tbody>
</table>
6.2. General Discussion

The factors influencing the health of an individual are complex and numerous. In the case of an individual with an immigration background, the complexity and abundance of these factors become even more amplified. The result of such an array of influences is poorer health and quality of life in immigrant populations, as compared to populations native to a country (Koochek, Montazeri, Johansson, & Sundquist, 2007; Nesterko, Braehler, Grande, & Glaesmer, 2013).

This thesis aimed to explore in depth just one of these factors as a potential influential element in immigrant health - the interrelation of cultural attitudes and expectations, and the doctor-patient relationship, on health behaviours and quality of life - in an effort to contribute to improving the health of ever increasing immigrant populations.

Acculturation orientation (AO) was used as a measure of cultural attitude that may influence thoughts, expectations and behaviours. In addition to the support for this measurement (described in Chapter 1) positing that individuals' AOs interrelate with their perceptions and behaviours (Montreuil & Bourhis, 2001; Van Leeuwen, Rodgers, Bui, Pirlot, & Chabrol, 2014), other research has also advocated the use and development of such measures. It has been suggested that they may be more optimal to use with different ethnic minorities, in order to better capture differences, rather than only examining where immigrants were born, how long they have lived in the host country, what their proficiency level in English is, etc. (Higginbottom & Safipour, 2015; Van Wieringen, Harmsen& Bruijnzeels,2002). AO has, however, been criticized as a difficult concept to measure empirically, and much research is still needed to further refine it as an effective tool (Hunt, Schneider & Comer, 2004; Rudmin, 2009; Thomson, 2009; Ward & Geeraert, 2016).
Chapter 6: Discussion

Throughout the chapters, various hypotheses were tested to examine whether acculturation orientations of immigrant patients and doctors play a role in the doctor-patient relationship, the health behaviours of the patients (physical activity, nutrition, and medical advice adherence) and overall quality of life. All aspects of Figure 1, the guiding schematic model found throughout the chapters, were tested. The final results taken together can be seen in the final version of this model below. Checkmarks indicate that significant relationships were found. Cross marks indicates no significant relationships were found. No symbol indicates the relationship requires more investigation: it was significant in some chapters, not in others.

Figure 1e. Overview of research content and results throughout the chapters in this thesis

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Chapter 6: Discussion

Review of and Reflection on Research Questions

Taken together, the results provide some insight regarding the research questions introduced at the beginning of this thesis:

1. Does the AO of doctors and immigrant patients interrelate with their relationship and communication based on the health consumer/health practitioner model?

2. How does the AO of immigrant patients interrelate with:
   a) Patients’ perceived expectations of their doctors
   b) The perceived quality of care received
   c) The patients’ reported health behaviours and
   d) The patients’ reported quality of life?

3. How does the AO of immigrant patients and the AO of their doctors interrelate with:
   a) Patients’ perceived expectations of their doctors
   b) The perceived quality of care received
   c) The patients’ reported health behaviours and
   d) The patients’ reported quality of life?

4. Is AO a useful practical measurement for understanding and improving immigrant health behaviours and quality of life?

The Health Consumer/Health Practitioner Model

Although results did not support the health consumer/health practitioner model as an accurate predictor of doctor-immigrant patient relationship quality, the findings suggest that certain AO combinations (Integration on the part of the patient, Separation or Marginalization on the part of the doctor) between doctor and patient might be important for a good quality
relationship. More empirical probing into this may help to expand the health consumer/health practitioner model into something that can be used as a base reference for attitudes that can be beneficial to the relationship. In addition, previous literature suggests Marginalization is the most dysfunctional AO, followed by Separation (Berry, Phinney, Sam, & Vedder, 2006), yet both seemed to be beneficial when adopted by the host culture doctors. Further investigation is also needed into whether the beneficial function of these AOs found in this research is particular to the healthcare setting.

**AO and the Doctor-Patient Relationship**

When considering how AO interrelates with the quality of the doctor-patient relationship, it appears that only the AO of the patient plays a role, however, the qualitative results suggest that the doctor AO might still be relevant as well. The quantitative examination of the relationship (Chapter 4) was not able to confirm the AO of the doctors as being significant, thus, further research is needed to investigate this aspect more deeply.

When considering the doctor-patient relationship quality, it seems to be only significantly related to the health behaviour of medical advice adherence. Physical activity and nutrition behaviours, and quality of life, were all independent of the doctor-patient relationship.

**AO and Health Behaviours**

When looking at the direct relation of patient AO to health behaviours and quality of life, AO was significantly related to nutrition, physical activity, and quality of life.

**AO as a Useful Measurement**

The AO measurement used in this thesis was thus found to be useful and valid, corresponding as expected to immigrants' feelings of connection to their home or host culture, and their perceived expectations of their doctor. Past studies have found that patients' perceived expectations of their doctor can play an important role in shaping the doctor-patient
relationship (Babitsch, Braun, Borde, & David, 2008; Verlinde, De Laender, De Maesschalk, Deveugele, & Willems, 2012), which was also the case with findings of this research. Further, in Paper 4 (Chapter 5), the AO concept was supported with an entirely different sample.

It must be acknowledged that strong empirical challenges and debate remain over the use of AO (Jian, 2012; Thomson & Hoffman-Goetz, 2009). It is equally important, however, that research on the construct continues, in attempts to refine and reliably use it, for instance, by finding better ways of measuring it empirically (Möllering, Schiefer, Knafo, & Boehnke, 2013).

This research used a newer method of measuring AO, which utilized the Euclidean distance formula to create continuous variables for each AO, and calculate which AO an individual leans toward the most, rather than placing them solely in one of the four categories. The findings provide support for the notion that AO is a potentially useful and practical tool. The findings often revealed AO to be indirectly related to health behaviours, or too complex to draw strong causal conclusions. It is important to note that this research was by no means comprehensive enough to make definitive conclusions about the AO measurement. It rather added to the literature, potential avenues to explore more deeply. This combination of support for the AO measurement, and remaining questions, warrants further investigation, to optimize its potential use in studying and understanding immigrant populations.

How do the Findings Fit with Previous Literature?

According to the literature, patients’ perceptions (of, for example, doctors’ expectations) may influence their health behaviours (Logan, Koo, Kilmer, Blayney & Lewis, 2015; Piccinino, Griffey, Gallivan, Lotenberg & Tuncer, 2015). Moreover, doctors’ expectations and receptivity toward patients have been found to exert an influence on the doctor-patient
relationship (Babitsch, Borde, & David, 2008; Shelley, Sussman, Williams, Segal & Crabtree, 2009). Findings of this study provide support for this aspect of existing literature, in that patients’ perceptions of doctors’ expectations (related to their AO) was related to their perceived quality of care, which was related to the health behaviour of medical advice adherence (Paper 2, *Chapter 3*). More specifically, yet further support came from the patient’s perception that the doctor accepts his or her previous culture being related to better perceived quality of care and thus improved medical advice adherence (Paper 3, *Chapter 4*).

Previous research has found that poorer communication and quality of care is more common in the relationship between doctors and immigrant patients than that between doctors and patients born in the host country, but the reason for these disparities is not well understood (Brzoska, Sauzet, Yilmaz-Aslan, Widera,& Razum, 2016; Harmsen, Meeuwesen, van Wieringen, Bernsen, R. & Brudijnzeels, 2003; Johnson, Roter, Powe, & Cooper, 2004; Saha, Arbelaez,& Cooper, 2003; Shouten, Meeuwesen & Harmsen, 2005; Shouten, Meeuwesen, Tromp & Harmsen, 2007; Van Wieringen, Harmsen, & Bruijnzeels, 2002). The findings of this research may contribute to improving the gap of understanding in this domain. At least part of the disparities may arise from a lack of common understanding between the doctor and immigrant patient. Since perceptions and expectations play a role in individuals' behaviours (Montreuil & Bourhis, 2001; Van Leeuwen, Rodgers, Bui, Pirlot, & Chabrol, 2014), and perceptions and expectations may be more complex between doctors and immigrant patients as opposed to patients native to a country (Bahreman & Swoboda, 2016; Brodie, Abel, & Burt, 2016), this may be one important factor creating disparities in communication and quality of care. As found by this research, patient and doctor AOs do seem to play a role in the experience of the relationship for both parties, and a positive, functional relationship seems to require patients to have an Integration AO, and doctors to have any of the other four, or patients and doctors to match in their AOs (Paper 1, *Chapter 2*).
Chapter 6: Discussion

While these results are not simply generalizable, and may be limited to the particular sample used in this research, they provide some initial valuable insights, and call for future research to investigate whether the same is true for other populations.

