University of Alberta

Healthy Immigrant Effect or Global Obesity Epidemic?

By

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Abstract

Migration and acculturation have been associated with obesity. This study assessed and compared the process of changing health behaviours of recent (<10 years) and non-recent (> 10 years) Hispanic immigrant women. Results support the healthy immigrant effect and acculturation premises in part. Most (86%) participants reported gaining weight in Canada. There was no significant difference between BMI levels of recent (26.11 $kg/m^2 \pm 4.14$) and non-recent (29.63 $kg/m^2 \pm 3.68$) participants. Recent immigrants identified a smaller body size ideal. Both groups perceived a larger Canadian body size ideal. Only 27.3% of recent and 41.7% of non-recent participants were sufficiently active. Energy expenditure, including non-leisure time activities, was 765.9 MET-min-d^{-1} ($\pm$ 843.4) (recent) and 941.6 MET-min-d^{-1} ($\pm$ 541.6) (non-recent). Household and occupational related activities were reported the most. Both groups reported low levels of dietary acculturation. Barriers to healthy weights included: faster lifestyles, dietary pattern changes, physical inactivity, migration stress, and globalization.

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CHAPTER 1 Introduction

Immigration is a large part of Canada's heritage. Since 1867, over 14 million people have immigrated to Canada (Citizenship and Immigration Canada, 1999a). Admitting between 225,000 and 255,000 newcomers every year, it is expected that by 2017, 22% of Canada's population will be foreign-born (Statistics Canada, 2005). Canada's ethnocultural composition has also changed considerably as there has been an increase in the proportion of immigrants who are visible minorities. Visible minorities are "persons other than aboriginal peoples, who are non-Caucasian in race or non-white in colour" (Employment Equity Act, 2006). Over the years, the goals of Canada's immigration policy have centred on economic growth and changing demographics (Green & Green, 2004). Canada needs skilled immigrants to enhance the labour force and to offset an ageing population. Hence, health, like education and job skills, is part of the human capital of immigrants (Beiser, 2003). It is, therefore, important to understand the factors that influence immigrants' health. In particular, there is a need to better understand how immigrants' settlement and integration experiences influence their health.

It has been established that the so called "healthy immigrant effect" exists in Canada (Gee, Kobayashi, & Prus, 2006). The premise behind the "healthy immigrant effect" is that upon arrival, immigrants have better health than Canadian-born persons, but after living in Canada for only 10 years, their health deteriorates (Chen, Ng, & Wilkins, 1996). Two of the main health concerns for public health officials today are overweight and obesity. We know that globally, there are more than one billion overweight adults and at least 300 million of them are obese (World Health Organization, 2005). Overweight and obesity is considered a disease in its own right,

but it is also one of the top ten chronic disease risk factors identified by the World Health Organization. Specifically, overweight and obesity are strong risk factors for developing type 2 diabetes, cardiovascular disease, hypertension and stroke, and certain forms of cancer (Vega, 2001; Calle, Rodriguez, Walker-Thurmond & Thun, 2003, World Health Organization, 2005).

Immigrants tend to have an increased probability of being overweight with more years in Canada (McDonald & Kennedy, 2005). Data from the 2000/01 and 2002/03 Canadian Health Surveys (CCHS) show that overweight and obesity was higher among long-term (11 or more years) immigrants compared to more recent immigrants (10 years or less) (Tremblay, Perez, Ardem, Bryan & Katzmarzyk, 2005). Studies also report that after approximately twenty to thirty years in Canada, unhealthy weight among Canada's immigrants meets or exceeds native-born levels (McDonald & Kennedy, 2005). A more recent study reveals that between 1994/95 and 2002/03 immigrants from non-European countries "were twice as likely as Canadian-born to report deterioration in their health" (Ng, Wilkins, Gendron, & Berthelot, 2005, p.3). Moreover, immigrant females are more likely to report fair or poor health than non-immigrant women and immigrant men (Newbold & Danford, 2003). Hence, the group most affected by the "healthy immigrant effect" seems to be non-European and female immigrants.

Researchers are now investigating and documenting the factors (behavioural, social, and cultural) behind the decline in immigrants' health. However, most Canadian studies are quantitative in nature and use epidemiological data from national population and community health surveys (e.g. Ali 2002; Chen et al., 1996; Dunn &

Dyck 2000; Newbold & Danforth, 2003.) Very few studies explore immigrants' own perspectives and views on why their health declines with more years in Canada. As part of my research, I interviewed immigrant women from Latin America and took a social critical perspective to assess how their every day living and working experiences affect their health. Specifically, I investigated how their migration and settlement experiences in Canada influenced their perceptions of body weight.

1.1 Background

In this section I will present a general profile of immigrants in Canada and Edmonton. This will help the reader understand the context in which immigrants live and work. The second part of this background will briefly outline the premise behind the healthy immigrant effect, with a particular focus on healthy body weights.

1.1.1 Immigration in Canada and Edmonton

One of the goals of Canada's Immigration Act is "to permit Canada to pursue the maximum social, cultural and economic benefits of immigration" (Immigration and Refugee Protection Act, 2001). Predicting a short supply of skilled labour and an ageing population, Canada admits between 225,000 and 255,000 newcomers annually (Citizen and Immigration Canada, 2003). Canadian immigrants are a heterogeneous group. They come from different countries and for different reasons (e.g. economic, family reunification, asylum). Some have been here longer than others and have different socioeconomic status from each other. Thus, changing immigration patterns have created an increasingly multi-ethnic and multicultural community in Canada.

In 2001, Edmonton's (Capital Health Region) immigrant population represented 21.8% of the total population and the total number of visible minorities had risen to 15% of Edmonton's 927,020 residents (Statistics Canada, 2003a). This gives Edmonton "the fifth highest proportion of visible minorities among census metropolitan areas, behind Vancouver, Toronto, Abbotsford and Calgary" (Statistics Canada, 2003a). In the 1990s, 11% of all recent immigrants to Canada came from Caribbean, and Central and South America (Statistics Canada, 2003b). It is expected

that by 2017, Latin Americans will be the fifth largest visible minority group in Canada (Statistics Canada, 2005).

Classifications in the Canadian immigration system include: economic class, family class, refugees, and other (e.g. caregivers, retirees, etc.) The majority (56%) of recent immigrants belong to the economic class and are well educated. For instance, in 2001, 42% of recent immigrants had a university degree. According to Citizenship and Immigration Canada (2003), recent immigrants also arrive during prime working-age years (25-44 years).

In 2006, 262,236 new immigrants entered Canada and out of these, 51.27% were women (Citizenship and Immigration Canada, 2006); in the same year and in the economic immigration class, 68% of principal applicants were male while the majority of spouses and dependents were female (59%). Data from the 2001 Longitudinal Survey of Immigrants to Canada (Statistics Canada, 2005), show that almost half of all female immigrants (47%) arrived in Canada with a university degree and 21% arrived with some post secondary, trade or college education.

Despite their educational training and prime working age, new immigrants report that finding employment is the biggest hurdle they face when settling in Canada (Statistics Canada, 2005). According to the Longitudinal Survey of Immigrants to Canada, a high proportion of immigrants must find lower-skilled occupations (requiring secondary school and/or occupation-specific training) than their pre-migration higher-skilled occupations (requiring university education or college education and/or apprenticeship training). In 2001, 62% of immigrants arriving in Canada had to accept

lower-skilled occupations than they had originally intended. Principal applicants in the skilled worker category and their spouses and dependants face the most difficulties finding employment (75% for principal applicants and 74% for the spouse and dependants). In the same year, immigrant women had higher rates of unemployment than immigrant men (54% for women and 34% for men) (Statistics Canada, 2005). In addition, a higher proportion of working female immigrants work in lower skilled occupations (sales and service occupations - 16% and clerical occupations - 14%) compared to men (11% and 8% respectively). In general, both male and female newcomers must obtain further education in Canada to find employment. For example, immigrants from Central and South America (82%) expressed the interest in furthering their education because they believed that this would be important for their success in Canada (Chiu, 2003).

In 2000, 29.3% of recent immigrants to Edmonton (arriving 1991-2001) had low incomes (Citizen and Immigration Canada, 2000). This is significantly higher than the 16.6% of Edmontonians with low incomes. Low income is defined as less than half the median income in Edmonton, $36,000 for a family of 2 adults and 2 children. Ninety percent of recent immigrant families living in Edmonton consist of married or common-law couples; however, 10% of recent immigrant families in Edmonton were one-parent families (Citizen and Immigration Canada, 2000).

1.1.2 The Healthy Immigrant Effect

Although upon their arrival in Canada, immigrants are on the whole healthier than Canadian-born individuals, after 10 to 14 years, their health status deteriorates and begins to resemble that of Canadians (Chen, Ng, & Wilkins, 1996; McDonald & Kennedy 2004; Newbold & Danforth 2003). Researchers exploring this issue refer to

this as the "healthy immigrant effect" (Ali 2002; Chen et al., 1996; Dunn & Dyck 2000; Newbold & Danforth, 2003). Because immigrants provide labour for developing sectors, fill gaps in various skilled occupations, and offset an ageing population, they are considered important for the development of Canada's social fabric (Citizen and Immigration Canada, 2005). Understanding why immigrants' health declines with years in Canada is therefore very important.

1.1.3 The Health Issue – Healthy Body Weights

Overweight and obesity are strong risk factors for developing type 2 diabetes, cardiovascular disease, hypertension and stroke, and certain forms of cancer (Vega, 2001; Calle, Rodriguez, Walker-Thurmond & Thun, 2003, World Health Organization, 2005). Studies show a progressive increase in the prevalence of overweight and obesity among Canadians has occurred over the past few years (Bélanger-Ducharme & Tremblay, 2005; Tremblay, Katzmarzyk & Willms, 2002). The 2003 Canadian Community Health Survey (CCHS) data report that one-third (33.3%) of adults were classified as overweight and 14.9% were considered obese (Bélanger-Ducharme & Tremblay, 2005). In 1981, the prevalence of overweight among women in Canada was 30%; however, in 1996 the level had increased to 35%, while the prevalence of obesity increased from 8% to 12% (Tremblay, Katzmarzyk & Willms, 2002). In addition to the health loss, overweight and obesity also has economic impacts for Canada. In 2001, direct medical costs attributable to adult obesity were estimated to $1.6 billion while indirect medical costs were estimated to $2.7 billion (as cited in Bélanger-Ducharme & Tremblay, 2005). According to the same researchers, the population subgroups most vulnerable to overweight and obesity in Canada are children, Aboriginal peoples, and immigrants. Recent non-European immigrants experience a 10% increase in Body Mass Index after just 8

years in Canada (Ng et al, 2006). This is almost twice as likely as the Canadian born population. A study conducted in 2005 found that 52% of Latin American immigrants were overweight (BMI ≥ 25 and including people who were obese) and 13% were obese (BMI ≥ 30) (Tremblay et al., 2005). Researchers believe that the "Canadian way of life [...] could constitute an obesogenic environment for previously healthy immigrants" (Bélanger-Ducharme & Tremblay, 2005, p. 185).

1.2 Literature Review

1.2.1 Introduction

The following literature review examines current research on: immigrants' health in general; immigrant women's health; and overweight and obesity among immigrants in Canada. I will review three of the most commonly used health models in the immigrant health literature and link these models to the ecological health promotion model. One of the assumptions of this literature review is that the Canadian context is considerably different from the US context. Nevertheless, some U.S. studies have been included because of limited research on Hispanic-Canadian immigrants. In addition, many U.S. studies have sensitized me and made me aware of the gaps in knowledge in Canadian literature. In the discussion at the end of this document, I also use some U.S. studies to link existing research knowledge with the results and concepts of my study. A summary and conclusions of the literature review are included at the end of this section.

1.2.2 The Healthy Immigrant Effect Models

Several studies have documented that upon arrival, immigrants have better health than Canadian-born citizens, but after a few years this health advantage begins to diminish

and ultimately immigrants' health converges with that of Canadian born citizens (Chen, et al., 1996; Perez, 2002; Ali, 2002; Newbold & Danforth 2003; Ali, et al., 2004). Studies on the "healthy immigrant effect" claim that it can take as little as 10 years for immigrants to lose their health advantage over their Canadian born counterparts (Chen et al., 1996).

Some factors influencing immigrants' health are clear. For example, we know that to ensure that newcomers are healthy upon arrival to Canada; immigration policy requires immigrants to pass a health screen test. This health screen ensures that immigrants are healthy before they are approved for entrance to Canada. There is also an "immigrant self-selection [factor] whereby the healthiest and wealthiest are the ones most likely to migrate" (McDonald & Kennedy, 2005). Finally, it is also clear that, in general, peoples' health deteriorates with age. Hence, age is a contributing factor to the decline in immigrants' health while in Canada. In the immigrant health literature, several models have been put forward to explain additional factors associated with the healthy immigrant effect. I will review three of these models and outline how these models relate to the ecological health promotion model.

1.2.2.1 Acculturation Model

Culture is a powerful determinant of health and health-related behaviours (Huff & Kline, 1999). It helps to specify what behaviours are acceptable, when they are acceptable, and what is not acceptable. Huff & Kline (1999) make reference to five basic criteria for defining a culture: 1) common pattern of communication (language); 2) similarities in dietary preferences and preparation methods; 3) common patterns of dress; 4) predictable relationship and socialization patterns among members of the culture; and 5) common set of shared values and beliefs.

Culture should not be confused with ethnicity. Ethnicity, "relates to the sense of identity an individual has based on common ancestry and national, religious, tribal, linguistic, or cultural origins" (Huff &Kline, 1999, p.8). It provides a sense of belonging. Culture or ethnicity should not be interchanged with race either. "Race is an ancient concept used by scientists to place human populations into 'racial' categories for the purpose of classifications (Huff & Kline, 1999, p. 10) According to Huff & Kline (1999) race has become a socio-cultural concept rather than a biological one, prompting discrimination, hatred, and divisiveness among human groups all around the world. For the purpose of research with immigrants, it is more appropriate to use terminology such as ethnic, multicultural, and culturally diverse.

Results from the 1994-95 National Population Health Survey (NPHS) showed that the health of recent non-European immigrants was better than the health of Canadians (Chen, Ng, and Wilkins, 1996). Some differences in health behaviours were reported. For instance, more non-European immigrants reported being physically inactive in their leisure time compared to European recent immigrants and Canadian born citizens. Chen et al. (1996) concluded that immigrants have a health advantage over Canadian citizens and speculate that immigrants may adopt health related behaviours common among Canadians and that this could cause their health to converge. This explanatory model for the healthy immigrant effect is referred to as acculturation, "the acquisition of dominant cultural norms by members of a non-dominant group" (Gordon-Larsen, Harris, Ward, & Popkin, 2003, p. 2023). It is believed that over time, immigrants adopt values and behaviours of the new culture in which they are living.

Thurston & Vissandjee (2005) explain that the degree of acculturation depends on many individual and environmental factors. There is no standard or expected time-line to this process. Abraido-Lanza, Armbrister, Florez, and Aguirre (2006) also dismiss linear and directional acculturation models. These models estimate acculturation based on nativity, length of stay, and language use and do not account for the complexity of acculturation. Abraido-Lanza and colleagues suggest that public health researchers and practitioners should consider other more reciprocal models developed in the social and behavioural sciences. Such theoretical frameworks for acculturation are grounded in ecological theories and consider interactions between the individual and the environment.

For example, in his model, Locke (1992) (as cited in Huff & Kline, 1999) identifies four levels of acculturation: 1) bicultural (an individual who can function equally well in his or her own and the dominant culture), 2) the traditional (an individual who holds on to most his or her cultural traits), 3) the marginal (an individual who does not have any real contact with traits of either culture), and 4) the acculturated (an individual who has adopted all the traits of the dominant culture).

Teran, Belkie & Johnson (2002) explain that research on acculturation and obesity has been inconsistent. Some studies have found that as acculturation increases obesity and fat consumption decreases. While other studies, have found a positive relationship between acculturation and prevalence of obesity. Acculturation theory is perceived as a continuum between exclusive identification with native culture and overidentification with the new culture (Teran et al., 2002). Consequences for health

status can be implied from both ends of the continuum. On one hand, exclusive identification with native culture can lead to acculturation stress and marginalization, yet also provide access to traditional sources of social support. On the other hand, overidentification and complete separation from one's origin can lead to negative psychological influences. It is believed that reaching a point somewhere in the middle of the acculturation continuum can lead to more positive integration and health experiences (Teran et al., 2002).

Abraido-Lanza et al. (2006) describe other ways to measure acculturation. The authors suggest that one should consider an individual's awareness and ethnic loyalty. Other acculturation models postulate that immigrants selectively adopt traits and behaviours from the new culture. In particular, immigrants would select behaviours that can increase their socioeconomic status while maintaining some of the values of their own culture. Abraido-Lanza and colleagues recommend that public health practitioners use acculturation scales that "consider factors relevant to the particular health issue at hand, rather than by a monolithic 'acculturation' concept" (p. 1343). When exploring the issue of obesity, for example, acculturation scales should consider adherence to traditional diets and attitudes about exercise.

Research on how acculturation affects health is lacking. Acculturation "may affect health behaviours as a consequence of coping responses to discrimination and poverty; loss of social networks; exposure to different models of health behaviour; and changes in identity, behavioural prescriptions, beliefs, values, or norms (Abraido-Lanza et al., 2006, p. 1343). For instance, dietary acculturation was explored in a U.S. study by Otero-Sabogal, Sabogal, Pérez-Stable, and Hiatt in 1995. This study reported

that less acculturated Hispanic immigrants ate more fruits and beans but at the same time, they also ate more fried foods and meats. A more recent study, however, found that more acculturated Hispanic Americans decreased their consumption of fruits and vegetables and increased their fat consumption (Neuhouser, Thompson, Coronado, et al., 2004). These studies are quantitative in nature and measure acculturation using short or long acculturation scales based on language use, ethnic identification, and birthplace.

Recent Canadian studies have attempted to narrow down the particular health behaviours that immigrants change. Ali et al. (2004), report that recent immigrants consume more fruits and vegetables than Canadian born. There may be some acculturation in vegetable and fruit consumption among non-recent immigrants. Ali et al.'s (2004) research was based on data from the NPHS, the National Longitudinal Survey of Children and Youth, the Canadian Alcohol and Drug Survey, the Health and Activity Limitations Survey, the Census and the Vital Statistics Database. It also revealed that both recent and non-recent immigrants also smoked less and consumed less alcohol than Canadian born. One area where both recent and non-recent immigrants performed worse than Canadian born was physical activity.

The most interesting outcome of the work by Ali et al. (2004) was that immigrants' health behaviours did not explain the differences in chronic conditions between immigrants and Canadian born. The authors warn that influences of cultural interpretations of survey questions and differences in conceptualization of health and health behaviours could affect Statistics Canada's data. Also, many of the surveys are not translated into other languages and this can exclude more recent immigrants. The

authors make recommendations for more research on immigrant subgroups (e.g. women, children, refugees). They also suggest more research on contextual factors such as pre-migration health history, selection effects, socioeconomic factors, and psychosocial and support resources for immigrants.

Further research is required regarding the effects of acculturation on changes in values, belief systems, and worldviews. Another research gap identified by Abraido-Lanza and colleagues is the reference group or culture to which immigrants are believed to acculturate. Canadian society is diverse and immigrants interact with many ethnic groups, not just White Canadians. They are also exposed to a variety of economic, political, cultural, and social circumstances. To what exactly are immigrants acculturating? Could immigrants acculturate to other ethnic groups in Canada? Another important issue relating to acculturation that has yet to be studied is why acculturation on certain health behaviours varies by gender and age (Abraido-Lanza et al., 2006).

Researchers have suggested that the degree of acculturation may vary depending on how different a person's culture is from the Canadian culture (Chen et al., 1996; Chen, Wilkins & Ng, 1996b). These studies suggest that non-European immigrants' culture and lifestyle may differ more from those of citizens born in Canada. European immigrants, on the other hand, are believed to have more similar culture and lifestyle than Canadian born citizens. By focusing on immigrants' lifestyle changes, the acculturation model for the healthy immigrant effect does not account for environmental factors that affect peoples' behaviours such as dietary practices and physical activity. In addition, this model does not consider potential biological factors

that may affect peoples' health. Clearly there must be additional reasons, other than changes in lifestyles that make non-European immigrants experience worse health declines compared to European immigrants. Whether these reasons are environmental (social, cultural, political, and physical), genetic or behavioural in nature, they require further investigation.

Understanding, immigrants' realities is also critical. Without this context it would be impossible to understand how immigrants negotiate which behaviours to adopt from the new culture. Assimilation is the social, economic, and political integration of a cultural group into a mainstream society to which it may have emigrated (Huff & Kline, 1999). As demonstrated in many obesity studies with the general population, SES is related to overweight and obesity. To get to the root causes of acculturation or lack thereof, public health frameworks need to consider the complexity of immigrants' lives and should incorporate and expand on existing interdisciplinary acculturation theories.

1.2.2.2 Convergence and Resettlement Stress Model

The convergence and resettlement model provides a broader perspective than the acculturation model. In this model, the healthy immigrant effect is attributed to changing health behaviours and socio-cultural determinants of health. The basic idea behind this model is that throughout the resettlement process, immigrants are exposed to a variety of environmental factors that worsen their health (Kliewer & Smith, 1995; Dunn et al., 2000). The convergence and resettlement stress model outline physical, social, and cultural barriers to health (Newbold et al., 2003). Baker (as cited in Health and Cultures, 1996, Vol. 2,) categorizes these barriers to health into physical (geographical changes including climate, living environment, and foods), social

(unemployment and subordination) and cultural changes (understanding new cultural norms, lack of social support networks and learning one or both of Canada's official languages). The relationship between stress, social support and immigrant health has not been sufficiently explored (Hyman, 2004).

Using NPHS data, Dunn and Dyck (2000) investigated the social determinants behind the healthy immigrant effect. Specifically, they looked at socio-economic characteristics, immigration characteristics, health behaviour indicators, and social support measures. Using multiple logistic regression analysis, they investigated the simultaneous influence of explanatory variables such as age, country of origin, place living in Canada, employment, income, education attainment, marital status, type of household (single, single parents, couple with children, etc) on a health outcomes (self-rated health status, chronic conditions, overnight hospitalization, and unmet needs for care). The authors concluded that "socio-economic factors are important to self-rated health status and presence of chronic conditions for both immigrants and non-immigrants, but more so for immigrants" (p. 25). The authors, however, did not find an "obvious pattern explaining how socioeconomic characteristics and immigration characteristics (e.g. years in Canada, place of origin), influence health status (p. 26). It seems that the explanations for these associations are very complex.

It may be that the concepts introduced by the NPHS survey are not culturally relevant. For instance, Dunn and Dyck (2000) explain that the social and economic characteristics used in the NPHS may not be useful predictors of health status for some cultures. The NPHS data are cross-sectional so it has the same limitations as the CCHS data. Dunn and Dyck (2000) also reflect on the need to have larger samples of

people from various places of origin and social circumstances to express the heterogeneity of Canada's immigrant population. Immigrant status is also raised as a potential factor contributing to the healthy immigrant effect. For example, immigrants who are sponsored by family members do not qualify for welfare or any social assistance. This will undoubtedly affect a person's ability to cope in a new country. More studies exploring the effects of immigrant status are needed.

Newbold and Danford (2003) used data from the 1998/99 NPHS to identify areas where particular immigrant subgroups and non-immigrant groups diverge in terms of health status. The researchers also wanted to determine whether differences in health status are explained by socioeconomic, sociodemographic, or lifestyle factors. The study focused on self-assessed health status and used multivariate techniques to evaluate the factors associated with health status. The results of this study showed that immigrants with lower levels of education and income, and those who are not working or are older, had lower levels of health. Hence, health inequalities based on socioeconomic and socio-demographic factors exist. Immigrants who have lower income adequacy, who do not own a home, who are unemployed and who are older reported poorer health status than non-immigrants. Moreover, immigrant females were more likely to report fair or poor health than non-immigrant women. Non-recent immigrants (those who have lived in Canada longer than 10 years) were less healthy than non-immigrants and reported higher rates of chronic conditions, including diabetes, heart disease, and arthritis. The authors concluded that the decline in immigrants' health status may represent a combination of social, political, economic, and cultural factors.

Ali (2002) used data from the Canadian Community Health Survey (CCHS, 2000/01) to determine whether the "healthy immigrant effect" influences immigrants' mental health as well. This study concluded that immigrants had lower rates of depression and alcohol dependence than the Canadian-born population. Although, long term immigrants reported higher levels of depression and alcohol dependence compared to recent immigrants, alcohol consumption remained lower than the Canadian born population. Ali (2002) also reported variations among immigrant groups. For example, immigrants from Asia reported fewer depressive experiences than other immigrant groups. Immigrants from Africa, South and Central America and the Caribbean also reported significantly lower levels of depression compared to Canadian born citizens. Factors such as length of residence in Canada, age, sex, marital status, income, education, language barriers, sense of belonging, and employment status did not affect patterns of depression among immigrant groups. Hence, this study did not provide evidence that the mental health of immigrants deteriorates with longer stays in Canada. The CCHS is also a cross-sectional survey and researchers could not make any conclusions about the effect on depression or alcohol dependence on the process of immigration itself. Another limitation of the CCHS could be that due to cultural differences, some immigrant groups do not willingly report symptoms of depression and alcohol dependence. Ali (2002) suggests that discrepancies between this and other studies could point to greater resiliency among immigrants or a difference in how immigrants approach stress and adversity in their lives.

In summary, despite emerging evidence that differences exist between ethnic groups' health experiences, the convergence and resettlement stress model does not consider

biological factors. It does, however, go beyond lifestyle changes and considers the broader social and physical environment in which immigrants live.

1.2.2.3 Interactions Paradigm

The third and final model I will examine in this literature review is called the interactions paradigm. This model proposes that immigrants' health outcomes depend on an interaction between genetic predisposition and the environment (Beiser, 2003). As such, it is has the strengths of the acculturation model and the convergence and resettlement stress model. It also compares to the ecological model of health promotion because it considers an interaction between the environment and human biology and behaviour. Undoubtedly, mechanisms behind the healthy immigrant effect are more complex than acculturation and convergence and resettlement stress theories claim. Intersecting vulnerabilities such as genetic predisposition, poverty, gender, racialisation (i.e., race-based discrimination), and transition periods of migration could be associated with the prevalence of overweight and obesity among immigrant women (Bowen, Tomoyasu, & Cauce, 1991).

The basis for including a genetic component in this model comes from current evidence that shows that Hispanics may have higher adiposity and lower fat free mass than White or Caucasian groups (Casas, Schiller, DeSouza & Seals, 2001; Fitzgibbon, Blackman, & Avellone, 1999). Casas and colleagues found higher prevalence of body fat among Hispanic immigrant women after controlling for socioeconomic status (SES). This study, however, had a relatively small sample (100 women). The authors explain that their small sample was due to the limited availability of Hispanic women of sufficiently high SES living in the study area. Fitzgibbon et al. (1999), on the other

hand, only recruited sedentary women, which may also explain their finding of reduced fat free mass among Hispanics.

The social and cultural component of the interactions paradigm is similar to the one of the convergence and resettlement stress model. Starting an entirely new life, learning a new language and adapting to new cultural norms can lead to changes in social status and income level (Meadows, Thurston, & Melton, 2001). Stresses of finding employment, obtaining an income, building a home, and lack of social networks influence the health status of immigrants. Meadows et al. (2001) found that non-European immigrants and recent immigrants are "particularly disadvantaged on a number of socio-economic characteristics compared to better-established immigrants of European origin" (p 25). Hence, the interactions paradigm includes one of the strengths of the convergence and resettlement stress model (i.e. influences of the social, political, and physical environment on health).

Social determinants of health, such as socioeconomic status, gender, and social exclusion have been associated with the development of chronic diseases, including heart disease, cancer, and diabetes (Wilkinson & Marmot, 2003). While the impacts of social determinants on health have been explored among the general Canadian population, fewer studies have focused on immigrants or visible minorities. The deterioration of economic integration of immigrants in Canada is discussed by Picot (2004). In his analysis, Picot explains that despite changed immigration policies accepting highly educated immigrants, there is an emerging trend of declining earnings among recent immigrants. Since, earning studies do not show the impact of unemployment and other sources of income such as social transfer benefits and total

exclusion from the labour market, it is more important to look at low-income trends (Picot, 2004). Statistics Canada (2003a) reports that although in 2000 low-income rates declined from 17.2% in 1980 to 14.3% among the Canadian-born population, these levels rose from 24.6% in 1980 to 35.8% among recent immigrant groups. This report adds that , "the gap in low-income rates between the Canadian-born and recent immigrants was highest among those who had a university degree, particularly those with applied science degrees" (Statistics Canada, 2003b).

The lack of longitudinal studies in Canada required Picot (2004) to produce a longitudinal perspective by focusing on particular cohorts of immigrants. He compared highly educated immigrants with "like" Canadian-born, and added variables such as age, level of education, visible minority status, marital status, and region of employment. From these regression analyses, he showed that the "earnings gap has been increasing significantly with each successive cohort, both at entry and after many years in Canada... [and that this increase] is greater after accounting for the differences between immigrants and Canadian-born" (p. 29). For recent cohorts, the elimination of the earning gap after living in Canada for a number of years has become more difficult. It can take as long as ten years for new settlers to achieve their economic potential (Beiser, 2003). Analysis of the 2001 Canadian census, for instance, has revealed that recent arrivals earned roughly 30 per cent less than their native-born counterparts (Frenette& Morissette 2003). Research has indicated a rapid deterioration in the economic performance (e.g. lower labour-force participation rates, higher unemployment, and lower overall earnings) of recent immigrant cohorts over the past three decades. Unless they experience unusually rapid earnings growth in the

future, Frenette & Morissette (2003) believe it is unlikely that these new immigrant cohorts will reach earnings parity with the native-born.

