Self-reported Health in Immigrants Living in Finland: Treatment Obstacles, Quality of Life and Language Ability as Mediators to Health

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Immigration to Finland has increased substantially in the last decade. Studies have shown links between immigration, lower socioeconomic class, gender, education and ethnicity with access to care, mortality and morbidity. Little attention - until recently - has been paid to the structural inequalities that contribute health disparities as well as how care is delivered to immigrants. In Finland equality is the standard of providing healthcare, rather than an emphasis on at risk groups. Using data from the Migrant Health and Welfare Study, the impact of quality of life, gender, language ability, treatment barriers and year of migration on self-reported health was assessed in 1000 Russian speaking, 1000 Kurdish and 1000 Somali immigrants aged 18-64 living in Finland for at least a year. Results showed that quality of life and gender have the strongest association with self-reported health. The Somali and Russian speaking groups showed a low moderate correlation with self-reported health while the Kurdish group showed a high moderate correlation with self-reported health. Self-reported health was more strongly related to logistical barriers such as waiting times, cost and transportation. Impact of year of migration and language ability were statistically significant at the p<0.05 level to self-reported health. Finally, the relationship between logistical obstacles to health and perceived language ability with self-reported health after controlling for quality of life and year of migration was assessed. Only language ability was found to be statistically significant. Respondents in the study were primarily from urban areas and thus could have influenced results. As Finland becomes increasingly multicultural, healthcare and public health sectors need to rethink their universal healthcare schemes towards a transcultural model that pays special attention to culturally congruent care as well as the special needs of marginalized groups.
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List of Abbreviations

ANOVA: Analysis of variance
ANCOVA: Analysis of covariance
MAAMU: Migrant Health and Wellbeing Study
NHI: National Health Insurance
PTSD: Post traumatic stress disorder
SES: Socioeconomic status
SRH: Self-reported Health
US: United States of America
QOL: Quality of Life
YOM: Year of Migration
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Self-reported Health in Immigrants Living in Finland: Treatment Obstacles, Quality of Life and Language Ability as Mediators to Health.

1. Introduction

Immigration to Finland has increased substantially in the past decade. In 2000, the total number of immigrants living in Finland was 98,977. In 2012, the number has jumped to 238,208 first generation foreigners living in Finland (Statistics Finland, 2012).

Equality in healthcare has been the subject of much research. It is an especially important question when considering so-called universal healthcare schemes, which aim to ensure access to health services to an entire population. Studies have shown links between immigration, lower socioeconomic class (SES) gender, education and ethnicity with access to care, mortality and morbidity (Williams & Collins 1995; Marmot et al., 1998; Denton, Prus & Walters 2004; Iglesias, Robertson, Johansson, Engfeldt & Sundquist 2003). Yet, delivery of universal services is based on the premise of equality; everybody has equal access. However, little attention- until recently - has been paid to the structural inequalities that contribute health disparities as well as how care is delivered to immigrant groups. In Finland, where equality is the standard of providing healthcare, rather than an emphasis on at risk groups, are immigrant groups at a disadvantage?

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1 For this paper “immigrant” is used to define, refugees, sojourners, asylum seekers and economic migrants.
1.1 Aim

The current study aims to evaluate the following using data collected for the Migrant Health and Wellbeing (MAAMU; ) study:

1. Is Quality of life associated with self-reported health in Immigrants living in Finland? If so, are the results different for men and women or between the three study groups?
2. Do obstacles to treatment influence self-reported health scores?
3. Are self-reported health scores influenced by either language ability or year of migration?

2. Social Psychological theories of Health Disparities

It has been known for some time that certain social groups enjoy longer and healthier lives than those that are more disadvantaged. For a long time, it was assumed by scientists that these disparities would diminish when improvements, such as access to care, were made. By the 1990’s, however, researchers found that health disparities persisted despite changes. It became increasingly evident that health disparities occur on many levels including economic, race(ism), neighborhoods, work settings and healthcare systems. Social psychological health research grew out of questions about the structural, systemic, socio-cultural and personal conditions which contribute to these health disparities.

Schnittker and McLeod (2005) define health disparities as, “The difference in health profiles across major subgroups of a population including a broad spectrum
of physical and mental health outcomes, from self-rated health to mortality, from psychological wellbeing to major mental disorders” (p.75).

Health disparities research is dominated by two conflicting approaches. Health psychologists have focused their attention to the downstream mechanisms through which psychosocial factors such as stress, coping and health behaviors play a role in health. The second approach is often used by public health and sociological scholars and focuses attention on an upstream approach. That is, health disparities are due to basic social processes that cannot be reduced to one particular risk factor. Instead of psychosocial factors, one must looks at the distribution of knowledge, power and resources. (Schnittker & McLeod, 2005).

What is missing from these two approaches is the social psychological process. This process brings together the individual and society by “identifying meso level structures (e.g. community) and interactions through which macro social conditions (e.g. society) shape the experience of and come to have meaning for individuals” (Schnittker and McLeod, 2005 p.77). The current study aims to explore health disparities through this theoretical framework; a multilevel approach to health disparities.

3. Contributing Factors to Health Disparities

3.1. Socioeconomic and status and health

Socioeconomic status (SES) has been shown to be a contributing factor if not one of the most powerful social risk factors in health. Differences in access, utilization and quality of care have been shown to differ between SES groups (Williams & Collins 1995). Most health disparities researchers approach SES with a
material conceptualization. That is, the higher the SES groups are granted more material advantages that, in turn, improve health. Status-based conceptualizations of SES highlight the subjective components of status such as social comparison, social affiliations, and social identities (Schnittker and McLeod, 2005).

Psychosocial factors explain some of the association between SES and health. Marmot et al. (1998) explored psychosocial factors as a mediator to health. They compared educational attainment and psychosocial factors such as neighborhood poverty, smoking, social relationships, social support, perceived inequalities, perceived control with 3 health outcomes (self-reported health, waist: hip ratio and psychological wellbeing). They found that each factor individually accounted for a small part of the effects of SES on health. However, when they controlled for all the psychosocial factors at one time, as a group they explained a significant portion of SES and health. The authors of this study speculated that SES can modify the effect of psychosocial factors on health. So, presumably, negative life experiences affect those with lower SES because those groups have fewer resources.

3.2. Women and health

It is a well-known that women in similar socioeconomic groups as men live longer. Despite living longer, they report a higher prevalence of mortality and disability during their lifetime as compared to men (Moss, 2000). The roots of these disparities are many. In addition to some genetic and biological differences, social structures, behavior patterns and psychosocial factors have been connected to differences in health between women and men. Income, education and employment inequalities have been shown to play a role in the health disparities between men and women (Denton, et al. 2004; Iglesias, et al., 2003). Furthermore, women who
immigrate are at particular risk. Iglesias et.al (2003) found that even after controlling for SES, age and other demographic factors, country of birth was a significant risk factor for poor self-reported health and psychosomatic complaints in women. Gerritsen, et al. (2006) found, in their study of refugees and asylum seekers in the Netherlands that being female was associated with more chronic conditions, post-traumatic stress disorder, depression and anxiety.