Previous literature has also found that doctor-patient discrepancies in understanding and communication have been linked to poorer reported quality of care (Ohana & Mash, 2015; Saha, Arbelaez, & Cooper, 2003), which has been found to result in immigrant populations experiencing a lower quality of life (Nesterko, Braehler, Grande, & Glaesmer, 2013), exhibiting poorer health behaviours than the native population, such as making less use of preventative healthcare measures (Newbold, 2004) and not adhering to doctors' medical advice (Freccero, Sundquist, Sundquist & Ji, 2016; Kagee & Delport, 2010; Villagran, Hajek, Zhao, Peterson, & Wittenberg-Leyles, 2011). While the majority of past research has been qualitative, the study here also used quantitative methods to try and start to disentangle some of the factors involved in the above mentioned issues. AO was found to be interrelated with health behaviours and quality of life. Integration in particular appeared to be the most beneficial, while Marginalization appeared to be the least beneficial (Paper 2, Chapter 3). It was found that AO was related to the eventual behaviour of medical advice adherence, via a path in which AO was related to patients' perceived expectations of their doctor. Integration was found to be positively related to the patients' perception that their doctor accepts if they want to maintain their previous culture, while Marginalization was negatively related to it. This particular perception was related to a higher perceived quality of care, which was related to better medical advice adherence (Paper 3, Chapter 4). While the relationship between doctors and immigrant patients is extremely complex with many different factors, the relationships found here provide some further insight into the dynamics at play, as well as
provide some direction in which to look when seeking to improve the relationship, and the
health and quality of life of immigrant patients.

Given that the general health, health behaviours and quality of life of immigrants tend to be
lower than that of individuals native to a country (Koochek, Montazeri, Johansson &
Sundquist, 2007; Nesterko, Braehler, Grande, & Glaesmer, 2013), the findings of this
research suggest one potential area, AO, in which knowledge and intervention could help
improve the health of immigrant populations.

To understand exactly what this means, the next two sections will consider both implications
of the research for both theory and practice.

6.3. Implications for Theory

The Role of Doctor Attitudes

It was found that doctors understanding patients' views and being open to the patients'
previous cultural beliefs and ideas is of high importance for a functional doctor-patient
relationship. As a result, Separation and Marginalization orientations of the doctors
manifested as behaviour that was either very culturally sensitive (Separation) or very
culturally neutral (Marginalization), and thus positive for the doctor-patient relationship.

While this is in opposition to the health consumer/health practitioner model, which posits that
the Separation and Marginalization orientations should translate into negative immigrant-host
culture relationships, it is in line with previous research, which has found that effective
doctor-immigrant patient communication requires the doctor to both explore the explanatory
model of the patient, to keep an open attitude toward other models, and to use an open and
non-judgmental approach with friendly, non-dominant interpersonal behaviour (Kiesler &
Auerbach, 2005; Shelley, Sussman, Williams, Segal, & Crabtree, 2009; Van Wieringen,
This openness among doctors, and effort to match their communication to patients' desired levels of information, may be an ideal approach for successful communication (Kiesler & Auerbach, 2005).

The Role of Patient Attitudes

The results of this thesis also suggest that patients of an Integration orientation seem to have successful interactions with their doctor, which is in support of the health consumer/health practitioner model, as well as with previous research suggesting that patient’s perceptions play a crucial role in the doctor-patient relationship (Babitsch, Braun, Borde, & David, 2008; Verlinde, De Laender, De Maesschalk, Deveugele, & Willems, 2012). In paper 1 (Chapter 2), the patients in the five observed cases were willing to adapt to their new culture, and did not expect their doctor to take care of everything. This is further supported by previous research, which has suggested that while doctors have a responsibility to be open to their immigrant patients, these patients must also be taught to give not only factual information to their doctor, but also inform the doctor about relevant aspects of their cultural background (Van Wieringen, Harmsen, & Bruijnzeels, 2002). The current research was not able to compare patients of an Integration orientation to those with AOs considered less functional, simply because no such individuals were present in the sample. This reveals a remaining question as to whether individuals with different AOs would show different perceptions as expected.

AO and the Health Consumer/Health Practitioner Model

AO appears to be important in the doctor-patient relationship. The role of AO did not manifest, however, in the ways predicted by the health consumer/health practitioner model, suggesting that the model may need to be adapted for specific contexts. It remains a task for future research to explore whether this finding is specific to the medical context, or applies to other circumstances as well. Immigrants with Integration attitudes and doctors with
Marginalization/Separation attitudes formed reasonably good relationships and positive experiences for both patient and doctor. Conflictual relationships between doctor and patient could not be evaluated, as all patients were of the Integration orientation and no negative relationships were reported in the studied doctor-patient pairs. Patients and doctors leaning toward other AOs might show very different behaviour patterns and relationship outcomes. Future studies could investigate whether different AOs yield different doctor-patient relationship quality, and how those relationships that continue to be challenging can potentially be improved through communication and understanding.

**AO and Perceived Expectations**

The relation of immigrant AO to the patients' perceived expectations of their doctors interrelated with perceived quality of care; those who perceived their doctors as being accepting of the patient's previous culture perceived a higher quality of care. AO was further related to physical activity health behaviours and quality of life (*Chapter 3*). In these cases, Integration and Assimilation appeared to be more beneficial for the immigrant patients than Marginalization and Separation.

These findings are supported by existing literature, which has found several key cultural variables, including expectations that different patients bring to health situations, which can influence health communication outcomes (Kreps & Sparks, 2008).

**Doctors’ AOs**

Hypotheses that doctors' AOs also play a role in the doctor-patient relationship could unfortunately not be confirmed quantitatively (*Chapter 4*). It was found that the doctors' AOs did not have a significant interrelation with perceived quality of care, health behaviours and quality of life. Rather, it was the patients' AOs that interrelated with patients' perceived expectations of their doctor, perceived quality of care, and medical advice adherence. The
Integration AO was related to better perceived quality of care and better medical advice adherence, while the Marginalization AO was related to poorer perceived quality of care and poorer medical advice adherence. This supports previous research findings that suggest Integration to be the most functional AO for the immigrant, and Marginalization to be the least functional (Berry, Phinney, Sam, & Vedder, 2006).

While it could not be measured specifically in this thesis, it is expected that conflict between doctor and patient expectations/perceptions would create a poorer quality of communication, and thus poorer health outcomes for the patient. This is supported theoretically by research considering a conflict between doctor and immigrant patients as being created due a collision between perceptions, goals or values of each respective party (Ohana & Mash, 2015). In such situations, the AO of the doctor might become more significant. This is another avenue that is yet to be explored.

*In Summary*

Support for the use of AO as a useful practical measurement when studying immigrant populations (*Chapter 5*) adds to the currently still debated acculturation literature, and opens new avenues to be explored to optimize its use in a way that could be applied to immigrant populations in general, instead of have many different measurements for different ethnic groups (Celenk & Van de Vijver, 2009; Rudmin, 2009; Salant & Lauderdale, 2003; Thomson & Hoffman-Goetz, 2009). This small contribution to further advancement of the acculturation literature makes a step into finding ways of providing insight into these populations, and how to improve their successful integration into new cultures.
Chapter 6: Discussion

6.4. Practical Implications

Key Points

The results of this study are supported by existing health communication literature, and can be integrated to add to the current knowledge of this topic. Some key points found in this thesis and supported by previous studies include:

- Open and non-judgmental questioning on the part of the doctor may be a useful approach for a working relationship, a point that is consistent with patient-centeredness theory (Shelley, Sussman, Williams, Segal, & Crabtree, 2009);

- Successful communication tends to be linked to open and non-dominant behaviour of doctors (Kiesler & Auerbach, 2005);

- When there is a match between patient and doctor preferences or expectations (in this case, willingness to adapt to the new culture, as well as respect for the previous culture), there is a better chance of improving patient satisfaction and clinical outcomes (Kiesler & Auerbach, 2005).

Intervention Research and Suggestions

These overall research results provide some steps toward developing interventions that can be practically applied, in an effort to improve the relationship and communication between doctors and immigrant patients. Existing literature suggests that in order to be effective, interventions need to be strategic and evidence-based, and that health communication training should be provided for both health care practitioners and health consumers (Kreps & Sparks, 2008). Those delivering such interventions or trainings might include scientists or researchers in the field, hospitals or health organizations themselves, or public health agencies, all of which could take the following suggestions into account.
Current cultural competence training is a potential strategy for improving the knowledge, attitudes and skills of health professionals (Wear & Kuczewski, 2008). Training for doctors based on evidence of AOs and their influence on perceptions, behaviours and health outcomes of immigrant patients may be a good starting point to add to and improve this emerging style of education. For immigrant patients, training on how their own AOs may impact their own behaviours, perceptions and health outcomes could be advocated. In terms of adherence improvement, with a strong understanding of the influence of AO and perceptions, doctors could also consciously include patients in culturally appropriate ways as partners in their care, an approach that has been suggested by previous researchers (Brundisini, Vanstone, Hulan, DeJean, & Giacomini, 2015). In general, trainings including AO fit well under the overlapping umbrellas of culturally competent and patient-centred care, both of which are gaining increasing support for their effectiveness in doctor-patient communication and health outcomes (Bahreman & Swoboda, 2016; Brzoska, Sauzet, Yilmaz-Aslan, Widera, & Razum, 2016; Higginbottom et al., 2016; Lin et al., 2015). 