1.2.2.4 Ecological Health Promotion Model

I have reviewed three health models available in the immigrant health literature. I will now discuss the ecological health promotion model as this is the foundation of my study. Recently, the ecological model of health has also been raised in the immigrant health literature (e.g. Thurston & Vissandjee, 2005). Health promotion is "the process of enabling people to increase control over, and to improve, their health" (World Health Organization, 1996). Health promotion goes beyond healthy lifestyles to well-being and recognizes that health is influenced by personal, social, and physical factors (World Health Organization, 1996).

The ecological approach to health promotion captures the essence of health promotion and suggests that there are many levels of influence on health related behaviours, such as intrapersonal characteristics, interpersonal processes and significant groups, institutional factors, community factors, and public policy (McLeroy, Bibeau, Steckler, & Glanz, 1988). Unlike lifestyle theories of disease prevention, the ecological approach does not consider health declines to be a result of personal failure. Lifestyle approaches tend to focus on identifying individual behaviour changes and put the blame on the victim (McLeroy et al. 1988). The acculturation models used in the immigrant health literature takes this lifestyle approach. Immigrant health researchers argue that through acculturation, immigrants adopt risky health behaviours common in the Canadian culture. Based on the acculturation model, potential health promotion interventions would focus on educating immigrants so that they do not adopt these risky health behaviours. Such health education programs fail

to recognize the socio-cultural, economic and political context behind immigrants' acculturation.

The key component of the ecological model of health promotion is the interaction between individuals and their environment. Individuals' characteristics, including their distinct genetic predispositions, interact with the environment (e.g. social, cultural, political and physical environments) and result in a specific health outcome. According to this model, peoples' behaviours are also affected by and affect the social environment (McLeroy et al., 1988). From the obesity literature, we know that many genes have been associated with this disease (Froguel & Boutin, 2001). A person who is overweight may have a genetic pre-disposition to this disease, but the social and physical environments may or may not allow for the disease to develop. In the case of immigrants, different ethnic groups may have varying dispositions to overweight and obesity. Depending on their social, cultural, political, and physical contexts, they may or may not develop overweight and obesity. In their research, Siegirst and Marmot (2004) investigated how social discrimination can influence the social, psychological and physical (biological) well being of people. They concluded that physical, social and emotional stress can cause a biological response in the body that can be linked to disease development.

More recently, the ecological model of health has been used in the immigrant health literature. Thurston & Vissandjee (2005) state that there is connection between personal characteristics of immigrant women, the context in which they live and their health outcomes. Economic inequities, discrimination, unemployment are conditions can be linked to overweight and obesity among immigrants because they create stress

and affect health behaviours. Personal characteristics of immigrant women can include genetic disposition to particular body compositions, which can also influence body weight outcomes. Although, my study does not include a particular genetic component, I investigated women's in-depth perspective regarding Hispanic body size ideals.

In summary, there are several models that attempt to explain the mechanisms behind the healthy immigrant effect. I have reviewed three of them in this literature review. The acculturation model is focused on lifestyle changes and seems to be the most reductionist of all of them. Although, the convergence and resettlement stress model accounts for social, political, and cultural determinants of health, it is the interactions paradigm model that is most comparable to the ecological model. As a health promotion student, I will frame my research findings within the ecological health promotion model. However, since the goal of my study is to also contribute to the general literature on immigrant health, my findings could also be framed within the convergence and resettlement stress model.

Now that I have reviewed potential models to explain the healthy immigrant effect, I will continue to review the literature on the evidence behind it. Specifically, I will review studies related to immigrant women's health and visible minorities. In this section, I also review some U.S. studies on the issues of overweight and obesity among immigrants, physical activity, dietary habits, acculturation, and body dissatisfaction.

1.2.3 Healthy Immigrant Effect and Women

Both in Canada and the U.S., there has been limited investigation into the impacts of intersecting vulnerabilities and transition periods on overweight and obesity among immigrant women. Much of the research on immigrant and refugee women's health has focused on reproductive health (Meleis, Lipson, Muecke, & Smith, 1998). Most studies have investigated the implications of women's cultural beliefs on the health care delivery system. Even though cardiovascular disease (CVD) is the largest killer of Latina women living in the U.S., few studies have looked at risk factors for CVD among this population (Meleis, et al., 1998). Little known about how Hispanic immigrant women perceive their health and health needs.

In 1999, a study by Cairney and Østbye, found that excess weight for both female and male immigrants increases with years in Canada. The study "revealed a significant interaction between gender and time since migration" (p.121). For long term (10 or more years) immigrant women, the prevalence of excess weight was reported to be higher than for Canadian born. Since, this study controlled for demographic, lifestyle and health factors related to body mass, the authors suggest that increased caloric intake or increase caloric intake from fat may be the causes for the observed increase in body weight. The authors recommend more research on the effects of acculturation on weight related to variables such as time since immigration, gender, and ethnic origin. The authors conclude their study challenges public health practitioners to develop educational programs in order to "encourage" women not to gain weight. This recommendation reveals the researchers' bias towards behavioural and individualistic approaches to health. The reality is, however, that healthy behaviours

depend on many social, political and environmental factors and not just on personal factors.

Thurston and Vissandjee (2005) also suggest that "health and migration are fundamentally gendered" (p.230). Women today make up nearly half of all international migrants and they are not just accompanying dependants, but they are also independent migrants who experience migration differently than men (Carling, 2005). Research should take an "analytical approach to gender as a relational term". In other words, how do gender relations affect and are affected by migration experiences? "Gender establishes and is established by [...] patterns of expectations; processes of everyday life; psychoanalytic subconscious processes; a socially constructed body; self and identity; desire; symbolic representation; interactions among friends, kin and strangers; and language and symbolic language" (Lorber, 1994 in Thurston & Vissandjee, 2005, p. 232).

Since previous research has linked degree of acculturation with health behaviours and status (Zsembik & Fennell, 2005; Finch & Vega 2003; Perez et al. 2002), it is an important mechanism to consider when exploring determinants of obesity among Latin American immigrant women. U.S. studies have investigated meal patterns among Hispanic immigrants and found that meal preparation, eating together, and family time is very important for this population (Delgado, 1997 as cited in Teran et al., 2002). In general, many immigrant women make dietary decisions for their family. They need to balance multiple roles; including household and work related roles and this influences their diet and exercise decisions. In the case of immigrant women, these gender issues are compounded by the need to maintain culturally

defined roles and their continuous struggles with cultural, linguistic, economic and informational barriers (Mendelson, 2003). Hyman and Guruge (2002) outline the following dietary determinants for new immigrants; a) culture, b) access to nutritional information, c) availability of healthy and acceptable foods, d) poverty, and e) acculturation. Gordon-Larsen et al. (2003) found that there is a "rapid acculturation of a series of obesity-related behaviours with the first to subsequent generations" of Hispanic immigrants (p. 2032) including nutrition habits. The food choices made by Latin American women can depend on acculturation levels as well as education, urbanization, geographic region, income, and family customs (Warrix, 2005). Maintaining ethnic foods as one of the symbols of ethnic identity is an important role for immigrant women however, to which extent Latin American women maintain traditional meal patterns needs further investigation.

Teran et al. (2002) conclude that the two major predictors of obesity appear to reflect divergent aspects of cultural identification. Hispanic immigrant women in the U.S. appear to be "juxtaposed between two worlds... [and neither] of the two worlds dominates" and this can result in higher prevalence of obesity (p.101). For example, Hispanic women raising relatively more acculturated children may have to deal with "fussy meal-related behaviours, criticism, and lack of appreciation for meal preparation", which can undermine emotional rewards and sense of meaning (p. 101). On the other hand, low levels of acculturation and "passive approach to discrimination faced by the children, whereby the mother suppresses painful feelings...can lead to unhealthy behaviours" (p. 100).

1.2.4 Healthy Immigrant Effect and Visible Minorities

Until recently, the supporting evidence the healthy immigrant effect were cross-sectional studies, which did not allow researchers to follow the same group of immigrants over a number of years. The lack of longitudinal data made it difficult to asses whether, or how long, immigrants' health advantage lasts. It is also very difficult to assess why there is a decline in immigrants' health. In 2003, Statistics Canada reported the first longitudinal evidence sustaining the fact that recent immigrants are healthier overall than Canadian born (Chiu, 2003). The study sample includes immigrants and refugees who arrived in Canada between October 2000 and September 2001. Immigrants and refugees were interviewed at three different points in time to find information about settlement experiences (Chiu, 2003). Results showed that upon arrival in Canada "[the] majority of newcomers (78%) rated their health status as either "excellent" or "very good" compared to 61% of the general Canadian population.

Ng, Wilkins, Gendron, & Berthelot (2006), report results from five cycles of longitudinal data from the National Population Health Survey. This article reveals that between the study years (1994/95 and 2002/03) immigrants from non-European countries "were twice as likely as the Canadian-born to report a deterioration in their health" (p.3). Non-European immigrants were also more likely to be physically inactive compared to Canadian born. The authors point to an interesting paradox in these data. The data show that European immigrants are more likely to become inactive than non-European immigrants. However, they are less likely to report a decline in health compared to Canadian born. The authors explain that although, the decline in health among non-European immigrants cannot be attributed to behaviours

such as smoking and physical inactivity, "weight gain may be a possible contributor" (p.5). In addition, non-European immigrants are more likely to report low social support compared to Canadian born. European immigrants are less likely to report low paid jobs than non-European immigrants, suggesting that "they may encounter few social, economic and lifestyle barriers than do those from non-European countries" (p.6). Ng et al. (2006) support the understanding of the convergence and resettlement stress model. However, despite the access to longitudinal data, this study cannot make cause and effect conclusions. They can only document that the decline in immigrants' health affects non-European immigrants more so than European immigrants.

1.2.5 Healthy Immigrant Effect – Body Weight and Ethnic Differences

There is a gap in the literature regarding overweight and obesity among immigrant ethnic groups (Tremblay, Perez, Ardem, Bryan, & Katzmarzyk, 2005). This is because most surveys do not include ethnicity questions. Most surveys also use sample sizes that are too small (Tremblay et al. 2005). Ng et al. (2006) found that between 1994-95 and 2002-03, recent non-European immigrants (especially those who arrived since the mid 1980s) experienced a 10% increase in Body Mass Index (Ng et al, 2006). This is almost twice as likely as the Canadian born population. Considering that the majority (75%) of immigrants to Canada come from non-European countries, it is important to understand the social and environmental determinants of overweight and obesity among different ethnic groups. Moreover, it is also important to understand how overweight and obesity influence the health of immigrants. For example, overweight and obesity have been associated with various chronic diseases that are more prevalent among visible minorities (e.g. arthritis, gout,

atherosclerosis, heart size and function, gallbladder disease) (Bowen, Tomoyasu, & Cauce, 1991).

Tremblay et al. (2005), analyzed data from the 2000/01 and 2003 CCHS. Since, they were working with small samples they were only able to present results according to broad groups. These groups included: White, East/Southeast Asian, West Asian/Arab, South Asian, Latin American, Black, Aboriginal, and broad category of "others". Results showed that ethnicity was associated with overweight and obesity even after controlling for the effects of age, socioeconomic status, physical activity, and birthplace. Close to 52% of Latin American immigrants were overweight (BMI $\geq$ 25 and including people who were obese) and 13% were obese (BMI $\geq$ 30). This was not, however, significantly different from estimate for White ($p < 0.05$). The prevalence of overweight among Latin American immigrant women was 42%, with 13% of them being obese. Overweight and obesity was also higher among immigrants who had lived in Canada for more than 11 years compared to recent immigrants. Long term Latin American immigrant women also had higher odds of being overweight compared with white immigrant women. This is congruent with findings from Ng and colleagues (2006), who found that non-European immigrants are more likely to report a decline in health. Low levels of physical activity and educational attainment were associated with increased odds of overweight and obesity in women, in addition to behavioural reasons (acculturation) to explain the high prevalence of overweight and obesity among long term immigrants, Tremblay et al. (2005) suggest that cultural and social pressures or norms may also have influence. For example, body size preferences may vary across cultures. Similarly, cultural norms around physical activity and nutrition may also be contributors. Tremblay et al. (2005) raise the issue

of the inadequacy of current weight guidelines for certain ethnic populations. Some ethnic groups (e.g., Asians) have lower BMI levels, but a higher percentage of body fat. Hence, the threshold for overweight and obesity may be lower or higher for certain ethnic groups.

1.2.6 Is Obesity Driving the Healthy Immigrant Effect?

McDonald & Kennedy (2004) suggest that if behavioural changes underpin the healthy immigrant effect and considering that overweight and obesity have causal effects on chronic conditions, then it must be the incidence of excess body weight that is driving the rapid immigrant health decline. They also argue that changes in behaviours are influenced by immigrants' social and cultural environment. For example, having access to or living close to ethnic communities (i.e., access to social networks) may delay or inhibit acculturation. Moreover, the physical environment may influence immigrants' access to traditional foods. To investigate the determinants of overweight and obesity among immigrants in Canada, McDonald & Kennedy (2004) conducted an empirical study to estimate the influence of social networks on these conditions. This study used data from the 1996 NPHS and the 2000-01 CCHS. They also used the 1996 and 2001 Canadian Census files to determine the concentration of ethnic communities in particular neighbourhoods. The study looked at ten visible minority groups in Canada, including Latin American (Hispanics). Overall, this study showed that non-white immigrant females have lower overweight and obesity levels than Canadian born females. However, with more years in Canada, the probability of being overweight increased. Although, white immigrants' prevalence of overweight and obesity converges with Canadian born, this is not the case for non-white immigrants. This is inconsistent with data reported by Newbold (2005), Tremblay et al. (2005), and Ng et al. (2006). McDonald & Kennedy (2004)

did find that there are large differences in overweight and obesity rates by ethnicity. Latin American women are "over 20% less likely to be overweight on arrival [...] but overweight rates increase markedly with years in Canada" (p. 2478). After 20 years in Canada, the prevalence of overweight among Latin American women reaches 60%. McDonald & Kennedy (2004) also found that if an immigrant lives closer to their ethnic community, and if that community has a higher incidence of overweight and obesity compared to the overall Canadian population, that person is more likely to be overweight or obese. On the other hand, increased rates of overweight and obesity among immigrants is tempered by the presence of an ethnic like community that has lower incidence of overweight and obesity compared to Canadian born. McDonald & Kennedy (2004) concludes that since increases of body weight over time can be attributed to lifestyle choices (related to diet and physical activity) then acculturation must drive the healthy immigrant effect.

1.2.7 Healthy Immigrant Effect and Age

Research on the intersection between immigrant status, time since migration, health status, and age had not been conducted until Gee, Kobayashi, & Prus (2006) examined whether or not the healthy immigrant effect "applies equally to mid – and later life populations" (p.57). Results of this study showed "strong support for the healthy immigrant effect among [recent immigrants] in the 45-to-64 age group" (p.60). This health immigrant effect in this group decreased with years in Canada. Longer-term immigrants, however, aged 45-64 experience comparable health status as Canadian born. Even after controlling for socio-demographic, socioeconomic status, and lifestyle factors, recent immigrants still have better health. Gee et al. (2006) recommend more research regarding social-psychological factors that might influence the healthy immigrant effect among recent immigrants. This study also found that the

healthy immigrant effect that does not apply to older adults (65-and-over). Recent immigrants in the age 65-and-over group have poorer health compared to Canadian born counterparts. After accounting for socio-demographics, socioeconomic status, and lifestyle differences, the health of older recent immigrants and Canadian counterparts converges. Since, this study used data from the 2000-01 Canadian Community Health Survey it has similar limitations as the studies reviewed above.

1.2.8 Hispanics in U.S. and Body Weights

U.S. studies also suggest that the incidence of obesity may be 4 to 6 times higher in the Latin American population compared with the rest of the U.S. population (Bowen, Tomoyasu, & Cauce, 1991). Hubert, Snider, & Winkleby (2005) report that "U.S. Latino adults have experienced an 80% increase in obesity in the last decade", with 21% of Latinos being obese (p. 642). US studies have also described the prevalence of obesity and physical inactivity among Hispanic Americans (Cantero, Richardson, Baezconde-Garbanati & Marks, 1999; Winkleby, Gardner & Taylor, 1996). Explanations for these rapid increases include socio-demographic characteristics and levels of acculturation.

Considering the high prevalence of overweight and obesity, Hubert et al. (2005) aimed to identify specific correlates of obesity within the Latino population in order to develop appropriate interventions. Among other research questions, Hubert et al. (2005) investigated which health behaviours are most strongly associated with being overweight and obese in Latinos. In this study, interviews were conducted to elicit self-reported data. Acculturation was measured according to the number of years lived in the United States, generational status (foreign born, first generation U.S. born, second generation U.S. born), and primary language spoken at home (Spanish,

English). Health behaviours included in the analysis were: exercise (leisure and work related), television watching, dietary practices (high fat foods, fast foods, and fruits and vegetables consumption), alcohol consumption and smoking. Participants were also asked if they perceived themselves as being overweight, underweight, or about average and if they were trying to lose weight at the time of the interview.

The study also compared Latinos living in communities (urban and rural census tracts) and agricultural labour camps. Most of the participants were Mexican-American. Results show trends of higher BMI with greater levels of acculturation in the community sample. In the case of women, there was also an inverse graded relationship between BMI and socioeconomic status (women living with lower household income had higher the levels of BMI). Women in the community who were physical inactive were also more likely to have higher MBI rates. Overweight and obese women were also more likely to eat chips and fried foods and leaving fruits out of their diet. For men, there was a significant association between blue-collar occupations and BMI levels. Over 50% of men working in blue-collar occupations were obese. Women were also more likely to be trying to lose weight, compared to men. However, women tried to lose weight by modifying their diets only and did not incorporate physical activity into their weight loss plan. This study found that the strongest correlates of BMI were age and level of acculturation. However, men working in labour camps who were more acculturated did not have higher BMI and they were more likely to be physical active and had better dietary habits. This could be because labour camps incorporate more physical demands and better dietary habits. On the other side, Latinos living and working in communities had poorer diets and lower rates of physical activity. The study has several limitations: cross-sectional

data, limited dietary data, and self-reports. Moreover, the overall recommendations for interventions were focused on education as opposed to broader social changes (i.e., ways to improve the socioeconomic status of this population).

1.2.9 Hispanics in U.S. and Physical Activity

Improving physical activity and diet represent the two most commonly recommended strategies for weight loss and chronic disease prevention (Miller, Koceja, & Hamilton, 1997). However, few research studies have focused on physical activity and diet behaviours of women from ethnically diverse communities. Although, there are some U.S. based epidemiological studies in this area such as the National Health Interview Survey and the Behavioral Risk Factor Surveillance System, there are very few qualitative studies focused on immigrant women's personal and cultural perception of physical activity and healthy eating (Juarbe, Lipson, & Turok, 2003). The process of acculturation also needs further investigation to understand how, when and why migrants assimilate negative health behaviours, in particular sedentary behaviours.

Overall, women of all ethnic groups exercise less than men (Juarbe, Lipson, & Turok, 2003). U.S. based epidemiological studies have found that Latin American women report overall lower levels of participation in planned and sustained physical activity (Juarbe et al., 2003). However, few studies have explored the perceived barriers to physical activity among Latin American immigrant women. A U.S. qualitative study looked at diet and exercise experiences of immigrant Mexican women in the U.S. and found that "rather than lack of knowledge or negative attitudes toward [healthy diet and exercise], sociocultural constraints [...] were responsible for women's not engaging in [healthy] behaviours (Juarbe, 1998, p.778). Sociocultural factors included

barriers such as gender roles, lack of partners and significant-other supports, and oppressive environments.

1.2.10 Hispanics in U.S. and Body Dissatisfaction

Some U.S. studies have also found that Black and Hispanic women experience body dissatisfaction at a higher body weight level than white women (Fitzgibbon et al., 1999; Casidy, 1991). Winkleby et al. (1996) found that Hispanic Americans desired a higher weight than White Americans. However, cultural ideals of body size (weight) may also be different between Hispanic subgroups. One of the limitations of this Fitzgibbon et al. study is that the findings came primarily from a sample of Mexican-American women and since Hispanics are a heterogeneous group it would be difficult to generalize to other Latin American groups.

A more recent U.S. study, Asian, Hispanic, black and white female and male participants does not provide any support for the hypothesis that there is a tolerance of larger body size by Hispanics (Cachelin, Rebeck, Chung, & Pelayo, 2001). The study found that there were no ethnic differences in acceptable body size either. In this study, differences in age, educational level, and BMI were controlled. However, since this is a U.S. study it is expected that participants would have been exposed to the American body size ideal. Hence, results of this study can be misleading as participants may have produced an "acculturated" response. Especially since they study also found that "individuals who were heavier tended to choose larger acceptable female and attractive figures" (p. 164). In addition, this study supports previous findings that there are gender differences in body image. Women consider thinner female figures as attractive and acceptable than did men and perceive that men prefer thinner female figures than they actually do. The perception that men prefer

thinner women was, however, more prevalent among white women. This result is also consistent with previous research. The authors conclude that it may be that "factors such as SES, age, and BMI are more powerful determinants or contributors to body-size perceptions" (p. 164). Cachelen et al. (2001) also suggest that certain cultures may be less critical of people who do not conform to the ideal body size and that this may create less social pressure to achieve a certain body size. The authors also recommend that future studies consider the level of acculturation among participants. A study conducted in the United Kingdom, reviewed the limited existing literature on immigrant women, eating disorders and acculturation (Geller & Thomas, 1999). This review found that there is support for the hypothesis that "rapid culture change through immigration increases vulnerability of adolescents and adult women to developing eating disorders" (p. 295).

In cross-cultural studies, Westernization has also been suggested as a potential factor contributing to changing body image ideals and increases rates of eating disorders in underdeveloped countries (Anderson-Fye & Becker 2003 as cited in Anderson-Fye, 2004). However, some cultures have been able to resist the "spread of eating disorders such as cultural change (with heavy components of Americanization), social transition, modernization, shifting social roles for women, and dramatically increased exposure to U.S.- originated print and visual media" (Anderson-Fye, 2002 as cited in Anderson-Fye, 2004). In her study of San Andrés, Belize, Anderson-Fye, found that female body shape is more important than size. A Coca-Cola shape (as in the old style glass bottles – "curvaceous at the top, goes in at the waist, and bigger on the bottom" (p. 568) or Fanta shape ("less at the top and bigger at the bottom" p. 567) is preferred by participants. This body shape preference is common in many Latin American

countries. The study also found that girls did not show body dissatisfaction (when the ideal body size differs significantly from the actual size) as girls in Western industrialized nations.

1.2.11 Healthy Immigrant Effect – Is It Real?

Recent studies have shown the healthy immigrant effect may be more apparent than real (McDonald & Kennedy, 2004; Newbold, 2005). Newbold (2005) explains evidence of the healthy immigrant effect is supported by Statistics Canada data but only with respect to prevalence of chronic diseases; it is not, however, supported with respect to self-assessed health. Researchers believe that as immigrants live longer in Canada, their perception of their health changes as they start comparing themselves to Canadian born. With respect to the prevalence of chronic diseases, Newbold (2005) found that after only 6 years in Canada, immigrants' health was worse and declining compared to Canadian born. While in 1994/95 nearly 56% of immigrants reported a chronic condition, this proportion grew to 69% in 2000/01. There was a general convergence of health (as assessed by prevalence chronic diseases) between immigrants and Canadian born over this period of time. The mean number of chronic diseases, however, was smaller for immigrants than Canadian born. Newbold also found that there are cohort effects, whereby more recent immigrants have the largest increase in reporting a chronic disease. This could be because at first more recent immigrants are less likely to report a chronic condition, but as they become more aware of chronic diseases, they begin to report it more.

Using multivariate analysis, Newbold found that overall immigrants are less likely to experience a chronic condition compared to native born. Also, younger immigrants and native born are less likely to report a chronic condition. Also, with higher

education and income, both immigrants and native born are more likely to report a chronic condition. Immigrants who consult a general practitioner are also more likely to report a chronic condition. Newbold suggests that the increase in prevalence of chronic conditions among immigrants in linked to use of health care facilities. The more immigrants access health services, the more aware they become of their health conditions. Hence, the reporting of chronic conditions increases.

Newbold warns public health officials against using self-assessed health status for immigrant populations as this may show an "unexpressed need for health care" (p.781). He suggests that prevalence of chronic diseases in this population may be a better indicator of health among immigrants. He also points out that the National Population Health Survey lacks information about immigration types (e.g., economic, family reunification or refugee) and information about the country of origin. This information would be important to have when investigating the determinants of the healthy immigrant effect.

1.2.12 In Summary

Much of the literature on immigrant health documents the existence of the healthy immigrant effect. However, mechanisms explaining the healthy immigrant effect are not well understood. Most studies on the healthy immigrant effect are descriptive or empirical in nature and do not provide in-depth perspectives of immigrants themselves. Most of these studies are based on cross-sectional data from the National Population Health Survey or the Canadian Community Health Survey. Other limitations of these data include: limited information of immigrant subgroups (ethnicity) and linguistic and cultural factors associated with survey questions and

self-reported answers. Some explanatory models exist, including the acculturation model, the convergence and resettlement stress model, the interactions paradigm and added more recently, the ecological model. Most studies on the healthy immigrant effect are based on the acculturation model, which takes a reductionist lifestyle approach. This model views changes in lifestyle as the main contributors to immigrants' health decline. Even if changing lifestyles is the cause for the healthy immigrant effect, research should investigate what causes the change in lifestyles. In this context, research should explore the social, political, cultural and physical factors that influence lifestyle choices and behaviours.

More studies are required that consider the broader context of the migration experience, gender differences, immigration status, age at migration, and ethnicity. Although, many differences exist between Canadian and U.S. immigration contexts, there are also common immigration experiences that suggest it would be important to determine the sociocultural factors that influence the health status and behaviours of Latin American women who have migrated to Canada. To the best of my knowledge, there have been no studies in Canada focused on the body weight experiences of Latin American immigrant women. There is also a significant gap in qualitative studies on the healthy immigrant effect in general. Considering the increasing proportion of newcomers to Canada, health professionals and policy makers need to have a better understanding of how personal health practices and coping skills as well as social, political, cultural and physical factors influence immigrants' health, in particular body weight.

1.3 Purpose of Study and Research Questions

The purpose of this study was to assess the process of changing health behaviours (dietary habits and physical activity) within the context of Hispanic immigrant women's immigration experiences and socio-cultural determinants of health (e.g. socioeconomic status, cultural food beliefs, cultural body size ideals, gender, and attitudes about physical activity). The study captures the perspectives of recent and non-recent Hispanic immigrant women living in Edmonton, Alberta. The research questions are the same as those of a research study with three immigrant communities currently in progress at the Centre for Health Promotion Studies under the leadership of Dr. Helen Vallianatos and Dr. Kim Raine. For the purpose of my study, however, I have added a greater physical activity focus.

1. What are the ideas, beliefs and understandings of immigrants regarding food, body size (weight), and physical activity?
2. How has the migration experience influenced concepts of food, body size (weight), and physical activity?
3. What health practices related to diet, body size (weight), and physical activity are exhibited?
4. How is body size experienced? How is this experience related to cultural perceptions on body image?

The objectives of this research are to understand Hispanic women's experiences with body weight since their arrival in Canada and to link these experiences to the larger social, economic, political, and cultural changes that women live through throughout their migration experiences. This study will contribute to the understanding of the

"healthy immigrant effect" by exploring the mechanisms involved as perceived by immigrant women themselves.

1.4 Significance of the Study

This study contributes to the limited body of literature on the health of Hispanic immigrant women in Canada. Increasingly, in the U.S., researchers are turning attention to the health of Latin American immigrants as this population represents the largest growing visible minority group. Latino groups in the U.S. are also one of the most "underserved and high-risk populations because they experience disproportionate burden of health risk factors, morbidity, suboptimal health status, underuse of health services, impaired access to care, and health disparities" (Flores, Fuentes-Afflick, Barbot, Carter-Pokras, Claudio et al., 2002, p.83). In Canada, Latin Americans will be the fifth largest visible minority group by 2017 (Statistics Canada, 2005). Although, U.S. studies bear some relevance to the Canadian context, there are many environmental differences that need to be described and understood.

In Canada, changing immigration patterns have implications for various public services, including health and social services. Some quantitative studies claim that as the length of time that immigrants stay in Canada increases, diet and physical activity behaviours change resulting in higher prevalence of overweight/ obesity and chronic diseases. Overweight and obesity is of particular concern among long term immigrant women who are visible minorities. In order to stop this trend, it is important to look beyond individual behaviours and to understand the underlying and intersecting personal, interpersonal, social, political, cultural, and physical factors that affect the health of immigrant women upon their arrival and with time in Canada. Based on an

ecological model of health promotion, this study explored the impacts of such forces on the health and changes in body weight of Hispanic immigrant women in Edmonton.

With this knowledge, researchers, practitioners, and community members can develop culturally appropriate health promotion programs. Research results also have implications for policy development and are relevant to a large part of Canada's multicultural population. Since, this study was conducted in partnership with the Multicultural Health Brokers Cooperative (MCHB), the study findings will have a larger impact on policy making and program development in Edmonton. Through a partnership with MCHB, research results will be disseminated within the community whenever appropriate or needed and will support potential community action. This study should serve as a platform for community action in the areas of obesity and chronic disease prevention. MCHB plans to support the integration of research findings into program/service designs as well as potential policy considerations.

CHAPTER 2 Research Design & Methods

This chapter describes the study's design, sample, measures, procedures and analysis. This study is part of an ongoing research project with three immigrant communities (South Asian, Arabic, and Hispanic) focused on understanding the similarities and differences in immigration experiences and influences on body weight. As such, I used most of the research instruments developed for the overall research project. The overall research project and my particular study are also part of a larger research initiative called "Promoting Optimal Weights through Ecological Research" (POWER). This initiative is led by the Centre for Health Promotion Studies at the University of Alberta.

2.1 Critical Social Perspective

Many epidemiological studies on the healthy immigrant effect state that there are "vulnerable/high risk groups" within the immigrant community. Using a critical social perspective helped me explore what causes health inequities between immigrant and the general population as well as identify particular vulnerable groups. Critical research asserts that facts "require interpretation within a framework of values, theory, and meaning" (Veenstra, 1999). Using both quantitative and qualitative research methods, critical research looks for an explanation behind social injustices and attempts to mobilize communities to change them (Veenstra, 1999). The driving force behind my study is to work towards creating social change. Rather than attempt to develop strategies to coerce people to change their behaviour, my goal is to increase awareness in my community so that we can mobilize ourselves and create change. Hence, one of the objectives of this study is to link women's experiences to

the larger social, economic and political processes so that together we can act to improve our situation.