Furthermore, women account for a large portion of those that are considered poor. A study of Finnish women found that the link between SES and health also carried through to women as a group. Women who had lower SES also had poorer health as compared to women with higher SES (Sihvonen et. al. 1998). However, the nature of the association between SES and women’s health is poorly understood. Some have speculated that social support networks and personal control may leave women vulnerable to stress (Shaffer & Lia-Hoagberg, 1997). Also, educational status may contribute to women’s poor health. Education enhances a women’s access to employment as well as her ability to make reproductive and marital choices. Finally, single mothers are particularly vulnerable. A Swedish study found that single mothers to have a 70% increase in mortality risk during a five year period as compared to other women ( Ringbäck, Weitoft, Haglund & Rosen, 2000).

3.3 Race and ethnicity in health

While public health studies in many countries focus on social class differences such as SES in health, a growing body of work has started looking at racial and ethnic minority populations. Race is strongly associated with SES. For example, in the United States, poverty rates for African American and the Hispanic populations are 33% and 29% respectively compared to 11% of the white population (Williams
& Collins, 1992). Furthermore, researchers have found that adjusting for social economic class reduces racial disparities but does not eliminate them (Rogers 1992, Cooper, 1993) suggesting that while SES is strongly associated for health disparities but not the only contributing factor.

For example, a public health survey in the city of Malmö Sweden found that there were significant group differences in self-reported health and that these group differences were reduced by adjusting for psychosocial and economic factors (Lindström, Sundquist and Östergren, 2001) but not eliminated.

Research have also has shown that racism is an important determinant of health in racial and ethnic out-groups (King & Williams, 1995). Racism plays a role in health in so much as it can restrict quality or quantity of health related services, induce psychological distress and can transform SES such as level of education and employment opportunities (William & Collins, 1995).

3.4. Immigration, acculturation and health

It has only been recently that health research collected data on immigration status. However, as the size of immigrant populations grow throughout the world, many health researchers are looking at how immigration and acculturation affects health in terms of access, care and quality. It has been known for quite some time that that there is a disparity in health between immigrants and their native born peers. However, the relationship between immigration, subsequent acculturation and poorer health is not direct. Rather several structural, cultural and individual factors seem to interact to create these disparities.

There are several schools of thought when it comes to how acculturation occurs. Gordon (1964 as cited in Sam, 2006) proposed a theory that has come to be
known as *straight line assimilation*. Gorgon proposes seven phases in which an individual passes through in his /her process of acculturation for which he called assimilation. Over time, the theory posits, the immigrant will become more like their host culture beginning with *cultural assimilation* and ending with an *Identificational assimilation*. It has been argued that this approach fits more closely with the assimilation experience of early immigrants—particularly in the US – and does not fit the current situation for migrants today (Sam, 2006).

The theory of *segmented assimilation* has been proposed instead (Portes & Zhou 1993). They argue that assimilation is contingent on such factors as social class differences, time of arrival and the context of reception leading to more of a non-linear assimilation.

Berry asserts that assimilation is a process that reflects the extent to which an individual participates in the culture of the host society and maintains his/her own cultural identity. This leads to 4 potential outcomes: assimilation, integration, separation or marginalization. (Berry, 1990 as cited in Berry, Phinney, Sam & Veder, 2006).

Language ability has been shown to play a role in access to and quality of healthcare. Ponce, Hays & Conningham (2006) found that adults over the age of 55 living in the United States (US) and did not have English proficiency, were 1.35 times more likely to report no regular source of healthcare. Also, adult immigrants (in the US) that are not proficient in English report more barriers with getting care such as long waits and difficulty getting information (Pippins, Alegria & Haas, 2007). Perceived language ability has been linked to life satisfaction, greater self-esteem and reduced stress (Ying, 1996; Noels, et al., 1996).
Immigrant populations are less likely to carry health insurance in countries where private health insurance is necessary in order to receive quality healthcare. Goldman, Smith & Sood (2005) found that 50% of health insurance disparities between migrants and their US-born counterparts were due to SES and 33% were due to the industry of employment. Furthermore, it is believed that undocumented immigrants have the lowest rates of health insurance in the immigrant community.

While, Finland has universal healthcare coverage, under Finnish law, undocumented workers are only guaranteed access to emergency health care at their own cost. This is especially a concern as the rate of undocumented migrants has increased over the last 10 years in Finland.

Immigrants are also less likely to receive preventative care. Echeverria and Carrasquillo (2006) explored what role acculturation and citizenship played in preventative mammograms and PAP smears in the US. They found that after adjusting for age, education, family income and marital status, both naturalized citizens and noncitizens were less likely to receive a mammogram than US-born women. Furthermore, when looking at PAP screenings, noncitizen women were 16 percentage points less likely to have this preventative test compared to native-born women.

While Echeverria and Carrasquillo (2006) found that access to care and SES played a large role in the differences between immigrant and native born groups, they also found that level of acculturation seems to play a role as well. Using an 8 question language preference measure as an indicator of level of acculturation, the researchers found that the remaining differences (after adjusting for SES and access to care variables) between the noncitizen group and the US born group disappeared after adjusting for level of acculturation.
Differences in self-reported health have been reported in immigrant groups. In their research into prevalence rates for physical and mental illness in refugees and asylum seekers, researches in the Netherlands found physical and mental health problems were highly prevalent among these two groups. Furthermore, they found that more asylum seekers (59.1%) than refugees (42%) considered their health to be poor. Asylum seekers also reported more post-traumatic stress (PTSD) symptoms than refugees. (Gerritsen, et al., 2006).

Research has also suggested that those immigrants whom were geographically most distant and culturally most dissimilar had poorer self-reported health (Lindström, et al., 2001). This result is consistent with current acculturation research.

3.4.1. Acculturative stress

Immigration is a social process. People relocate for various reasons. Some choose the country they migrate to and others have no choice. Some are forced because of war and conflicts. Others migrate because of persecution in their home countries for reasons such as race, sexual orientation, religion or nationality. Finally, for some, migration is purely an economic choice. All of these pre-migration factors play a role in subsequent acculturation (Sam 2006).

Immigrant groups can be different in terms of their cultural and ethnic backgrounds yet quite similar when it comes to their SES and other factors such as language barriers and a lack of familiarity with their new country’s cultural norms and healthcare system. Immigrants’ experience of stress from the acculturative process can play a role in health disparities.
Two types of change are present in the acculturation process: cultural and psychological. These changes can proceed with relative ease through cultural learning and cultural shedding. However, some changes produce stress (Berry, et al. 2006). For example, if an individual or group’s intercultural contact is hostile. Berry (1997) developed the theory of acculturative stress to understand this part of the acculturation process. Acculturative stress is a response by individuals to intercultural conflict in everyday life. This term has been linked to “culture shock” but it is distinct in that the word “stress” relates to the studies that have looked at negative life events, subsequent coping strategies and ultimately some sort of adaption (Lazarus & Folkman, 1984; Barry et al., 2006).