In framing such interventions, a number of aspects should be considered. Some evidence suggests medical students become more conservative as they advance through medical training, (Wear & Kuczewski, 2008), so it may be crucial to include AO training even at this early stage. Literature further posits that a more sustained nurturing of self-awareness and broadening of vision seems to be imperative for successful interactions (Wear & Kuczewski, 2008), providing support for the above mentioned training, which would encourage doctors and patients to be more self-aware of their own attitudes that are and are not serving them. 

Past literature has also suggested role modeling to be an extremely influential method for changing attitudes (Wear & Kuczewski, 2008). Thus, doctors should receive training on AO and being culturally sensitive, and act as role models for medical students, helping them
reflect on what they are doing and why, with regard to their behaviours and attitudes toward culturally diverse patients, and how these behaviours and attitudes influence their communication with, and the eventual health outcomes of these patients' lives once they leave the hospital or clinic (Wear & Kuczewski, 2008).

From a slightly broader perspective, clinics/hospitals may influence the doctors who work there, in that those with more culturally competent attitudes and behaviours may influence doctors to also develop more culturally competent attitudes (Paez, Allen, Carson, & Cooper, 2008). Thus, while individual AO training programs for doctors and patients in targeted communication skills are likely to be effective (Shelley, Sussman, Williams, Segal, & Crabtree, 2009), they are unlikely to induce lasting attitude changes alone, and should additionally include implementation of supplementary organizational supports. Another approach might be to have clinics as a whole undergo AO trainings, and influence the doctors working there with this awareness and approach.

_Cultural Competence_

The field of cultural competence has developed substantially in recent years as a strategy to overcome cultural differences in health services, and is becoming recognized as critical for quality of care and satisfaction with treatment. It puts forward four elements of skills acquisition required for cultural competence: communication repertoire, situational awareness, adaptability, knowledge about core cultural issues. While it has been found that doctors who get training in cultural competence communicate better with patients, the field of cultural competence still faces the methodological challenge of lacking standard metric evaluations (Ohana & Mash, 2015). AO and perception of openness to the patients' previous culture, while mostly related to the first three of the four elements, may be promising additions to the knowledge on which training should be based, to make it more effective in developing culturally competent doctors and patients.
Interpretation within the Framework of Social Cognitive Theory

Keeping in mind the framework of Social Cognitive Theory mentioned in the introduction (Chapter 1), other contextual, or less direct factors should also be taken into account when creating interventions to improve the doctor-immigrant patient relationship. Previous literature has found that some immigrants improved in their health-related quality of life with longer time spent in the host country (Koochek, Montazeri, Johansson, & Sundquist, 2007). This highlights the fact that time in the host country may change the perceptions and expectations of immigrant patients, so different strategies may be required at different points in time.

Systemic problems are also an important element in health communication, and were mentioned both in this study and in others; including aspects such as long wait lists, busy schedules and limited time to communicate adequately with patients (Brundisini, Vanstone, Hulan, DeJean, & Giacomini, 2015). This would need to be taken into account when structuring trainings, so as to make recommended behaviours and tasks realistic within the existing health care structure.

In terms of interventions, training doctors on AOs, openness to patients' previous culture, and tailoring responses to individual patients could be an effective approach (Kiesler & Auerbach, 2005).

On a broader society level, past research also has suggestions for practical interventions. Developing a health policy and health care organization sensitive to social and cultural diversity is one. The findings of this thesis can contribute to such goals, but incorporating the knowledge of AO and its function into broader strategies and organization. Reaching immigrant populations with AO or health information is complex and not an easy task. Promoting migrants' participation and accessibility to necessary knowledge is essential, while
promoting relevant information among health professionals is equally important (Norredam, Nielsen & Krasnik, 2009).

When designing health communication interventions, Kreps and Sparks (2008) identify six suggestions to improve communication effectiveness, which could also be used when considering AO trainings:

1. Involve and empower vulnerable and at risk consumers in health communication efforts
2. Develop inter organizational partnerships to support intervention efforts
3. Prove appropriate training and support for both consumers and providers
4. Design culturally appropriate messages and materials for communication efforts
5. Focus on family and community for delivering reinforcing messages
6. Provide consumers with choices and options for promoting their health (Kreps & Sparks, 2008)

Taking into account and implementing some or all of these points, interventions could be developed based on the evidence provided here, and combined with existing scientific knowledge. In order to further enhance the evidence base and thus effectiveness of interventions, suggestions for future research are discussed in the following section.

6.5. Suggestions for future research

While this study in and of itself has yielded useful results, it is by no means an end point. The gathered data provide a useful foundation on which to build future studies, theories and interventions for improving healthcare provision, communication, health behaviours and quality of life among immigrant populations. As AOs of immigrant patients and perceived expectations of their doctors are related to patients’ perceived quality of care, health behaviours and quality of life, a deeper understanding of the effects of such attitudes is still
essential, in order to create successful interventions in these areas (Perloff, Bonder, Ray, Berlin Ray, & Siminioff, 2006; Rosenberg, Leanza, & Seller 2007; Schouten, Meeuwesen, & Harmsen, 2005).

Additionally, it is critical to consider additional factors contributing to immigrant health and quality of life, such as how these populations respond to communication about health care (Kreps & Sparks, 2008), and what role contextual factors, such as sociodemographic factors, severity of disease, time in disease diagnosis, and type of decision being made play in the health and quality of life of immigrant patients (Kiesler & Auerbach, 2005).

Study replications of this work could also be conducted to assess AOs of different immigrant patients and different native healthcare providers (i.e. physiotherapists, dieticians, chiropractors, dentists, etc.), and how this affects patients’ health behaviours and quality of life. This exploration can be further expanded to other culturally diverse cities to examine whether (1) similar AO influences are observed, and (2) the extent to which resulting conclusions can be generalized. Such studies should seek to reach immigrant patients who are not well adapted to the culture, and doctors who are not as familiar with working with immigrant patients, in comparison to those who participated in this research. They could aim to collect objective data - at least for health behaviours - in addition to self-report measures, and should also seek to collect longitudinal data on this subject, in order to be able to establish more concrete causal relations.

These results, therefore, open a large opportunity for future research directions.
6.6. Limitations

The information presented here is valuable, and not without its limitations. In terms of the qualitative data, the immigrant patients who participated are not necessarily representative of the entire population, but rather most likely better integrated than others, because they visit Canadian doctors and agreed to participate. None of these patients leaned toward the AOs that might result in a more negative relationship with the doctor. The doctors who participated are also familiar with working with immigrants, and possibly more adept than doctors in other areas who are not exposed as frequently to such populations. The sample size is small, which is always a concern, but observed consistencies among these 10 individuals were strong, and suggest that the context may be significant as well: a multicultural hospital, with doctors having a substantial amount of exposure to immigrant patients, revealed doctor-patient pairs reporting good relationships. There were many more female than male participants. It should be noted, however, that in a usual family practice, approximately 65% of the visits are with women. Considering the small sample size, 80% being female patients is not very unrepresentative (CDC/NCHS National Ambulatory Medical Care Survey, 2012). For doctors, however, the sample is not representative, as about 50% of family doctors in the province of Quebec are women.

In terms of the quantitative data, they were cross-sectional so no causality can be stated. Although the sample size was sufficiently large for the purposes of this study, larger, more representative samples could enable stronger and more robust statistical tests and results. The use of self-report data must always be taken with caution, in that it is dependent on accurate assessment and recording by the participants.

It was found that doctors' AOs were not significant, but patients' perceptions were. This also must be taken with the awareness that while the finding is important, the doctors in this sample were small in number, and all leaned toward the Marginalization or Separation
orientation. Both AOs accept patients keeping their own culture, an important element for patient perceived quality of care. Doctors leaning toward different AOs, or who do not accept patients' previous cultures, may reveal more problematic relationships.

Finally, AO and perception are not the only factors associated with perceived quality of care, health behaviours and quality of life of immigrant patients. Other factors, such as SES, remain to be investigated and disentangled from the results found here.

6.7. Conclusions

This research provides some initial support for the importance of AO and perceptions in the quality of the doctor-patient relationship, perceived quality of care, health behaviours and quality of life of immigrant patients.