One of the epistemological assumptions of the critical theoretical perspective is that linking health decline (or in this case, increases in body weight) with the determinants of health (social, economic and physical environments, personal health practices, individual capacity and coping skills, human biology, early childhood development, and health services), does not suggest cause and effect. Although, it is important to conduct descriptive (epidemiological) studies to establish health inequities, it is also important to understand what creates them from the perspective of communities. This is why qualitative studies can be useful. They can help us understand what factors and variables influence the determinants of health.

2.2 Mixed Research Methods

This study followed a mixed research design. Both quantitative and qualitative research instruments were used. I chose to use quantitative and qualitative research methods because I wanted to develop a broader perspective of Hispanic immigrant women's experiences with migration and body weight. Mixing qualitative and quantitative methodologies is gaining acceptance, especially for studies of cultural phenomena (Douglas, 2003). It is believed that this research approach can help researchers get a better understanding of [participants'] reality (Trochim, 2001). In this particular study, quantitative data help set the context of the study participants by describing socio-demographics, acculturation level, body image ideals, and physical activity patterns. Qualitative data, on the other hand, examine the everyday experiences of research participants within their own social setting. It is the

qualitative information that provides a deeper meaning or interpretation of participants' daily context.

There are both advantages and disadvantages with each of these research methods. For example, unlike, quantitative methodologies, qualitative methods do not produce statistical generalizable results (Morse, 1992). However, they allow for the development of models and theories in one particular study. These models and theories can be exported to "provide explanatory theory for the experiences of other individuals who are in the comparable situations" (Horsburgh, 2003, p.311). The goal of qualitative research methodologies is not to provide "probabilistic generalizations to a population" but to contribute to the theoretical understandings of a particular phenomena or concept (Horsburgh, 2003). The goal of the current study is to contribute to the understanding of the "healthy immigrant effect" by synthesizing and interpreting the migration and body weight experiences of a group of Hispanic immigrant women.

As demonstrated by the literature review, many quantitative (epidemiological) studies have already established that the healthy immigrant effect exists in Canada. However, there are no qualitative research studies exploring this concept in particular immigrant communities. Existing quantitative studies report that immigrant women experience increases in body weight in Canada. Such epidemiological studies have examined the distribution of overweight and obesity in the immigrant population and demonstrated the burden of overweight and obesity among various immigrant groups. However, these studies fail to explore immigrants' health experiences within the context of their daily lives. Specifically, qualitative studies are needed because there is no knowledge

about the every day experiences of Hispanic immigrant women in Canada and how these experiences influence their health and body weight.

Quantitative studies exploring the mechanisms involved in the healthy immigrant effect are limited in their use because they fail to include the voices and perspectives of immigrant women themselves. These studies can be stigmatizing as they tend to call attention to so called "high risk or vulnerable groups". This is turn can lead to stereotyping particular groups of the population, which can both justify and contribute to the preservation of health inequalities (Thurston & Vissandjee, 2005). Rather than just documenting health disparities among immigrant communities, researchers need to develop theories to explain why immigrants' health declines with more time in Canada. Qualitative studies can be useful in the development of such theories. Since the objective of this study is to contribute knowledge towards the understanding of the causes of health inequalities in immigrant groups, qualitative methodology is a good fit for this research study.

Members of the Hispanic community who reviewed this study's research design also agreed that qualitative methods are better suited for this study. Before conducting my study, I spoke to many community members about the research objectives and goals. When I explained to them the results of existing epidemiological studies, they were both surprised and concerned. Some, shared their concerns about such research, including their fear of being portrayed unfairly or compared inappropriately to other immigrant communities in Edmonton. They were also concerned that such studies would result in stereotypes about Hispanic women in Canada. More importantly, they did not want to appear to be a burden for the Canadian society. By using qualitative

methodologies, community members agreed that women would be able to talk about their migration experiences and share their ideas about how these experiences have influenced their health and body weight. This would help prevent inappropriate comparisons or portrayals.

Another limitation of only using quantitative methods is the inability to transfer ideas across cultures. As explained in the literature review, National population health surveys use concepts that may not translate well linguistically or culturally. For example, the concept of social support may be perceived differently in non-European communities. This is another reason why qualitative methodologies have been deemed to be more suitable for research with immigrant populations (Lipson & Meleis, 1989; Morse, 1992). Qualitative instruments can facilitate the understanding of concepts across cultures. Focus groups and in-depth interviews, in particular, have been deemed culturally appropriate data collection methods for Latin American immigrant women (Perilla, 1998; Marin & Marin, 1989). Using these qualitative instruments in my study allowed me to identify and understand specific Hispanic socio-cultural concepts.

2.3 Study Design

Participants were divided into two separate groups. The first group included Latin American women who have been in Canada for less than 10 years and the second group included women who have lived in Canada for more than 10 years. Separating participants into these two groups reflects the methodology of most research studies on the investigation of the healthy immigrant effect in Canada (Chen, Ng, & Wilkins, 1996; McDonald & Kennedy 2004; Newbold & Danforth 2003). There were two

phases in this study. In the first phase, six focus groups were conducted. Three focus groups with recent immigrant women and another three with non-recent participants. A total of 36 (18 recent and 18 non-recent) immigrant women participated in the first phase of this study. In the second phase, fourteen participants (eight recent and six non-recent) from the focus groups were invited back for individual in-depth interviews.

Physical activity questionnaires were administered at the end of each in-depth interview and provide quantitative information about physical activity behaviours. To uncover the women's attitudes and practices, I used qualitative data from focus groups and in-depth interviews. Questions and probes in the in-depth interview allowed women to talk about their lives and the barriers and facilitators to physical activity. Ultimately, the goals of the physical activity component of this study were: 1) to understand the type, frequency, duration and intensity of leisure and non-leisure-time activities Hispanic immigrant women engage in and 2) to explore the perceived barriers and facilitators for physical activity. Since, this study is based on an ecological framework, I aimed to understand how personal, interpersonal, environmental, cultural, institutional, and policy factors may influence women's physical activity behaviours.

Since, I only interviewed 14 women, an additional nine focus group participants were called back to complete the physical activity questionnaires. I contacted women who participated in the focus groups over the phone and asked them if they were interested in completing the survey. Although I initially expected to reach all 36 participants I was only able to reach an additional nine participants. A total of 23 physical activity

surveys were completed; 11 with recent and 12 with non-recent participants. Nine of these surveys were administered over the phone with participants who had participated in one of the six focus groups. Table 1 summarizes the design.

Table 1: Study Design

	Recent		Non-Recent	
	Focus Groups	**N**	**Focus Groups**	**N**
Phase 1 Focus Groups	3	18	3	18
Phase 1 Demographics		18		18
Acculturation Scales		18		18
Body Image Scales		18		18
Phase 2 In-depth Interviews		8		6
Godin Leisure-Time Exercise Questionaire		11		12
Minnesota Leisure-Time Physical Activity Questionnaire		11		12

2.4 Sample

In 1996, at 22.5%, Edmonton's immigrant population was higher than that of Alberta (15.2%) or Canada (17.4%) as a whole. In that year, there were 6,885 immigrants from Central and South America living in Edmonton (Edmonton Social Plan, 2003). Latin Americans represent a heterogeneous group with various cultures, race, and ethnicity. This study concentrated on a large portion of this population who share certain common characteristics, including a common language, colonization experiences, and religion (Marin & Marin, 1991, as cited in Rivera Adams, 2004. Therefore, this study could include women from more than 20 Spanish speaking countries in Latin America. For the purpose of this study, I will use the term Hispanic rather than Latin American. Although, this term would include Spain, Spanish people and their culture, in my study, I only refer to Spanish speaking people of Latin America and their culture.

Thirty six Hispanic immigrant women (18 years and older) living in Edmonton participated in this study. One half of them arrived in Canada less than ten years ago (recent) and the other half has lived in Canada longer than ten years (non-recent). The women who participated in this study had immigrated as adults from a variety of countries in Latin American (Cuba, Mexico, Chile, Colombia, Venezuela, El Salvador, Peru, and Guatemala).

2.5 Measures

In this section, I will describe the specific qualitative and quantitative research instruments used in the study. I start with quantitative instruments and finish with the qualitative data collection tools.

2.5.1 Demographic Questionnaire

All study participants completed a demographic questionnaire (Appendix A), which included: age, marital status, household size, household income, ethnicity, religious affiliation, number of years living in Canada, country from which emigrated, and highest level of education completed. Additional educational questions were used to determine whether participants' foreign education was recognized in Canada and whether they held occupations or professions according to their level of education. The questionnaire also included a question about fluency in Canada's official languages (English and French). Finally, participants were asked information about medication intake and body weight changes since arriving in Canada. The information about medication intake shed light on the prevalence of certain chronic conditions such as diabetes, high blood pressure, and heart disease.

2.5.2 Acculturation Scale

An acculturation scale (Appendix B) based on language use was intended to measure the level of acculturation among recent and non-recent participants. Focus groups and interviews were intended to reveal whether participants showed signs of acculturation with respect to food habits and physical activity behaviours. Acculturation scales were based on previously used schedules and were culturally meaningful and appropriate for Hispanic participants. The acculturation scale was based on the Short Acculturation Scale by Norris, Ford, and Bova, (1996) and Wallen, Feldman, and Anliker (2002). The scale is composed of four items, based on language used at home, with friends, when reading, speaking, and thinking. Although, this scale does not measure all the dimensions of acculturation, it is expected that focus group and in-depth interview data will also provide insights about other acculturation dimensions.

2.5.3 Body Image Scale

The Stunkard figure drawings (a series of 9 figures for women, Appendix C) were used to assess body image (Stunkard, Sorensen, & Schulsinger, 1983) and glean information about cultural ideals for body size or weight. The Figure Rating Scale provides schematic figures of women raging from underweight to overweight. By examining the different drawings participants indicated: a) which figure was most representative of their current body size, b) which figure was representative of the body size they wish to look like, c) which figure represented the Latino cultural ideal, d) which figure represented the Canadian cultural ideal, and e) which figure represented the body size most attractive to the opposite gender. This instrument has been validated for test-retest reliability among Hispanic immigrant women in the U.S.

(Fitzgibbon, Blackman, & Avellone, 2000). See appendix C for complete body image scale.

2.5.4 Anthropometric measures

Measures commonly used to assess overweight and obesity include body mass index (BMI), waist circumference, and waist/hip ratio (Health Canada, 2003).

Waist Circumference is an expression of the magnitude of abdominal adipose tissue deposits and total fat mass. It is considered to be a "better indicator of Cardiovascular Disease (CVD) risk than is BMI" for Blacks, Mexican American and Whites (Zhu, Heymsfield, Toyoshima, Wang, Pietrobelli & Heshka, 2005, p. 413).

Body weight was measured using a calibrated standard balance-beam scale and height was measured with a standard height bar. Waist and hip circumferences were also measured. The height and weight of the participants were measured while clothes [but no shoes] were worn. Waist measurements were assessed with a tape measure under clothing. This quantitative data complemented qualitative data gathered during interviews on immigrants' perceptions of health, weight, and body image ideals.

2.5.5 Physical Activity Questionnaires

Participants were asked to complete two physical activity questionnaires. The first one was a short survey that was modified from Godin (1985) to include physical activities that are culturally relevant (see Appendix D).

The Godin Leisure-Time Exercise Questionnaire lists different types of exercises and categorizes them into strenuous, moderate, and mild physical activity levels.

Participants indicated whether they participated in activities in each category, provided an average number of times per week and the average session time for the activity. This survey only takes three to five minutes to complete. The query examines usual leisure-time exercise habits and does not account for household and daily activities (i.e., non-leisure physical activity). In this study, a broader definition of physical activity was used and both planned and unplanned body movements that resulted in energy expenditure as exercise were considered (Henderson & Ainsworth, 2001).

The Minnesota Leisure-Time Physical Activity Questionnaire (MLTPAQ) (Jacobs, Shucker, Knudsen, Leon, & De Backer, 1978) was used because it adds information about non-leisure physical activity (see Appendix E). The MLTPAQ is an interviewer-administered physical activity assessment tool that consists of a list of sixty-three sports, recreational, yard, and household activities. Administering this survey took approximately twenty to thirty minutes. Participants were asked to report whether or not they performed a particular activity in the last twelve months. To verify participants' responses, they were asked to also report in which months they performed the activity and the number of times per month and average time they spent doing the activity.

This MLTPAQ has been used for assessing physical activity trends in many different countries, including Canada (Craig, Russell, & Cameron, 2002). Moreover, the survey has been tested for reliability and validity with various populations, including Spanish women and older Mexican-Americans (Elosua et al, 2000; Mouton, Calmbach, Dhanda, Espino & Hasuda, 2000).

2.5.6 Qualitative Data Collection Instruments

Focus groups were conducted, as this qualitative method is best suited to understanding participants' perspectives, the Hispanic immigrant women, and the context surrounding the social facilitators and barriers to their health. Focus groups explored changing lifestyles such as food habits, cultural ideal of body size (weight), and physical activity levels. Each focus group included 6 to 10 participants and was conducted in Spanish or English, depending on the wishes of group participants. Location for the focus group depended on the recruitment source and the convenience of participants. Before starting the focus group, a description of the project was given to all participants. Some ground rules for the discussion were also set at the outset of the focus group, such as the need to allow all participants to speak and to avoid speaking at the same time.

2.5.7 Focus Group Interview Questions

A semi-structured interview instrument with open ended questions was designed with assistance from community members. Using the funnelling approach (Rothe, 2003), the questions moved the discussion from broad concepts to specific issues of concern. Broad questions are intended encourage participants to reminisce about particular issues, including migration experiences. Although, an interview guide was developed, the focus groups were a free-flow discussion and probes were only used when issues of interest did not surface in the discussion. Focus group questions included:

1. What was your first meal in Canada? [probe: first impressions of food in Canada]
2. How do foods in Canada differ from foods in your home country? [probe: meal patterns]

3. What do you miss about your home country? [probe: foods]
4. How has your diet changed since you've moved to Canada? [probe: access to foods, cooking techniques, gender roles]
5. What are traditional foods for pregnancy/nursing? Do you continue to follow these practices in Canada? Why or why not? [probe: body politic]
6. What are traditional foods for babies/children? Do you continue to follow these practices in Canada? Why or why not? [probe: generational differences]
7. What does it mean to be healthy?
8. What other things are important to do to maintain health? [probe: why, gender roles/differences, generational differences, & activity levels]
9. What foods should you eat to maintain health? [probe: why]
10. What body size is healthy? [probe: cultural values of body size]
11. What kinds of pressure are there to maintain a specific body size in Canada, in your home country?
12. How does Canadian culture portray food, healthy eating, and healthy weights? [probe: dieting]

Focus groups were scheduled for 2.5 hours, including time for completion of demographic questionnaire, body image assessment, acculturation scales, and anthropometric measurements.

2.5.8 In-Depth Interviews

In the second part of the study, 14 in-depth interviews were conducted; eight with recent and six with non-recent immigrant women. Focus group participants were asked if they wish to volunteer for an in-depth interview, which was conducted using a life-history approach. The interview began with the following statement: "Tell my about your first day in Canada". It was expected that participants would begin to

reminisce about the migration process. If changes in food habits, physical activity levels, body size (weight) did not come up in the story, I guided the participant to tell her story about these lifestyle behaviours. Interviews were conducted in the language of choice of the participant and took place where the study participant felt most comfortable (e.g. their home, community centre, University campus, or my home). Interviews were schedule when it was most convenient for the participants. Interviews lasted anywhere between one to three hours, including time for completion of two physical activity questionnaires.

2.5.9 Researcher Journal

One the main premises of qualitative research is that a researcher cannot fully detach herself from the research study. The notion of objectivity, impartiality, and value neutrality is simply impossible because a researcher's "actions and decisions will inevitably impact upon the meaning and context of the experience under investigation" (Horsburgh, 2003, p. 308). In my particular case, I must disclose that I am a Hispanic immigrant woman with similar migration experiences as the study participants. As a "researcher-insider", it was important for me to document my experiences in this research endeavour. Throughout this study, I documented my relationships with the study participants, including my personal feelings and emotions. Since, I have lived through similar experiences as the women I have interviewed in this study; I also recorded my own behaviour and experiences in relation to the participants' experiences. I also tried to constantly be aware of how my influence and relationships with participants would affect the data collection and analyses. For example, my ability to empathize and sympathize with participants was important for the achievement of this study's objectives and goals. I believe that the women who participated shared their experiences more openly because I am a

Hispanic immigrant woman. Some community members have shared with me that they decided to participate in this research study to show their support for Hispanic women in academics.

Reflecting on my role as researcher and community member has been part of both the research process and product. I used my researcher journal to review emerging and confirm emerging themes that were used in the final data analyses. I also decided to use "first person" in my thesis as a way to demonstrate my subjective involvement in this study. As a critical health researcher, however, it is my duty to interpret and analyze this study's data in a way that will lead to changes for immigrant women overall.

Research with immigrant communities requires skills such as cultural and linguistic competence. Papadopoulos (2002) identifies two layers of cultural competence. First, a researcher should have culture-generic skills, which are knowledge and skills applicable across ethnic groups in order to develop culturally competent data collection tools, methods of analysis and reporting. Secondly, a culturally competent researcher should have culture-specific skills. As a community member, I bring cultural competence skills necessary for conducing research with Hispanic immigrants. My volunteer experience with MCHB continually allows me to develop culture-generic skills as I interact with other ethnic groups. I am also fluent in Spanish and can work directly with community members and study participants in the language of their choice.

2.6 Procedures

2.6.1 Entry to the Community

Before starting this study, the investigators working on this project, approached a local immigrant and refugee service agency. This agency, the Multicultural Health Brokers Cooperative (MCHB), agreed to collaborate with the Centre for Health Promotion studies in the planning, development and implementation of this study. Three immigrant communities agreed to be involved: South Asian, Arab and Hispanic. In the case of the South Asian and Arab communities, community members were recruited to develop interview guides and consent forms. As a member of the Hispanic community I worked with the principal investigator and the South Asian and Arab community members throughout this process. I also translated all study instruments and consent forms. I consulted with other members of my community to verify the translation and cultural sensitivity of my work.

I used many recruitment sources, including churches in the community, English as a Second Language Schools, community groups, the Multicultural Health Brokers Co-operative, and the YMCA-YWCA.

2.6.2 Informed Consent, and Ethics Approval

Participants were compensated for their participation in this study. Focus group participants received a grocery gift certificate for $20 CAD and in-depth interview participants received an honorarium of $30 CAD. Childcare was provided when necessary. Location for focus groups and in-depth interview was determined based on participants' convenience. Food and beverages were also provided.

Before starting the focus groups or interviews, participants were informed that this was a voluntary activity and that they were not obliged to answer any of the questions. Written informed consent was obtained from each participant. Ethics approval was also obtained through the Department of Anthropology at the University of Alberta. To ensure confidentiality of the study participants, I developed a coding system for the focus groups and individual interviews. None of the transcripts contain the names or any other identifying data. All quotes used in this report include the codes I developed. Pseudonyms were also used. For instance, in some cases, names and the country of origin was to protect participants' identity.

2.6.3 Qualitative Data Recording, Translation and Verification

All focus groups and interviews were tape-recorded, transcribed and translated. In this study, all except one focus group was conducted in Spanish. I recorded my field notes and researcher journal in English.

I translated all the study instruments and transcripts into Spanish with the assistance of several bilingual community members. Many factors have to be taken into consideration when translating records. As in the case of most modern languages, there are variations between written and spoken Spanish from country to county (Rivera Adams, 2004). Considering these vocabulary differences, I ensured clear communication by including the appropriate variations of the word in all research materials. I also consulted community leaders to secure guidance on the culturally and linguistically appropriate translation.

When necessary, participants were contacted by phone during the data analysis process for further clarification. Participants had been asked to provide their contact information for this purpose. Providing contact information was not mandatory. All participants provided this information. Only three participants were contacted to verify information. A strategy for ensuring that data were not lost through translation was to conduct *some* of the analysis in Spanish. Then, after translating the data and analysing the results in English, the two sets of analysis were compared to ensure nothing was missed. In order to improve the dissemination of the results, a final report in both English and Spanish will be prepared.

2.7 Analysis

In this section I will describe quantitative and qualitative methods of analysis and provide a brief overview of the guiding theoretical frameworks that influenced my data analysis and interpretation.

2.7.1 Socio-Demographics

Average age and years in Canada was calculated. In addition, percent of participants in each education category was also determined. Percentage of participants living in poverty were estimated based on poverty rates from Statistic Canada's before tax low income cut-offs (1992 base) for 2004.

2.7.2 Acculturation

The Short Acculturation Scale is composed of four questions. Each response has a 5-point scale. Responses were scored as follows:

- Speaks Spanish 100% of the time equals to a score of 1.

- Speaks Spanish 75% of the time equals to a score of 2.
- Speak Spanish 50% of the time equals to a score of 3.
- Speak Spanish 25% of the time equals to a score of 4.
- Speak English 100% of the time equals to a score of 5.

A value between 1 and 5 was assigned to each question. A score of one means low acculturation level, while a score of 5 indicates a high degree of acculturation. The scores for each question were summed for a total score ranging from 4 to 20. The higher the sum of the scores is, the higher the level of acculturation.

2.7.3 Body Image

Scores for current size, desired size, Canadian cultural body size ideal, Hispanic cultural body size ideal, and men's preferred body size for women were calculated based on participants' responses (Buliki et al., 2001). Body sizes range from one to nine in each category.

2.7.4 Anthropometrics

Body Mass Index was calculated by dividing weight in kilograms (kg) by the height in metres squared (m^2). Body Mass Index were used according to the World Health Organization adult obesity guidelines, were a BMI of 30.0 kg/m^2 means a person is obese and a BMI between 25.0–29.9 kg/m^2 means a person is overweight (Bélanger-Ducharme & Tremblay, 2005). Zhu et al. (2005) recommend that clinical action thresholds corresponding to BMI levels of 25 (overweight) and 30 (obese) be established at 83 cm and 94 cm for women. According to these WC cut-offs, both recent and non-recent study participants are at risk for CVD risk. Waist-to-hip ratio was calculated by diving waist circumference by hip circumference.

2.7.5 Leisure-Time Physical Activity (Godin, 1985)

In this survey, participants reported how many times per week they engaged in strenuous, moderate, and light activities. Only activities fifteen minutes or more per occasion were included (as specified in Jacobs, Ainsworth, Hartman, and Leon, 1993). I multiplied the frequency of each of these categories by the estimated value in METs. Strenuous activities are estimated to have a METs value of nine, moderate activities have a MET value of five and light activities a value of three (Bengoechea, Spence, & McGannon, 2005). I then calculated total weekly Leisure-Time Physical Activity (LTPA) by adding the products of the separate activities (strenuous, moderate, and light). To be considered sufficiently active, a woman must reach 35 METs per week or 300–400 MET-minutes per day (as cited in Bengoechea et al., 2005). This is the equivalent to a weekly energy expenditure of 2,000 kcals, which is considered sufficient for reducing risk of heart disease.

2.7.6 Minnesota Leisure-Time Physical Activity Questionnaire

I used the data from the Minnesota Leisure Time Physical Activity Questionnaire (MLTPAQ) to report: 1) total energy expenditure, 2) energy expenditure for household activities and non-leisure types of physical activities, and 3) types of activities most frequently engaged in by the participants. Since, the study sample was too small, multivariate analysis was not possible. In this survey, activities are reported by week, month, trimester and year. Energy expenditure for each activity was calculated by multiplying the amount of time spent in each activity by the MET rated for the activity and divided by the number of days in the time period. Total energy expenditures were calculated based on activities reported in the past year. To calculate total daily energy expenditure I added the products of the separate activities. The

same procedure was followed to determine the energy expenditure for non-leisure time activities.

2.7.7 Statistical Analyses

All the quantitative analyses were conducted with the Statistical Package for the Social Sciences (SPSS), version 12.0.

Multivariate analysis to determine differences between groups of immigrant women who have lived in Canada for less than ten years and those who have lived in Canada for more than ten years was not possible due to small sample size. Two participants in the recent group did not provide anthropometric measurements (one woman was pregnant and another did not consent). Therefore, the sample for the recent group was only sixteen women. The non-recent group had eighteen participants.

In behavioural sciences, effect size (ES) is used to measure the magnitude of a treatment effect (Cohen, 1992). ES or *d* represents the difference between the means, $M_1 - M_2$, divided by the average standard deviation of both groups. Cohen (1992) categorized effect sizes as small, $d = .2$," "medium, $d = .5$," and "large, $d = .8$. Independent Samples T-test was conducted for all the variables that showed medium and large effect sizes. If significant differences were detected based on the Independent Samples T-test, an ANCOVA test was implemented to determine potential co-variables (e.g. age). Frequencies on BMI status were also analysed.

Linear regression analysis to examine the relations between socio-demographic variables and body dissatisfaction, physical activity levels, and acculturation levels in each group was not possible either.

2.7.8 Qualitative Data Analysis Method

I used both inductive and deductive research methods in my analysis. First, I used inductive qualitative research methods to arrive at general themes. I reviewed each transcript several times for surface descriptions of "easy-to-identify themes" in the data (Rothe, 2003, p. 64). As soon as I finished one focus group or interview I transcribed and reviewed for emerging themes. I also used deductive methods to determine if these themes were theoretically relevant to the healthy immigrant effect and the ecological model of health promotion. I followed this process throughout the data collection phase and stopped collecting qualitative data once I had reached the saturation point. The saturation point was reached when no new themes emerged from the transcripts.

As I interviewed more women, I tried to clarify concepts and determine how certain concepts vary depending on an individual's characteristics and experiences. For example, in the individual interviews stage, I tried to sample participants who had arrived to Canada at different ages, with different levels of education, and who had different marital status. I also tried to ensure I interviewed women from different socioeconomic contexts. I looked for deviations from emerging themes and comparisons with new data from various groups and individuals.

In the induction phase, I coded all surface description themes extracted from the data and followed a deep-structure analysis as described by Rothe (2003). This analysis "looks at context, circumstances, characteristics, hidden assumptions, systems of logic used" by the participants (Rothe, 2003, p. 64). In the deductive phase, I used, primarily, the ecological model of health to frame qualitative themes. Rather than just

looking at the lifestyle behaviour changes participants experienced, I also tried to determine the deep assumptions and reasons behind these lifestyle changes. My analysis and interpretation was also guided by several other research theories and frameworks, which I describe below.

The main guiding model in my study is the ecological health promotion model, within a critical social perspective. By extending this model, I can compare it to existing models available in the immigrant health literature. The most comparable model in the immigrant health literature is the interactions paradigm. In addition, I considered concepts from health and culture (or acculturation), globalization, and gender and health. Using these models, theories, and frameworks I was able to position the emerging themes into an organized pattern.

CHAPTER 3 Results

In this chapter I will first report quantitative results, followed by the qualitative analysis and interpretation. In the qualitative analysis, major concepts and sub-themes will be discussed first, followed by two case studies. These case studies will profile one recent and one non-recent immigrant woman in order to show how different migration experiences are associated with different levels of integration and acculturation. Whenever possible, the stories of the women in profile are linked to their experiences of weight change. Later in my discussion, however, I will make more direct links between migration, integration, acculturation and obesity using existing literature and research theories. At the end of this chapter, I summarize the results from this study.

3.1.1 Quantitative Results

Data from thirty-six women were included in this analysis. Data were analyzed using descriptive and inferential statistics. Sample characteristics are presented in Table 2 and 3.

3.1.1.1.1 Years in Canada

Average time in Canada was over twenty years for non-recent and close to three years for recent.

3.1.1.1.2 Country of Origin/Migration History

The women came from a variety of countries in Latin American (Cuba, Mexico, Chile, Colombia, Venezuela, El Salvador, Peru, and Guatemala), with the majority of arriving in Canada directly from their country. Only four women reported living in

another country before coming to Canada. Their stay in other countries was relatively short and probably did not influence their acculturation to Canadian culture.

3.1.1.2 Language Skills

Many of the participants identified themselves as bilingual, but the majority reported that Spanish was the primary language in the household. Only three women reported English as the primary language in the household; each married to Canadian men who did not speak Spanish.

3.1.1.3 Marital/Family Status

In terms of marital status for the recent group, three were divorced, another three were married with no children, eight were married with children and four were single. More evidence that immigrant women are not coming to Canada just as dependents. Among non-recent participants, only one woman reported being divorced. However, three reported to be widowed. One was married with no children and 12 were married with children.

3.1.1.4 Ethnicity

When asked about their ethnicity, many participants were confused; they did not know what was meant by "ethnicity". Twenty six women reported their ethnicity as Latina and ten of those included their nationality as well. Two reported their ethnicity as white, three as Hispanics, three as Spanish, and one as Mestizo. Mestizo is a term used to designate people of mixed European and indigenous ancestry. Since, I wanted participants to identify and define ethnicity for themselves; I did not provide a pre-determined definition. As mentioned previously, ethnicity is related to a person's sense of identity, which can be based on nationality and linguistic origin. Many of the study participants, however, interchanged ethnicity with race. Future research is

required to investigate how a person's identification with ethnicity intersects with acculturation.

3.1.1.5 Religion

Thirty-three women reported to be Catholics, with recent immigrants more likely to be currently practicing their religion. The majority of non-recent immigrant women reported being non-practicing Catholics.

The language skills, ethnicity and religious affiliations of the participants demonstrate the common characteristics of this community.

3.1.1.6 Education

Thirty three per cent of non-recent and 50% of recent participants reported having a University degree (Table 2). However, the majority of women (n = 22) reported that their education was not recognized in Canada. Twenty three (64%) women reported working in a different occupation in Canada than the one they were trained for in their country. Most of these twenty-three women reported that their education was not recognized in Canada. This is a similar trend as observed in the general immigrant population. As mentioned in the literature review, 62% of immigrants arriving in Canada in the year 2001 had to take on lower-skilled occupations than originally intended.