Acculturative stress and subsequent adaption have many factors. On a group level, one must consider the society of origin’s political context and economic situation. Also, the societies of settlement’s orientation towards immigration as well as its social support policies are important factors. Moderating factors in pre-migration such as age, gender, health, and migration motivation should be considered as well as moderating factors post migration such as social support, coping strategies, resources and societal attitudes. These are all important because they influence how the individual (and or group) deals with everyday life in their new environment (Sam, 2006). When levels of conflict are experienced and deemed to be problematic, the result is acculturative stress. Lazarus & Folkman’s (1984) stress and coping models can help to understand this process.

3.4.2. Cognitive stress theory and coping

Psychosocial stress has been widely studied in terms of negative life events. In 1984, Lazarus and Folkman used psychological approaches to studying stress by
analyzing the cognitive processes that mediate between life events and stress. In the resulting *cognitive stress theory*, Lazarus & Folkman assert that “psychological stress is a particular relationship between the person and the environment which is appraised by the individual as taxing or exceeding his or her resources and endangering his/her wellbeing” (1984, p. 804). So, the main actions involved in determining the extent of stress a person experiences is their appraisal and coping.

A person’s *coping resources* have been found to have a significant effect on which situation is experienced as stressful as well as an individual’s success at overcoming it. “Resources “are defined as both properties of the *person* and those, which are primarily *environmental*. Personal resources are those that include physical health and psychological factors such as optimism, positive self-concept, social and problem solving skills. Environmental resources are people available to help the person with coping with the stressful situation for example with financial or social support. (Lazarus & Folkman 1984)

This is especially interesting when looking at immigrant health. Mortality studies have shown that immigrants suffer from poorer health. Many theories have been put forth to explain this phenomena. The *stress hypothesis* asserts that the health disparities faced by immigrants are the result of their inability to cope with stressors associated with acculturation (Berry et al., 2006). The *selection hypothesis* posits that individuals with health problems are predisposed to migrate (Odegaard, 1932 as cited in Sam, 2006). This hypothesis contradicts the research which shows that migrants tend to be healthier than the native population upon migration but this advantage deteriorates over time. Thus, the *healthy immigrant effect* posits that- contrary to the selection hypothesis- it is the healthy individuals’ that migrate. These migrants’ health, however, deteriorates over generations. This is known as the
immigrant paradox (Sam, 2006). One explanation for this could be that when groups migrate, they often adapt diet and health behavior patterns of the new culture. Behaviors that affect health adversely, such as decreased breast-feeding, smoking and drinking increase with acculturation (Vega & Amaro, 1994).

The relationship between immigration and health is complex. Some have looked at health disparities in general by using so called “downstream” phenomena whereby social experiences create physical and mental health differences (Shnittker and McLeod, 2005). Downstream approaches emphasis the role stress, coping and health behaviors and their effect on health. One possible downstream explanation for the immigrant paradox is lack of social support. Social support has been shown to be an important determinant of health (Berkman, Glass, Brissette & Seeman, 2000). When one migrates, interactions with family, friends or peers are interrupted. Social support is particularly important during stressful life events by boosting coping skills and thus moderating the impact of stressors (Simich, Beiser, Stewart, & Mwakarimba, 2005). This, in turn, can reinforce self-confidence which has been shown to be important tool for immigrants to effectively manage the many challenges he/she faces in the acculturation process (Simich et. al. 2005).

People are at greater risk of psychological distress when they are exposed to stressful life events. Migration is one such stressor and is considered a stressful life event for variety of reasons. Stress and coping are relational. The way it works depends on the “fit” of the individuals coping style and his/her environment. Similarly, psychological adaption to acculturation is considered a matter of learning a new repertoire of behavior. This process consists of a “cultural shedding” of behaviors that no longer fit with the new culture and sometimes results in a moderate amount of “culture conflict” where incompatible behaviors create conflict
for the individual. When serious conflicts occur acculturative stress is the result (Barry 1970, 1992, 1984 as cited in Berry 2006).

4. Wellbeing, life satisfaction and health

There has been serious debate on one definition of wellbeing because it is both subjective and objective and encompasses emotional and cognitive experience such as happiness and life satisfaction (Kahneman, 2010). Recently, researchers have begun to differentiate between two types of wellbeing: emotional wellbeing and life evaluation. Emotional wellbeing encompasses everyday emotional experiences. In life evaluation people are asked to think about their lives as a whole and in general rate it on a likert type scale (Kahneman, 2010).

Life satisfaction is an example of cognitive aspect of wellbeing. It is a global judgment of one’s life. The effects of such variables as health on life satisfaction have had a lot of empirical research (Siahpush et al. 2008, Kahneman 2010, Spreitzer et al. 1979, Daig, Herschbach, Lehmann, Knoll & Decker, 2009, Pilcher 1998, Salinas-Jimenez, Artes & Salinas-Jimenez, 2010). For example, Strine, Chapman, Balluz Moriarty and Mokdad (2007) found that as the level of life satisfaction decreased, the prevalence of fair/poor general health, disability, and infrequent social support increased.

Siahpush et al. (2008) studied life satisfaction and happiness and its effects on health. The study showed that people were happier and more satisfied with their lives if they were in better health. Spreitzer et al., (1977) also found that perceived health and income were predictors of life satisfaction.
Daig, at el. (2009) studied age and gender differences as well as possible interaction effects in life satisfaction. In a 2006 representative survey of the German population, Daig, et al. (2009) found that women were more satisfied with their family life. Furthermore, an age and gender interaction emerged in satisfaction with health, income, and family life. Men aged 60 years and older reported higher satisfaction with their income than women. This older group of men 60 and over reported a higher satisfaction with their health compared to women the same age. Finally, women reported higher satisfaction with income age 30 years and under.

5. Barriers to Treatment

New immigrants are more likely to experience barriers to healthcare. Practical barriers can include: transportation, cost, lack of information on how or where to gain access to healthcare and limited ability to speak new language. Cultural barriers can include, shame, stigma (particularly in mental health), fear or the belief that the treatment is ineffective. Also, intercultural competence of healthcare workers or lack thereof, contributes to the barriers to healthcare immigrants’ experience.

Intercultural competence is seen as “the knowledge, motivation, and skills to interact effectively and appropriately with members of different cultures” (Gibson & Zhong 2005 as cited in Wiseman, 2002 p.208).

Norredam, Mygind and Krasnik (2005) identified a number of barriers a refugee might face in the European Union. 1) Lack of awareness of available health care services and language barriers were found to be significant problems. 2) Cultural barriers existed in the role of healthcare providers versus patients as well as the overall viewing of illness. 3) Structural barriers were found in that, services
aimed at dealing with the specific needs of the asylum seeker were considered inadequate; and in two countries asylum seekers needed to obtain an identity cared before having access to healthcare.