Key results revealed that successful doctor-immigrant patient communication requires patients to have a willingness to adapt to the host culture (an Integration AO), and doctors to show a willingness to accept an immigrant’s previous culture (a Separation or Marginalization AO). Since the literature reveals that doctor-immigrant patient communication is often suboptimal (Klug et al., 2012; Newbold & Danforth, 2003; Schouten & Meeuwesen, 2006; Schouten, Meeuwesen & Harmsen, 2005; Zihindula, 2015), relating to poorer perceived quality of care (Krupic, Sadic & Fatahi, 2016; Saha, Arbelaez, & Cooper, 2003), and less patient compliance (Dell'Arciprete et al., 2014; Van Wieringen, Harmsen, & Bruijnzeels, 2002), it is important to improve the relationship between doctors and immigrant patients.

The evidence provided points toward patient AO as a potentially influential factor in the doctor patient relationship, via a path involving the patients' perceptions of doctors'
Chapter 6: Discussion

expectations and perceived quality of care. These factors relate both directly and indirectly to the health behaviours and quality of life of immigrant patients. Doctors' AOs did not show to be significant.

Having a solid evidence based foundation of knowledge can help to enhance understanding of this topic and guide interventions. At this time, many interventions seeking to improve doctor-immigrant patient relationships do not follow a standardized method, since not enough evidence exists currently to create one (Ohana & Mash, 2015). This exploration of AOs and perceptions adds to the evidence on which interventions could be based, in order to design effective trainings to understand the influence of AOs. It could help improve interaction between doctors and immigrant patients.

This may contribute positively to the perceived quality of care, and resulting health behaviours and quality of life of immigrant populations.
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Appendices

Appendix A1 - Patient Consent Form

Effects of acculturation on immigrant health behaviours and quality of life

Information and Consent Form

PATIENTS

Principal Investigator: Dr. Ellen Rosenberg
Trainee: Amanda Whittal
Funded by the Bremen International Graduate School of Social Sciences
Location of study: St. Mary’s Hospital Center

You are being invited to participate in a research study because you were not born in Canada. Your family doctor is participating in the research. The objective of the study is to better understand how cultural attitudes impact health and quality of life of immigrant patients. Your participation in this study is voluntary, and you may withdraw or refuse to participate in the study at any time. You may refuse to answer any questions during the study or you may stop at any time. You may also ask that the tape recorder be stopped at any time.

Purpose of the Study

The purpose of this study is to better understand how cultural attitudes impact health and quality of life of immigrant patients. This study will explore the influence of acculturation attitudes of physicians native to a country for the first time. This research will be done over the period of 3 months, and requires approximately one hour of interview time with each participant.

Description of the Study’s Procedures

In order to better understand how cultural attitudes impact health and quality of life of immigrant patients, you are being asked to participate in this study. This study consists of

- Completion of a very brief questionnaire before the clinic visit
- an audio recording of one regular clinic visit,
- a follow up interview on your experience of the clinic visit.
The audio recording takes place during your regular treatment, so requires no additional time. The interview should take approximately one hour to complete, and would be done at a time that is convenient for you. The interview may be recorded with your permission, however, all names will remain anonymous.

**Benefits**

There will be no direct benefit to you as a participant, however, you may be made aware of the study results when findings have been determined and written. If you would like to receive information about the study results, please indicate your permission to be contacted again when the results are ready. Additionally, your help will assist in research to improve the quality of medical treatment received by immigrants, and their health and quality of life. Your help will also assist doctors to better understand how to treat immigrant patients in the best way possible.

**Risks**

There are no foreseen risks associated with your participation in this research.

**Confidentiality and Anonymity**

All information provided to us will be kept confidential. A number will be used in place of a name on the sheets recording the interview information to provide confidentiality. All information will remain anonymous and be stored in a secure place. No identifying information will be used. The master list of names will be kept in a locked file cabinet available only to members of the research team.

**Conservation of Data**

All documents for this study will be conserved for a period of 5 years, after which they will be destroyed.

**Termination of Participation**

If you wish to withdraw from participating in the research project, you can do so at any time. If you become upset during the study, either you or the investigator may stop the study at any time and your data will be removed from the study and destroyed.

**Copy of Consent Form**

If you decide to participate in this research study, a copy of this consent form will be given to you.

For further information about the study, please contact:
Before You Sign this Document

By signing below, you are agreeing to participate in this research study. Make sure that any questions have been answered to your satisfaction, and that you have a thorough understanding of the study.

If you want to talk to someone not connected with the study about your rights as a study participant, or if you have any complaints about the research, you can call the St. Mary’s Ombudsperson at (514) 345-3511. Ext. 3301.

I, _________________________________, agree to participate in the study entitled “Effects of acculturation on immigrant health behaviours and quality of life.” In doing so I give the Principal Investigator permission to record one routine treatment session in which I participate, and interview me about the experience. I wish to be contacted about the study results (please check one):

___ Yes - Please contact me via: Email ________________________ Phone ________________________

___ No

_____________________________ _______________________________ ________________________
Participant Signature Date
Appendices

Appendix A2 - Doctor Consent Form

Effects of acculturation on immigrant health behaviours and quality of life

Information and Consent Form

PHYSICIANS

Principal Investigator: Dr. Ellen Rosenberg
Trainee: Amanda Whittal
Funded by the Bremen International Graduate School of Social Sciences
Location of study: St. Mary’s Hospital Center

You are being invited to participate in a research study because you were not born in Canada. The objective of the study is to better understand how cultural attitudes impact health and quality of life of immigrant patients. Your participation in this study is voluntary, and you may withdraw or refuse to participate in the study at any time. You may refuse to answer any questions during the study or you may stop at any time. You may also ask that the tape recorder be stopped at any time.

Purpose of the Study

The purpose of this study is to better understand how cultural attitudes impact health and quality of life of immigrant patients. This study will explore the influence of acculturation attitudes of physicians native to a country for the first time. This research will be done over the period of 3 months, and requires approximately one hour of interview time with each participant.

Description of the Study’s Procedures

In order to better understand how cultural attitudes impact health and quality of life of immigrant patients, you are being asked to participate in this study. This study consists of

- Completion of a very brief questionnaire before the clinic visit
- an audio recording of one regular clinic visit,
- a follow up interview on your experience of the clinic visit.
The audio recording takes place during your regular treatment, so requires no additional time. The interview should take approximately one hour to complete, and would be done at a time that is convenient for you. The interview may be recorded with your permission, however, all names will remain anonymous.

Benefits

There will be no direct benefit to you as a participant, however, you may be made aware of the study results when findings have been determined and written. If you would like to receive information about the study results, please indicate your permission to be contacted again when the results are ready. Additionally, your help will assist in research to improve the quality of medical treatment received by immigrants, and their health and quality of life. Your help will also assist doctors to better understand how to treat immigrant patients in the best way possible.

Risks

There are no foreseen risks associated with your participation in this research.

Confidentiality and Anonymity

All information provided to us will be kept confidential. A number will be used in place of a name on the sheets recording the interview information to provide confidentiality. All information will remain anonymous and be stored in a secure place. No identifying information will be used. The master list of names will be kept in a locked file cabinet available only to members of the research team.

Conservation of Data

All documents for this study will be conserved for a period of 5 years, after which they will be destroyed.

Termination of Participation

If you wish to withdraw from participating in the research project, you can do so at any time. If you become upset during the study, either you or the investigator may stop the study at any time and your data will be removed from the study and destroyed.

Copy of Consent Form

If you decide to participate in this research study, a copy of this consent form will be given to you.

For further information about the study, please contact:
Principle Investigator: Dr. Ellen Rosenberg 514-345-3511 Ext. 5620
Trainee: Amanda Whittal: awhittal@bigsss.uni-bremen.de

Before You Sign this Document

By signing below, you are agreeing to participate in this research study. Make sure that any questions have been answered to your satisfaction, and that you have a thorough understanding of the study.

If you want to talk to someone not connected with the study about your rights as a study participant, or if you have any complaints about the research, you can call the St. Mary’s Ombudsperson at (514) 345-3511. Ext. 3301.

I, _________________________________, agree to participate in the study entitled “Effects of acculturation on immigrant health behaviours and quality of life.” **In doing so I give the Principal Investigator permission to record one routine treatment session in which I participate, and interview me about the experience.** I wish to be contacted about the study results (please check one):

___ Yes - Please contact me via: Email __________________________ Phone __________________________

___ No

___________________________ __________________________
Participant Signature Date
Appendices

Appendix B1

*Patient Semi-Structured Interview Questions*

**Reason for visit**

---

**General**

1. Was it difficult to find your doctor? What were some of the challenges you faced?
2. Did you choose this doctor for a particular reason?
3. Are you seeing more than one doctor? How many? For the same thing?
4. How often do you visit your doctor?
5. How long have you been seeing your doctor?
6. How long have you been in the country?
7. Can you tell me a little bit about health care in the country you come from, and your own experiences with it?
8. Have you lived in any other country? Did you get medical care there?