3.1.1.7 Age

Recent immigrant women (M_{age} = 43 yrs, SD = 15) were younger than non-recent (M_{age} = 54, DS = 8.4) (Table 3). This finding is congruent with general Canadian immigration trends, where more recent immigrants in the independent immigrant

category are more educated and younger (Citizenship and Immigration Canada, 2003).

3.1.1.8 Income

Despite being relatively young and educated, 61.1% of recent immigrant women reported low annual household incomes (< 25,000). This is significantly higher than levels reported by Citizen and Immigration Canada in 2000. In that year, 29.3% of recent immigrants to Edmonton (arriving 1991-2001) had low income (< $33,600). Low income rates for non-recent women in this study were 27.8% and the overall percentage of women reporting low household income was 44.4% (Table 2).

3.1.1.9 Anthropometrics

Average BMI for recent immigrant women was 26.11 kg/m^2 ± 4.14 and 29.63 kg/m^2 ± 3.68 for non-recent women. Approximately, 39% of recent and 62.2% of non-recent participants were overweight and obese (BMI > 25 kg/m^2). Both groups were overweight but the non-recent group was closer to being obese. Average WC was 89.62 ± 11.57 cm (recent) and 94.72 ± 7.96 cm (non-recent).

As outlined in Table 3, several anthropometric variables exhibited medium to large differences between recent and non-recent immigrant women. In particular, BMI levels (d = 0.9), waist circumference (d = 0.52), and weight (d = 0.59). To determine if the differences were significant, an independent samples t-test was conducted for each variable. This test showed a significant difference in BMI levels between the two groups, t (1, 31) = -2.63, p. 0.013, with recent immigrant having a smaller average BMI (26.11 kg/m^2) than non-recent immigrant women (29.63 kg/m^2). Because age is associated with BMI and there was an age difference between the groups ANOVA

was conducted with age as a covariate. No difference in BMI was observed, after controlling for age. Similarly, for WC there was no significant difference between groups, $F(1, 32) = -1.511$, $p = 0.141$. No significant differences between the groups with respect to any of the other anthropometric variables.

3.1.1.10 Weight Change and Chronic Diseases

In the recent group, 14 out of 18 women reported gaining weight after arriving in Canada. Four women reported no change in body weight. All except one woman in the non-recent group reported gaining weight since they arrived in Canada. Overall, 86% of the participants reported gaining weight. This is congruent with the anthropometric findings. Two women reported taking medication for diabetes, while seven reported taking medication for high blood pressure and one woman reported taking medication for heart disease.

3.1.1.11 Body Image Ideal

A medium effect size ($d = 0.59$) for differences between recent and non-recent participants were detected for current body size reporting, with non-recent participants identifying a larger body size for themselves. No statistically significant differences existed between the recent and non-recent groups with respect to self-identified body size, $t(1, 34) = -1.70$, $p = 0.098$ (Table 3).

Mean current body silhouette for recent was 4.194 ± 1.69 and 4.972 ± 0.947 for non-recent. Desired body size was 3.00 ± 0.84 (recent) and 3.556 ± 0.616 (non-recent). The distribution for both recent and non-recent participants was shifted to the left by one silhouette, with women generally desiring to be 1 to 1 1/2 size smaller. Desired body size ideal was different between groups ($d = 0.76$), with recent immigrant

women desiring a smaller body size. This means that recent immigrants were less satisfied with their current body size. However, no statistical differences were found, t (1, 34) = -0.925, p = 0.362. Since recent immigrants are younger, age could be a contributing factor in this difference. Cultural body size ideal was also different between groups (d = 0.53), with non-recent identifying a larger cultural body size ideal. However, no statistical differences were found t (1, 34) = -0.698, p = 0.49.

Non-recent and recent immigrant women identified similar Canadian cultural ideal body size ideal (3.17 and 3.71 respectively). Both groups perceived there is a slightly larger ideal body size in the Canadian culture compared to their own culture. No statistically significant differences existed between the recent and non-recent groups with respect to Canadian cultural body size ideal variables.

Both recent and non-recent immigrant women perceived that men preferred a smaller body size for women than their own preference. They also perceived that men preferred a smaller body size for women compared to the Canadian cultural ideal and their own cultural ideal.

3.1.1.12 Acculturation

Both recent and non-recent groups show an average acculturation score below 10 (7.23 ± 3.06 recent and 8.72 ± 3.95 non-recent) indicating a low degree of acculturation of most participants, as measured by language use (Table 3). A small to medium effect size (d = 0.43) was detected. No significant differences existed between the recent and non-recent groups with respect to acculturation levels, t (1, 34) = -1.273, p = 0.212.

Table 2: Socio-demographic characteristics.

	Recent (n = 18)	Non-Recent (n = 18)	Overall (n = 36)
Education (% in category)			
Little formal education	11.11	5.56	8.33
High School	16.67	22.22	19.44
Some College	11.11	16.67	13.89
Bachelor	50	33.33	41.67
Masters	11.11	11.11	11.11
PhD	0	5.56	2.78
Vocational	0	5.56	2.78
Income (% in category)			
< 25,000	55.56	16.67	36.11
25,000 - 35,000	16.67	16.67	16.67
35,001 - 50,000	5.56	11.11	8.33
50,001 - 71,000	5.56	38.89	22.22
71,001 - 100,000	16.67	11.11	13.89
100,001 - 115,00	0	5.56	2.78
> 115,000	0	0	0
In Poverty*	61.11	27.78	44.44

*Poverty rates based on Statistic Canada's before tax low income cutoffs (1992 base) for 2004.

Table 3: Anthropometrics and Body Image Results.

	Recent			Non-Recent			Overall			
	N	Mean	SD	N	Mean	SD	N	Mean	SD	d	t
Age	18	43	15.24	18	54.06	8.475	36	48.53	13.39	0.93	
Weight	16	64.5	12.26	18	70.74	9.133	34	67.79	11.01	0.59	
Height	16	1.57	0.059	18	1.546	0.054	34	1.557	0.057	0.42	
BMI (kg/m2)	16	26.1	4.142	18	29.63	3.678	34	27.97	4.236	0.9	-2.63 *
WC (cm)	16	89.6	11.57	18	94.72	7.962	34	92.32	10.01	0.52	-1.511 ***
WHR	16	0.87	0.047	18	0.88	0.041	34	0.874	0.044	0.29	
Body Image											
Current	18	4.19	1.69	18	4.972	0.947	36	4.583	1.407	0.59	-1.70 **
Desired	18	3.00	0.84	18	3.556	0.616	36	3.278	0.779	0.76	-0.925 ***
Hispanic Ideal	18	2.81	0.86	18	3.25	0.827	36	3.028	0.861	0.53	-0.698 ***
Canadian Ideal	18	3.17	1.295	18	3.306	2.217	36	3.236	1.791	0.08	
Men's Ideal	18	2.78	0.878	18	2.639	0.936	36	2.708	0.897	0.15	
Years In Canada	18	2.85	2.349	18	22.35	7.521	36	12.6	11.31	3.95	
Accultu-ration	18	7.22	3.059	18	8.722	3.953	36	7.972	3.566	0.43	-1.273 ***

d = Effect Size (Cohen, 1992), * $p < 0.05$, **$0.05 < p < 0.10$, *** $p >= 0.1$

3.1.1.13 Leisure-Time Physical Activity (Godin, 1985)

Only 27.3% of recent and 41.7% of non-recent immigrant women were considered to be physically active. Table 2 summarizes leisure time physical activity results from the LTPA survey by Godin (1985).

Table 4: Leisure Time Physical Activity Measurements (Godin, 1985).

	Recent Immigrants (n = 11)		Non-Recent Immigrants (n = 12)	
	Mean	SD	Mean	SD
Weekly Leisure-Time Physical Activity (LTPA) (MET-min*d^{-1})	34.7	37.46	31.25	12.17
% Active (≥ 300 MET-min*d^{-1})	27.3		41.7	

3.1.1.14 Minnesota Leisure-Time Physical Activity Questionnaire

Overall energy expenditure for recent immigrant women was 765.9 MET-min-d ^{1} (± 843.4) and 941.6 MET-min-d ^{1} (± 541.6) for non-recent. This includes household activities. Non-recent immigrant women were more likely to report engaging in household related physical activity. Energy expenditure for household activities for the recent group was 84.4 MET-min-d ^{1} (± 66.9) and 213.1 MET-min-d ^{1} (± 185.6) for non-recent immigrant women. Table 5 presents energy expenditures for leisure time and household physical activities.

Table 5: Non-Leisure Time Physical Activity Measurements (Minnesota Leisure Time Physical Activity Questionnaire)

	Recent (n = 11)		Non-Recent (n = 12)	
	Mean	SD	Mean	SD
MLTPA Total Energy Expenditure in PA-EEPA) (MET-min-d ^{1})	765.9	843.4	941.6	541.6
MLTPA Energy Expenditure in PA-EEPA) (MET-min-d ^{1}) Household	84.4	66.9	213.1	185.6

To determine which types of activities participants engage in the most, the number (and percentage) of participants reporting various activities was calculated. Table 4 lists activities by frequency of reporting. The majority of the most frequently reported activities are classified as non-leisure physical activity. Cleaning the house was the most reported type of non-leisure physical activity, while walking for pleasure was the most frequently reported type of leisure time physical activity. Walking fast (i.e. non-leisure time activity) was reported more frequently by non-recent immigrant women. Dancing was also highly reported (82.61%)

Table 6: Frequency of Reporting Leisure and Non-leisure Time Physical Activities.

Activity	Participants reporting activity	%
60 - Cleaning the House	23	100.00
5 - Using Stairs	22	95.65
1 - Walking for Pleasure	22	95.65
61 - Moving Furniture	20	86.96
3 - Walking with shopping/grocery cart	20	86.96
10 - Dancing	19	82.61
15 - Walking fast	17	73.91
4 - Walking in shopping mall carrying shopping bags.	16	69.57
12 - Playing with children (running, jumping).	15	65.22
6 - Hiking	12	52.17
55 - Snow Shovelling by Hand	12	52.17
53 - Weeding, Spading, Digging, Filling in Garden	12	52.17
2 - Walking to and/or from work	10	43.48
7 - Backpacking	7	30.43
26 - Swimming (more than 150 meters in the pool)	7	30.43
13 - Home Exercise	7	30.43
58 - Painting inside of House (includes wall paper)	6	26.09
54 - Weeding and Cultivating Garden	6	26.09
11 - Aerobics or Ballet	6	26.09
51 - Mowing Lawn walking Behind Power Mower	5	21.74
19 - Weight Lifting	5	21.74
14 - Health Club Exercise	5	21.74
31 - Ice or Roller Skating	4	17.39
16 - Jogging	4	17.39
56 - Carpentry in Workshop	3	13.04
52 - Mowing Lawn Pushing Hand Mower	3	13.04
34 - Volleyball	3	13.04
33 - Bowling	3	13.04
29 - Skiing (Downhill)	3	13.04
27 - Swimming at the beach	3	13.04
9 - Bicycling to Work and/or for Pleasure	2	8.70
8 - Mountain Climbing	2	8.70
68 - other	2	8.70
50 - Road or Mountain Cycling	2	8.70
45 - Golf (Walking and Carrying Clubs)	2	8.70
39 - Basketball: Non-Game	2	8.70
36 - Tennis (Singles)	2	8.70
28 - Snorkeling	2	8.70
17 - Running (8-11 km/hour)	2	8.70
69 - Tai Chi	1	4.35
65 - Fishing in Stream with Wading Boots	1	4.35
59 - Painting outside of House	1	4.35
49 - Motorcycling	1	4.35
46 - Handball	1	4.35
43 - Soccer	1	4.35
42 - Squash	1	4.35
35 - Table Tennis	1	4.35
32 - Horseback Riding	1	4.35
23 - Canoeing on a Camping Trip	1	4.35
22 - Sailing	1	4.35

3.1.2 Qualitative Results

3.1.2.1 Introduction

After reviewing the transcripts several times and finding common threads, one overriding concept emerged and within it several sub-themes. The results are organized under a set of emerging themes. The overriding theme that appeared frequently in the data is "health and globalization". Within the context of health and globalization, the two more major sub-themes are: "health and acculturation" and "migration and integration". Each of these sub-themes has several components. An overview of themes and sub-themes is provided in Table 7.

Table 7: Overview of Qualitative Findings.

Health and Globalization	
• Globalization causes social and cultural changes in Latin America • Globalization creates migration inequities • Globalization, the media, and changing body size ideals • Globalization and dietary changes in Latin America • Safety and physical activity	
Health and Acculturation	**Migration and Integration**
Ideas, beliefs, understandings of health dimensions	**Sources of Stress**
Body Image	Language Barriers and Obesity
90-60-90 and shaped like a guitar	Missing home/nostalgia and lack of support networks
Jennifer Lopez' body shape	Negotiating Pre-Migration Expectations and Reality in Canada
Canadian women are bigger and more confident	Disillusionment and Loss of Social Status
Obesity is not a problem in Latin America	Barriers to English as Second Language (ESL) Programs
Canadians are couch potatoes	Socio-cultural Transition, Stress and Resilience
Appearances in Latin America are more important than in Canada	Discrimination, Prejudice, and Stress
Gender differences	Immigration Policies and Migration Stress
Perceived barriers to health and healthy body weight	Migration Stress and Age
Comer con gusto – Eating with delight	Lack of Time
Differences between Canadian and Hispanic foods and diets	**Health Consequences of Migration Stress**
Even the water makes you fat	Fatigue and Depression
Lack of taste	**Resilience and Taking Risks**
Eat breakfast like a king, lunch like a prince, and supper like a beggar	
Meal Staples	
Access to Hispanic traditional foods in Canada	
Diet acculturation	
Alcohol consumption and smoking	
Barriers and facilitators to leisure-time physical activity	
Pre-migration physical activity behaviours	
Normative, cultural and personal believes about exercise	
Barriers to physical activity in Canada	

3.1.2.2 Health and Globalization

The core theme in this study, health and globalization, first came up when non-recent participants reflected on the fact that the way they remember traditional foods and food habits from their country may not be the same anymore because time has passed and the world has changed. Some of the changes observed in Latin America as a result of globalization are: social and cultural changes, dietary changes, changing gender roles, physical inactivity, and rising levels of obesity.

3.1.2.2.1 Globalization Causes Social and Cultural Changes in Latin America

The women told me that over the years they have observed social and cultural changes, which have influenced their health behaviours in Canada, but they have seen similar changes among family and friends in their home countries.

> Participant 9: That was before...this is years ago we are talking about in the past...You don't know how it is now...it could be like in Mexico [more westernized]...because all these things they change... Participant 2: And traditions change too. Things change. We are not the only ones who change. Focus Group 2- Non-recent (200-205)

When asked why they thought societies and cultures in Latin American were changing, they suggested that there has been an overall social change due to influences from the Western world.

> Participant 2: Because it is the influence of here going there...everywhere...things have changed there now...now they work long hours over there, you don't have time either...the distance...now the distances you have to travel there...it's horrendous...so you have to stop anywhere to eat, instead of going home and eating lunch, they stop and eat at McDonalds or anywhere...Focus group 2- Non-recent (1174-1177)

The dialogue made women reflect on potential reasons for the social changes they observe in their countries. Specifically, women talked about the consequences of globalization. Participants perceived that large transnational companies are not only

penetrating the economic markets in Latin American but they are also changing language, customs and traditions.

> Participant 7: I have an anecdote...we talk about this...because we are trying to teach our children Spanish...one day we went to the restaurant and they saw chicken fingers and they started saying: "I want chicken fingers" and I said" "Well, how do you say that in Spanish"? and they said: "AH...'pollo empanizado'...I don't know", they said. And we went to Mexico, we went to a restaurant and when I saw the menu and it was written "chicken fingers". Yes, it was in English. Yeah. Focus group 2- Non-recent (1188-1194)

> Participant 3: I want to go back to what she was saying that there was no translation for the chicken fingers...that is true because there are all the same fast food restaurants that are here...there are there now. They are not any different. You have Kentucky Fried Chicken, you have Dairy Queen...and they don't change the menu. No, no...it is not changed to fit the culture...it is the same food you eat here. Focus group 2- Non-recent (1201-1205)

> Participant 8: It is the same. When Canadians go on a tour or to visit our countries they go straight to those places because it is exactly the same. Focus group 2- Non-recent (1206-1207)

Women also commented on the powerlessness of Hispanic people to do anything about this corporate invasion of their culture and language.

> Participant 2: No, in our countries, people don't have the guts to tell them...to translate things. Focus group 2- Non-recent (1210-1211)

> Participant 5: They are so rich... you know...the corporations...they have all the money...they even send all the ingredients and packaged foods directly from here to our countries...you know over night on the plane. Focus group 2- Non-recent (1208-1209)

Social changes such as longer work hours and more rapid lifestyles also influence gender roles, family relationships, and health behaviours.

> In Santiago all is about time, and I felt that Santiago, for my girl [daughter]...it was tough... and I would have to have a live-in nanny because in Chile one doesn't work until 4:30. No, in Chile...at 6:00 PM minimum and they look at you like "why are you leaving so early"? Minimum until 6:00 PM and do extra work on Sunday and Saturday. There is little respect for the worker. One thing that would bother me was that my boss would say to me on Friday... he would call me and tell me "you are going to Valdivia on Monday"... it wasn't: "could you go"? It

> was "I will send you the ticket, okay". What can you do? I would miss my friends' birthdays or my nieces' birthdays... I would miss going to the gymnasium. I tried to at least to be able to do exercise two or three times a week. I had to get off the plane and go to the gym, because you would leave work at 6:00 PM or 7:00 PM or at 8:30 PM and so one's life is postponed until later. And at that time the [fitness] classes had already started. Individual Interview-1-Recent (121-137)

Some women believe the westernization of their home countries is changing human relations and the social fabric of their societies. Some of these changes are positive while others are seen as detrimental. For example, as more women enter the work force, their family eating habits must change. Consumerism is also increasing.

> Now people don't visit my mother, because everyone is working. Now there are diabetic and obese children in Chile because there is that junk food. If the mother works... if you work...then...for example, my mother would make us (stew), seafood she would take an hour or two to make lunch for us. I can't do that with my daughter... in the end she ends up eating a sandwich. So the changes have to do more with the movement of the woman in the field of labour. But we deserve it, because it was generations coming. The incidence of divorce is higher also...because before the woman didn't have the option to divorce... she couldn't, even though the man would hit her, was alcoholic that they wouldn't give them money, they don't do anything in the home, they didn't have an option. Individual Interview-1- Recent (684-694)

As labour markets change in Latin America, people must work more for their money. Families now require two incomes and many women must enter the work force. This, again, causes dietary changes for the entire family.

> Yes, because before, life was more relaxed. The man worked; there was no television so there was no time to be consumed by that. There were no computers so one did not live with that stress. There were no telephones in houses and so there was more time. If the woman stayed at home, there was more time to make the meals more natural; cook in the evenings. But nobody does that anymore. Not even over there because now both people are working and the money is not enough as it is here. Here people work hard and everything but people can buy themselves a home, by a car, save, but over there, over there you have only one car. To buy a house it is something really difficult also. Eh, it appears that one gets compensated here more for what one works. Here it's like one receives more. Individual Interview-5 Recent (291-300)

3.1.2.2.2 Globalization Creates Migration Inequities

One engineer from Venezuela told me her story, which reveals that transnational companies can create social inequities. When coming to Canada, immigrant engineers must go through several exams in order to get their credentials recognized. The process is expensive and time consuming. Transnational companies, however, can sponsor engineers working in their sister companies in Latin America. These engineers do not have to go through the long and strenuous credential process.

> There are cases that I know of, for example, people that have come from Colombia, for example people that come from [x] sister company that come to work as engineers here in Canada, they come to do the same engineering job, they don't do tests, they only have to take the ethics exam because that is for everyone, but if one does not have the experience in the economy, of course one has to take it, but they don't have to take the technical exams. So that makes me ohhhh! Yes I know of that case and other cases. Individual Interview -5- Recent (671-678)

In this case, a transnational company working in Latin America brings skilled professionals from Latin American countries and bypasses regulatory mechanisms that exist for recognizing immigrants' credentials. This demands further investigation into policy or policies that create social inequities among immigrants in Canada. Another consequence of globalization is further exploitation of developing countries by industrialized one. This level of exploitation also has impacts on the health of Hispanics.

> But remember that technology comes to all countries... of course; it depends on the economy of each... but think of all the garbage that they send to our countries... pesticides, insecticides, all the things that they can't use anymore in the States, so they send them there. A present for them! Why? Because they don't have anywhere else to get rid of it. So what do they do? "We're going to give them this pesticide, this fertilizer for agriculture, for the poor... for everyone." So, they give you something and then you are obligated to give something in return. So, this is all contaminating our countries and now that's what they're eating too. Look at all this biogenetics to patent seeds... so that no one else... I don't think that anyone should have the right to patent a seed, when it's Mother Earth

> that has given it to you. But what... and its not nutritional, that's been proven. It's been proven that chickens fatten up in 80 days. And to what size? ... That's what we eat here... Yeah, if you buy 5 pounds of chicken you get 3 pounds of fat. Individual Interview-13 Non-recent (675-688)

Further investigation is required to determine the ethical consequences of globalization processes. According to participants in this study, globalization processes allow corporations to exploit people and to create social inequities both in Canada and underdeveloped countries. These social inequities are undoubtedly linked to health outcomes for immigrants in Canada and people in underdeveloped countries. For instance, employment inequities as a result of lack of recognition of credentials will have an impact on immigrants' ability to integrate into the Canadian society. Inability to ingrate can affect peoples' health. The specific mechanisms through which social inequities influence peoples' health continues to be explored (Wilkinson & Marmot, 2003). Some of these mechanisms will be explored in the theme of migration and stress of the current study.

3.1.2.2.3 Globalization, the Media and Changing Body Size Ideals

Transnational corporations advertise through the media all over the world. Participants in this study gave me examples on how the media promotes a thinner Western body ideal.

> Participant 7: I would say...I came here 12 years ago and down there [Mexico] I was shocked...for I was fat for them...for the guys...I think here...Canadians...guys...they don't care much about the weight. Or at least...at the University where I was studying... when I was at the University in Mexico...they would tell me: "You are fat. You have to stop eating chocolates". You know those kinds of comments from guys...and you know...that's none of their business. But, yeah...the pressure is there...and I actually have a niece and she went anorexic last year because of the way that there...because here they have the media, TV and movies and things like that and it is just getting there now...we did not have that much when I was young...but now my niece she has in her mind that she has to be skinny. It is a systemic pressure now. Not like when I was young. Focus group- 2-Non-recent (1047-1058)

The media also promotes racism by only showing images of blond, tall, and thin women.

> Participant 7: You know, I was going to say that here what I like in Canada is that television... they have images of all different ethnic groups...for example if you see a commercial you can see black children, Chinese children, and all different colours...but in Mexico, in television they like *blond skinny people*. So, people there want to be white...Like I have my oldest daughter she is kind of white and when I take my daughter to Mexico...people go like: "She is pretty". And I don't like that, because you know, everybody is like "oh, she is so pretty" and when we come here she is one in millions. Yeah, it is different, but there is a lot of pressure from the TV the media. Focus group-2-NR (1061-1068)

> Participant 10: But, is never black. It is always, blond, blue eyes, and skinny. You know...the woman can be stupid, a total idiot, but she is on TV and because she is blond and has blue eyes, she is considered right....what about that woman in Chile...Miss Universe...she had a TV show...she was a TV hostess...she was an idiot...blonde and blue eyes ...we are always trying to pretend we are blonde, we are blue eyed, we are white...Focus group-2-Non-recent (1073-1078)

> Participant 8: Most of the girls...down there...bleach their hair, you know. Focus group-2-Non-recent (1079)

3.1.2.2.4 Globalization and Dietary Changes in Latin America

With the world changing in the last decades, the women reflected on the dietary changes they have observed in their countries. One woman told this story:

> Participant 3: It is so funny because times change... a lot. For me, for example, I never, never, eat...the red stuff...the children like it... What is it called? Yes, Ketchup...But it was funny, my mother came [to visit] before she died in 1985 and there are my memories with my mom and the [traditional Chilean meals] "pantrucas" (pasta soup), "carbonada" (stew) and all that. And that day I made rice for her... with chicken or something. And she said: "Do you have ketchup?" And ...laughing, I thought..."Somebody changed my mom". [Everyone: laughing hysterically]. It was so cute... [Still laughing]. No, in our generation, no [we did not eat ketchup]. But, now they eat it now. Focus Group 2- Non-recent (254-257)

Other participants began to reflect on this anecdote and agreed with the idea that more and more, in their home countries, they are seeing increasing amounts of processed

and fast foods. This is consistent with results from emerging studies that report there is a "rapid spread of the fast food culture, perhaps exemplified most visibly by McDonald's" (Chopra, Galbraith, & Darnton-Hill., 2002). This is a direct result of global markets, which have created large transnational food corporations with global marketing strategies.

> Participant 2: But you know, over there, they have all that too. They have McDonalds, Kentucky Fried Chicken now... Because there is a change in life in our countries too. The way we live, there has been a change for us here in Canada too. Because I see this in myself as well...instead of eating a good breakfast...I stop by McDonald and buy breakfast there. And over there they are doing that too...And I tell them over there now, if you keep doing that and you are going to have a big trouble. There they change...now they are not eating at home like in our times. But, you cannot keep doing that. Focus Group 2-Non-recent (1164-1172)

The access to processed foods in Latin American countries was discussed by recent immigrants as well. In particular, they raised the point that in urban places, nutritional transitions due to industrialization are putting an end to natural organic foods.

> Participant 1: There [Colombia], they inject hormones into chickens... in the big cities, so that they grow fast and they can sell them. In our region, no, because they are raised in the patio of our house. At home or on the farm, it's more natural. Focus group 1- Recent (297-299)

Participants made the connection between the loss of traditional and organic diets in their country (to more processed foods) and the consequences of these changes for their health and body weights.

> Participant 3: The taste of meat is also very different, maybe because it has more fat or maybe because of the hormones. The other day we wanted chicken so I bought a quarter chicken. What an atrocity! An enormous layer of fat came from the quarter chicken. Focus group 2- Recent (104-106)

> Well, if you don't take care of yourself. But, so many things have changed with technology... with industry; people want more production and commercialization. They put more things in the cows so that they have more milk. Yes, well those hormones come in the meat, in the milk.

> In the cream, it's in everything... That affects you. Individual Interview-13- Non-Recent (667-673)

Participants also discussed how corporations have effectively succeeded in penetrating the Latin American markets. They discussed how people in Latin America, no matter how poor they are, will work and save money to be able to eat in these restaurants. Women realize that corporations commercialize bad foods and influence the most vulnerable populations in their countries.

> Participant 2: Those stupid places [fast food restaurants] are everywhere...and people love them. The only one we don't have in Guatemala...it did not work there...it was Kentucky Fried Chicken because we have "Pollo Campero", which is the equivalent Guatemalan restaurant. You know, even the most poor person...they will save money to go to "Pollo Campero" or McDonalds. Participant 5: And you know it is not cheap...even McDonalds in our countries...it is not cheap. Focus group 2- Non-recent (1212-1215)

This perception is consistent with research that shows that the "obesity prevalence is higher in urban areas, especially among all lower-income men and women" (Kain, Vio, & Albala, 2003 p. S80). Women perceive processed and junk food as unhealthy. They also believe that the consumption of these foods is driving overweight and obesity in their countries by replacing traditional healthy diets with "garbage".

> Participant 2: ...you have all those places and this is why people are now getting fat in our countries too. Focus group 2- Non-recent (1173)

> Participant 1: This is how it is going to be...TV commercials are international and they have invaded our country and we don't have food anymore...we have garbage and that is what people are eating now and this is why you see people dieting and exercising now because they don't want to recognize from where that bad junk comes from. And why there is so much junk food now. And that this is they way they are eating now. Focus group 2- Non-recent (1195-1200)

> Participant 3: But they are learned behaviours. Even though there is poverty, you will always see people at MacDonald's. It's expensive; in Canada it's expensive too. In Guatemala it's expensive, but you'll see

them at "Pollo Campero"... you see... Focus group 2- Non-recent (1215-1220)

I went [to Guatemala] in 2001. I was really surprised... like with the malls, the Paix (like Superstore). They have better, bigger malls there. We don't have anything to envy here. [In Canada] The food there... everything. There is no money there, there's poverty. How are they eating there? I wonder. It's, yes, they are learned behaviours... that I actually don't understand. They prefer being hungry but with high fashion clothing. Individual Interview-13- Non-recent (511-516)

Participants expressed suspicion over the content of processed foods. They also realize that processed food contains more sugar and/or salt. Chopra et al. (2002) corroborate that in addition to fats and oils, "sugar and salt are the two most commonly added ingredients" to processed foods (p. 957). Food companies have done their research and observed that people like sweet food and are more likely to ignore satiety when consuming sweet and fat. Women explained to me that despite the availability of processed foods in Canada, if possible they will try to avoid them and prepare their own fresh foods instead.

Participant 1: Now everyone eats it. Participant 3: Ketchup on rice is popular. Participant 8: Not only that [ ]. Now, a little kid who just came from there [Chile], he puts ketchup on everything. Everyone: yes...on everything...[not audible] Participant 3: They don't know how they made that stuff, because if they know how they make it, then they are not going to eat it... Participant 8: Exactly. They don't know. Focus group 2- Non-recent (268-275)

Participant 6: [Fresh tomato sauce] tastes better because the ketchup has sweet and sour and it tastes...blah... because we don't put the chemicals in [tomato sauce] when we make it.... That is the difference, because ketchup is pure tomatos and sugar. Participant 1: Yes, they put sugar in it. Participant 5: and other additives...probably. Focus group 2 - Non-recent (279-286)

3.1.2.2.5 Safety and Physical Activity

In addition to the dietary changes they observe in their countries of origin, women also talk about declines in levels of physical activity due to globalization processes.

Increased availability of cars causes people to walk less. But more importantly, the growing social and economic disparities in underdeveloped countries also lead to higher levels of crime. People in many Latin American countries do not feel it is safe to walk on the streets anymore.