Multiple studies have shown that it is hard to get social and health care services in one’s own language in Finland (Hiltunen, 2003, Wahlbeck et. al., 2008, Adjadjioue & Ali, 2009). While the Finnish constitution and language laws assure the patient’s rights to have services in his/her own language, it is usually the case that social and health care services are provided in the majority language (i.e. Finnish or Swedish) and on the healthcare worker’s terms.

Where one lives can play a role in care. Immigrants whom live in urban areas may have more access to bilingual staff than those who live in less densely populated areas. Language proficiency also seems to play a role in access to care. For example, Echeverria and Carrasquilla’s (2006) study found that Latinas in the US were 2.2 times more likely to report having a pap smear than Latinas who were not proficient in English. This suggests that language ability impedes with access to care. Furthermore, Latinas that did not speak English at home ( an acculturation measure) were less likely to have all recommended healthcare than non-Latino whites( Cheng, Chen & Cunningham, 2007) The importance of a health care provider that speaks the same language as his/her patient has been shown to be an important mitigating factor in health care. Wilson, Chen, Grumback, Wang & Fernandez (2005) found that those individuals that were not English proficient and did not have care provided in their native language were two to three times more likely of having trouble of understanding medical situation, as well as have trouble understanding medication instructions.
6. Health in Finland

Finland’s constitution guarantees equity in health care to all of its residence. Finnish health policy strives to diminish differences in health between SES and other disadvantaged groups (Wahlbeck et al., 2008). Municipalities in Finland are responsible for arranging healthcare and social services to its residents. Furthermore, all permanent residents in Finland are covered under the National health Insurance (NHI) program. The NHI is part of the Finish social security system (KELA) and covers a portion of a private doctor’s or dentists’ fee and treatments prescribed. The NHI also covers a portion of medication costs and illness related transportation (i.e. ambulance). Working people all have access to occupational healthcare services. Finally there is a large private sector in which people can obtain both general and specialized care. It has been noted that working people can choose between these systems yet those that are poor and unemployed usually have only the municipalities to obtain care. Furthermore, in the past 10 years private healthcare has grown faster than municipalities and has undermined the principle of equality in Finland’s healthcare scheme.

Several initiatives have been introduced by the Government to tackle equity issues. One such initiative is the Finnish National Action Plan against poverty and Social exclusion 2003-2005. This action plan is based on a model of universal social policy. One of its objectives is to give special attention to migrants under threat of social exclusion. When this plan was evaluated in 2005 it was considered to have achieved many of its goals. However poverty among families with children has increased in recent years thus increasing the divide between the poorest and the richest. Inequity in health between these SES groups continues to today.
As immigration in Finland is relatively new, research into access to healthcare and social services are limited. A few studies in the area, however, have shown that immigrants’ access to these services are limited due in part to lack of understanding of immigrants’ needs and a lack of intercultural competence (Adjadjihoue and Ali 2009, Castaneda, Rask, Koponen, Mölsä, Koskinen, 2012) These limitations lead to discrimination in services even if it is indirectly so (Clarke 2004). Further, Gissler (2006), found that immigrants in Finland use health and social services less than native-born Finns.

7. Method

7.1. Participants

Data from the Migrant Health and Wellbeing (MAAMU; Castaneda, Rask, Koponen, Mölsä & Koskinen, 2012) study were used. One thousand Russian speaking (e.g. born in Russia or the Soviet Union), 1000 Somali origin (e.g. born in Somalia) and 1000 Kurdish origin immigrants (e.g. were born in either Iraq or Iran and mother tongue was Kurdish) were invited to take part in the study. Stratified sampling of location and category of The Finnish Population Register Center was used to select the sample. Participants were aged 18-64 living in Helsinki, Espoo, Vantaa, Turku, Tampere and Vaasa, Finland. All participants had been living in Finland for at least a year. Of those asked to join the study, 70% of Russian origin, 51% Somali origin and 60% Kurdish origin completed some part of the study. Overall, the Russian speaking group was more highly educated than the other two groups. The Somali group had the lowest education. Males represented 47.4% (N=1421) and women represented 52.6 (N= 1579) of the total sample. Participants living in a metropolitan area consisted of 65.3 % (N= 1960) of the total sample.
7.2. Procedure

Health examinations and interviews took place during 2010-2012 and were carried out by personnel that were Somali, Kurdish or Russian in origin and spoke both the native language of their target group. Focus group interviews were carried out by licensed health care professionals to discuss the things that should be taken into account according to each immigrant group such as gender roles, perceived sensitive issues and Muslim Ramadan. All employees received 2 weeks of training on background, purpose of the study, recruitment of subjects, interviews and health checks and interview techniques. (Castaneda et al., 2012).

There were two phases of the study; interview and medical examination. In the case that the long interview was refused, a brief interview was enlisted. An invitation to the study, in the individual’s own native language, was sent by mail. The letter discussed the study and its importance as well as a toll free phone number for the individual to call. When a potential participant called this number, they spoke with the team coordinator whom tried to coordinate an interview or a physical exam. If the potential participant didn’t respond by phone, then a search was made using the population register database for the phone number of another resident of the same address. The coordinator then would call this number to get in touch with individual and try to book an appointment. Finally, if no phone number could be used to reach the individual, a research nurse, coordinator or interviewer would make a home visit in effort to reach out to the subject. These home visits were tried up to 5 times in effort to reach the individual. If still unable to be reached, the individual was counted as “unreachable”. If the person was reach and didn’t want to participate in an interview or health examination then the subject was offered the
opportunity to take part in the brief interview. In effort to add motivation for these individuals, a lottery was held for each city using donations and prizes including gift certificates for sports centers, swimming pools, film and theater tickets and beauty products. (Castaneda et al. 2012)

7.3 Interview

Interviews took place in a research facility or, less frequently, in the participant’s home. Participants were granted travel grants and a small snack after the interview and or physical exam. Each city decided for themselves logistics such as premises, location of laboratory samples, reaching out and informing subjects, travel for field staff etc.

The interview covered extensive health and wellbeing factors. It was structured and contained 8 sections:

1. Background Information section included questions on immigration related issues, marital status, family living environment, home language, language skills, education, income and home economics.

2. Health and Illness section surveyed perceived health status, chronic disease, treatment for diseases, infectious diseases and reproductive health.

3. Trauma section included questions about traumatic events prior to coming to Finland. Questions about experience of violence, trauma symptoms and experiences of discrimination.

4. Health Services section examined use of health services, availability and accessibility, outpatient visits, health promotion, physiotherapy, rehabilitation and medication use.

5. Oral health and related health care services
6. Lifestyle section examined eating habits, smoking alcohol and drugs, sleep and physical activity

7. Social Welfare section examined social performance status, quality of life, friendships getting help and hobbies

8. Work section focused on all previous work inside and outside Finland, wage, access to employment, wellbeing violence at work, bullying, gender attitudes, view of Finnish working life

The interview lasted 1.5 hours. Before each interview, participants were explained the purpose of the study and the voluntary nature of participation as well as the possibility to suspend the interview at any time. After this, the participants signed a consent form. Participants could choose to conduct the interview in either their native language (Russian, Somali or Kurdish Sorani dialect) or Finnish.