**Communication**

9. How did your meeting with your doctor go?
   - Was it a good visit? Can you tell me in what way it was good? Can you give me an example?
   - Was it negative not so good visit? Can you tell me in what way it was not good? Can you give me an example?
   - What were your expectations of the meeting? Were they met?
   - Did you feel listened to and understood? Why or why not?
   - Was there anything that you feel could have improved the experience?

**Advice**

10. Was the medical advice you received clear?
    - Do you feel comfortable with the advice that was given to you? Will you follow it?
    - Does the advice you received fall in line with your own beliefs and values about health? Why or why not?
    - Can you tell me a little bit about your own beliefs about health and what you do to stay healthy?

**Overall**

11. Where you satisfied with the interaction with your doctor?
    - What did you appreciate most about it?
    - Is there anything you would like to see changed?
Appendix B2

*Doctor Semi-Structured Interview Questions*

**General**

1. Do you see a large number of immigrant patients?
2. How long have you been seeing this particular patient?
3. Can you tell me about any challenges or observations you notice when treating immigrant patients?

**Communication**

4. How did you experience the meeting with this patient?
   - Was it positive? What about it?
   - Was it negative? What about it?
   - What were your expectations of the meeting? Were they met?
   - Did you feel the patient listened to and understood you? Why or why not?
   - Was there anything that you feel could have improved the experience?
   - Was this a typical treatment for you with this patient?

**Advice**

5. Do you feel confident that the patient understood the advice you were providing?
   - Do you feel confident that the patient will follow this advice?
   - Do you feel that this patient agrees that the advice is necessary and valuable?
   - Do you have similar experiences with other (immigrant) patients?
   - Are you aware of any disparities between your advice and the patient’s view of health?

**Overall**

6. Where you satisfied with the interaction with the patient and the treatment you were able to provide?
   - What were you most satisfied with?
   - What did you find most challenging?
   - Is this true of many of your (immigrant) patients?
   - Is there anything you would like to see changed?
Appendix C1

Patient Questionnaire

Culture and Health Questionnaire

This confidential questionnaire is about connections between culture and health. There are no right or wrong answers to any of these questions. Please read the questions carefully, and answer each one according to what is true for you. Some questions may look similar to each other. Please answer every question to the best of your ability, and please do not skip any questions.

The survey should take approximately 20 minutes to complete.
Please follow the instructions provided for each question.

Part I Culture

For this section, please first write in the space what you feel is your ‘home culture’ – this means the culture into which you were born, or where you have spent most time in your life so far.

My home culture is: ______________________________

Please mark with an ‘x’ how much you agree or disagree with the following statements. Mark only one box for each statement. When the statement uses “my home culture”, please think of the country you wrote above.

1. First, please think about your home culture…

<table>
<thead>
<tr>
<th></th>
<th>Completely disagree</th>
<th>Slightly disagree</th>
<th>Slightly agree</th>
<th>Agree</th>
<th>Completely agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>It is important to me that others see me as part of my home culture</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>It is important to me to see myself as part of my home culture</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendices

| Being part of my home culture is an important part of who I am |   |   |   |   |
| At home, I eat food from my home culture |   |   |   |   |
| I celebrate the holidays of my home culture |   |   |   |   |
| Most of my friends are from my home culture |   |   |   |   |
| I can easily communicate with people from my home culture |   |   |   |   |

2. Now, please think about Canada…

<table>
<thead>
<tr>
<th>It is important to me that others see me as a Canadian</th>
<th>Completely disagree</th>
<th>Slightly disagree</th>
<th>Slightly agree</th>
<th>Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>It is important to me to see myself as a Canadian</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Being Canadian is an important part of who I am</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>At home, I eat Canadian food</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I celebrate Canadian holidays</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Most of my friends are Canadian</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I can easily communicate with people from Canada</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3. Now, please think about what you believe your doctor expects of you…

<table>
<thead>
<tr>
<th>My doctor thinks I should become part of the Canadian culture</th>
<th>Completely disagree</th>
<th>Slightly disagree</th>
<th>Slightly agree</th>
<th>Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>My doctor accepts that I want to try to keep my home culture</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Part II Physical Activity

The following 7 questions are about physical activity health according to the standards of western societies.
*For example, 2.5 hours could be 5 days a week for 30 minutes each day, or any other combination*
Please think about the following statements, and mark the box that fits best for you with an ‘x’.

4. During your normal weeks…

<table>
<thead>
<tr>
<th>Do you do physical activity for at least 2.5 hours during the week, in a way that you are tired after?</th>
<th>No, and I do not intend to start</th>
<th>No, but I am thinking about it</th>
<th>No, but I seriously intend to start</th>
<th>Yes, but I only continued this for a short period of time</th>
<th>Yes, and I continued/will continue this for a long period of time</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

5. For at least 2.5 hours per week or more, I intend to…

<table>
<thead>
<tr>
<th>… do strenuous physical activity (heart beats fast, sweating).</th>
<th>Completely Disagree</th>
<th>Slightly disagree</th>
<th>Slightly agree</th>
<th>Agree Completely</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>… be moderately physically active (no fatigue, mild sweating).</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>… be mildly physically active (hardly strenuous, no sweating).</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>
6. If I am physically active for 2.5 hours per week or more, then…

<table>
<thead>
<tr>
<th>Statement</th>
<th>Completely Disagree</th>
<th>Slightly disagree</th>
<th>Slightly agree</th>
<th>Agree Completely</th>
</tr>
</thead>
<tbody>
<tr>
<td>… this is good for my health.</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>… I feel better afterward.</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>… it will cost me time (e.g., changing clothes, getting there).</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>… this will be hard for me financially.</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
</tbody>
</table>

7. I feel certain that I can be physically active for at least 2.5 hours per week…

<table>
<thead>
<tr>
<th>Statement</th>
<th>Completely Disagree</th>
<th>Slightly disagree</th>
<th>Slightly agree</th>
<th>Agree Completely</th>
</tr>
</thead>
<tbody>
<tr>
<td>… even if it is difficult.</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
</tbody>
</table>

8. I feel certain that I can continue to be physically active at least 2.5 hours per week…

<table>
<thead>
<tr>
<th>Statement</th>
<th>Completely Disagree</th>
<th>Slightly disagree</th>
<th>Slightly agree</th>
<th>Agree Completely</th>
</tr>
</thead>
<tbody>
<tr>
<td>… even if it takes a lot of time until I am used to it.</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>… even if I have worries &amp; problems (e.g. schedule difficulties).</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>… even if I need several tries until I succeed.</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
</tbody>
</table>

9. For the near future I have already planned in detail…

<table>
<thead>
<tr>
<th>Statement</th>
<th>Completely Disagree</th>
<th>Slightly disagree</th>
<th>Slightly agree</th>
<th>Agree Completely</th>
</tr>
</thead>
<tbody>
<tr>
<td>… which physical activity I will do (e.g. walking).</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>… where I will be physically active (e.g. in the park).</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
</tbody>
</table>
… on which days I will be physically active (e.g. every Tuesday).

<table>
<thead>
<tr>
<th></th>
<th>Completely Disagree</th>
<th>Slightly disagree</th>
<th>Slightly agree</th>
<th>Agree Completely</th>
<th>Not Applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>My partner helps me to stay physically active.</td>
<td>☐️</td>
<td>☐️</td>
<td>☐️</td>
<td>☐️</td>
<td>☐️</td>
</tr>
<tr>
<td>My family helps me to stay physically active.</td>
<td>☐️</td>
<td>☐️</td>
<td>☐️</td>
<td>☐️</td>
<td>☐️</td>
</tr>
<tr>
<td>My friends help me be physically active.</td>
<td>☐️</td>
<td>☐️</td>
<td>☐️</td>
<td>☐️</td>
<td>☐️</td>
</tr>
</tbody>
</table>

10. Please think about your family and friends...

<table>
<thead>
<tr>
<th>Statement</th>
<th>Completely Disagree</th>
<th>Slightly disagree</th>
<th>Slightly agree</th>
<th>Agree Completely</th>
<th>Not Applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>My partner helps me to stay physically active.</td>
<td>☐️</td>
<td>☐️</td>
<td>☐️</td>
<td>☐️</td>
<td>☐️</td>
</tr>
<tr>
<td>My family helps me to stay physically active.</td>
<td>☐️</td>
<td>☐️</td>
<td>☐️</td>
<td>☐️</td>
<td>☐️</td>
</tr>
<tr>
<td>My friends help me be physically active.</td>
<td>☐️</td>
<td>☐️</td>
<td>☐️</td>
<td>☐️</td>
<td>☐️</td>
</tr>
</tbody>
</table>

Part III Nutrition

The following 7 questions are about nutrition health according to the standards of western societies.
A portion means a whole fruit, or a large handful of things such as berries, lettuce, peas, etc.
Please think about the following statements, and mark the box that fits best for you with an ‘x’.