> Participant 6: ...when I went home [Guatemala] in 2001, I think, there is a lot of cars. People don't walk anymore. They have cars...they don't walk because crime is so high and it is dangerous to walk. I wanted to walk, but I couldn't because it was dangerous. In the city, people are using cars. There are cars and cars and the pollution is terrible...It has changed a lot since 20 years ago. People don't walk anymore. Individual Interview-13-Non-recent (674-681)

3.1.2.2.6 Summary – Health and Globalization

In this section I described the overarching theme of this study. Globalization as Spiegel et al. (2005) outline is one of the determinants of health. Globalization processes have influenced the lifestyle behaviours and social conditions of people in Latin America. Women in this study perceived that the changes they are experiencing in Canada through the migration process are not anything that would have been unavoidable if they would have stayed in their country. It is important to situate their experiences with body weight changes within the context of globalization processes. The remaining themes of this qualitative assessment show that the women's experiences in Canada may not be that different than the experiences of Hispanic women in Latin America.

3.1.3 Health and Acculturation

In this section, I describe the concepts of health and acculturation as experienced by the Hispanic immigrant women who participated in this study. The major sub-themes are: 1) ideas, beliefs, understandings of health dimensions, 2) perceptions of barriers to health and healthy body weights, 3) differences between Canadian and Hispanic foods and diets, 4) perception of barriers and facilitators to leisure-time physical activity. Each of these themes covers several sub-themes. Many of the overlap and relate to women's personal, interpersonal, social, cultural, and physical experiences in Canada.

3.1.3.1 Ideas, Beliefs, Understandings of Health Dimensions

Conceptualization of health for Hispanic women incorporates physical, emotional, social and spiritual wellness. Physical health included notions of being able to function normally and not suffering from diseases. Being physically healthy means being able to work and to participate in social (dancing), physical (sports), and relaxation (resting/sleeping) activities.

> Participant 1: It [health] could be ... enjoying life, work, enjoying your daily routine, being physically active, emotionally thinking more positively. Focus group-2-recent (155-156)

> Participant 2: ...Someone who doesn't get sick a lot, someone who doesn't get a lot of headaches, someone who exercises, who doesn't get tired when they walk, like walking four blocks and is already tired, what they eat they can digest it properly, what they eat makes them feel good. Focus group-3-Recent (66-69)

> Participant 3: It means having a proper diet, eating balanced, doing exercise 3 times a week, being active, being able to do exercise for an hour without getting worn out, and being able to complete tasks, in school or at work; to be able to rest and sleep well. Focus group-3-Recent (76-77)

> Participant 2: [being healthy means]...Not being stressed. Like I have high blood pressure. What else do I have now? I have injured my knee because I started to be healthy and I started exercising. [Laughter]. so I don't know,

being healthy means not just being able to do things, but, look after yourself...you know...eat properly and look after mental health. Focus group-3-Non-recent (791-798)

Participant 3: For me what it means to be healthy is to count my blessings. Because I have been working for 28 years and I have been overusing my back but I have never have problem with my back so I am glad to have my joints in good shape. My back is in good shape...even if I am diabetic, but I manage it quite well with my food, and the medication and exercising. So, I feel lucky and I count my blessings. I have co-workers that are younger than me and in worse shape than me. Because, I am a nurse and we use a lot physical activity. You lift, you turn, you do whatever and you are on your feet for 12 hours. Walk, walk, walk...and then after 28 years, I am lucky so that's why I count my blessings. Focus group-2-Non-recent (1004-1012).

3.1.3.1.1 Body Image

Women also talked about physical health in terms body size or body weight. Although, quantitative analysis shows that there were no statistically significant differences between the recent and non-recent groups with respect to body size variables, qualitative data show that the cultural body ideal has changed in the last couple of decades. Recent and younger participants prefer a more Westernized body size ideal.

The issue of health and globalization came up again in this discussion. Women who left their countries twenty to thirty years ago realize that body size preferences have changed in Latin America. The body size that used to be accepted twenty to thirty years ago is no longer preferred due to influences from Western countries.

Participant 8: Yes, it is different. It was...It is. The difference is that in South America...I want to talk about South America because I am from South America...the pressure is so hard that in these days...a teenager...of fifteen and sixteen...they cannot be overweight, because even the mother is after them. Focus group-2-Non-recent (1094-1097)

Participant 2: People say...when I went back to visit...to my country...and all my friends came to visit me and all of them were looking at me...waiting for the moment to tell me that I am fat. Because they said: "You are still pretty because we love you, but you are fat...what happened

> to you? What are you eating over there?" That's how it is now. Focus group-2-Non-recent (1098-1101)

Non-recent women also made reference to increased prevalence of eating disorders in Latin America as a result of Western media influences.

> But now...I read...not too long ago... in a Chilean newspaper...that in some high schools in Santiago, they have to lock the doors to the washrooms...they have to lock them up at lunch time so they girls don't go and...you know...vomit...because they found too many of them were doing that. And in my time, we did not even know that this existed in my time...Individual Interview-10-Non-recent (210-215)

> Participant 8:...and you can see it in the TV...there they show it to you there and you have to be that [thin]. Focus group-2-Non-recent (1117)

Non-recent immigrants tended to be more concerned about shape than actual size.

> But it did not used to be like that...no, in my time...the women were supposed to be attractive but they were not the skinny ones. They were kind of...I don't know...kind of like Sophia Loren...you know...voluptuous. I had a friend...one of my best friends...and she looked like that...very wide here (chest) and wide (hips) here...more voluptuous....and small waist...and the guys looked at her...I think that's why I made friends with her [laughing], but she was like...not skinny and considered very attractive by the guys. Individual Interview 10-Non-recent (203-210)

When concerned about body size/weight, it was health concern rather than aesthetics.

> Participant 3: But, you know that after 45 years, the woman changes their mentality and then women they start to gain weight and the fat gain...and that is a process that everyone has to go through. That you have more or less fat...that is just assuming you are eating well and you are feeling well and you are healthy I don't think that is a problem. Focus group-2-Non-recent (1147-1151)

Non-recent and older immigrant women also identified a larger body size ideal. They engaged in a dialogue about accepting their current body size. Some women equated larger body size (overweight) with the normal ageing process. They believe that to

have a healthy ageing one needs to have some extra weight or at least one should not be too thin. Being too thin can lead to unhealthy ageing.

> Participant 3: I thought about this when you asked before and I think that a healthy size is a size 10. It depends on your size...I think that as a middle age women like myself (laughing). Really, you know, I think... I am a size 12 and I would like to be a comfortable 10 and I would like to do some weights and ...I would like to be a size 8 and look you know drop dead gorgeous but it's....at our age it ...like you said (looking at participant)...is harder and harder to keep the weight off and I bet you would have to be exercising and dieting all the time to keep that look...I think a size 10 is healthy. Focus group-3-Non-recent (991-1002)

> Participant 2: I think in Latin America is more acceptable that when women get older it is normal to gain weight. Somehow you tell yourself skinny and it is not true because when you are older you are going to lose all the weight anyway and you are going to be...you are not going to be able exist, when you are old, because you are too skinny and then you get sick. It happens when you get older you are not going to be able to stand up. Focus group-3-NR (849-854)

3.1.3.1.2 "90-60-90" and "Shaped like a Guitar"

Generally, recent immigrant women (who tended to be younger than non-recent) were also concerned about their body shape, but they related this concern to aesthetics reasons rather than health. They also tended to use shorthand terminology for the preferred body shape.

> Participant 2: Yes, of course there it is 90-60-90, and it is the most acceptable. For example, that everyone has a nice figure, not too thin or too fat. Not anorexic, that is not acceptable. Focus group-2-Recent (475-476)

> Participant 5: "A body like a guitar is more like it". Focus group-1- Recent (678)

> Participant 4: The Latina woman has her curves, her hips, her waist, her bust. Focus group-3-Recent (249-250)

> Participant 1: Generally, at least in my country, the women in my country, women my age, they are my height, but weight, that depends... genetics. You are careful because, well, the Latina woman is vain, flirtatious, she's careful not to get fat, normally we have wide hips. If we gain weight, we look like this (shows large figure). You have hips and a butt, ... well...

> wide hips but that's how we are, Latinas, and those who don't have much, well they have to put something on that looks good". Focus group 1-Recent (665-670)

> Participant 2: The Colombian woman is vain, they compete. Girls are careful to make sure they look good. Focus group-1-Recent (701-702)

According to the quantitative data, for both recent and non-recent groups ideal body sizes differ (not statistically significant) from their actual sizes. Qualitative results show that many women have concerns about their current body weight. Concerns derived from pressure from family and friends as well as health concerns.

> Participant 6: I am going back ...again... you know...all depends where you grow up and what people...the environment you grow up in because depending on what environment you grow up in...is the way. For example, for me right now...I know that for me my weight is not healthy...my weight is a problem...but when I was young and running at five in the morning and sometimes I was doing a lot of exercise because I had to weigh 118 lbs because in my family I was too chubby and they called me "gorda" (fat one) all the time and even that I was...they said that I had a very good body at that time...I was so traumatized that I was the chubby one that I was always doing something to lose weight...now I don't care...so it all depends on the environment because there were other girls that were fat like me but they didn't bother because my brothers would bother me that I was fat so I started dieting...Focus group-2-Non-recent (1127-1137)

3.1.3.1.3 Jennifer Lopez' Body Shape

There were many similarities in women's description of the ideal Latin woman's body shape. Some, terminology to describe the ideal body shape included names of famous actresses. Young and more recent women are more likely to use this terminology.

> Participant 4: Not too thin, like here. For example in Latin America men do not like the thinnest, they prefer women a bit chubbier but with curves, and dangerous ones like those of Jennifer López. Focus group-2-Recent (214-215)

> Participant 5: I watched a TV program that said that of Beyonce, Jessica Simpson, and Jennifer Lopez, Jessica Simpson was the most desirable by men, but I said "please..." from my point of view Jennifer Lopez and

> Beyonce are more beautiful than Jessica Simpson. Focus group-2-Recent (216-219)

Some women disagreed with the idea that Jennifer Lopez has the culturally ideal body shape.

> Participant 3: Nooooo, she [Jennifer Lopez] doesn't have a bust, but like she says: Canadians have nice legs and maybe a butt, but they don't have anything up here. They have nice bodies but no hips. Focus group-3-Recent (235-238)

Some participants perceived that Hispanic society imposes pressure on them to have a "thin, but too thin" body size and that men actually prefer a relatively larger body size. The ideal Latina body shape is considered the same as men's preferred body shape for women.

> Participant 3: Like it or not, yes, I believe [] [there is a social pressure to have that body figure}. A woman imposes it on herself and accustoms the man. My mother always drank water so as not to become fat, trying to stay thin. "One cannot become fat" ...my father also used to say that he did not want to see her fat as well. She had control over what she ate so that she would not look fat. Focus group 2-Recent (220-223)

> Participant 2: A fat woman, well I mean, sorry, but she goes unnoticed... well generally. A fatter woman, well, men don't like that, or if she's not done up, like not even a bit of makeup". Focus group-1-Recent (681-683)

> Participant 3: With clothing you can realize that for example, those clothing stores, that say "14 plus" don't exist, not even by mistake in Colombia. Who would go in? No one goes in, because like, what's with that store? Participant 5: Yes, in Mexico, there is only one, and it's like only grannies, buying clothes, but then again, Mexico's so big... Focus group-3-Recent (354-358)

> Participant 1: Men like women, like she was saying, that have somewhere to grab, that they are a little round". Focus group-1-Recent (676-677)

Younger and more recent immigrant women believed that men like thinner women.

> Participant 3: For example, look at when you dance with your friends. In Colombia, you dance right? [showing dance position]. They grab your

> waist and you dance! Here no! But there, it's like... ay... they are going to grab my fat! They tell you if you overweight or whatever, it makes you worry. Focus group -3-Recent (302-305)
>
> Participant 4: Above all, men don't like fat women". Focus group-1-Recent (671)
>
> Participant 3:T rue, it's true, it's so nice when people say: "You look good! "Hey you look good today. You look so great." ... The 'culture' makes you like that. The Colombian man is very picky. They want a woman with not too much make-up, like not a clown, that's what they like, a beautiful woman. Focus group-1- Recent (705-708)

3.1.3.1.4 Canadian Women are Bigger and More Confident

There were inconsistencies in perceptions about the ideal body size in Canada. Some believed that Canadian culture is more tolerant of larger body sizes. Others believed that there is more social pressure to be thin in the Canadian culture compared to the Hispanic culture.

Women who perceive that there is a tolerance for larger body size in Canada also believed that younger women tend to be thinner. There are differences between the pressure women feel in Canada versus in Latin America. In Canada, they are more likely to feel pressured from media images. In Latin America, the pressure comes from family and friends.

> Participant 1: Canadians... (Laughter) but haven't you seen Canadians? They don't have a waist! They put their pants on their hips with their rolls on the outside. It depends... they have a different kind of body. I don't have anything against it but I haven't found a single pair of pants that fit me. Here you can't find pants with big hips and a small waist. Focus group-3-r (254-258)
>
> Participant 4: I don't know, I think that here it's a higher margin of weight, here people don't take the time to think of what they look like, they just work they don't worry about what they look like, and they just go to work. Focus group-1-Non-recent (728-730)
>
> Participant 1: Here, its like, there's no middle ground, here you see either really skinny or really fat. Focus group-3-r (294)

> Participant 2: Yes, I think there are different models. The model of beauty is maybe for a specific time or era. If you want to be a model, it's because, you want to be like that particular model of beauty, and it's more like an individual pressure: "I want to be pretty, and that's my definition of pretty." [In Canada] there's no social pressure like from your friends or your brothers and sisters, or your parents are commenting: that "you are fat, and you have rolls", that '"you are for the dogs", that "now there's more fat for the soup"; that type of pressure doesn't exist, it's more like an individual pressure. Focus group -3-Recent (306-313)
>
> Participant 1: No, I have seen thin girls [in Canada]... they are young, pretty thin, but their bodies are different... they are thin everywhere, they don't have much in the hips. Focus group-1-Recent (688-689)
>
> Participant 3: I think it is a little bit more [pressure] here...I think the girls...the girls are having same thinking and the same pressure but I think like you mention...it is more acceptable here – a bigger women. I think those things are still there, but I think there is more. Focus group-3-Non-recent (1021-1023)
>
> Participant 2: but I think it [the pressure] is more in society [here] itself more used to or more accepting of a bigger woman, I don't know about men in particular, but I think here it is definitely you gotta be very skinny when you are young. Focus group-3-NR (1025-1028)

Canadian women are perceived to have better self-esteem and self-acceptance than Hispanic women. Recent immigrant women also believe that Hispanic women care more about their looks than Canadian women.

> Participant 3: People here are fatter, more obese. Focus group-1- Recent (686)
>
> Participant 5: Here in Canada, young girls are very thin and older girls are very fat. Focus group-3-Recent (293)
>
> Participant 1: Yes, here girls aren't as complicated; they don't have such a complex". Focus group-1-Non-recent (698)
>
> Participant 2: Here I see calmness in the women. They are a bit more relaxed". Focus group-1- Recent (715)
>
> Participant 3: Here girls are happier, they aren't complicated. I imagine they are happy because they aren't thinking: "Oh, no, I can't have a fat tummy". Focus group-1-r (696-697)

> Participant 1: Girls, like those you see on the bus, who wear their pants on their hips, they are almost the only [type of pants] you can find. You can't find the waist part and they aren't worried about showing their rolls. In Latin America, that doesn't happen because, if you have a roll, you cover it! People are embarrassed. You put on a loose blouse or a sweater that hides it, but here you show your rolls, because here you know nobody will say anything. There (back home), you won't go two blocks, without people letting you know. But if people say things to you in the street; if you go out with a miniskirt with a short shirt and you show your 'fat' men will say things, like: "hey chubby, your rolls are falling out!" Focus group-3-Recent (264-276)

3.1.3.1.5 Obesity is Not a Problem in Latin America

There was a perception among recent immigrant women that there are less overweight and obese people in Latin America. This perception is not supported by recent studies from Latin America that show that levels of overweight and obesity among women in Latin America are similar to those in the U.S. (Chopra, Galbraith, & Darnton-Hill, 2002).

> There are many obese women here, in Chile there are none. You see people that are overweight with bellies but not obese. You don't see that obesity in Chile. Individual Interview-1 (624-625)

> Participant 2: In Peru I never saw anyone that fat. It's strange, if you do see it, it's a physical problem, like thyroid deficiency, or something. In the street, there are people that are a bit fat, and you don't see fat kids. Like here, you even see nursing babies that are fat. Focus group-3-Recent (295-298)

> Participant 4: ....because when I was in El Salvador I didn't see many people, obese people, you know. I just saw regular body sizes. I see more obese people here Focus group-3-Non-recent (1029-1031)

3.1.3.1.6 Canadians Are Couch Potatoes

The victim blaming approach is also used by many recent and non-recent immigrant women. Some women perceive Canadians to have poor self-control leading to overeating and sedentary behaviours. They also believe that the larger body size ideal results in people being heavier. Moreover, meal patterns are perceived to influence late night snacking while watching television.

> I believe that it is due to bad food and to sedentary life style, if you analyze the life of an obese person they wake up spend all day sitting while working eating bad food or eating all day because it is due to anxiety and returns home to eat potatoes. Those we see in the river valley are about 5%. Individual Interview-1 (626-629)

> I think it has something to do with the bigger size preference here...people keep eating a lot and exercising less, you know, because people are saying eat, eat, eat, you know. They are watching TV and food and food, you know the commercials about food, and they get more attracted to the food and they eat, and just get it out of the fridge, you know because the mind is not busy just watching TV, just go to the fridge. They don't exercise and that's their time to get up when they come to the fridge (laughing), right? When the watch TV they eat and they don't have time to go for a walk or do something else like in the summer time, talking to the neighbor and go bicycling or...Focus group-3-Non-recent (1038-1045)

> P: Mmm...[going to bed at night with a full stomach]...No, that's a mortal sin. Yes, but they [Canadians] should have time to process the food, before going to bed, and to not have a full belly, but I think that they are hungry. My sister and I were thinking, that this is what is going on with Canadians, they eat a lot, a lot [at dinner], but it is too early...between, 6 o'clock, and 10 o'clock before they go to bed, and the majority of Canadians watch TV and snack. Individual Interview 9- Recent (273-280)

3.1.3.1.7 Appearances in Latin America are More Important than in Canada

Both groups perceived that appearance is more important in Latin America than in Canada. Women are expected to appear attractive, both for professional and social reasons. Some women explain that you could lose your job if you don't have the right appearance

> Participant 5: Women compete amongst themselves; they look at whoever is prettiest who is the most made-up even at work, people look after their image. Even companies you enter in the main office, people talk about who looks the best who is the most done up men and women. Like even who has a nice bum or: "Oh you better go to the bathroom, and fix yourself up". You always have to be made up, have a good appearance. Focus group-1-Recent (700-714)

> Participant 2: High heels, there (back home) you make such a sacrifice, like for style or appearance, even if you're tired you fight it. Focus group-1-Recent (716-717)

> Participant 1: Here, you dress like how you feel and that's it, that's what I'm wearing. Focus group-3-Recent (336)

> Participant 2: Latin American people are always worried about everybody else...looking around..."You know, are you gaining weight?" or " Look, she is getting big?" They don't care. They will say it right to your face. "What's happening to you, how come you are eating too much?" [laughing] There is a pressure. With Latin American people, there is...with Canadian people you don't see that a lot. They are not like that. They don't seem to really care. Focus group-3-Non-recent (1072-1084)

> Participant 4: They [Canadians] are more polite. They talk...."look at her", "look at that"...they don't say it to your face. Focus group-3-Non-recent (1084-1085)

> Yes, women have to be thin because if you do not care for yourself you will lose your ability to better your career, you won't be able to change jobs. I'm not saying that that doesn't exist here, because it is a natural thing, tell me if it is not, if you see someone that cares for themselves they give you a better impression it's natural, but for example, today my boss was wearing a dress and on top a sport jacket and if you would see her in Chile one would say "she looks like a grandmother she just needs to have her slippers"... but no problem. There is no [work] evaluation due to appearance here, which is good. Individual InterviewI-1 (610-6120)

Also, appearances are less important here because it is easier to cover up. Since the weather is colder in Canada, women feel that it is easier to cover up "extra fat" by wearing heavier clothing. This is one explanation for why immigrant women gain weight. They don't have to worry too much about appearances here.

> Participant 3: I think the weather has something to do with this as well. Because you have to wear a swimsuit, you care about your body. And here, it does not matter; I just wear a sweater and I am comfortable. I think this has a lot to do with this, the weather and different food habits. Focus group-3-Non-recent (1050-1052)

3.1.3.1.8 Gender Differences

Women also explained that there are gender differences in term of expectations regarding body size and shape. In Hispanic culture female physical appearances are continuously watched and judged on the street (Anderson-Fye, 2004). Men, however, are not watched or judged in the same way.

> Participant 5: Yes, well a husband could be horrible and the woman would say nothing, but in Mexico, if you are fat or not fat, they would just tell you to be careful. Focus group-3-Recent (316-318)
>
> Participant 1: At home, maybe you would say to your husband, "you have a gut", or "you're gaining weight", things like that, but you would not call it out when they walk on the street [like they do with us]. Focus group-3-Recent (319-320)

Gaining weight after getting married is considered normal for men. Women are expected to "show" their love to their husbands by preparing delicious food for them. Women, however, must be more careful with weight gain as this could put their marriage in danger.

> Participant 3: You expect that a man gains weight when he gets married, but that's normal. A woman has to be more careful because she is married. If she gets fat, maybe the husband won't look at her anymore. When the husband gets married he gets fat; the woman spoils him and gives him delicious things. There's a saying: if you want to gain weight, get married. LA-3-Recent (320-327).
>
> Participant 1: Yes, You show your love 'through the stomach.' You reach the heart through the stomach. Focus group-3-Recent (328-329)

3.1.3.2 Perceived Barriers to Health and Healthy Body Weight

In this theme, participants spoke about their changes in dietary habits. These changes are perceived to be the most important influencers to their health and body weight changes.

Changes in dietary habits have been associated with the healthy immigrant effect. In this section, I outline the study participants' experiences with food and dietary patterns in Canada and their perception about Canadian foods. A major change in peoples' dietary habits is the tradition of "comer con gusto" (eating with delight). Participants also experience differences between Canadian and Hispanic foods and

eating patterns. Issues of food content, freshness, taste, meal staples and meal patterns, access to traditional foods, dietary acculturation and alcohol consumption were raised in the discussions.

3.1.3.2.1 *"Comer con Gusto"* - Eating with Delight

"Comer con gusto" roughly translates to "eating with delight". This translation, however, does not do justice to the overall concept. Recent and non-recent participants explain this concept as follows:

> Participant 1: "comer con gusto"...It's not just to "eat." Focus group-3-Recent (198)
>
> Participant 3: Yes, I was going to say..."comer con gusto". We take the eating time like a 'family affair' and everybody is eating at home. Focus group-2-Non-recent (541-542)
>
> Participant 5: And...something sweet at the end. And then a long talk. Yeah. Traditionally, we don't talk when we are eating. In Canada, it is quite different because you talk all the same time while you are eating. It does not matter if you have food inside your mouth. So, it is quite different that...I was quite shocked because I came from a very traditional family...We had a long talk after. It was the place to solve all the problems practically...after eating not during our food. And here it is different because here people eat fast, they talk at the same time, they stand up and they go. Focus group-2-Non-recent (484-498)
>
> Participant 4: "comer con gusto"...it is one of the things that I really miss because I remember that when I was younger that in my house we had supper every night and we talked with my father and my brothers and we talk and we talk everything that happened to us during the day. So that is something that I really...I don't miss here because we talk...we talk...but it is different... [We changed it here] when the children were younger I used to get them up on Saturday and Sunday...laughter...at 9:00 o'clock and I said "It is time to come for breakfast". Yes, family time. And they came downstairs and looked really tired but then we were laughing and talked about the things that happened during the week and it was very nice to have that time. And after that they have to do things...soccer, guitar lessons, I don't know what else...so maybe we did not have time to talk in the afternoon so we did it in the morning. It was something good for them. We talk and we laugh and we were happy. Focus group-2-Non-recent (501--514)

> Participant 2:...and I think that a lot of times when it is time for meals you sit down to enjoy the meal and here now ...you know you eat, eat fast and then get out. So you don't have time to digest the food and you don't feel that you are full, because you don't sit down to eat...yeah we eat with gusto... yeah, and you take your time to eat.... P4: you take two hours to eat...Participant 3: it is not a lot of food, but it just the process is slower. Focus group-3-Non-recent (163-171)

The loss of this dietary practice in Canada is something that many women regret and miss. It is possible that this dietary practice facilitates slow eating and that this might be a deterrent to overweight and obesity. A 2006 study reports that "among middle-aged men and women [ ] eating fast would lead to obesity" (Otsuka, Tamakoshi, Yatsuya, et al., 2006). Moreover, the socialization aspect of this practice may also provide a protective factor against weight gain. The women in this study claim that this is one particular change they have made while in Canada. This could be attributed to acculturation (i.e. women now engage in more Canadian ways of eating) or to lifestyle changes (i.e. women are busier and there is no time for this dietary habit).

Sitting longer at the dinner table does not mean that people eat more. It simply means that people spend more time socializing. It encourages people to eat slower. For example, a woman from Mexico explains the process of "comer con gusto":

> Participant 3: And also the time, in Mexico you used to sit down and have LUNCH, you would always have soup then you would always have rice, you would have your MAIN DISH and you would have BEANS... [Laughter]...and tortillas. That was like a staple of the meal. Do whatever main dish you wanted, but some kind of soup was always there....and rice was always there and beans was always there and not that I ate all the time, but you always knew that there ...like there was a pot like this in the fridge and cause' at every meal ....like every main meal, you would have the beans and the rice and they would make a soup everyday..."sopa aguada"!...that would be the staple that would be a staple for dinner ...then you would add a steak or chicken or fish or whatever. But that always part of it. SO you ...I know it sounds like you were eating so much, but you eat smaller amounts of everything. So, it was always a very small steak or chicken...just a small piece because you have all these other things.

> Yeah, that always strikes me as funny. That, here, you can have chicken or beef and vegetables, but you would have them in the same plate. There, we would always have your soup first, then you have a plate with rice, then it goes back and you would have your meat and maybe salad or a vegetable and then it GOES back and you would have your plate with...with beans. But, here they have a HUGE plate and it has everything. And, that is just a cultural difference....yes, [in Mexico we have] smaller portions...Yeah, it sounds like when I narrate and when I used to tell [my husband who is Canadian] what we eat in Mexico, he was horrified; you know, he thought we would eat amounts and amounts of food. But, you know it doesn't really happen. I don't think necessarily that it [portion] would bigger here; it is just that it is a different way of eating and I think that you eat faster when you everything right there. And when you have...when you serve something and you take your time, you eat slower and even if you are eating more you are probably not getting that full. I don't know it is just a different way to approach a meal. Focus group-3-Non-recent (115-153)

Both recent and non-recent groups talked about this "way of eating" as a thing of the past. It is a practice they used to enjoy in their countries, but here in Canada, they have discontinued it due to lack of time and lifestyles.

3.1.3.2.2 Differences between Canadian and Hispanic Foods and Diets

In this study, Hispanic immigrant women identified several differences between Canadian and Hispanic foods. I will describe only the major differences, which are: food content and freshness, taste, and meal staples.

The freshness of food and the perception that in Canada foods contain more preservatives was a major issue discussed in this study. Women expressed concern over artificial additives, preservatives, and hormones that are added to foods. They believe the lack of freshness and organic foods cause immigrant women to gain weight in Canada. This is a similar concern that was raised in the context of globalization. Women believe that the increased consumption of processed foods is causing weight problems in Latin America and in Canada. Recent immigrants confirm that in their countries there is a trend towards more processed foods and less organic foods. However, this depends entirely on the geographic location in which women

lived. Women who lived in urban areas had already started to consume more processed foods, while women who lived in more rural areas still consumed only organic meats and vegetables. It was only after arriving in Canada that they began introducing such products into their diets. The use of sauces to give food more flavour is one source of processed foods in Canada.

> Participant 5: Everything has preservatives and artificial spices, and I think that makes you gain weight... It does! Well that's what I heard. Focus group-1-Recent (34-36)

> Participant 4:...people use a lot of sauce [here] Well, you do [back home] season the food, but more naturally, like with onion, garlic. LA-1-Recent (45)

The freshness of meat and poultry is a particular concern for recent immigrant women. Women struggle with the changes, but eventually they adjust.

> Participant 2: Oh yes, I spent a month without eating meat here. Here the meat is...God! It just doesn't taste the same as there (back home) because cattle are raised differently or they feed it differently. Like it's just pure grass, there (back home) the meat is delicious. Focus group-1-Recent (144-147)

> Participant 1: Do you know what Ximena, that the chicken you cook here... it's like bloody, like watery and bloody, I don't like it. You put it in the oven and it has a weird taste, it has blood... Nooooo, there [back home] the chicken doesn't have as many hormones. Focus group-1-Recent (280-284)

Recent immigrant women perceive that non-organic meats and poultry have more fat. Fresh or organic meat on the other hand is perceived to be leaner and healthier. Some women associate non-organic foods with the development of overweight and obesity and other chronic diseases such as asthma.