If the long interview was refused the short interview was offered. The short interview consisted of the most important issues from the long interviews (state of health, disease, treatment need, discrimination, experiences of violence, health services, lifestyle, wellbeing, psychological symptoms, functional limitations and background information and work) and lasted 15-20 minutes. The short interview was completed in person or over the phone or by mail.

7.4. Measures

Only certain variables were used to answer the current questions. Self-rated health status and self-assessment of quality of life were rated with a 5 point likart type scale (1= very good to 5= very poor). The outcome factor self-reported health (SRH) is a powerful predicting tool, For example, Sundquist & Johnson, (1997)
found that those whom reported poor health also had increased premature death.

Other studies have shown that SRH is associated with chronic disease and mortality (Lindström et al., 2006, Miilunpalo, et al. 1997). A Finnish study demonstrated that SRH was stable over time and a valid indicator of health. The Quality of life Inventory is the only clinically oriented measure of life satisfaction and an indicator to health (Frisch, Cornell, Villanueva, Rerzlaff 1992; Sundquist, Behmen-Vincevic & Johansson 1998). Furthermore, life satisfaction has been shown to be stable over time (Koivumaa-Honkanen et al. 2001).

Ability to understand spoken Finnish or Swedish was rated with a 4 point likart type scale (1= Not at all to 5= very well). Before data analysis this variable was dichotomized into 2 variables for simplicity in analysis (1= those whom answered very good and good and 2= bad or not at all).

Barriers to medical treatment were assessed and recorded with a simple “no” or “yes” answer to the following questions: 1. Queue management, 2. Poor transportation 3. High service fees, 4. Doubt treatment will help and 5. Language difficulties. Barriers to treatment variables were combined and transformed into a new variable of total barriers to treatment scores. After factor analysis determined that the highest loading variables in total obstacles to treatment were those that were of a logistical nature (queue, high service fees and poor transportation), the variable total obstacles to treatment was divided into two variables: 1: logistical obstacles and 2: those obstacles that were more subjective in nature; language and doesn’t know available treatment. Doubt in treatment effectiveness was dropped because it had less than .3 in commonalities with the other variables.
Demographic variables year of migration, immigrant group, gender, were also used in the data analysis. Year of migration was transformed into 3 groups Group1 \( \geq 1997 \), Group 2, 1998-2003 and Group3, 2004+.

8. Data and Analysis

8.1 Descriptive Statistics

Preliminary analysis on frequencies and demographics showed that

The data included \( n=1421 \) males and \( n=1579 \) females. Each of the 3 immigrant groups consisted of 1000 participants. Participants were between 18 and 64 with the mean age of \( \mu=35.8 \). (See Table1).

Table1.

Total respondents in demographic categories, Ethnic group, Age, Education, YOM and Language ability

<table>
<thead>
<tr>
<th>Characterizes</th>
<th>Total</th>
<th>(%) of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Percent</td>
</tr>
<tr>
<td>Male</td>
<td>1421</td>
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</tr>
<tr>
<td>Female</td>
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<td>Ethnic Group</td>
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<td>33.3</td>
</tr>
<tr>
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<tr>
<td>Age</td>
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<tr>
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<td>41.8</td>
</tr>
<tr>
<td>Year of Migration</td>
<td></td>
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</tbody>
</table>
Before commencing data analysis, preliminary analyses were conducted to ensure that there was no violation to the assumptions of normality, linearity, multicollinearity and homoscedasticity.

8.2. Question 1: Does Quality of life affect self-reported health in Immigrants living in Finland? Are the results different for men and women or between the three immigrant groups?

8.2.1. Correlational Analysis.

A bivariate correlational analysis to explore how and to what extent the variables self-reported health (SRH) and quality of life (QOL) are linearly related in the immigrant population of Finland was conducted. Results indicated a strong moderate correlation; $r = .48$, $n = 1368$, $p<0.01$ between these two measures. Further correlational analysis was conducted to look at correlational differences in gender. Results showed that both males and females showed a strong moderate correlation between SRH and QOL measures; males, $r = .47$, $n = 616$, $p<0.01$ and females, $r = .50$, $n = 752$, $p< 0.01$ (Table 2). This correlation was carried through to the three immigrant groups in the study. Russian speakers group; $r = .38$, $n = 528$, $p<0.01$. Somali group; $r = .34$, $n= 333$, $p<0.01$. The strongest correlation was in the Kurdish group, $r = .49$, $n = 507$, $p<0.01$ (Table 3a, b, c). Finally, a bivariate
correlational analysis between SRH and ability to speak Finnish / Swedish showed a small correlation, $r = .21$, $N=1778$, $p<0.01$.

Figure 1.

*Mean SRH by immigrant group and gender*
Partial correlation was used to explore the relationship between SRH and QOL while controlling for gender, ethnic group and language ability. There was strong moderate partial correlation between QOL and SRH controlling for gender, ethnic group and language ability, \( r = .48, n = 1364, p < .005 \). An inspection of the zero order correlation (\( r = .47 \)) suggested that controlling for gender, ethnic group and language ability had very little effect the strength of the relationship between these two variables.

8.2.2. Regression analysis.

A standard regression analysis was carried out to assess QOL, gender and Finnish/Swedish language ability to predict SRH. The R-square = .264 which suggests that this model explains 26.4% of the variance of SRH. An ANOVA showed that this model reaches a statistical significance \( p < .0005 \). Analysis of the beta standardized coefficients, QOL was shown to make the strongest contribution in explaining SRH. QOL beta = .384 followed by Age beta = .262 and finally gender B = .110. Interestingly, language ability did not make a statistically significant unique contribution to the model, Language ability B = -.043.

8.3. Do obstacles to treatment influence self-reported health scores?

8.3.1. Correlational Analysis.

A bivariate correlational analysis was conducted to explore how and to what extent the variables SRH and total obstacles to treatment scores are linearly related. Results showed a small correlation between SRH and total obstacles to treatment, \( r = .244, n = 267, p < 0.01 \) (Table 8). The 6 items in the barriers to treatment
questionnaire were subjected to principal components analysis. Prior to this the suitability of data for factor analysis was assessed. The Kaiser-Meyer-Oklin value was .68 exceeding the recommended value of .6 (Kaiser, 1974 as cited in Pallant, 2007) and Bartlett’s test of Sphericity reached statistical significance supporting the factorability of the correlation matrix. Principal components analysis revealed the presence of 1 component with an eigenvalues exceeding 1, explaining 36.77% of the variance and a second component with a eigenvalue of .997 explained 19.94% of the variance. Using catell’s scree test, it was decided to retain 2 components for further investigation. This was further supported by the results of the Parallel Analysis, which showed the 2 components exceeding the corresponding criterion values randomly generated data matrix of the same size.