11. Please think about what you eat during your normal weeks…

<table>
<thead>
<tr>
<th>Statement</th>
<th>No, and I do not intend to start</th>
<th>No, but I am thinking about it</th>
<th>No, but I seriously intend to start</th>
<th>Yes, but I only continued this for a short period of time</th>
<th>Yes, and I continued/will continue this for a long period of time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you eat five portions of fruit and vegetables per day?</td>
<td>☐️</td>
<td>☐️</td>
<td>☐️</td>
<td>☐️</td>
<td>☐️</td>
</tr>
</tbody>
</table>
12. In the near future, I seriously intend to…

<table>
<thead>
<tr>
<th></th>
<th>Completely Disagree</th>
<th>Slightly disagree</th>
<th>Slightly agree</th>
<th>Agree Completely</th>
</tr>
</thead>
<tbody>
<tr>
<td>... eat at least 5 portions of fruits and vegetables daily.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>... eat fruits and/or vegetables at every meal.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>... drink at least one fruit or vegetable juice every day.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

13. If I eat 5 portions of fruits and vegetables daily, then…

<table>
<thead>
<tr>
<th></th>
<th>Completely Disagree</th>
<th>Slightly disagree</th>
<th>Slightly agree</th>
<th>Agree Completely</th>
</tr>
</thead>
<tbody>
<tr>
<td>... this is good for my health.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>... I feel better afterward.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>... this will cost me a lot of time (e.g. buying, preparing).</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>... this will be a financial burden for me.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

14. I feel certain that I can eat at least 5 portions of fruit and vegetable a day…

<table>
<thead>
<tr>
<th></th>
<th>Completely Disagree</th>
<th>Slightly disagree</th>
<th>Slightly agree</th>
<th>Agree Completely</th>
</tr>
</thead>
<tbody>
<tr>
<td>... even if it is difficult.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

15. I feel certain that I can continue to eat at least 5 portions of fruit and vegetables every day…

<table>
<thead>
<tr>
<th></th>
<th>Completely Disagree</th>
<th>Slightly disagree</th>
<th>Slightly agree</th>
<th>Agree Completely</th>
</tr>
</thead>
<tbody>
<tr>
<td>... even if it takes a lot of time until I am used to it.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
… even if I have worries and problems (e.g. preparation time) | ☐ | ☐ | ☐ | ☐
… even if I need several tries until I succeed. | ☐ | ☐ | ☐ | ☐

16. For the near future I have already planned...

<table>
<thead>
<tr>
<th>Completely Disagree</th>
<th>Slightly disagree</th>
<th>Slightly agree</th>
<th>Agree Completely</th>
</tr>
</thead>
</table>
| … what I will eat (e.g. cereals, fruits). | ☐ | ☐ | ☐ | ☐
| … where I will buy my food (e.g. supermarket). | ☐ | ☐ | ☐ | ☐
| … at which meals I will eat fruits and vegetables (e.g. additional salad with dinner). | ☐ | ☐ | ☐ | ☐

17. Please think about your family and friends...

<table>
<thead>
<tr>
<th>Completely Disagree</th>
<th>Slightly disagree</th>
<th>Slightly agree</th>
<th>Agree Completely</th>
<th>Not Applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>My partner helps me to eat healthy.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>My family helps me to eat healthy.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>My friends help me to eat healthy.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>
Part IV Quality of Life

For the following questions, please mark the box fits best for you with an ‘x’.

<table>
<thead>
<tr>
<th>Question</th>
<th>Very poor</th>
<th>Poor</th>
<th>Neither poor nor good</th>
<th>Good</th>
<th>Very good</th>
</tr>
</thead>
<tbody>
<tr>
<td>18. How would you rate your quality of life?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19. How satisfied are you with your health?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The next questions ask about how much you have experienced certain things in the last 4 weeks.

<table>
<thead>
<tr>
<th>Question</th>
<th>Not at all</th>
<th>A little</th>
<th>A moderate amount</th>
<th>Very much</th>
<th>An extreme amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>20. To what extent do you feel that physical pain prevents you from doing what you need to do?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21. How much do you need any medical treatment to function in your daily life?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22. How much do you enjoy life?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>23. To what extent do you feel your life to be meaningful?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24. How well are you able to concentrate?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Appendices

### 25. How safe do you feel in your daily life?

<table>
<thead>
<tr>
<th></th>
<th>Not at all</th>
<th>A little</th>
<th>Moderately</th>
<th>Mostly</th>
<th>Completely</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>✓</td>
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<td>✓</td>
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</tr>
</tbody>
</table>

### 26. How healthy is your physical environment?

<table>
<thead>
<tr>
<th></th>
<th>Not at all</th>
<th>A little</th>
<th>Moderately</th>
<th>Mostly</th>
<th>Completely</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>✓</td>
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<td>✓</td>
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<td>✓</td>
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<tr>
<td>✓</td>
<td></td>
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</tr>
</tbody>
</table>

*The next questions ask about how completely you experience or were able to do certain things in the last 4 weeks.*

### 27. Do you have enough energy for everyday life?

<table>
<thead>
<tr>
<th></th>
<th>Not at all</th>
<th>A little</th>
<th>Moderately</th>
<th>Mostly</th>
<th>Completely</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td></td>
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<tr>
<td>✓</td>
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<td>✓</td>
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<td>✓</td>
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<tr>
<td>✓</td>
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</tr>
</tbody>
</table>

### 28. Are you able to accept your bodily appearance?

<table>
<thead>
<tr>
<th></th>
<th>Not at all</th>
<th>A little</th>
<th>Moderately</th>
<th>Mostly</th>
<th>Completely</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td></td>
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<tr>
<td>✓</td>
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<td>✓</td>
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<td></td>
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<tr>
<td>✓</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

### 29. Have you enough money to meet your needs?

<table>
<thead>
<tr>
<th></th>
<th>Not at all</th>
<th>A little</th>
<th>Moderately</th>
<th>Mostly</th>
<th>Completely</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td></td>
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<td>✓</td>
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<td></td>
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<tr>
<td>✓</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

### 30. How available to you is the information that you need in your day-to-day life?

<table>
<thead>
<tr>
<th></th>
<th>Not at all</th>
<th>A little</th>
<th>Moderately</th>
<th>Mostly</th>
<th>Completely</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>✓</td>
<td></td>
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<tr>
<td>✓</td>
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<tr>
<td>✓</td>
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<tr>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 31. To what extent do you have the opportunity for leisure activities?

<table>
<thead>
<tr>
<th></th>
<th>Very poor</th>
<th>Poor</th>
<th>Neither poor nor good</th>
<th>Good</th>
<th>Very good</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>✓</td>
<td></td>
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<tr>
<td>✓</td>
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<tr>
<td>✓</td>
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</tr>
<tr>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 32. How well are you able to get around?

<table>
<thead>
<tr>
<th></th>
<th>Very dissatisfied</th>
<th>Dissatisfied</th>
<th>Neither satisfied nor dissatisfied</th>
<th>Satisfied</th>
<th>Very satisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
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<td>✓</td>
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<tr>
<td>✓</td>
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<td>✓</td>
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<td></td>
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<tr>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 33. How satisfied are you with your sleep?

<table>
<thead>
<tr>
<th></th>
<th>Not at all</th>
<th>A little</th>
<th>Moderately</th>
<th>Mostly</th>
<th>Completely</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>✓</td>
<td></td>
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<tr>
<td>✓</td>
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<tr>
<td>✓</td>
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<tr>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Appendices

<table>
<thead>
<tr>
<th>Question</th>
<th>Never</th>
<th>Seldom</th>
<th>Quite often</th>
<th>Very often</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>34. How satisfied are you with your ability to perform your daily living activities?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>35. How satisfied are you with your capacity to work?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>36. How satisfied are you with yourself?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>37. How satisfied are you with your personal relationships?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>38. How satisfied are you with your sex life?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>39. How satisfied are you with the support you get from your friends?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>40. How satisfied are you with the conditions of your living place?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>41. How satisfied are you with your access to health services?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>42. How satisfied are you with your transport?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>43. How often do you have negative feelings such as blue mood,</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*The next question refers to how often you have felt or experienced certain things in the last 4 weeks.*
Part V Medical Care

For the following questions, please think about your most recent medical visit since being in Canada.

44. What was the reason for your medical visit?

___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________

For the next question, please mark one box with an ‘x’ to say how you feel about the quality of medical care you have received since being in Canada.
Mark only response for each item, by placing the ‘x’ closer to the word that is most similar to you view.
The middle score (2) means you are undecided.