> Participant 3: I have noticed that the meat from here is too greasy, with my husband we look for the best meat, but there is no way to avoid it, the grease weighs more than the meat. For example, in Guatemala they said that the cows were thin, but it had meat, not only fat, one ate the meat fresh from the slaughterhouse. Fresh meat! Focus group-2-Recent (95-98)

> Participant 5: The cows from here are given too many hormones and from there one gets asthma and a large amount of other illnesses. My son developed asthma when he was one year old. I took him to the doctor here and the doctor cured him and told me not to give him beef because it comes with too many hormones. He said that it is bad for children. Now he tells me that my son no longer has asthma. Focus group-2-Recent (99-103)

> Participant 4: In the meat. When I first arrived here I weighed 105lbs. Soon we went to school. Being here we would eat of everything and in a matter of a year and a half, my weight went up to 180lbs. Soon afterwards I went to a doctor and he told me that I had problems with my cholesterol. Yes, exactly; now I am more careful with food, I am now at 140 lbs, I don't increase nor do I decrease, I control myself better. Focus group-2-Recent (110-116)

> Participant 1: It depends if one has a backyard in their home or not. If one does not have one then one goes to the market and those who have chickens in their homes are there to sell in the animal markets. One purchases them and then kills them and then cooks them in one's home. And in the market everything is much cheaper and more nutritious. The organic chicken is more nutritious and better tasting. Focus group-2-Recent (129-133)

> Participant 6: The freshness that you have you don't have that here...many times you go to the store here every day...you have the transportation issues and you don't find freshness...I think that is more important... every day you cook. The transportation from our countries to here and all the things they put in the food to preserve them...all the chemicals to preserve long time. And sometimes, you can see that even some babies, they are...No, the foods are not fresh. All depends on the seasons...in the summer you are going to have fresh if you go to the "Framers' Market". BUT, do you have time to go every day? NO. Back home, we did. Focus group-2-Non-recent (375-385)

Some recent immigrant women observed the dietary changes in their countries. Especially, they realize that there are changes between foods available in rural and urban areas.

> Participant 2: Where I live, we had organic chickens, raised on the farm, sometimes we bought them in town, but still they were organic (Creole). The ones that are raised on corn are the most delicious. We wait 6 months to kill them [chickens] and eat them, but here, after a month, they're ready, because they inject them with so many hormones, they do the same in Bogota. The chickens there are bigger. Focus group-1-Recent (285-290)

> Participant 5: There, they inject hormones into chickens in the big cities, so that they grow fast and they can sell them. In our region, because they

> are raised in the patio of our house. At home or on the farm, it's more natural. Focus group-1-Recent (297-299)
>
> Participant 4: In Mexico, we had a house with a yard, and we had our hens. Focus group-1-Recent (302)

The idea of frozen and canned fruits and vegetables is also foreign to recent immigrant women. The added sugars in canned foods is a potential contributor to weight gain.

> Participant 1: Noooooo, how long do you think it's (Yuca) frozen for, and then you touch it and it's all soft, no, because here they put it in the freezer. Who knows for how long! There [back home] it's way better, because it's natural, not frozen, it's right out of the ground. Focus group-1-Recent (152-155)
>
> Participant 5: But here everything comes from Mexico and other countries. They arrive frozen and I don't know how many days it takes to transport them, they are not fresh. Over there [in Colombia] one eats the fruit of the season. Here if we would like to eat fruit, a mango for example, oh no! Focus group-2-Recent (71-74)
>
> Participant 3: Oh yeah ... and those beans, oh, those are horrible, so sweet, those sweet beans....Everything comes in a can, canned and sweet. No, we [back home] make beans with salt. Focus group-1-Recent (83-84, 89)

3.1.3.2.3 Even the Water Makes You Fat

Women perceive many foods and dietary changes to be the causes of their weight gain in Canada. As customary in social gatherings with Hispanics, laughter and joy are essential components. Many women expressed their gratitude to me for bringing them together to talk about their experiences with each other. Women began to joke with one another and told each other anecdotes. After discussing all the foods they thought were making them gain weight, some began to feel that they could not eat anything here or they would become fat. This frustration was turned into humor as one participant told the group about a friends' experience with weight gain in Canada.

> Participant 4: I have a friend here that is from Colombia, and she told me not to drink too much water here, tap water. So I asked her why, and she replied that even the water from here makes you fat. [Laughter] Yes, here

> everything is fattening, whatever one eats or drinks is fattening. Everything is fattening. Focus group-2-Recent 117-120

Both recent and non-recent groups raised the issue of over-consumption of white (refined) sugar in Canada.

> Participant 4: Yes, the consumption of white sugar is also different, and that is what is fattening. Here people eat too much white sugar. Focus group-2-Recent (324-327)

> Participant 1: Eating brown sugar is common in some areas over there, people say it is better, that it is healthier, event though that in some areas people avoid eating brown sugar, they prefer white sugar. Focus group-2-Recent (330-332)

Women explained that in Latin America there is less consumption of sugar because there is better access to natural sugars, such as fruits. Drinking pop is not as common since people prefer to make their own fresh fruit juices.

> Participant 5: Yes, over there one tries to eat things that are natural and fresh that are purchased in the market. The juices in Colombia, generally, are made of fruit and are fresh. They don't have sugar added. Focus group-2-Recent (69-70)

> Participant 2: Generally, you make natural juices; you buy the oranges, lemons, passion fruit, guayaba. In the morning, if you don't drink coffee, you drink fresh orange juice. Focus group-1-Recent (240-241)

> Participant 3: In Colombia, depending on the region, for example, in some places people drink coffee or hot chocolate, really hot chocolate, hot milk or really hot coffee, because it's cold there. In other regions, like the one where she's from or where I'm from, we drink cold things, lemonade, and juice with ice, ice cream, fruit juice or warm coffee. At meal time, a refreshment. We never drink pop, that's bad for you. Focus group-1-Recent (233-237)

> Participant 7: Like, I used to eat a lot of mangos. And here to have a really good mango, you have to be really lucky. Focus group-2-Non-recent (395-398)

Hidden sugars in processed foods are also a concern. Women prefer to cook everything from scratch in order to avoid the added sugar.

> Participant 8: It is more healthy...because we don't put the chemicals in it. That is the difference, because ketchup is pure tomatoes and sugar and other additives...probably. Focus group-2-Non-recent (284-299)

3.1.3.2.4 Lack of Taste

Another important difference between Canadian and Hispanic foods is the taste or lack thereof.

> Participant 3: The taste of meat is also very different, maybe because it has more fat or maybe because of the hormones. Focus group-2-Recent (104)

> Participant 5: The truth is that yes, I believe that the meat, chicken meat, I don't taste the moistness of the chicken meat, its too dry, I have always said so. Focus group-2-Recent (122-123)

> Participant 2: it was mashed potatoes, it was... [The first Canadian food I tasted]...I don't know, with steak with gravy on top...some peas and carrots and stuff like that....No taste. Yeah, bland... Focus group-3-Non-recent (37-42)

> Participant 1: [The difference between the food in Peru and Canada] is that the food in Peru has more taste. [laughter] Yes...too plain, no falvour, mmhh. Focus group-3-Non-recent (94)

> Participant 2: Even the fruit...[has more taste] Yes, [the food here has no taste]...still now there is no taste....ahmm [laughter-everyone}....and if you go to a restaurant and they give you a salad and it tastes nothing...but.. yeah, you have to eat it. Focus group-3-Non-recent (102-107)

> Participant 3: oh, [yes, there is a difference between Canadian and Mexican food] very much so. But, same thing...it's just flavour.....and style of cooking, and also the difference comes from different ingredients, the different things that you would eat. Focus group-3-Non-recent (115-117)

The lack of taste or the difference in taste influences peoples' food choices. Many women stated to me that they do not eat the same things they ate in their countries because they just don't taste the same. This change in dietary habits can have negative consequences for immigrants' health and could be related to their changes in weight. In some cases, women realize that they have decreased their consumption of fruits and vegetables and replaced it with more meats.

> Ah, the food. The food is so fresh over there. It tastes good. It is not the same here. The food is not the same. I note, for example, that my husband has gained a lot of weight. He gained weight since we married, but he has gained more since we came to Canada. In the summer he loses some weight, but since the summer is so short he does not lose all the weight he gained in the winter.
> He tells me that the diet here is not as healthy like in Peru. But, I don't know what to cook. I don't cook differently than I did in Peru. But, here the fruit and vegetables don't taste the same. It is not the same. It simply different! Well, the thing is that there are things I used to cook there that when I make here don't taste the same. It tastes bad and he does not eat it. Most of these dishes I am talking about are vegetarian because I am vegetarian, but here they taste bad. I can't blame him because it truly tastes bad and in Peru my food tasted much better. I use the same ingredients but it still does not taste good. I don't know what Canadian food is. But, I try to cook the same dishes I made in Peru. But I have eliminated certain dishes from our diet and those are the ones with vegetables. I have incorporated more dishes with chicken and meat. Individual Interview 6- Recent (483-507)

The way Canadians cook is also very different because it produces different tastes. Hispanic women do not mix sugar and salt. However, mixing vegetables to give food more flavour is important. This style of cooking could also be a protective factor against weight gain. Women believe that since Canadian food lacks taste, people in Canada end up compensating by adding sauces and creams that contain a lot of fat and sugar.

> Participant 9: The salad we have in Chile is very different. The Coleslaw, because it is very small, you put a different dressing on it. You put lemon, oil and salt. THAT'S IT. And you can put black olives, if you want, in the salad. Here they put...they put... it is not...it's the other dressing that is sweet. It's sugar. Yes, you can taste the sugar. It tastes in the salad. Probably the issue is that we don't mix sugar with salt. We don't mix it in salads. It is very rare. Sugar is sugar and salt is salt. And the cranberry sauce... Just like we never put cranberry sauce on meat. Focus group-2-Non-recent (236-251)

> Participant 2: Ah...we tend to sort of blend flavours, vegetables...We have a lot of different dishes in our diet. Different names for each dish depending on the combination of veggies and which one is more prevalent or...here, I notice, people are afraid to touch the potatoes...Oohhh....they put the potato here and the vegetable over here...and they have to butter the potatoes because it has no [taste]...Or you put ketchup on them...[laughing]. It cracks me up because I like to make vegetable soups

and all that but I cannot because: "How can you cook vegetables?" But, you know they cook together. Yes, that's why they taste better. The flavours, yeah, I notice that is the main difference that we let the flavours combine. And here it is separated...potatoes with butter, peas with butter and this with butter... Focus group-2-Non-recent (307-322)

3.1.3.2.5 "Breakfast like a King, Lunch like a Prince, and Supper like a Beggar"

One big difference between Canadian and Hispanic dietary patterns is the difference in meal times. In Latin America, the heaviest meal tends to be at lunch time. The women in this study have no doubt that eating the heaviest meal at night, immediately before going to bed, causes people to gain weight. Recent immigrant women try to maintain the meal patterns from home, but once they begin to work, they are forced to change this practice. Both recent and non-recent groups believe that this is a major dietary change they have made since coming to Canada.

Participant 6: One major difference is the eating schedule. For me breakfast has always been something mild, eating eggs, drinking coffee, milk, or juice. Lunch is the most important meal time... at least that is the way that I was brought up. Supper is light. Here, in general, supper is when one eats more. Focus group-2-Recent (142-145)

Participant 6: Have breakfast like a king, have lunch like a prince, and have super like a poor beggar. This is part of the education that we receive, that is given to children. Focus group-2-Recent (149-150)

Participant 5: In my country lunch is the biggest meal, at 2 pm, that's lunch. Supper is hot chocolate maybe. Focus group-1-Recent (211-212)

Participant 3: Here, you eat, and then you go to bed, that's why you get fat. Focus group-1-Recent (219)

Participant 3: Yes, there [in Guatemala} breakfast and lunch are more important, supper not so much. They say that eating too much at supper time is very fattening. Focus group-2-Recent (147-148)

Participant 1: For me the most important is lunch, I can't just eat a sandwich, the principal meal is lunch. Focus group-1-Recent (208-209)

Non-recent immigrant women have adopted the three meal approach used in Canada. While some women who arrived more recently still try to maintain traditional meal patterns from home. Acculturation of meal patterns change because of changing lifestyles.

> Participant 8: Ah, yes, they are different. But we try to adjust here also. In our case...back home, I remember...we are talking about 30 years ago so I was a mom staying at home and I did not go to work so... I had the time to go to the market and follow the four meals...that we have in the south of Chile. So we started with the breakfast and then "almuerzo" or lunch which has everything there...the main meal... Yeah...and then the tea time around 6 o'clock and at night the kids could not go to bed before having something light...So, they got some soup or something small. So, over here, of course, that changed because...you know...different type of life...and we cut it down to three. And since then...with my kids...up to this date we have three meals. Yes, breakfast, lunch and dinner. Dinner...the 5 or 6 o'clock dinner. And we keep that pattern ...like we have every dinner at five or six in the evening. Focus group-2-Non-recent (427-442).
>
> Participant 1: There, (back home) people don't eat as much at night, but here, they do. No, but no, I stay with the rules of my Colombia, unless I'm so hungry like really hungry, if not, juice and crackers. Focus group-1-Recent (221-223)
>
> Participant 9: For me it was the same thing with the meals. We stick [changed] to the three meals. But the other thing that has changed is the fresh vegetables for the frozen ones. Because you are in a rush...Focus group-2-Non-recent (467-469)
>
> Participant 4: For me it has changed with stages...when the children were at home we would have two or three meals every day...I mean three meals or sometimes four meals a day. And my husband or I would cook. And after that when they left...well, now we eat whatever we want to eat. Like we open the fridge and we say..."oh, do you want to eat fish...I will cook". But this could be, for example, Monday it could be a two o'clock or at six o'clock...whatever we feel like we want to eat something. Yes, we eat whatever we want and whenever we want. But we are very conscious about what we eat...and we try to eat every day...the things that we have to eat and no more than that...vegetables, fruits, etc. Focus group-2-Non-recent (470-477)

A non-recent woman from Chile explains how her eating habits have changed since arriving in Canada. This case study demonstrates the drastic dietary changes Hispanic immigrant women experience in Canada due to changing lifestyles and acculturation.

Participant 5: Oh...I grew up in a house where we were very Spanish traditional family so we had five meals. We...I had breakfast at 7:00 o'clock before I went to school. And then at 10:00 we had soup..."consome"...to prepare for lunch...yeah, it was like toast and the "consome"...and then from 12:00 to 1:00 we had lunch. Lunch was the heavy meal with all the stuff...more or less...the five course meal with soup, salad, meat, pasta, something sweet, and something to drink also. We used very much...eh...fruit juice.

I think in order to be healthy you have to have a balance in your diet. A good breakfast, something that we are not doing anymore... Eh, eating a healthy lunch...instead drinking all morning coffee...because that is one big problem when you work in a office...eh...like me, I work 8 hours sitting in an office and my life has become very sedentary... then my diet is not as balanced as it was before...because breakfast....I created a bad habit...because I go to work quite early so I am not hungry so I go to work and start working...at coffee break...well, at 8:00 AM before I start I have coffee...at 10:00 I have a muffin...something I didn't eat before, but I eat a muffin because it is more practical than anything else. Then, at lunch time, of course I am hungry, but what I eat probably is not a lunch like before...full meal...and THEN, the problem start going back home. (950-960)

I walk every day...going back and forth to my workplace...even during winter, I try to walk...if the cold weather is -15 Celsius and it is not windy, I can walk. So, that's the exercise I have. BUT, the big problem is all the stress at work. Ah...[sighs]..and...I come home and the fridge is there and the food starts coming out. I am cooking and when I am finished cooking, probably I ate whatever was there and I am not hungry anymore. Focus group-2-Non-recent (484-490) (950-965)

3.1.3.2.6 Meal Staples

The Hispanic diet is a combination of "dietary traditions of regions inhabited primarily by three high cultures of aboriginal Latin Americans: the Aztec, the Inca, and the Maya and dietary traditions that emerged following the arrival of Columbus, at about 1500, to the present time" (Harvard School of Public Health and Oldways Preservation Trust, 2000). There are many variations between the diets in Central and South America. These variations are due to dietary preferences, food availability and cultural eating patterns. The staples of rice and beans dominate native dishes in many Central American countries. In general, Central American countries consume more

plant-based proteins such as beans, while South American countries tend to consume more animal proteins. Animal proteins are often higher in fat and cholesterol. Consumption of animal fats in Central American, for example, depends on affordability and peoples' socioeconomic status. A woman from Guatemala explains:

> Diets there (in Central America) are completely different from here [Canada[. Diet for example, depends on economic possibilities. But the Latin-American diet is based more in vegetables, in corn, beans, and eggs. That's the protein that's most consumed. Well, yes meat, if you have the possibilities to eat it. If not, you have beans, tortillas, cheese. It all depends, because I still eat beans and tortillas. Individual Interview-13 Non-recent (192-199)

In South America, however, meat is always part of a meal. This woman describes the staples of Chilean meals:

> Ok ...first of all...we had the time to cook...I used to have a helper [maid] also with me...so we make...one day...it depends on what is the budget of the family...we used to have...you know...how do say "La Entrada"? Yeah, the appetizer...it was nice to have that. And then the soup and then...the...it could be anything the main meal...whatever...the soup can be with "garbazos" chick peas and all that...or lentils...Meat...in Chile every meal has meat...always some kind of meat...Yeah...meat...chicken...or fish...The soup always was there...a stew...was the main components. Yes, with meat and vegetables. Of course, the desert could be fruit or something that we have time to do or to prepare. Focus group-2-Non-recent (427-466)

3.1.3.2.7 Access to Traditional Foods in Canada

Many women explain that they cannot access traditional food items they used to consume in their countries. This is one reason why their dietary habits change. However, since Edmonton has a relatively large Hispanic community, a grocery store carrying some traditional foods is available. Women find this resource very quickly after arriving in Edmonton.

> Participant 1: It takes no time, as soon as you get here; people tell you that there is a 'Latin store'. Yes, as soon as you arrive people tell you... "There is a place to get leaves for tamales." Focus group-1-Recent (177, 185-186)

> Participant 2: At Superstore, I buy the rice, oil, but the "Tienda Latina" for the "arepa" flour, hot chocolate, and what else... oh the leaves to make tamales. Focus group-1-Non-recent (182-183)
>
> Participant 1: Everyone finds the "tienda Latina" because Latinos are very communicative, I don't mean we gossip.... we communicate!! (Laughter) LA-1-Recent (188-189)

There are many food items, however, that women cannot find in Canada at all or cannot afford to buy on a regular basis because it is too expensive. Some women struggle with making purchase decisions of fruits and vegetables because of the cost.

> Participant 2: Yes, obviously everything is more expensive. Focus group-1-Non-recent (279)
>
> Participant 5: I say to my mother, paying one dollar and change for a mango where over there one can have it for free. No, no, no, what an atrocity! Focus group-2-Recent (75-76)
>
> Participant 3: An atrocity... just as in Guatemala where one can find all types of vegetables and all kinds of fruit, however here one has to wait. There may be some, there may be none, when will it come, in what season... for example, the Güisquil [green vegetable with little needles], only once have I eaten güisquil since I have arrived here. Güisquil is produced in Central América, their vines tangle up so much. In the backyard of the majority of houses one finds them. It can be prepared with meat, with small pieces in a soup or instead you cut slices, beat an egg, you add cheese and you roll it up and fry it. Then you prepare a special sauce and it is very tasty. This is the vegetable, the güisquil, it's from Central America. Focus group-2-Recent (77-90)
>
> Participant 2: Something different between here and Colombia is that there people eat guayaba and guanaba jam. One cannot find "panela" here. Apples jams and other fruits. Here things that contain a lot of [natural] sugar are not consumed; here it is much more fat. There it is less fat and more [natural] sugar, generally of course. LA-2-r (324-327)

Women expressed concern over not being able to provide their children with their traditional Hispanic diets.

> Participant 7: Like every time I see... I used to eat that by myself... one avocado for me. Here you have to keep that avocado for the baby. You know, it is too expensive. [Everyone in agreement] And for me it has been difficult to have my children to eat my way. It is just really expensive. Like... in winter time to buy an avocado or try to get mangos or other

kinds of vegetables it is really, really expensive. [Everyone in agreement]. Focus group-2-Non-recent (400-405).

Women also disapprove of the "westernization' of their traditional foods. Canadian restaurants will advertise foods from various Latin American countries, but in reality the food is not even close to tasting the same as in Latin America. Flavours and ingredients are changed completely to fit the Canadian style.

> The only thing that I don't like is the so called "clean Mexican food". Yeah... It is kind of disappointing every time you want to get the Mexican taste, but it is better not to try it... I just get upset...because they want to sell you [indistinct] tortillas with cheese and tomatoes or something like that, but it is not Mexican food... Focus group-2-Non-recent (414-416)

3.1.3.2.8 Diet Acculturation

One of the issues I wanted to examine in this study was whether immigrant women from Latin America change their eating habits. In addition to changes in meal times, I found that many recent immigrant women try to maintain their traditional diets. Non-recent immigrant women also try to maintain their diets. However, they busier they get; the more likely they are to adopt Canadian dietary habits. Some of the dietary changes include: buying canned foods and frozen vegetables, and eating out.

> Participant 4: That's the good thing about having your own house, it hasn't been that hard for me because the first week that I got here, we got to a hotel and we went to the store. I always cook at home, we almost never go out to eat, if we have gone out, it's been like 2 or 3 times, it's rare. Here, [in Canada] we always eat what we've eaten there [back home]. Thank god that we found the "Latino store" there are a lot of Latino products from home. I try to give my food seasoning from home. Focus group-1-Recent (162-167)

> Participant 3: I don't buy anything canned. I use peppers, tomatoes, onion, garlic, I can't go without peppers. Focus group-1-Recent (192)

> Participant 9: Heritage...OK I have in my mind whatever my mom says what is good and then I continued the tradition. I have to cook "Cazuela" (soup) and I have to cook "Carbonada" (stew) all those things I have in my mind. One day I was with my children and I cooked "Pantrucas" (pasta

soup) and the children don't know what is "Pantrucas". And my daughter, she was at that time 17 or 18 years old and she is very conscious about health...and she say to me: "Mom, now I know what Chilean women cannot bend and they are very overweight – how you can eat all these Pantrucas all the times [laughing]...Because Pantrucas is made from flour, white flour, you know...and then I realized she was right. And now, you know, everywhere in the books they say it is not good to eat white flour. No, [I used to eat this] before...no, no I don't eat it now. It was the cheapest food you can make...if you are poor...not even poor, you know...It is very...it is a good dish and it is very inexpensive. You put white flour, salt, water, oil...it is like pasta. You put in on something. Yeah...like pasta...but no nutrition, only calories. Right, it is stretched out dough in little squares and beef. Focus group-2-Non-recent (4-26)

Participant 2: We still make our own food, because my husband is from [Argentina] and I am from [Peru] so we mix...sometimes he cooks, I cook. That's how we raise the kids with our own food. But they still like... They, I know they used to hate us because there was never nothing in the freezer...like on an evening that would have been useful, but they used to hate us because there was nothing in the freezer so they could grab it and eat it. Everything had to be prepared. Everything! NO. Never had any fast food. No cookies. So if they wanted cookies: "so are you going to bake cookies?" So I would bake cookies. I never bought the cookies and they liked that and still like that. They hated it sometimes. Focus group-3-Non-recent (601-614)

What happens is that in Chile my mother taught me how to eat healthy, she taught us to eat everything fresh, tasty things from the garden, no fat, nothing fried. So here I have the same habits. So in my house there is no fat, there are no fried foods, I try to make everything normal. If you look at my children they are thin. My husband is thin... I am the only one who is fat. My husband hasn't had any problems with weight gain. I believe that through good luck he gained some weight because he was too thin. Individual Interview-2 Non-recent (766-772)

Some women described how they way of cooking in Latin America is also changing. Women in Latin America are entering the work force more and more and they do not have the time to cook traditional foods.

I believe so, but now because I used to still cook things. I used to prepare them but if I lived over there and had children, with limited time, I believe so. Here, I would tend to go more for things that would be pre-cooked. Down there, there is a meal that they give to children. It is made from plantains. The recipe is to dry at full sun, once dried, they would grind it, prepare it, they would put milk. Delicious, later my cousin would make it for her children, but would no longer put it to dry on the roof but everything else, yes. Delicious and my other cousin who would give it to

> her daughters all, grown up, she would now buy the powder which would come in a package which was the plantain flower. What she would do was to cook it with the water. She would prepare it and add milk; she didn't do that of adding the plantain, cutting it up, putting it to dry, grinding it. No, all that is no longer done, there are things that are changing. Individual Interview-5 (277-289).

As immigrants become busier and more stressed with school and work, they don't have the time to cook in traditional ways. Lack of time is the main reasons for changing eating habits.

> This woman, when she got here, she said she always did all that [cook from scratch] because she had time. But then when she started working and studying, she didn't have time and she started to buy everything in jars. LA-1-NR (204-206)

Different life stages also lead to changing eating habits. A woman who arrived in Canada when she was in her i20s tells her story about the dietary changes she made as she got older. What is interesting about her story is that her maternal role influenced her dietary habits as well. Motherhood helped her make the right decision for her children and herself. But as the children grew and she re-entered the workforce, she began to make the "wrong" choices for herself.

> Participant 3: oh, they [eating habits] have changed so much. And back and forward too. When I first came, I was alone too and I never had to cook a lot. I did not know how to cook. SO I went the easy way out...I survived on hot dogs and jam and sour cream. I had that every day. Day in and day out. Then I got really tired...maybe it was just...really awful food all fast food, really. I would go and buy some...once a month, maybe, something fresh and all that. Then I got really tired and decided I was going to learn to cook. Then I went the total extreme. Everything had to be from scratch. Everything had to fresh. And I have been like that all my life...back and forward with all these things. And then it was too much work. And then I was with my husband and he liked to cook. So, I let him. And he cooks very simple but good. And I would add something and it was fine.
>
> And then the kids came and then I was again in the "nuts" stage and everything had to be fresh and everything was...so it's been back and forth. And now that I am working again I am back into the very bad habits. But I think that since I had the kids I have had maybe not very exciting food, but it was healthy. It was healthy. And now that my kids are grown up they have those good habits, because they definitely do, I am doing

really bad choices for myself. It is just because I did not work when they were little. I started working two years ago and it's been in the last two to three years that I put on the weight and I have made absolutely bad choices for myself. I was busy with the kids when they were little. It's just...that and I think that to cook Mexican food and to cook other things takes a lot of time. It's a process and I don't enjoy cooking. It is not just the time. It's not in me to cook. If I could cook only twice a week I would do that.

Now, I never cook Mexican food. I cook one Mexican dish twice a year. And I make such a big dish, but no one else likes it... [It's called] Posole....it's like a stew with corn...others make similar dishes...it has beans and some have sausage and some with lamb or pork...and I have to make it outside on the BBQ because it smells really bad Focus group-3-Non-recent (618-691)

3.1.3.2.9 Alcohol Consumption and Smoking

Some women explained that not all the health behaviour changes they have made since coming to Canada have been detrimental for their health. Their smoking and alcohol consumptions habits, for example, have decreased or ceased all together.

Participant 3: Yes, that is something that changed for the better when I came here. It is so bad over there. When we would finish lunch we would have coffee and a few cigarettes. And I got here and I smoked and I smoking and that is something I had to stop. People smoke a lot over there. Everyone: oh yes, all the time and everybody....Participant 2: but they do it more socially smoking than anything else. LA-3-NR (942-954)

Participant 2: oh no, everybody smokes over there. You go to the airport and people are smoking. You go to the mall and people are smoking. Participant 3: anywhere. Participant 2: anywhere you go people are smoking. Participant: people don't think a second time to light up in a hospital or where there are children. Participant 2: oh, yes, they don't care. It is more structured here; there are places where people can smoke...Participant 2: There is no place to smoke anymore... [Laughing], but I mean people here smoke in specific areas but in Latin America smoke everywhere. Focus group-3-Non-recent (958-968)

Participant 5: There, (back home) people drink a lot of beer. In warmer regions, they drink something called "refaja" which is half beer, half 'Colombian' (apple flavoured pop). You would have that maybe at a barbeque, nice and cold. It's not exactly a custom from my country, but people do sometimes. I don't drink here. Focus group-1-Non-recent (254-257)

3.1.3.3 Barriers and Facilitators to Leisure-Time Physical Activity

Most women believe physical activity is good for them, but most do not engage in regular leisure time physical activity. According to the quantitative data in this study, only 36.4% recent and 41.7% non-recent Hispanic immigrant women is this study are considered sufficiently physically active (i.e. enough to reduce their risk for heart disease). Non-recent immigrant women are a little more active than recent. US studies have shown that more acculturated Hispanic women are "more likely to adhere to recommendations concerning leisure time physical activity" (Berrigan, Dodd, Troiano, Reeve, & Ballard-Barbask, 2005). Based on the data from the Minnesota Physical Activity Questionnaire, the women in this study, however, are very active and lead very busy lives. Many have jobs that require walking and heavy lifting (janitorial work). Others try to balance work, school, and motherhood and engage in a lot of household types of activities. From the qualitative data, I understand that not many women engaged in structured physical activity in their home countries. Walking (as a mode of transportation) was the most commonly undertaken activity before coming to Canada. This activity is reduced with years of living in Canada.

In this section I will describe the women's past behaviours related to physical activity and their normative, cultural, and personal beliefs about exercise. I will then describe in more detail the identified barriers to physical activity in Canada. Participant identified the following barriers: lack of time, physical tiredness and ailments, lack of friend and family support, expectations and needs of the family, weather, and economic constraints.

3.1.3.3.1 Pre-Migration Physical Activity Behaviour

The types of physical activity women engaged in prior to coming to Canada vary depending on the geographical area they lived in. Women who lived in rural areas have different experiences than those who lived in cities. Much of the physical activity prior to coming to Canada included transportation-related activity. Active transportation seems to be much more common in Latin America than it is in Canada.

> Participant 2: Yes, it is walking. Over there it is all mountainous, one goes down and one goes up, one walks. Focus group-2-Recent (236)

> Participant 5: We didn't have a car. So I have to walk to the bus and to my house every day...like sometimes twice a day because I sometimes went home for lunch...so it was six blocks...three... four times a day. Yes, and for whatever you want to do...we had to go to downtown...it's the same....you walk and take the bus. Focus group-2-Non-recent (606-610)

> Participant 6: I love to walk. But when I was 20 years ago I was walking 12 kilometres a day and then when I was pregnant and all my pregnancy I walked 12 km a day. And then my son was born and I was running. At five in the morning I was running...one hour. But then, when I...23 years ago when I left my country. Focus group-2-Non-recent (611-614)

> Participant 10: There I used to walk more than here. Because, a thing that we have not mentioned here is that there we don't like one day old bread. We have to have fresh bread every day. So, you go to the bakery and the bakery is sometimes two or three blocks away. Rarely, are you lucky enough to be really close to the bakery. So you go and buy the bread for breakfast and for tea time. Because I don't know...P3: Yes, we eat fresh bread for all three meals. Focus group-2-Non-recent (640-648)

> In Nicaragua, I used to go the gym. There I was thinner, because over there you walk a lot. Wherever we went with my husband to do our interviews we had to walk. The town was far away from where we lived. The thing is that there were buses to this place but they did not go very often. The buses would break down and you would be stuck somewhere and had to return by walking. It was several kilometers. But we walked a lot...we would also bike all around the town we lived in. Individual Interview-4 (500-513)

Women who lived in large cities in Latin America did not report as much transportation-related physical activity.