The 2 component solution explained a total of 56.72% of the variance. Obstacles to treatment were thus divided into 2 variables: logistical obstacles to treatment containing high service fees, queue, and poor transportation and personal obstacles to treatment- containing language difficulties and doesn’t know treatment available. A Pearson correlational analysis showed that logistical reasons for obstacles to treatment showed a stronger correlation to SRH (r = .27, n = 266, p<0.01) than personal reasons (r = .13, n = 266, p<0.05). (See Figure 2.)
8.3.2. Regression: SRH Obstacles to treatment.

A standard regression analysis was carried out to assess obstacles to treatment ability to predict SRH. The R-square = .083 which suggests that this model explains only 8.3% of the variance of SRH. An ANOVA showed that this model reaches a statistical significance p< .0005. Analysis of the beta standardized
coefficients showed that logistical obstacles to treatment were the only variable shown to make significant contribution in explaining SRH. Logistical obstacles to treatment beta = .26 followed by personal obstacles to treatment beta = .09 (Table 10). An analysis of the kurtosis showed a negative kurtosis for both logistical obstacles to treatment (-1.76) and personal obstacles to treatment (-1.67). This suggests a distribution that is rather flat. This can be a concern as Kurtosis can result in an underestimate of the variance. This risk is, however, reduced with a large sample (over 200 cases: Tabachnick & Fidell 2007 p. 80). Furthermore an analysis of the maximum value for Cook’s distance is .053, suggesting no major problems as it is smaller than 1 (Tabachnick & Fidell 2007 p.75).

8.4. Are self-reported health scores influenced by either language ability or year of migration?

8.4.1. ANOVA 1: Impact of year of migration on SRH.

A one-way between group analysis of variance (ANOVA) was conducted to explore the impact of year of migration on self-reported health. Participants were divided into 3 groups, (Group1: <=1997, Group 2: 1998-2003, Group 3: 2004+). There was a statistically significant difference at the p<0.05 level in SRH scores for the three groups: F(2,1771) = 3.3, p = .036. Even though statistical significance was reached, the actual difference in mean scores between the groups was quite small. The effect size, calculated using eta squared, was 0.0037. Post-hoc comparison using the turkey HSD test indicated that the mean score for Group 2 (M = 1.94, SD= 1.17) was statistically different from Group 3 (M= 1.77, SD= 1.06). Group 1 (M=1.9, SD=1.13) did not differ significantly from either Group 2 or 3.
8.4.2. ANOVA 2: Impact of language ability and SRH.

An Additional one-way between group analysis of variance was conducted to explore the impact of language ability on self-reported health. Participants were asked to rate their language ability. Group 1 rated their ability as bad or no ability, Group 2 rated their ability as moderate and Group 3 rated their ability as good or very good. There was a statistically significant difference at the p<0.05 level in SRH scores the 3 groups: F (2, 1370) = 43.5, p = .01. The effect size however, was small, (eta squared =.0068). Post-hoc comparison using the turkey HSD test indicated that the mean score for all three groups were statistically different from one another. Group 1 (M = 2.33, SD= 1.3) was statistically different from the Group 2 (M=2.11, SD=1.17) and Group 3 (M= 1.63, SD=.993).

8.4.3. ANOVA 3: Impact of year of migration and language ability on SRH.

A two-way between-group ANOVA was conducted to explore the impact of year of migration and a language ability on SRH. Participants were divided into 3 groups according to their language ability (Group 1 rated their ability as bad or no ability, Group 2 rated their ability as moderate and Group 3 rated their ability as good or very good) There was a statistically significant interaction between year of migration and language ability (.018). (See Figure 3).

Figure 3.
Mean self-reported health, language ability and year of migration
Additionally, a one way between-groups ANOVA was conducted to explore the relationship between self-reported health and year of migration while controlling for quality of life and language skills. After adjusting for quality of life and language ability, there was a significant difference in SRH and year of migration, $F(2,1360) = 19.68$, $p = .005$, partial eta squared = .028. The covariate language ability was significantly related to SRH, $F(1, 1360) = 83.79$, $p = 0.58$. The second covariate
quality of life also was significantly related to SRH, $F(1, 1360) = 371.62, p=.215$.

(See Figure 4)

Figure 4.

SRH and year of migration

8.4.5. ANCOVA: relationship between logistical obstacles and language with SRH.

A 2 by 2 between-groups analysis of covariance was conducted to explore the relationship between logistical obstacles to healthcare and language ability with self-
reported health while controlling for quality of life and year of migration. After adjusting for quality of life and year of migration, there was no significant interaction effect between language ability and logistical obstacles to treatment, $F(3,256) = .904, p= .44$, with a small effect size (partial eta squared = .01). The main effects for language ability were statistically significant $F (3,256) = 3.65, p=.01$ and a small effect size (partial eta squared =.04). Main effects for logistical obstacles to treatment were not statistically significant, $F ( 1,256)= 2.28, p=.13$. The covariate year of migration was significantly related to SRH, $F ( 1, 256) = 7.01, p = .009$, (partial eta squared = .027). The second covariate quality of life also was significantly related to SRH, $F(1, 256) = 45.99, p=.005$, with a large effect size (partial eta squared =.152).

9. Discussion

The aim of the current study was to look at how or if quality of life, gender, immigrant group, year of migration and language ability moderate or contribute to self-rated health in immigrants living in Finland. Also, the extent to which the treatment obstacles faced by these groups contributed to SRH was explored.

9.1. Relationship between self-reported health, quality of life, gender and immigrant group

When quality of life, gender, immigrant group and language were looked at individually in their relation to self-reported health each showed a positive linear
relationship to self-reported health but to varying degrees. Quality of life ($r = .47$) and being female ($r = .48$) showed the strongest relationship with self-reported health. Women, in the current study, reported a higher percentage than men of “bad” health (6.6% vs. 4.3% respectively). While 39.9% of women reported their quality of life to be “good” (the percentage that rated their quality of life as “bad” was slightly higher than men’s rating (1.6% vs. 1.4% respectively; see Appendix 1).

This result concurs with past research that indicates that immigrant women experience poorer self-reported health than men even when SES, age and other demographics are controlled for (Iglesias & Roberson et al., 2003). Social economic factors could be playing a role in the difference in gender. Immigrant women are at particular risk of being poor, unemployed, single mothers and have a lower education. All these have shown to be risk factors for poor self-reported health (Sihvonen et. al. 1998; Ringbäck, et al. 2000; Denton, et al., 2004; Iglesias, et al., 2003). Immigration disrupts gender roles and family structure; possibly changing women’s roles in family, marriage and society. Despite knowing these risk factors, it is hard to know exact nature of these associations. It has been speculated that stress plays a role in that immigrant women have poor social support networks that lead to reduced personal control stress (Shaffer & Lia-Hoagberg 1997). Furthermore, immigrant women may have lower academic attainment than that of their native-born peers. Education can increase a woman’s employment opportunities, as well as her marital and reproductive choices.