45. My quality of care was…

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>High</td>
</tr>
<tr>
<td>Impersonal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Personal</td>
</tr>
<tr>
<td>Uncaring</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Caring</td>
</tr>
<tr>
<td>Unconcerned for my wellbeing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Concerned for my wellbeing</td>
</tr>
<tr>
<td>Not Beneficial</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Beneficial</td>
</tr>
<tr>
<td>Unsatisfactory</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Satisfactory</td>
</tr>
</tbody>
</table>

*Did your doctor give you a recommendation? (E.g. medication to take, diet to follow, etc.)
☐ Yes ☐ No
(If yes, please answer the next question about this recommendation, if no, please skip to question 47)

46. How often were each of the following statements true for you during since the last time you saw your doctor? Please mark one box only for each statement, with an ‘x’.

<table>
<thead>
<tr>
<th>Statement</th>
<th>None of the time</th>
<th>Some of the time</th>
<th>Most of the time</th>
<th>All of the time</th>
</tr>
</thead>
<tbody>
<tr>
<td>It was hard to do what the doctor recommended I do</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I followed my doctor’s suggestions exactly.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I was unable to do what was necessary to follow my doctor’s treatment plans.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I found it easy to do the things my doctors suggested.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Statement</th>
<th>None of the time</th>
<th>Some of the time</th>
<th>Most of the time</th>
<th>All of the time</th>
</tr>
</thead>
<tbody>
<tr>
<td>In general, how often were you able to do what the doctor told you since the last time you saw him/her?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

47. Please answer the follow questions by filling in the appropriate number.

In the past 6 months…

<table>
<thead>
<tr>
<th>Question</th>
<th>Number of times</th>
</tr>
</thead>
<tbody>
<tr>
<td>How many times did you visit a physician?</td>
<td></td>
</tr>
<tr>
<td>Do not include visits while in the hospital or a hospital emergency room.</td>
<td></td>
</tr>
<tr>
<td>How many times did you go to a hospital emergency room?</td>
<td></td>
</tr>
<tr>
<td>How many different times did you stay in a hospital overnight or longer?</td>
<td></td>
</tr>
<tr>
<td>How many total nights did you spend in the hospital?</td>
<td></td>
</tr>
</tbody>
</table>
48. Please think about your past year…

<table>
<thead>
<tr>
<th>Did you go to a physician if necessary? (E.g. if the physician asked you to come, or if you were ill).</th>
<th>No, and I do not intend to go</th>
<th>No, but I am thinking about going in the future</th>
<th>No, but I seriously intend to go in the future</th>
<th>Yes, but I don’t know if I will go again in the future</th>
<th>Yes, and I will continue to go when necessary</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

Part VI Background

49. Please fill in the following information about yourself by marking one box with an ‘x’, or filing in the blank.

<table>
<thead>
<tr>
<th>What is your gender?</th>
<th>Male ☐</th>
<th>Female ☐</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you have children?</td>
<td>Yes ☐</td>
<td>No ☐</td>
</tr>
<tr>
<td>If you have children, how many do you have?</td>
<td>_______</td>
<td></td>
</tr>
<tr>
<td>What is your native language?</td>
<td>English ☐</td>
<td>French ☐</td>
</tr>
<tr>
<td>How old are you? (enter a number in years)</td>
<td>_______ years</td>
<td></td>
</tr>
<tr>
<td>How old do you feel cognitively? (enter a number in years)</td>
<td>_______ years</td>
<td></td>
</tr>
<tr>
<td>How old do you feel physically? (enter a number in years)</td>
<td>_______ years</td>
<td></td>
</tr>
<tr>
<td>In which country were you born?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>In what country do you currently live?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>How many years have you been living in your current country of residence?</td>
<td>_______ years</td>
<td></td>
</tr>
</tbody>
</table>
50. Please mark one box with an ‘x’ that fits best for you.
How strongly do you feel part of…

<table>
<thead>
<tr>
<th></th>
<th>Not at all</th>
<th>Very little</th>
<th>Somewhat</th>
<th>Fully</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Canadian culture</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Your home culture</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

51. Please mark one box with an ‘x’…

<table>
<thead>
<tr>
<th>What is your marital status?</th>
<th>Single</th>
<th>Close relationship, not living together</th>
<th>Close relationship, living together</th>
<th>Married/In common law relationship</th>
<th>Divorced</th>
<th>Widowed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Close relationship, not living together</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Close relationship, living together</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married/In common law relationship</td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>Divorced</td>
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<td>Widowed</td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>What is your highest school graduation?</th>
<th>None (yet)</th>
<th>Primary school</th>
<th>Secondary school</th>
<th>High school</th>
<th>Junior college</th>
<th>University or above</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>None (yet)</td>
<td></td>
<td>Primary school</td>
<td>Secondary school</td>
<td>High school</td>
<td>Junior college</td>
<td>University or above</td>
<td>Other</td>
</tr>
<tr>
<td>Primary school</td>
<td></td>
<td>Secondary school</td>
<td>High school</td>
<td>Junior college</td>
<td>University or above</td>
<td>Other</td>
<td></td>
</tr>
<tr>
<td>Secondary school</td>
<td></td>
<td>High school</td>
<td>Junior college</td>
<td>University or above</td>
<td>Other</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High school</td>
<td></td>
<td>Junior college</td>
<td>University or above</td>
<td>Other</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Junior college</td>
<td></td>
<td>University or above</td>
<td>Other</td>
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<td></td>
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<tr>
<td>University or above</td>
<td></td>
<td>Other</td>
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<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>What is your current work status?</th>
<th>Employed, full-time</th>
<th>Employed, part-time</th>
<th>Student/In training</th>
<th>Unemployed/d/ job searching</th>
<th>In pension</th>
<th>Housewife/ husband</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employed, full-time</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employed, part-time</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>Student/In training</td>
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<td></td>
<td></td>
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<tr>
<td>Unemployed/d/ job searching</td>
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</tr>
<tr>
<td>In pension</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Housewife/ husband</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

52. Which of the following areas do you come from? Please mark one box with an ‘x’.

<table>
<thead>
<tr>
<th>Western Europe</th>
<th>Asia</th>
<th>Mediterranea n</th>
<th>Africa</th>
<th>America/Austr alia/New Zealand</th>
<th>Eastern Europe</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

208
53. Is there anything else you do in your life that you feel is important for your health, but was not mentioned?
Please take your time, your comments are welcome and appreciated!

___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________

__________________________________________

__________________________________________

___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________

Thank you very much for your participation!
Appendices

Appendix C2

Doctor Questionnaire

Culture and Health Questionnaire

This confidential questionnaire is about connections between culture and health.
There are no right or wrong answers to any of these questions.
Please read the questions carefully, and answer each one according to what is true for you.
Some questions may appear similar to each other.
Please answer every question to the best of your ability, and please do not skip any questions.

The survey should take approximately 5 minutes to complete.
Please follow the instructions provided for each question.

1. Please respond in terms of your views regarding immigrants to Canada

<table>
<thead>
<tr>
<th></th>
<th>Completely disagree</th>
<th>Slightly disagree</th>
<th>Slightly agree</th>
<th>Agree Completely</th>
</tr>
</thead>
<tbody>
<tr>
<td>It should be important to them that others see them as Canadians</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>It should be important to them to see themselves as Canadians</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>For them, being Canadian should be an important part of who they are</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>At home, they should eat Canadian food</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>They should celebrate Canadian holidays</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Most of their friends should be Canadian</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
</tbody>
</table>
2. Please respond in terms of your views regarding immigrants to Canada

<table>
<thead>
<tr>
<th></th>
<th>Completely disagree</th>
<th>Slightly disagree</th>
<th>Slightly agree</th>
<th>Agree Completely</th>
</tr>
</thead>
<tbody>
<tr>
<td>It should be important to them that others see them as part of their home culture</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>It should be important to them to see themselves as part of their home culture</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>For them, being part of their home culture should be an important part of who they are</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>At home, they should eat food from their home culture</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>They should celebrate the holidays of their home culture</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Most of their friends should be from their home culture</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

3. Can you please specify what group of immigrants you were thinking about when you answered the above questions?

___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
4. Please think about your ease or difficulty communicating with people…

<table>
<thead>
<tr>
<th></th>
<th>Completely disagree</th>
<th>Slightly disagree</th>
<th>Slightly agree</th>
<th>Agree Completely</th>
</tr>
</thead>
<tbody>
<tr>
<td>I can easily communicate with people from Canada or Quebec</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>I can easily communicate with people from a different ethnic group</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
</tbody>
</table>

5. Please think about your expectation of immigrants in general…

<table>
<thead>
<tr>
<th></th>
<th>Completely disagree</th>
<th>Slightly disagree</th>
<th>Slightly agree</th>
<th>Agree Completely</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immigrants should fully adopt the Canadian culture</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>I accept that immigrants want to maintain their own culture</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
</tbody>
</table>