> Participant 7: Ah, the thing is that I am from Mexico City and it is very dangerous for you to walk. And we had really bad experiences...so...no, you know, in just trying to catch the bus. So, yeah, it was awful. It is still awful. [Laughter]. So, I used to exercise...I have all this exercise, but I go

> to the gym. I like to go to the treadmill...and then I am used to that. My husband, he is Canadian, and he wants to go for a walk. And, I don't find it...really interesting, you know. So then we go cycling. We go to the river valley or something like that. But, I don't like to just walk in the neighbourhood... I like to see more nature or something like that. Focus group-2-Non-recent (628-635)

Women also realize that in Latin America, transportation-related activity is also decreasing because more and more people can afford to buy a car. This is a result of changing global markets and economies.

> But, what happens is that there, when people did that, they walked a lot, but now, with all the technology, people sit around a lot... in front of a computer, people go to the supermarket two blocks away in a car... everything is by car. That's what I say to my son. "The only things that's left for you is to go to the bathroom in you car. Only because you can't have the car upstairs..... (Laughing) Individual Interview-14- Non-recent (204-218)

3.1.3.3.2 Normative, Cultural and Personal Beliefs about Exercise

Physical activity behaviours are influenced by a combination of normative, environmental, cultural and personal factors.

> Participant 3: And exercise. We know we have to do it, but we don't do it...because exercise is impossible here. Because if you don't have your treadmill, in winter, what can you do? Focus group-2- Non-recent (905-908)

> Participant 8: Ah...for me [exercise] is important because you know I try...I try, for example, instead of taking the elevator at work, I do the escalator, all the time. To park the vehicle, I park it very far away now. Even in winter time. I make a habit at lunch time to walk because in the evenings sometimes I am too tired to go to the treadmill. In winter time, I am talking in winter time. And winter is longer in Canada so those are the months that we tend to "blow out" more...like gain more weight. Summer time, no, because you go home earlier and you walk more or do something else. But, yeah, we have a treadmill at home and we try to use it...I can't loose weight, but at least I am not gaining...Participant 3: You are maintaining...Participant 8: Yeah, unfortunately that's it [laughing] Focus group-2-Non-recent (688-698)

> Participant 3: [one should] eat properly and exercise. Definitely. It needs to be done too. {Laughing}.I know the theory. I do know the theory, yes. But, I don't...yeah, it is eating healthy and not overdoing it with any kind of food. Not on the healthy part or in the bad or whatever...you

> know...and exercising not just to lose weight but just to maintain your body working. Yes, to maintain your body going. Yes, [three times per week] walking and nothing strenuous but do have a certain amount of fitness, physical fitness. Oh, I think walking is probably the best. Focus group-3-Non-recent (858-873).

Some women discussed differences in opinion about what is and should be considered exercise. They disagreed about whether household activities that require lifting and carrying or just walking at work should be considered exercise.

> Participant 9: I think that what you do in your house, especially because me the way I do it...I got to be in a run for about 6-7 hours every day...in a run and never stop...for a snack or something yes, but for me that is exercise. Go up and down the stairs, clean the living room, go down to the basement, etc. And in my work, I walk too. All...almost all day long. I don't know if this is exercise, maybe I am wrong....I am a nursing attendant...I walk all day. Focus group-2-Non-recent (937-943)

> Participant 1: No, [I don't consider household activities] exercise. Because I don't do them like that...not the way I do them, because I take long breaks...because I get bored with something and then I go away and then come back...But I did have a housekeeping job in December and January and I dropped a few pounds because, you know, it was all day long, walking back and forth, upstairs and downstairs, carrying sheets...all day. Focus group-2-Non-recent (929-933)

Marquez, McAuley, and Overman (2004) found that cultural definitions of women's (gender) roles and body image ideals may influence the perception of leisure time and non-leisure time physical activity. For example, many women tend to engage in non-leisure physical activity for weight loss and cosmetic reasons. Most Hispanic families also maintain traditional gender roles and this leaves women doing the majority of household work. One hundred percent of the women in my study engaged in household related physical activity. This type of activity is considered "light" exercise but it is considered to be sufficient for the reduction of chronic diseases risk (Elosua et al., 2000). Many participants agreed that the exercise they get by doing household chores will not have an impact of their overall health.

> Participant 3: One problem that women have is confusing burning energy with doing exercise. In the house, or doing chores you use up a lot of energy and wear out your body because for example when you are vacuuming, you aren't really thinking, much about your body, like your tummy, or you back. But when you are bike riding for example, you are watching your shoulders, your back, maybe its sore, you think about that. For example, in Colombia, older women, like my grandparents, have osteoporosis, generally because of lack of exercise. They obviously didn't do exercise because they had like 8 or 9 kids. LA-3-Recent (134-141)

Participants in this particular study also considered recreational and social activities as part of a healthy lifestyle. Some perceived recreational physical activity more important that non-leisure physical activity.

> Participant 5: Because, I read, I have other interests and, of course, I feel that one of the things that people forget is that we have to have some recreation as well. And it is not happening. Yeah, it is not happening because what kind of recreation do you have sitting in front of the computer eating all day long and ...It is going out with friends and talking with friends...This is why the group "Amigas"...it is very nice to have the group. Because for me it is like having recreation...and the things we have in common and it is a matter of going out and we share and sometimes going to the mall...like it is cheaper to walk there. Focus group-2-Non-recent (969-976)

3.1.3.3.3 Barriers to Physical Activity in Canada

Women identified the following barriers to physical activity: lack of time and money, physical tiredness and ailments, maternal roles, lack of friend and family support, lack of will power, and weather.

Lack of time was the most prevalent reason mentioned in this study. Time constraints vary throughout life stages and changing lifestyles in Canada. Moreover, the burden of non-leisure physical activity (jobs that demand walking, lifting and carrying) is also a barrier to leisure-time physical activity.

> I didn't want to exercise because I didn't have the time, and I would leave at 6 in the evening for the "daycare plus," you go home, I wouldn't be able to go anywhere, I didn't have a car, the buses take to long, transportation

is difficult. My life was university and home, and my home was studying...Individual Interview-1-Recent (350-353)

For me, at first it was a time restriction. Secondly, I went to fitness classes and I didn't like them, so I didn't have the motivation, I didn't like the style, there was a part of me that I found when they said (uh-who!) I said boring, what does it have that is exciting? Individual –Interview 1- Recent (511-514)

Participant 7: It all depends on the activity that you are doing...for example, before depending on the schedule, I was walking 30 blocks and after that half hour of training [strength]. It was so wonderful. And now I don't have time anymore. You know 17 years in Canada...we have changed. We cannot talk about now when it was completely different when I was a student and I was not working. But now, my work is walk, walk, and walk. So I walk. Focus group-2-Non-recent (707-712)

Participant 3: But, I am saying after working like...Like I work 12 hours...I am not going to go to they gym after that. [Smiling] Focus group-2-Non-recent (914-915)

Studies make you gain weight, for one the sedentary condition and secondly... for example me. My friend that started studying in September and now she is over weight, and she says I sit down to study and I sit down with food. Me too I would eat those apple pies myself, the brain asks for sugar and it all has to do with the endorphins. I was too busy...Everything influences what you do, how you see yourself, the activities that you do. Individual Interview-1- Recent (708-712)

A vicious cycle forms when lack of time and money become a barrier for physical activity.

And people always say: "I don't have time. I don't have time." And when do you really have time? For example I want to go to "Curves", because they say that Curves is a really good program. I have the time, but I don't have the money. And when I have the money, I don't have the time. Because when you have money it's because you are working and saving money. Yes, like a vicious cycle. Tell me, for example, Kinsmen, is close by, but how much do I have to pay? It's so expensive. Focus group-13-Non Recent (710-718)

Participant 5: In the gym here at the University of Alberta, if one wants to go to the gym one has to pay because here everything is money. As opposed to over there where everything is free...going for a walk, going to the soccer field. Focus group-2-Recent (233-235)

Women's maternal role influences exercise habits as well. Many women feel they don't have time to exercise because of their responsibilities as a mother. Some women miss being able to exercise, while others accept lack of leisure-time physical activity as a normal life stage. They do not consider themselves to be completely sedentary because the activities they do with their children are a type of exercise. As found in previous studies, maternal rewards outweigh the burden of household activities and childcare (Juarbe, 1998). For cosmetic reasons, however, women also realize that after they have had children, they need to exercise more to lose the weight.

> Participant 1: I like anything that is athletic, but I have recently had a baby and I hardly do anything. I like to skate, walk, ski, I really enjoy all kinds of sports. Focus group-2-Recent (251-252)

> No, no because life is totally different, the type of activities, for example now, in this period of my life, taking care for my kids, raising them with all the activity, really I do a lot of exercise, and now I'm nursing. I don't have any energy to go to the gym, now I play with my kids, I'm nursing them and ...cleaning the house can be sufficient. My grandparents, not like my mom, that's another generation, but my mom would go to work among other things, it wouldn't occur to her to go to the gym because the physical activity of taking care of kids was enough. Individual Interview-6- Recent (147-160)

> When I had kids. Then I stopped; and also, after I had kids, I started to gain weight. Before, not even by accident. I could eat an entire cake, and I would still be thin. After I had kids, my metabolism changed, now I breathe and I get fat.... It's more work to maintain a certain weight or lose weight, that's just the way it is. Individual Interview-3-Non-recent (363-367)

Some women also reflect on the need to have time for themselves (i.e. without the children). They also understand that they need to exercise outside of the home in order to stay healthy and to have more energy for their families.

> Participant 5: Exercise with recreation because you are walking all the time, you move and exercise, but something that relaxes you is different, like going out to a park and walking, you are breathing fresh air and thinking about other things, not just your chores. Its hard work, with kids

> its hard work. Like... you are exhausted from that, but not from exercise. Focus group-3-Recent (116-120)

For some women, the guilt from leaving their children outweighs the need to exercise. However, others point out that if women take time for themselves they can have more energy to be with their children. Exercise is then not seen as a benefit only for the woman, but for their families. In Latin America, motherhood is a socially constructed concept that can prevent women from thinking of their own needs and desires (Juarbe, 1998). Men in Latin America play a strong role in the maintenance of this social construct.

> Yes, because a lower [SES] level it [exercise outside the home] is even questioned. But look a woman that works and has children does not give herself the time, there is an issue of guiltiness, the woman feels guilty that if she goes to the gym.... she is taking away time from her children, and she doesn't see that the time will give her energy to be more energetic with her children, she will not be stressed. In my generation they don't have that yet, I know I instill it in my friends. "give yourself some space for you, buy yourself something beautiful, give yourself some time, go to the gym", it can't be work-child, child-work, but they don't do it out of guiltiness. Because society tells them that they are being bad mothers. At work my colleagues used to ask me: and when do you see your daughter? The men would ask me that... us women, we are more supportive; my sister tells me that we need to fight for empowerment. Individual Interview 1- Recent (530-539)

Women have internalized their roles as mother so much so that they do not even realize when they assume such gender roles. When they realize, however, that they have a role in promoting gender roles in their families, they begin to change their behaviour.

> Participant 5: I remember when I would go out and my husband would say: "Go, don't worry, the kids are fine, we're going to paint"...and I would go to the corner and I was worried. I would say: "I have to go home, and see if everything is ok"...and he would get upset and say: "Why don't you trust me? What's with you?"...and later I realized that I was spoiling my husband. Focus group-3-Recent (171-176)

> Participant 3: That's why there's so much "machismo". We, ourselves, form our own machismo. Focus group-3-Recent (176-177)

> Participant 6: For example, my husband would get mad because my mom would be in the kitchen teaching the kids to make cookies with drawings and my husband would say: "No, my sons won't bake cookies." And my mom would say: "You are going to tell me I can't teach my grandkids to cook? I raised 8 boys and they all know how to cook. One day if their mom isn't there and if you don't know how to cook, how are they going to eat?" So that's how he realized that it didn't matter, both men and women have to learn. Focus group-3-Recent (179-185)

Exercise may be perceived as a mechanism to become more physically or sexually attractive instead of as a health maintenance or health promotion behaviour. Cultural norms for weight may influence nutrition and the need for exercise (Juarbe, 1998). The social pressure women feel to be attractive can be incentive to start exercising. However, once they begin an exercise program, women realize that exercise has other benefits such as social and health benefits.

> Let's look at it from a gender perspective, in Chile it is very important for the woman to be pretty, that is the motivation, but once they enter into exercise and the group dynamic exists, the socialization I believe retains them, although there are cases where the woman becomes obsessed, that type of exercise where one little grain is two hours, but many people go like my mother as a health issue and social issue, she needs it for health. Individual Interview 1- Recent (530-535)

Many women believe there are ways to incorporate regular exercise into their lives, but there is a sense of lack of will power to go through with it. Women feel that having a social group or network in which women can motivate each other to exercise would be useful.

> Participant 3: I think that for example in Colombia, if you have a way to get a housekeeper... But there is a way, I go to the gym, and there are a lot of women that are exercising, and there are opportunities for you at the gym, like a daycare, or they show you exercise with the buggy, or you exercise with them. Focus group-3-Recent (144-147)

> Participant 8: Today I am going to walk and it never happens. It does not happen. In my job, you know, I walk, I walk a lot and I promise myself I

> am going to continue to walk but what happens. Six o'clock, the soap opera comes and I watch it and then I want to watch the news and then I want to watch the other soap operas...so it never happens. Focus group-2-Non-recent (591-597)

> The truth is that when I am not alone, alone, alone it is better because when I am with somebody I don't feel the time. For example, if we had a group to go together with in the afternoons I would do my time. I believe that doing everything... in the end there is time, but what happens is that I just don't take the car and go. If there was a group that would say, let's all go together... I would go. That's what would motivate me more. Individual Interview-10 (807-812)

Some women explain that physical tiredness and ailments prevent them from exercising, while others understand that they must exercise more because of their pre-disposition to chronic conditions.

> Although I have kept doing some exercise, not constantly, but I have kept it up. For example, before I played tennis, and that was my exercise. But two years ago they found a tumour in my chest and they had to operate...fortunately, it was benign and the next year ... the last 2 years I haven't been able to do anything because the operation really affected me. The operation was here but I can't use my arm the same way and playing tennis is way too much impact. And so it's been two years since I played tennis, and I have gained weight. Individual Interview 3- Non-recent (368-374)

> Laughing...Ah the real truth is that my family is, well, fat. It's hereditary, and diabetes... it's not because I came to Canada, it's because it's also hereditary, it's in my family. My grandmother had 12 kids, 6 of which had diabetes. My dad had 10 kids, and I know they have diabetes. The 6 kids that my mom had with him, 4 are diabetic. My older sister, my older brother, my younger sister and my younger brother. The ones in the middle aren't diabetic... but potentially, genetically, we are diabetic. No, I don't think that it's all genetics. Diets there (in Latin America) are completely different from here. and I have to exercise more...Here in Canada people are more conscious of exercise, but even with all the technology, people don't do it. I do my exercise, my work... I have to walk for 7 hours. And before I did that, I went walking really fast for more exercise... I had to walk 30 hours... I mean 30 blocks. When I lived in the South side [of Edmonton] I would wake up early and go for a walk, and after I had a half an hour to swim... because, because there was a pool in the building that we lived in. And I had the time. Since I wasn't working... my son worked at that time, and I just had a few patients in the clinic... and I would see them and then I had the time to walk or swim after seeing the patients. But when we moved here, that ended. So the

work there was what I did. Individual Interview-13- Non Recent (181-187, 698-702, 704-717)

For both recent and non-recent immigrant women from Latin America, the Canadian winters are strong barriers to physical activity.

> Participant 2: And exercise. We know we have to do it, but we don't do it...because exercise is impossible here. Because if you don't have your treadmill, in winter, what can you do? Focus group-2- Non-recent (905-908)

> Participant 5: Over there one goes out to walk and burns calories and works out, as opposed to here at -30 one does not go out...here one can jog, not always, but one can in the summer. Focus group-2-Recent (202-203)

> Participant 4: In Guatemala, where I lived in a placed named Chiquimula, it is a hot place, I would eat a normal amount, not too much, I would sweat a lot and I would drink lots of water, walking helped me maintain myself. Once I arrived here, after two months, I gained 4 lbs and my stomach became noticeable. My husband would say that I wasn't drinking water, that I shouldn't have this or that...but it is the lack of exercise. Focus group-2-Recent (205-209)

Structured physical activity programs seem to facilitate healthy behaviour choices for some non-recent participants. For example, workplace exercise programs are considered very useful. Women see many benefits of physical activity, including increased physical energy and ability to function as well as improved perceptions of well-being.

> Participant 2: No, [I don't go to they gym] but we have a lady that comes to the office. And she makes us to all this stuff but then on Monday she is like working us too hard (laughing) and Fridays because we have two days off (laughing) and I am like – "you can't do that" (laughing). Focus group-3-Non-recent (879-881)

> Participant 8: Actually, for me, I am taking a different path now. I see things differently. I joined the Tai Chi now and I have been doing that for six months and twice a week. That, for me, is very relaxing and you know ... and that way I can see things different too...I tried yoga too, but it is not for me. Because I should have started earlier age maybe. Because when I started it was only about two years ago, so no...it was not for me. And changing the way of eating too. You know my habits to eat...and because like [name], I work in an office so hours sitting down, the stress

and all that...for me...like twice a week I go to Tai Chi. Focus group-2-Non-recent (996-1003)

Participant 7: So I have to exercise...so now...some kind of promotion...so when I have the children I could not exercise...I was looking after the children and I could not exercise...so it was for a while that I could not exercise...like for a year that I could not exercise because I had my toddler and the babies so it was not until I joined the YMCA again and they have this baby sitting ...and it was great! Because it was like this...to be healthy is all in the mind... and I have to have my time ...like no children screaming and crying. So that was my time and I exercised and I feel that after exercising...even though I am tired physically, I feel more relaxed and I think that I can function again. Focus group-2-Non-recent (986-994)

3.1.4 Summary – Health and Acculturation

It is clear that participants hold a holistic view of health and wellness. The physical aspect of health is important both for disease prevention and aesthetics reasons. Women's perceptions about body image clearly show that aesthetics and appearances are important for Hispanic women. In general, Hispanic women perceive that appearances are more important in Latin America than in Canada. They also perceive that there is a larger body size ideal in Canada. The ideal body image in Latin America has been changing, however, due to globalization forces and influences of Western media. Perceived barriers to health in Canada include, stress, faster lifestyles, changes in dietary patterns and reduced physical activity (walking).

3.1.5 Migration and Integration: Sources of Stress and Consequences for Health and Body Weight

The aim of this study was to develop a better understanding of the mechanisms behind the healthy immigrant effect within the context of the migration experience. Study instruments used were developed so that participants could share as much information as possible about their migration and settlement experiences in Canada. With this

information, linkages can be made to health declines. Migration can be considered as a determinant of health in its own right (Thurston & Vissandjee, 2005). Participants shared many details of their migration and integration experiences. Most women linked these experiences to increased levels of stress. Some explain he consequences of this stress on their health. Migration and acculturation stress has been linked to health declines in other studies (Beiser, 2006). Moreover, migration experiences have also been associated with chronic stress that may contribute to deterioration in mental health (Lopez, Haigh, & Burney, 2004). My study contributes a better understanding of the particular factors that cause migration and acculturation stress. Factors such as inequitable migration policies and socio-cultural transitions are direct sources of stress for both recent and non-recent immigrant women.

From the health literature we know that stress "activates a cascade of hormones that affect the cardiovascular and immune systems" (Wilkinson & Marmot, 2003). Studies show that excessive production of hormones such as glucocorticoids predicts future coronary disease (Brunner, 1997). Although, many did not link their stress levels to weight changes, this link has been established in the literature (Terán, Belkic & Johnson, 2002).The sub-themes of this section are: migration and stress and negotiating pre-migration expectations and reality in Canada. In this section I will outline two case studies, each demonstrating women's experiences and struggles with inequitable policies and socio-cultural differences.

The literature on migration and health has established that acculturation to a new culture brings many challenges that cause great amounts of stress in immigrants' lives

(Smart & Smart, 1995). Many women in this study described stress as a factor that affects their daily lives in Canada.

> It is a bit frustrating, you know. I tell my husband that if sometimes I seem angry and frustrated and all that...it is not for nothing...it is because one has many frustrations here...Here in Canada there is a lot of tranquility and things that you could not have in your country, but at the same time there are many frustrations because of the language, the profession issues, the cultural differences...it has its advantages and disadvantages. Individual Interview 4 – Recent Immigrant (116-120)

Cleghorn and Strainer (1979) as cited in Smart & Smart (1995) explain that stress can also make people more aware of physical symptoms and illnesses. This in turns reduces actual levels of health and slows down potential recovery. It has also been established that different cultures respond differently to stress (Smart & Smart 1995). There are many sources of stress for immigrant women. In this study participants identified the following sources of stress: language barriers, lack of social networks, negotiating pre-migration experiences and reality in Canada, discrimination and racism, and loss or decline in social status.

3.1.5.1.1 Language Barriers and Obesity

Many recent immigrant women do not speak English and have difficulties navigating the Canadian system. Research has shown that language barriers can not only affect obesity directly but could also be a mediator for obesity (Terán, Belkic & Johnson, 2002). An older woman from Venezuela told me about her frustrations with weight, diabetes, language barriers and social isolation. Her inability to speak English prevents her from going outside of her house because she is afraid that she will not be able to make herself understood. This causes fear and anxiety. The end result is that she stays inside, does not exercise, and feels terribly lonely. Since arriving in Canada, she has gained weight and developed type 2 diabetes.

I gained a lot of weight at first... well now that I am sick [diabetes] and I have lost weight...No, no, I haven't been able to study English. Since I got here, I started studying and now that I've been looking to see what I can do... I think, no, now what kills me is the English. I can't work if I don't know English. And now with my illness, I can't work... well if my blood sugar is low, and I feel dizzy, like really dizzy.

NO! They [neighbours] are all Canadian. I can't talk to anyone. That's been really hard for me... I want to say something to them, but I can't... I feel terrible! Like for example I feel like saying something to someone and I can't say anything. Well how can I [answer the phone] if I can't talk English! I don't go out...what for? I can't talk to anyone.

Yes, it is very difficult [to integrate]. But sometimes I think about my loneliness it's so horrible... I really think it's horrible. For example, a lady came to visit me [and she is] from Costa Rica, and another one from Colombia, who had an accident, she fell down the stairs and she broke her foot. Now she can't come and see me. Mmmm... but sometimes my granddaughter takes me around, like to the doctor or wherever, they are always taking care of me. Of course! [In Colombia] I had lots of friends... I went wherever I wanted, but here everyone [family members] is always worried about where I'm going, what I'm doing.

But I didn't study [English]. I only studied the bare minimum, just to understand things. I said to a friend who's from Cuba, I said, "why don't we study together", I said to her, because she understands a bit better than me - she's a teacher among other things. At any rate, she understands very little, and imagine... my god, to understand it all. Tell me what one has to do to understand, it's so hard for us, dear Lord. (Sighs) Individual Interview-7 – recent (105-108, 408-414, 449-453, 539-545, 678-683)

3.1.5.1.2 Missing Home, Nostalgia, Lack of Support Networks and Stress

The lack of support networks, neighbours, and familiar surroundings causes more stress for immigrants. It has been established that decreased levels of social support among immigrant groups is associated with high levels of stress (Ponizovsky & Ritsner, 2004 as cited in Smart & Smart, 1995). Moreover, socio-cultural transitions and stressful life events are factors can cause physical illness. Syme (1984) as cited in Smart & Smart (1995) explains that disruption of social ties is a strong disease risk factor. In this study, women talked about feeling stressed and anxious over the separation from family in their home countries.

> Participant 2: You always miss kids that you have there (back home). Focus group-1-Non-recent (642)
>
> Participant 3: [I miss] everything (everyone laughs) family especially. Focus group-2-Recent- (276)
>
> Participant 4: the people...I miss the people...There [back home] everything is different....she can explain to you {looking at another participant). There...Christmas festivities....during Christmas people are kind...you feel more happy because the neighbours get closer to you and they visit each other for New Years'] ...they give each other a hug. We lived in the City and it was the same...all the neighbours give each other [the New Year's] hug [people are] very warm...here they don't do it...there is no hugging, you know...sometimes although some neighbours had been upset at each other for something...they still gave each other the New Year's hug. Focus group-3-Non-recent (258- 283)
>
> Participant 5: Just a comment, it's that over there one has her friends and family, which one does not have here; one does not have that support. Focus group-2-Recent (435-436)

Participants stated that the lack of family support creates a larger burden of responsibility as they have nobody to help them raise their children. This creates a sense of pressure and stress that in turn affects their mental health.

> Participant 1: Yes, we miss our extended family; the kids don't have their grandparents nearby. Here, you have to raise your children alone. Here one feels more the responsibility of raising the children, with all the positive aspects that has, but in Peru, it's a collective raising of the children. You have the main responsibility, but like my mom says, it's respected, but in a few cases the grandparents get involved! (Laughter) But the children have to respect what their parents say as much as possible. But a collective raising of a child is much the same; kids have many people to model themselves after, their grandparents, their cousins, and their uncles. It's a much more of a 'collective parent.' There is less pressure of responsibility; there is less psychological pressure. Focus group 3-Recent (218-227)
>
> And when you arrive in a new country you lose that, because you don't have your network, you don't have the friends you lose everything you have to "renew" it all, making friends takes time, friends in which you can confide. What I felt the first few years is that above all I had a little girl [daughter], for example I'd be late in traffic, they close the daycare and who can I call? In Chile I would call my mother and she would go and pick her up. I believe that now that I have live here for 5 years I have friends that I have developed, they are friends that I can ask them a favor like that. Individual Interview 1 (210-217)

Creating a social network in Canada can take several years.

> There (back home) there was much more of that. It was complete change... socially. In reality, no, I wouldn't trade my family in Canada for anything in the world. But it has taken time. I've known them for 12 years, well, because we lived close together, because we haven't continued traveling. But now we have that kind of relationship, it took a lot more time. I think that there it's not something that you have to do. It's already there, maybe because you are born there... there (back home) it's more open-minded, people accept you faster. Here they receive you as well, but it takes more time. There (back home), people open their arms to you, they adopt you. Here it's a bit more difficult, but you can still achieve the same level of the relationship, but it takes longer. Individual Interview-3-Non-recent (379-380, 391-397)

3.1.5.1.3 Case Study 1- Experiences of a Recent Immigrant Woman: Negotiating Pre-migration Expectations and Reality in Canada

In addition to the challenges of social support, the inability to speak English creates many other challenges in immigrants' lives. The following is a case study depicting the migration and settlement experience of a recent participant. Her experience demonstrates several key sources of migration and acculturation stress. The sources of stress in this case are: negotiating pre-migration expectations and reality of life in Canada, disillusionment of skilled of immigrants and loss of social status, barriers to English as Second Language (ESL), and adapting to socio-cultural transitions.

Carmen, is a recent immigrant from Colombia. She came to Canada as a "dependent" since her husband was the principal applicant in their "skilled immigrant application". Canada's immigration policy does not allow for two principal applicants. In many cases, the wife is classified as the dependent. There are many consequences to being classified a dependent in the application process. For example, as a dependent, women are treated as being ''not destined for the labor market'' (Man, 2004, p. 140). This policy creates confusion among immigrants because immigration official assess a family's potential for finding work by looking at the education levels and work

experiences of both husband and wife. Hence, when Carmen and her husband were applying for their immigration papers, they expected that both would have access to work opportunities in Canada. Carmen is a chemical engineer with eighteen years of work experience. Her husband is a computer engineer with twenty years of experience.

> They [immigration officials] assured us that we would not have any problems finding employment in Canada [laughing]. 116-117

As required in this category, they were asked to have $9,000 in a Canadian bank account. This money ensures that they can pay for their living expenses for a couple of months. Carmen and her husband borrowed money from family members and friends. They had to re-pay this amount shortly after arriving in Canada. The burden of having to repay this money was a source of stress for this family. Finding work was their first priority upon arriving in Canada. However, soon after arriving in Canada, Carmen's family realized that they would not have any support or orientation from the Canadian government with respect to employment opportunities.

> Yes, well...when we arrived here...we got a cold reception...in other words they "bite' you when you arrive. They told us: "Well, now you have to start looking for jobs...prepare your curriculum and that's it".

Without knowing how to navigate the Canadian system they talked to friends about what to do. Knowing that they needed to learn English before finding work, they were told to contact the Catholic Social Services office. There quickly enrolled in English as Second Language classes.

> I knew from the outset that I did not have the language skills to be able to work. We went to the Catholic Social Services and there they put you in an English class....which is what I did...I finished the "Link" program and now I am doing a fourth semester of ESL and next week I start a training program at North Quest college. It is a program for engineers...for people who have professions in their countries and they give them training...

3.1.5.1.4 Disillusionment - Loss of Social Status

This training, however, will not allow her to work as an Engineer, but as a technician. In the end, her University education and eighteen years of experience have been reduced substantially. This has created a sense of "loss of social status" since she will not be able to work as a professional engineer. Her husband could not find a job as an Engineer either, so he took a job in construction.

> It almost killed him because he had never done that kind of work...It was after all, 20 years of sitting in front of the computer...can you imagine...to be doing manual labour...It was horrible...but now he is there...and now he actually works for the company...he does not work for the agency that contracts him out to other companies. He is at IBM now and he can at least have benefits. And although the salary is low...$18 per hour...but at least we have benefits...and when I start we will see what we can do...