The three immigrant groups studied showed differences in their relationships with self-reported health and quality of life. While the Somali and Russian speaking groups showed a low moderate correlation with self-reported health, the Kurdish group showed a high moderate correlation with self-reported health.
It should be noted, the Kurdish group’s language ability was also the poorest among the three groups with 25.2% reporting “bad or no Finnish/Swedish language ability”. As discussed in the literature review, perceived language ability has been linked to life satisfaction (an indicator for quality of life and contributor to self-reported health), greater self-esteem and reduced stress (Ying, 1996; Noels, et al., 1996). The Kurdish group also reported the most logistical (9.8%) and personal (10.5%) obstacles to treatment. This result concurs with research that has found that those immigrants that are not proficient in their host country’s language report more barriers to healthcare (Pippins et al., 2007).

It was noted in the report of the original MAAMU study results that two thirds of the Somali group participated in community groups or associations whereas only one third of the Kurdish group participated in community groups or associations. Additionally, it was reported in their report that 78% of the Kurdish group reported experiencing a major traumatic event pre-migration. Moreover, it was reported that the Kurdish group reported the most permanent injuries due to violence. The Kurdish group also reported the most severe depression and anxiety symptoms. (Castaneda, et al. 2012).

These results suggest that the Kurdish group differs in some way with the Somali and Russian speaking groups. Berry’s et al. (2006) stress hypothesis tells us that an inability to cope with stressors from acculturation contributes to disparities in health. It is possible that the Kurdish group’s migration and subsequent stressors have affected their acculturation process negatively. Perhaps this group lacks the personal and or environmental resources to effectively cope with the stressors associated with acculturation and thus contributing negatively to their self-reported health. Another factor in the Kurdish group’s poor self-reported health could be
their refugee status. Many of Finland’s Kurdish immigrant’s came recently and are the largest group of “quota refugees”. According to the Finnish immigration service:

Refugees who have left their home country or country of permanent residence for another country, where they may not settle down permanently, however, can be chosen for resettling in a third country under the so-called refugee quota. Under the refugee quota, Finland accepts persons whom the United Nations High Commissioner for Refugees has designated as refugees or other foreigners who are in need of international protection for resettlement. (Finnish Immigration Service, 2013).

Quota refugees do not enjoy the same permanence as other immigrants. While repatriation programs are considered voluntary, there have been cases of forced or coerced repatriation. As discussed in the introduction of this paper, acculturation is a cultural and psychological process. Many factors play a role and assimilation is contingent on such factors as social class differences, time of arrival and the context of reception (Portes & Zhou 1993). The fact that the Kurdish group are quota refugees and that their entrance to Finland is the most recent of the 3 groups could point to a difference in their acculturation style or their status could have led to a stagnation of their acculturation process. Furthermore, the evidence that this group reports the most anxiety and depressive symptoms, experienced the most trauma pre-migration, speaks the least amount of Finnish or Swedish and participates the least in the community all contribute to marginalization as a group.
The Somali group was the largest group with no previous education, yet they rated their language stills the highest out of the three groups (10.3% rated as moderate to good). The Somali group also had the lowest percentage of rating their health and quality of life as “Bad” (1.5% and 0.7% respectively). This is interesting considering that 57% Somali group experienced severe trauma before migration symptoms (Castaneda, et al., 2012). However, these results are consistent with a previous study conducted in the Netherlands in which Somalis, as a group, reported the least amount of chronic conditions, PTSD, depression and anxiety (Gerritsen, et al., 2006). Furthermore, as a group their logistical and personal obstacles to treatment were identical 0.3 (“no” obstacles) and 0.4 (“yes” to obstacles) respectively. So, those that experienced logistical obstacles also reported personal obstacles. It should be noted that the Somali group participated less (only 35.1%) in the long interview (which included obstacles to treatment questions). Thus, 99.3% of those interviewed did not answer this set of questions. This could suggest that the Somali’s that choose to participate in the long interview (thus answering the obstacles to treatment questions) are different in some way to the large group of Somalis whom did not participate in the long interview. However given that these findings are consistent with past research suggest that these data are not confounded.

For example, Liebkind and Jasinskaja-Lahti (2000) found that while Somali adolescent immigrants were less acculturated (as measured by the acceptance of parental authority and a belief in the limitation of children’s rights), they expressed greater life satisfaction than other immigrant groups. The authors also found that the Somali group reported significantly more parental support than other immigrant groups studied and concluded that this parental (specifically maternal) support was
positively associated with a lower degree of acculturative stress in the female immigrants in their study.

The Russian speaking group was the most educated with 51.8% having completed high school. Yet they rated their ability to speak Finnish or Swedish well was the lowest of the 3 groups (7.7%). The original MAAMU study paper reported that the Russian speaking group as the most physically healthy and this group was also found to be most active in Finnish events and politics (Castaneda et al., 2012). Interestingly, almost half of the Russian speaking participants were between the ages of 43 and 68. Furthermore, 27.7% of the Russian speaking group immigrated to Finland on or before 1997 (See Table 1). This data could have contributed to the results.

Controlling for gender, group and language ability was shown to have very little effect on the strength of the relationship between self-reported health and quality of life. So, a standard regression analysis was used to assess the ability of quality of life, age, gender and Finnish/Swedish language abilities to predict self-reported health. This model was statistically significant and explained 26.9% of the variance in self-reported health. While quality of life made the biggest contribution to this model followed by age and then gender, language ability was not a statistically significant contributor to this model. It was expected that language ability would contribute to self-reported health in its interaction with quality of life. However, this assumption was not supported by the results. This was surprising given the evidence that language ability, in previous studies, played a role in both the ability to gain access to healthcare and the quality of the interaction and communication with a healthcare provider.
9.2. Relationship between SRH and Obstacles to treatment

O’Mahony & Donnelly found that new immigrants to Canada were 10 times more likely to report barriers associated with “individual circumstances” (2007, p. 922) such as transportation, cost and lack of information on available healthcare.

While the current study did not find such a strong result, a correlational analysis between self-reported health and total obstacles to treatment showed a small correlation. However, when total obstacles to treatment was divided into two variables - one for logistical treatment barriers and one for personal barriers - the results showed that self-reported health was more strongly related to logistical barriers to treatment. Waiting times, cost and transportation were the most strongly correlated barriers to treatment in terms of self-reported health. This result concurs with the original MAAMU study report (Castaneda et al., 2012). However, while a standard regression to assess the relationship between logistical obstacles to treatment and self-reported health was statistically significant, it only accounted for 6.8% in the variance of self-reported health. Furthermore, it should be noted that the population for this portion of the analysis was much smaller than that of the other analyses (n=266). It is not known why the obstacles to treatment questions were answered by so few participants compared to the other questions in the study.