Thank you very much for your participation!
Appendices

Appendix D – Verona Coding System: Schematic Diagram
Appendices

Appendix E – Six Phase Process of Thematic Analysis

<table>
<thead>
<tr>
<th>Phase</th>
<th>Description of the process</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Familiarizing yourself with your data:</td>
<td>Transcribing data (if necessary), reading and re-reading the data, noting down initial ideas.</td>
</tr>
<tr>
<td>2. Generating initial codes:</td>
<td>Coding interesting features of the data in a systematic fashion across the entire data set, collating data relevant to each code.</td>
</tr>
<tr>
<td>3. Searching for themes:</td>
<td>Collating codes in potential themes, gathering all data relevant to each potential theme.</td>
</tr>
<tr>
<td>4. Reviewing themes:</td>
<td>Checking if the themes work in relation to the coded extracts (Level 1) and the entire data set (Level 2), generating a thematic ‘map’ of the analysis.</td>
</tr>
<tr>
<td>5. Defining and naming themes:</td>
<td>Ongoing analysis to refine the specifics of each theme, and the overall story the analysis tells, generating clear definitions and names for each theme.</td>
</tr>
<tr>
<td>6. Producing the report</td>
<td>The final opportunity for analysis. Selection of vivid, compelling extract examples, final analysis of selected extracts, relating back of the analysis to the research question and literature, producing a scholarly report of the analysis.</td>
</tr>
</tbody>
</table>
Appendices

Appendix F – Euclidean Distance Calculation Example: Patient A

Scores:

Completely disagree = 1
Slightly disagree = 2
Slightly agree = 3
Agree completely = 4

Mean of answers to questions about home culture: 2.86
Mean of answers to questions about host culture (Canada): 2.43

Calculate Distance Score from each orientation with Euclidean Distance Formula:

\[ D(x, y) = \sqrt{(x_1 - y_1)^2 + (x_2 - y_2)^2} \]

\( X_1 = \) mean score on questions about home culture
\( X_2 = \) mean score on questions about host culture
\( Y_1 \) and \( Y_2 = \) Most extreme scores for each orientation (Marginalization = 1, 1; Separation = 4, 1; Assimilation = 1, 4; Integration = 4, 4).

Distance Scores for Patient A:

From full Marginalization: \( \sqrt{(2.86-1)^2 + (2.43-1)^2} = \sqrt{5.5} = 2.35 \)
From full Separation: \( \sqrt{(2.86-4)^2 + (2.43-1)^2} = \sqrt{3.34} = 1.83 \)
From full Assimilation: \( \sqrt{(2.86-1)^2 + (2.43-4)^2} = \sqrt{5.92} = 2.43 \)
From full Integration: \( \sqrt{(2.86-4)^2 + (2.43-4)^2} = \sqrt{3.76} = 1.93 \)

*Distance scores can range from 0-4.24. Proximity scores to each orientation are then calculated:

Marginalization: 4.24- 2.35 = 1.89
Separation: 4.24-1.83= 2.41
Assimilation: 4.24-2.43 = 1.81
Integration: 4.24-1.93 = 2.31

*These scores are used to plot the person in two dimensional space, and observe visually toward which orientation they lean the most
Appendix G – Table of Calculated Acculturation Orientation Scores for Doctors and Patients

Acculturation orientations (AO) of doctors and patients: highest scores indicate which orientation individuals lean towards the most, but are not completely exclusive of other orientations.

<table>
<thead>
<tr>
<th>Proximity Score</th>
<th>Doctor A</th>
<th>Doctor B</th>
<th>Doctor C</th>
<th>Doctor D</th>
<th>Doctor E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marginalization</td>
<td>1.61</td>
<td>1.61</td>
<td>1.64</td>
<td>2.41</td>
<td>2.57</td>
</tr>
<tr>
<td>Separation</td>
<td>2.77</td>
<td>2.26</td>
<td>3.64</td>
<td>2.30</td>
<td>2.45</td>
</tr>
<tr>
<td>Assimilation</td>
<td>1.38</td>
<td>1.20</td>
<td>0.61</td>
<td>1.89</td>
<td>1.67</td>
</tr>
<tr>
<td>Integration</td>
<td>2.39</td>
<td>1.74</td>
<td>1.64</td>
<td>1.81</td>
<td>1.59</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Proximity Score</th>
<th>Patient A</th>
<th>Patient B</th>
<th>Patient C</th>
<th>Patient D</th>
<th>Patient E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marginalization</td>
<td>1.89</td>
<td>1.81</td>
<td>1.70</td>
<td>1.41</td>
<td>1.70</td>
</tr>
<tr>
<td>Separation</td>
<td>2.41</td>
<td>1.89</td>
<td>2.38</td>
<td>2</td>
<td>2.38</td>
</tr>
<tr>
<td>Assimilation</td>
<td>1.81</td>
<td>2.29</td>
<td>1.78</td>
<td>2</td>
<td>1.78</td>
</tr>
<tr>
<td>Integration</td>
<td>2.31</td>
<td>2.42</td>
<td>2.50</td>
<td>2.82</td>
<td>2.50</td>
</tr>
</tbody>
</table>

As can be seen above, Doctor and Patient A are the only pair who have a combination of acculturation orientations that match to provide consensual relationships as predicted by the health practitioner/health consumer model. The other four doctor/patient pairs show orientation combinations that lead to conflictual/problematic relationships according to the health practitioner/health consumer model.
Education

**PhD Health Psychology: BIGSSS, Jacobs University, Bremen, Germany**
(September, 2013 - December, 2016 (defence date set for December 5, 2016))
- Tasks including but not limited to: data collection, dissertation writing and defense, results dissemination, teaching undergraduate courses, participation in weekly scientific seminars, methods training, didactics training, core theory training, conference participation.

**Masters of Health Psychology: Leiden University, Leiden, Netherlands**
(September, 2012 - August, 2013)
- Tasks including but not limited to: course work and practice, dissertation, internship.

**Honours Bachelor of Science in Psychology, University of Toronto, Toronto, Canada**
(September 2004 - August, 2008)
- Award for outstanding achievement in psychology.

**High School Diploma: Bow Valley High School, Cochrane, Canada**
(September, 2000 - June, 2003)
- Award for outstanding leadership contribution.

Experience

**Visiting Researcher** (August 5, 2015 – August 26, 2015)
University College London: Centre for Behaviour Change
(Gower Street, London, UK)
- Preparation for and statistical evaluation of the UCL Centre for Behaviour Change summer school
- Assessing and coding behaviour change techniques used in intervention studies, as part of a theoretical framework development.

**University Co-Lecturer** (February 1, 2014 – May 15, 2014)
Jacobs University (Campus Ring 1, Bremen, Germany)
- Shared teaching semester of a 3rd year university level 'Psychology of Communication' class.
- Duties included course design, lecture design and delivery, grading

**Health Psychology Intern** (May 1, 2013 – August 15, 2013)
University of Bath (Claverton Down, Bath, UK)
- Miscellaneous duties for a rehabilitation study with cardiac patients:
  - Assisting with interviews, transcription, literature reviews, qualitative analyses

**Health Psychology Research Assistant** (October 1, 2012 – January 31, 2014)

**Health Psychology Research Assistant** (October 1, 2011 – January 31, 2012)

Jacobs University (Campus Ring 1, Bremen, Germany)
- Ongoing review and revision of research and grant proposals.
- Designed, conducted and analyzed a pilot study on sleep, stress and health behaviours among students – providing counselling to students and helping them integrate this into their lives.
- Performed detailed statistical analyses with SPSS software on sleep/stress pilot study, and on a campus initiative to improve mental and physical health among students and faculty.

**Research Papers**


**Conference Participation**
- **May 2015:** Transcultural Psychosomatics, Psychiatry and Psychotherapy Congress.
  Marburg, Germany. Oral presentation, conference participation.

- **Sept 2015:** European Health Psychology Conference (EHPs).
  Limassol, Cyprus. Oral presentation, poster presentation, conference participation.

- **Sept 8-9, 2016:** Migration, Health, and Ethics,
  Bremen, Germany. Oral presentation, conference participation.
Statutory Declaration

I, Amanda Whittal, hereby declare, under penalty of perjury, that I am aware of the consequences of a deliberately or negligently wrongly submitted affidavit, in particular the punitive provisions of § 156 and § 161 of the Criminal Code (up to 1 year imprisonment or a fine at delivering a negligent or 3 years or a fine at a knowingly false affidavit).

Furthermore I declare that I have written this PhD thesis independently, unless where clearly stated otherwise. I have used only the sources, the data and the support that I have clearly mentioned.

This PhD thesis has not been submitted for the conferral of a degree elsewhere.

__________________  ___________________
Place               Date

_____________________________________
Signature