9.3. Impact of year of migration and language ability on self-reported health

The final question was whether year of migration or perceived language ability impacted self-reported health. Year of migration was shown to be statistically significant to self-reported health. A one-way between-group ANOVA showed that those arriving in Finland between 1998-2003 had a poorer self-reported health than those arriving between 2004-2011. As with barriers to treatment, effect size was
shown to be small. This result can be partially explained by the healthy immigrant effect in that the newest arriving immigrants reported themselves to be healthier than both the group that arrived before 1997 and the group that arrived between 1998 - 2003. One could argue that this effect could be due to age, however when controlling for age, there was still a statistically significant result. The group that arrived before 1997 was not found to be statistically significant to either group. This could suggest that this group has lived in Finland long enough to become acculturated.

Interestingly, the impact of language ability was shown to be statistically significant to self-reported health. A one-way between-group ANOVA showed that those who rated their language ability as “bad” or “no ability” reported poorer health than both the group who reported “moderate” language ability and the group that reported their language ability as “good”. This result suggests that language ability has more of a direct effect on self-reported health than in combination with quality of life. It should be noted that year of migration and perceived language ability were shown to have a statistically significant but small interaction (.018). This result makes sense because one can assume increased language ability coincides with length of residence, and with increased language ability and longer residence the more acculturated one becomes as is evidenced in the group that arrived >= 1997.

An analysis of the relationship between self-reported health and year of migration while controlling for quality of life and perceived language ability showed that there were significant differences in self-reported health depending on year of migration. This suggests that year of migration, independent from quality of life and language ability, is related to self-reported health.
9.4. Relationship between logistical obstacles to health and perceived language ability with self-reported health using quality of life

A final ANCOVA explore the relationship between logistical obstacles to health and perceived language ability with self-reported health using quality of life and year of migration as covariates was conducted. No significant interaction effect between perceived language ability and logistical obstacles were found. While the main effects for perceived language ability were found, logistical obstacles were not statistically significant. This suggests that while logistical obstacles to treatment can impact self-reported health when in combination with quality of life or year of migration but is not strongly independently related. Quality of life and year of migration remained significantly related to elf-reported health.

To understand the results of the current study in context, it might be helpful to look at the general Finnish population. The Health 2000 survey conducted by the Finnish National Institute of Public health examined a nationally representative sample of Finnish adults aged 30 and up. In Health 2000 the percentage of respondents (age = 30-64) reporting poor health was 18 % (Aromaa & Koskinen, 2004). In the current study, almost a quarter of the respondents aged 28-64 rated their health as poor (23.8 %). This is not a huge difference; however it is large enough to take notice. Furthermore, in the immigrant group in the current study aged 29-42, 8.9% reported their health as poor or very poor as compared to the Health 2000 sample of 30-44 year olds reporting only 3% (Aromaa & Koskinen, 2004). This difference is much larger and suggests that there is a difference in the immigrant population as a whole compared to the general Finnish population.

10. Limitations and Future research
There are some possible limitations to the findings in the current study. First, it is hard to make sweeping conclusions on the differences between immigrant groups as very few studies distinguish between immigrant subgroups. Many factors could possibly play a role in disparities among subgroups. One contributing factor could be that those that are culturally more similar to new country have an easier acculturation process. This could be the case for the Russian speakers, for example.

Second, the Health 2000 survey found that those respondents living in Southern Finland reported their health to be better than those in the rest of the country (Aromaa & Koskinen, 2004). Furthermore, larger cities are generally considered to be more diverse with more bilingual and culturally competent social services and healthcare staff than less populated and rural areas. These differences could have reflected upon the current study in that the sample used were all from metropolitan areas and could have reported their health more favorably than those in the rest of the country.

Third, there were significant portions of data missing from the obstacles to treatment questions. Part of this could be explained by which interview was given (long or short). However the participants that answered these questions could have been different in some way than those that did not provide this information.

Finally, the large amount of data on health disparities in general and specifically among immigrants could be inflated due to the phenomena of publication bias (studies with statistically significant results tend to be published more).

Future research should explore how or if culturally competent, outreach, social service and healthcare mitigate health disparities among immigrants in Finland.
Also, health disparities between different immigrant subgroups in Finland need to be evaluated in more detail. Immigrant women in particular, also require further study. The responsibilities of immigrant women may make it impossible for them to access healthcare or support and can result in increased stress. Policy can also disadvantage immigrant women. If a woman is home raising her children, she is not necessarily available to participate in language or job training and leaves her in a vulnerable and potentially marginalized position.

Finally, language ability, employment and stress can all impact health. Therefore it is important to look at how policy in terms of integration programs, language education and work training can be implemented in a way that is both culturally congruent and accessible.

11. Conclusion

When considering these outcomes through the social psychological theoretical framework, it is apparent that both psychological and the sociocultural aspects of acculturation are working together to moderate self-reported health. One’s quality of life contributes to or takes away from psychological adaptation and satisfaction with achievement in the new culture. Language acquisition contributes to sociocultural adaption. Treatment barriers can lead to feelings of isolation and frustration. Marginalized or at risk groups may feel more stress thus increasing their vulnerability and poorer perceived health.

Barriers for the general population to healthcare in Finland include geographical barriers, regional differences in service provision, transportation, waiting times and cost (Wahlbeck et al., 2008). If the general population experiences
such barriers, it can be assumed that immigrants experience these barriers more deeply. In addition they must contend with language barriers and cultural incompetency.

It is important to obtain valid information on the factors that impact the immigrant population in Finland. This information can help shape health policies that respond to the special health, needs, and access to healthcare.

Addressing the needs of immigrants can be challenging given that the Ministry of Social Service and Health’s mission is to ensure equity to all. Thus, healthcare policy planning does not address minorities or immigrants as separate (Ministry of Social services and Health 2012). However in order to ensure equity in healthcare separate policy should be created.

The findings of this study as well, as the larger MAMMU study, can help to inform policy makers in healthcare to become more aware of the mediators to health in the immigrant groups discussed.

1. Socio-cultural barriers, such as quality of life and language ability.
2. Structural barriers, such as the universality of health and social services impacts policy (or lack thereof) directly aimed at immigrant groups.
3. Systemic barriers, such as cultural congruency in healthcare and promotion
4. Status barriers such as socioeconomic barriers, education and social network and support.

All of these barriers impact the health and wellbeing of immigrants. It is important for policy makers to understand what contributes to poorer health in immigrant groups so policy and infrastructure can be created to address these disparities
As Finland becomes increasingly multicultural, healthcare and public health sectors need to rethink their universal healthcare schemes from a tradition of equity within a monoculture towards a transcultural emphasis that pays special attention to culturally congruent care as well as the special needs of marginalized groups.
12. References


http://dx.doi.org/10.1016/j.socscimed.2003.09.008


Official Statistics of Finland (OSF): Migration [e-publication].


13. Appendix

Percent of respondents in each category

<table>
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<tr>
<th>Ethnic group</th>
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<th>Kurdish</th>
<th>Somali</th>
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<th>Female</th>
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</thead>
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