Carmen and her husband realized that there are job opportunities for newcomers. But, these job opportunities are not the ones they expected. They were disillusioned to discover that the only work they could find were as a janitor and construction worker. In these kinds of employment they would not be able to apply their professional skills. They are also low paying jobs that do not offer any health benefits. Carmen feels mislead and exploited.

> Canada is not a land of opportunities...it is about knowing people...and about arriving at the right moment...and to trust your luck...Even when you learn the language...you have another problem...many of our friends who speak English now...they were Engineers in Colombia but they had to apply for technician jobs...and when they went for the interviews the would tell them: "you are overqualified for the position"...so if you took the position you would have to accept that you would be stuck in that position and that your salary would stay the same...because you accepted those conditions...It is like exploiting people...because you are not recognizing our level of education...
>
> No, no, working as a janitor...that's where you can find work opportunities...In Alberta there are lots of those kinds of jobs...cleaning jobs. There is work...selling things...but the problem is what kind of English do you learn in those jobs? It is a very basic English skills...so

> when you go for an interview...you need more advanced English skills...writing skills, even.

Their struggles finding employment created a lot of stress and affected their overall health. Her husband lost weight, while she developed an ulcer.

> Well, it the situation has caused me and the family a lot of stress. Especially when we first got here and my husband had to confront the construction work...that company demanded a lot too...it was very hard...he lost a lot of weight and it was hard to see him like that...I had health problems in Cuba but they have been aggravated here...I have a gallbladder problem and my doctor in Colombia told me that emotional stress increases can cause more problems...I am still looking for a doctor that can treat me here in Canada.

3.1.5.1.5 Barriers to Accessing English as a Second Language (ESL) Programs

Carmen expressed frustration over the vicious cycle of needing to work to pay their debt and to survive and not being able to learn English. Without learning English, the potential for ever getting a job in her field was diminished. In her cleaning job, Carmen does not learn much English. Moreover, the ESL class she finally was offered by the province of Alberta was not sufficient for her to learn English at an advanced level. Without more advanced language skills she will not be able to find work in her field. The sense of frustration takes an emotional toll on. But she remains hopeful and resilient.

> I had to take a cleaning job...look that is an example. The ESL course, which only Alberta offers, I consider it very good because it helps immigrants ...it helps them speak and write and think in English. But the time is short. But when we came we had to start our lives...we are independent immigrants...my husband was not finding employment and so I had to find a cleaning job...My husband worked in construction and his salary was not enough. When I went to apply for the ESL course...and since both of us were working...I did not qualify. Even though it was just a cleaning job and the salary was not that high...they still disqualified me from the course because I was working...but the following year I got some tax money back so that money I used for my school.

Having cleaning job even disqualified her for ESL programs. She had to stop working before she could take part in this program. However, since they needed money to survive she had to work until her husband was able to find a better job. The frustration of experiencing a change in social status affected her emotional health. However, thinking about her family gave her the strength to continue. The main reason she and her husband decided to leave Colombia was to giver their daughter a better future.

> Every day I would tell myself: "I have to get out of this [cleaning job]"...because one knows...that one has the skills to do another type of work...It is not hard for me to clean as a second option...I mean it is not a problem...the problem is that I cannot do the type of work that I know how to do and that I know I can do well...but we have a daughter and you have no other choice...
>
> For sure... it is for the children...for your family... for yourself too. In the end it is for one self because, for example, I was telling you that as Colombians we have a lot of good things in our country and here we have other good things. The salaries in Colombia were not enough for us to save...we decided to make the change thinking about our daughter and so she could have more opportunities. And thinking of our families that we left behind as well...that we can help them a little...making a bit more money here...sending them a little money makes a difference. Because $20 is a lot over there...so the minimal help we can give makes a significant change for our families.

3.1.5.1.6 Socio-cultural Transition, Stress and Resilience

Adapting to a new culture is also creates stress. Carmen wishes more cultural orientation by the government was available. However, she had expected the socio-cultural transition to be difficult. Her positive attitude and resiliency is demonstrated in the following paragraphs.

> And one of the worst things that changes is that you don't know the law or the culture here...or in social situations you don't know what to do...you have to learn everything again...everything is new...Immigration is something very difficult.
>
> When you come to another country you have to adapt to the conditions of that country. You cannot think that you will be the same as in your country

> because then you should not have come. You have to confront...if you know you are coming to confront change and really you need to learn English because that is the language spoken here. You can't pretend that people will speak Spanish to you. You have to learn English and you have to learn to live in this society, because of course, you chose this. If you came here voluntarily...some do not come here willingly...like refugees.

Her determination to succeed and integrate also helped her to keep going. Knowing that she and her family could not return to Colombia was also facilitated her settlement experience.

> When we left Colombia we knew we could not return. So that put us in the right mindset...because since we left Colombia we knew what we had to do. I could no speak English but I told my husband: "I am going to work". I did not know of the ESL courses that the Alberta government offered before I came here so I was determined to learn English on my own. When the government gave me access to ESL classes I tried to take advantage of that and learn as much as possible. BUT, I knew...I mean...to get a cleaning job...or to do whatever work that did not require English language skills...I had to do it to support my family. When you live here...I don't know...you get lost a little...But you keep going...you have to...and really we have tried to improvise...when we decided to come here we said we would try anything...now we are trying to learn how to skate even... [Laughing].

In summary, this case study exemplifies several sources of migration and settlement stress, including deskilling of immigrant women and loss of social status, barriers to ESL programs, and socio-cultural transitions. I will now present other sources of stress identified by participants.

3.1.5.1.7 Discrimination, Prejudice, Racism and Stress

Stress derived from migration experiences and the perception of discrimination and racism are key influencers of women's mental and physical health. Previous, research in the U.S. has shown that "discrimination may be an important predictor of poor mental health status among Black and Latino immigrants", (Gee, Ryan, Laflamme, and Holt, 2006). Many Hispanic women in this study have had direct experiences with discrimination and racism.

> Participant 1: Yes, that's true because if it's because you are an immigrant sometimes the treatment isn't very humane. I myself can't say, but discrimination does exist. Let's look at Edmonton; here there isn't one Canadian from Edmonton cleaning bathrooms. Focus group-2-Non-reent (172-175)
>
> Participant 3: That's true because you could be African, East Indian, Latin-American, you have to support yourself. You have to struggle hard. I've heard racist comments like 'what are you doing in my country' – 'leave my country' 'what are you doing here?' But I worked hard, I studied, I made an effort. I arrived when I was 17. Focus group 2- Non-recent (180-185)
>
> I have met people with a PhD from India and with my sister we would analyze the positive discrimination towards Latin people, because it has to do with the accent, tell me if it is not true. Understanding a Chinese or Hindu person is more difficult, and Canadians do not have much patience to try to understand, they say: "what?" the first time and the second time they stop listening. I believe that the first barrier is linguistic and the second is racial, that is why I say positive discrimination because if they think you are nice and warm, they say "I don't' understand anything of what you are saying but I like how you express yourself". And if you pay attention Canadians do not speak with gestures, there are preconceptions, I see with my students that I teach Spanish, they think we all know how to dance, but to know how to dance is Caribbean, in Chile they don't dance. If you go to a nightclub here, I feel uncomfortable because if you are a Latin woman *you must know* how to dance. And another thing many people believe that it is tropical in my country and they think that we live in the jungle with the monkeys, so there are many prejudices and preconceptions and you have to teach people. I tell people the only difference from your country and mine is the income gap, poor and rich. I think there is a positive discrimination... I believe that when I was looking for work I had a better chance than if I would have been from Africa, India or China. Individual Interview 1 (372-388)

Experiences with discrimination and racism affect immigrants' ability to integrate both socially and financially. Research has shown it can take ten or more years for an immigrant to achieve his or her immigrant economic potential (Beiser, 2002). A woman in this study explains that it can take even longer to integrate socially.

> I think that social integration takes much longer...social integration...I mean...economic integration...there are people who have gained higher economic status here in the Canadian society...it is a middle class status, where you have everything you need, you have two cars, you have a house...Yes...mmm....socially, though, I think we will never really integrate...however when the children start marrying...so the generation

> of our children they are well established in the Canadian society...they integrate from the point they start school...because in the classes 90 to 95 % of the children in kinder garden are Canadian so our children integrate with that group and they grow up together...they go to University together...they marry with Canadian people and they are well inserted in the society, but our generation I think it is too difficult that we would ever integrate fully. Yes, the second generation takes the benefits that we were able to achieve. Individual Interview-10 (273-287)

Immigrant women also experience challenging interactions with immigration officials. This creates much tension and anxiety for women.

> I don't know... I believe that things happen for a reason... because so many things happened so that I could stay in this country... it was difficult. The immigration process was very difficult for me, although I had the language, the experience, the age, the studies, I went to the immigration "interview" and they told me: "but you don't have a job"... although I already had an offer but "I don't have the papers," and they [employers] asked me to have the papers beforehand, and they [immigration officials] told me but get a job first and then you can have the papers. It was a very frustrating situation, but I said to them: "what do you want me to do?", "I need the papers", and he made this comment: "I know you (are) right you need the immigration papers but I believe you are looking for government assistance because you have a small girl and you are a single mother, you don't want to find a job. And I told him: "look at how much I made in Chile, and I don't want to have that job, if I'm coming to this 'country'... I am coming to a "better life", and he said: "I understand that many people enter the country, and then they cross their arms and they stay with the "Government support," many because they want to and other because they can't because there are no options. Individual Interview 1-Recent (505-530)

> When we went to the embassy, the consul...the Canadian consul was very cold with us, harsh. He told us, "what are you going to go there for, it's a cold country, you will have to go and clean washrooms." He was cold, cold and I thought to myself: "are all the Canadians like this?" He said, "Listen, you will go to suffer and do what the majority of Chileans do that they go and return and what they do is only to lose money, they don't help themselves or the country. They don't do anything solid because they just spend their money, they go here don't have anything solid". And that experience helped me a lot, in that moment it he appeared to be cold, rude, and harsh but he was saying the truth and I told him "everything that you are telling me, nothing impresses me because I will go to clean washrooms, I don't care." My husband told him, "we are hardworking people, we are young, we already have our own business in this country, good clients" he showed him his invoices so that he would see that it was true. Individual Interview-2-Non-recent (82-101)

3.1.5.1.8 Immigration Policies and Migration Stress

One of the assumptions of Canada's immigration policy is that skilled immigrants will easily reinsert themselves in the Canadian labour market. As demonstrated in Case Study 1, when applying for work permits in their countries, immigrants are led to believe that once in Canada they will be able to find employment within their professions. According to the women I have interviewed, this is rarely the case. The qualitative data in my study show that women experience large difficulties with finding employment in Canada. Man (2004) indicates that with less employment opportunities, there is less integration into Canadian society and more marginalization of immigrant visible minority women. In turn, social exclusion has been associated with health decline. Wilkinson and Marmot (2003) explain that "continuing anxiety, insecurity, low self-esteem, social isolation and lack of control over work and home life have powerful effects on health" (p.12). Wilkinson & Marmot (2003) also report that racism, discrimination, stigmatization, hostility and unemployment can lead to social exclusion.

Canada's immigration policy does not make it easy for immigrants to find employment. In fact, certain policies can act as barriers. Canada's immigration policy requires immigrants to have a job offer before they can apply for a work permit. However, employers cannot offer an immigrant a job unless that person already has a work permit. Immigrants can get involved in a vicious cycle between employers and immigration officers.

> And I started looking for work but I didn't have the [immigration] papers, and when I applied they would call me and ask me for my papers, and I would tell them that they were still in the works. They tell you, a Canadian can't contract someone who is not a Canadian unless there is no one else, they must look and demonstrate that they could not find anyone who is Canadian.... that may occur in something very specific if you are an

> expert in software... very rare, but I am general engineer, that way anyone could apply, "and take my job," that's what they would explain to me.
>
> May passed, June passed and July was on the way when I lost me second job, because I lost the job in Calgary because I didn't have the papers, they offered me permanent work but I could not take it. I called the (immigration official) and I told him look: "I lost this and this job opportunity" and I told him that I felt so frustrated, he told me: "give me a letter from one of those companies in which they state that you lost your job or where they say that they didn't give you the job because you didn't have your papers"... But, nobody gives it to you because that is an example of discrimination, that they wouldn't give me the job because I didn't have my papers.
>
> In "my case" my level [of education] is a Masters. It is a Canadian masters too, it is an MBA...a masters in engineering would have been "harder"... well everyone tells me that I have to be very intelligent, or that is to say, yes because they say that I was capable to enter into the MBS program ... if you have an engineering level already... here they believe that engineers are very intelligent... Just the same it was difficult to find a job, look at what I had to do, my mother had to take [my daughter] to Chile. Individual Interview-1(296-313)

Some immigrant women do not even bother including their education and experience from their countries.

> I would put it [job experience from my home country] on my resume but they didn't give me a job because of that, it was more because of what I had done here. And I wouldn't even put my masters from Chile or else it would be like I was "over qualified." II-1(362-364)

3.1.5.1.9 Migration Stress and Age

Participants also discussed how settlement experiences can vary according to age. Generally, participants thought that settlement can be less stressful for younger immigrants.

> When you are an adult it is more difficult to learn another language, the accent of the first language stays there...there is discrimination for the person that does not speak English...but with the accent...they look at you...they think less of you for being an immigrant even though in this country there are few people who are not immigrants...the only ones who are not immigrants are Aboriginal Peoples. Individual Interview-10 (249-253)

It's different because you arrived when you were 17, I got here when I was 37 with kids and it wasn't that easy because I had to worry about my kids. I had to do whatever it was to support us. Focus group 1- Non-recent (103-108)

It all depends on how old you are when you arrive in Canada...this is important because when you are young and you arrive here it is not a problem, but for someone like us...my husband and I, we came here when we were more than 40 years old. And that is ...one has a whole life in one's country...one had customs...and I tell you from the professional point of view...one feels comfortable...because I had a comfortable job...I had job security...I liked my job there and I did it well. Individual Interview 14- Recent (560-584)

3.1.5.1.10 Lack of Time

Adapting to faster lifestyle is another source of migration stress identified by study participants. Working longer hours, language barriers, and having less time for themselves influence their level of stress.

Participant 2: Yes, the rhythm of work here is different because in Colombia I felt more relaxed. I believe that it is because of the English. Here, starting to work with another language, sometimes I understand and other times I don't. In Colombia it is easier. I also believe that in Latin America life is much more relaxed. I would never worry about the time; I never had to check the time. Here one arrives and the boss or everyone looks at the time of starting and ending. At break time it is so exact, one cannot take one or two more minutes because the people look at their watches and that causes me stress. The exactness of the time... Over there everyone is much more friendly. One arrives at work and it is relaxed, a kiss, a hug. Here people do not even respond to me. If it is Monday, oh God! And to speak in English. Focus group -2-Recent (181-198)

3.1.6 Health Consequences of Migration and Settlement Stress

Stress was linked to overeating and obesity by some study participants.

Participant 2: You know, I am more stressed and have to take medication. And then I had to start exercising because I was gaining a lot of weight because I was stressed. When you are stressed you eat and you don't even realize you've been eating and eating. I gained weight and I was like size 16 going on (pause) 20? [Laughing] It was so bad, like I went to try a dress and it was size 16 and that's the biggest you can get and it fitted so tight and I thought "oh my god" and I had to go the store for big ladies. I went there and I tried on the smallest dress and it was size 14 and it was too big. And I thought "oh my god" I can do two things: gain weight and

> buy this one or lose it [laughter]...yes, I started losing weight, exercising and going on a diet.
>
> It was not like one diet, I would go on a diet for two months and then I would try to keep that weight for once you maintain the weight for about 6-7 or 8 months and then I would go again to lose another 10 pounds. And that is what I have been trying to do. Because the hard thing is to maintain the weight, not to lose it...Yeah, so until I reach my goal, the hard thing is to maintain the weight. In my opinion if I can be a size 7 I'll be OK [laughing], but I mean at the bottom of size 7. For my body size it would be 7 or 8 because otherwise I would be too skinny. Focus group-3-Non-recent (810-844)

Stress was also associated with the development of other chronic conditions.

> Participant 6: No, [I developed Diabetes] here. In 2002 they diagnosed me [with diabetes]. But now I am being treated. They have me exercising and watch my diet. Focus group-2-Recent (244-245)
>
> Yes I do... due to tension of all the tings that have happened. I have a hernia and the doctor told me that it is due to stress. The doctor told me to eat calmly, to chew, but there hernia is still there. I am taking medicine. II-2 non-recent (789-791)

3.1.6.1.1 Fatigue and Depression

Depression is a "universal response of some individuals to life stressors and adaptation" and if untreated it can disrupt relationships and daily life activities (Munet-Vilaró, Folkman & Gregorich, 1999). In this study, many recent immigrant women talked about their depression. Most of them associate fatigue and depression with the long and dark winters in Canada. Studies report that Hispanic women report more symptoms than do Hispanic men (Munet-Vilaró et al., 1999). This study also found that lack of acculturation is also associated with depression among Latinos. The high levels of depression in this study population may reflect the stressfulness of the immigration experience. Munet-Vilaró and colleagues outlined the following somatic symptoms that are indicative of depression: loss of appetite, difficulty sleeping, and lack of energy. Similar symptoms were identified by my study participants.

Participant 2: Sometimes, I see someone, like tired or worn out, or tired of life, sometimes I feel that way...I feel tired. Focus group-1-Non-recent (617-618)

Participant 5: Yes of course, I get depressed...being alone, not enough sun, lack of sun, missing your family. Focus group-1-Non-recent (640)

Participant 6: The winter is depressing, for me the winter caused me a horrible depression. I cried, I would get upset, because I did not want this... it is so boring because of the cold. Focus group-2-Recent (261-262)

Participant 4: Like the morning so dark.... the darkness depresses me. Focus group-1-Non-recent (641)

Participant 3: In Guatemala I would go to bed at 12 or 1, but I would wake up the next day in a good mood, but here I am not even motivated to get out of bed, even if I go to bed at 10. My husband is always telling me to get up because it is late, I don't know what is wrong with me. Focus group-2-Recent (272-274)

Participant 5: For example, since I have been here, I think maybe it's the long winter, and I need light, I don have energy, I don't go out much, I don't feel like it. There, (back home) night and day are the same, (length) and I went out a lot. Here in Canada, I don't have much desire to go out. I think it has something to do with exposure to the sun; here my life isn't as healthy as it is there (back home). For example, something that maybe doesn't have to do with it, but it seems like there is a lot of cancer here, like there (at home) I knew like 3 people with cancer, but here, I have met like fifteen. Focus group-3-Recent (79-87)

Participant 5: A short time ago, I heard about a study about vitamin B [vitamin D] deficiency and that it has to do with the sun, and it's (vitamin B)[vitamin D] a preventative for a lot of types of cancer. But this summer, I hardly went out, and now winter is coming, and I haven't even gone out. It also has to do with a balanced diet and doing exercise but also to have the energy and desire to do things. Focus group-3-Recent (89-93)

For example the climate affected me, because I lived in a basement, lack of light, I would feel that it would take me a lot to get up in the morning, Saturday Sunday I was in bed until 11 am, and I am a person who at 8 I am up, it was a feeling that my body wanted to hibernate. Individual Interview 1 (347-350)

Participant 2: It's like having heaviness in your body, like heaviness, laziness. It's hard to stand up, it's hard to do anything, and you are depressed. Focus group-1-Non-recent (625-626)

There was a perception among recent immigrant women that depression is more common in Canada than in Latin America.

> Participant 6: In Colombia you don't here very much of depression, but here, yes, I have many female friends that tell me that they are taking pills for depression. I am being treated; more commonly women. Focus group-2-Recent (264-266)

> Participant 1: There are many people who have depression here. I had to find help. Because I could not even lift my head. But here it is difficult, the doctor told me that he would give me pills and I took them, but no, I am an active person, but here nothing I did not have motivation to do anything. I like to get up. To be active. Focus group-2-Recent (268-270)

The lack of energy and overall fatigue prevents women from engaging in physical activity and may be another contributor to overweight and obesity.

> Participant 5: The little energy you have mentally has repercussions physically. But now I don't feel like I have energy, I know I should go to the gym but.... I think that once you start to be active then you will keep doing it. Focus group 3-Recent (96-98)

Women perceive the health implications of stress and try to develop strategies for reducing some stress. Strategies include physical exercise, dancing, time for relaxation, spiritual/religious connections, as well as social support.

> Participant 1: Go dancing...it removes all the stress. It is good for your body, mind and soul. [Dance for] at least for half an hour. [Laughing]. Focus group 3- Non-recent (895-901)

> Participant 1: Physical exercise is one thing but [in terms of] is recreation... For example going to the park to see the flowers when they are in bloom, to awake your mind, to have some time to be distracted. Relaxing is important to be healthy. Focus group-3-Recent (127-130)

> Participant 5: I agree, because at my house I am worn out, and I need some time to relax and if I don't, I can't do anything. It's good to have a routine, even 3 times a week. Focus group-3-Recent (131-133)

> Participant 2: Sometimes it's not enough, because you do exercise, eat healthy but in other places you aren't careful about what you eat, or you work a lot. Focus group 2- Non-recent (170-173)

Participant 4: And rest too. Because I used to take a 5 minute break and I have been relaxing for an hour or two hours. Focus group-3-Non-recent (907-908)

Participant 2: Sleep too. I need to at least 8 hours or I am not functional. Participant 4: definitely...Participant 1: la siesta. Participant 3: The older I get, the more I need it. Focus group-3-Non-recent (911-914)

Participant 2: You know I never World drink coffee over there, but here is where I learned to drink coffee. I believe it was in an attempt to decrease stress. I started with 3 now and I already feel addicted. If I don't drink I develop a headache. Focus group-2-Recent (158-159) (170) (179)

Participant 3: It means giving thanks to God for health. Everyone who knows me knows that I don't complain about anything because I don't have pain and I'm not on medication. I had shots when I was a child but never again after that. I have been healthy all my life. I simply eat what God gives me, lots of fruits and vegetables. Focus group-2-Non-recent (157-163)

Participant 1: Be happy! Not being ill. Have good health, go out at whatever time you wish, return home at whatever time you wish, dance...just don't get sick and enjoy life. Physically and mentally too...because imagine if I were not well in my head then I could not enjoy life [laughing]. Focus group-3-Non-recent (776-789)

3.1.6.1.2 Case Study 2- Experiences of a Non-recent Immigrant Woman: Health Consequences of Deskilling Immigrant Women

In hopes of facilitating their economic integration, some immigrant women decide to return to school and study something that will make it easier for them to obtain employment. However, despite these efforts, some immigrant women still do not achieve successful economic integration. Instead they end up with more debts from student loans. One immigrant woman asked me: "how long do you keep trying to get your credentials recognized? When do you decide, enough is enough? How much stress can you take? The following story represents the stress and humiliation of trying and failing to get one's education recognized.

Sonia is a medical doctor trained in El Salvador who came to Canada as a refugee eighteen years ago. She also has a nursing degree from El Salvador. She is a single mother and has struggled to integrate both economically and socially. When she arrived, she could not speak English. Her first job was at the Mennonite Centre for Immigrants and Refugees where she worked with Spanish speaking immigrants. Since, she was not able to work as a medical doctor in Canada she decided to upgrade her nursing skills. It only took her six months to pass all the required nursing courses. However, her English skills were not sufficient and the college refused to give her a degree. When Sonia told me her story she got very emotional. I could feel her pain as she told me what happened to her.

> Yeah, for example, me. What am I doing at night? You want to know? I am a Janitor. Cleaning offices in a refinery. How much did they pay me when I taught [at the Mennonite Centre]? [I was] under stress all the time...Preparing for classes didn't pay. Wasting ink in printing stuff. Paying for the bus... and how much did they pay... 10 dollars. There I get 13 dollars an hour. I get there, I get my garbage can, I take out the garbage, I dust, at break time, I have a break... and the time is up. If I don't have time to finish today, it doesn't matter. It's calmer, and I'm calmer, I get more money.
>
> It's terrible because I have 28 years of education. And look it's so sad, horrible, but you have to survive...a lot of people criticized me. You are a doctor...Why haven't you integrated? I tell them: "you don't know that having a 10 year old kid, and you have to help him get ahead."
>
> [In the beginning] I said, no, no, I won't be a cleaner, I won't be a cleaner [crying] but there came a time when I had to do it. But in El Salvador I was educated. Well, first I was a hair dresser [smiling a little] that was first, then I became a teacher, then a registered nurse, then I went to University to study medicine. [calming down a little]. And along with that, here I did continuing education in Grant McEwan in nursing. I took a refreshment course for nursing, because I wanted to get my license, but unfortunately Grant McEwan wounded me a little. They wouldn't let me do the practicum. Because I was short two points in the spoken test. I had to do the TOFEL and the "Spoken Test", and so I said to them... well I made the mistake of doing the 2 year course in 6 months. It was easy for me.
>
> Yes, and I did it in 6 months. So, I said, I'm ready for the practicum. I thought that I would have plenty of time. That in two years I would get

> the TOFEL but unfortunately I didn't pass. And when I told them that I couldn't do it and that I wanted my money back [for the practicum[and when I could do the TOFEL I would come back. But they told me, no. That I couldn't do that and that they couldn't give me the money back either. And what they did... since I didn't do the practicum, they didn't give me my money back because it was too late to drop the courses. But I knew that I could do that later ... I could do the (tearing up again...can't speak clearly) TOFEL. They still do that... all those students who pay... and they keep all that money. So it hurt and that they put [in my transcript] that I had failed in the Practicum, because I didn't do it. Mmhh...Bad. And along with that, they kept the 500 dollars. And so at that time 500 was a lot. For me it was a lot of money. But from there, the situation changed. Ralph Klein cut all job opportunities for nurses. And I thought why should I get licensed if there are no jobs. I had to persevere. Because I should have already been working as a nurse.
>
> After, I took life skills at Grant MacEwan. That's when I started working as a teacher even though they didn't pay me very much. I started with 7 dollars an hour but the most I ever earned was 10 dollars an hour. Three and a half years. But it was a non-profit organization. So they gave me a lot of opportunities to learn... Parenting skills, I started giving parenting skills classes. I started translating a program about how to talk to kids so that they listen. But the Hispanic community didn't respond. In the end I left it kind of half done because I was giving night classes and since they didn't respond it wasn't really worth it. So then I started an acupuncture program at Grant MacEwan. Then I was in debt, which is the reason that I'm working as a Janitor. Because the Acupunture didn't give me enough to sustain myself.
>
> So I don't want to be like 10 years in debt. And the small pension that you get... that money would pay the debt. So, you have to think about it. I say, the majority of the money I get, I don't even touch. Everything is to pay debts. It's so hard. Individual Interview-13 (309-412)

The concept of deskilling immigrant women in Canada has been explored in other studies (Man, 2004). In many cases, immigrant women are forced to leave paid labour force or settle for low paying part-time jobs. Canada's new immigration policy prioritizes highly skilled and business immigrants. As demonstrated by this case study, deskilling immigrant women has tremendous consequences for health and well-being.

3.1.7 Resilience and Taking Risks

Despite the harshness of their settlement experiences, study participants fight and survive.

> I never lost hope, what did happen to me is that I felt exhausted, tired...Yes, it was very stressful. Yes I do... due to tension of all the tings that have happened. I have a hernia and the doctor told me that it is due to stress. The doctor told me to eat calmly, to chew, but there hernia is still there. I am taking medicine. I'm still in it, I'm still struggling, now I work fulltime and I study at night, I don't have vacations I am doing some courses at the university but I also want to take general education development, if I pass that exam I will have the high school here. I am doing it because I want to start another business. I learned in my business manager course that not all of us are the same, there are people who simply cannot take risks because their way of being does not permit it, they would have much stress, fear of the future, to lose everything, fear of risk. So one cannot ask the same of all people, but I risked it because I thought I have to do it, but now I do not have the same strength. Individual Interview 2- Non-recent (547-560)

3.1.8 Summary – Migration and Integration: Sources of Stress and Consequences for Health

In this theme I have described women's struggles and successes throughout their migration experiences in Canada. The stories of recent immigrant women are similar than those of non-recent. However, there are many individual differences with respect to women's current situations. Hispanic immigrant women in Edmonton come from many different backgrounds, but they all share similar experiences such as difficulties finding employment, language barriers, discrimination, prejudice, and social exclusion. These women are resilient and they fight for the well-being of their families. Their struggles are rewarded in the hopes that their children will have a better future than themselves. In the first years of the settlement experience, the major source of stress is the inability to speak English. Not being able to speak the

language creates difficulties in finding employment, making friends and developing social networks, and navigating the Canadian socio-cultural system. These difficulties create a level of stress and anxiety that ultimately challenges women's health and body weight. Other sources of migration stress include: disillusionment of work opportunities for skilled professionals and loss of social status. According to the women in this study, older women feel more stress because they have families to support. They believe that migration stress would be lower for younger immigrants who do not necessarily "start over completely". The burden of supporting their families can be a facilitator and a barrier for integration. While on one hand, women with children are motivated to succeed and integrate quickly, they are also likely to need to take lower paying jobs. Once they work in these low paying jobs they have fewer opportunities to learn English and this in turn prevents them from getting ahead. The inability to access English as a Second Language programs further deskills immigrant women. Several policy barriers were identified in this study. Policies regarding work permits and access to English as a Second Language programs are two of the more important ones that need to be investigated further. The process for recognition of immigrants' credentials is also a barrier for women's integration into the Canadian society. Ultimately, failure to integrate into the Canadian society bears health consequences. Participants in this study clearly demonstrated that their psychological well being suffers the most. Physical health declines, however, are also apparent. This includes increases in body weight and development of stress related diseases such as ulcers and diabetes.

CHAPTER 4 Discussion and Conclusions

The purpose of this study was to assess the process of changing health behaviours (dietary habits and physical activity) within the context of Hispanic immigrant women's immigration experiences and socio-cultural determinants of health (e.g. socioeconomic status, cultural food beliefs, cultural body size ideals, gender, and attitudes about physical activity, etc.). A group of recent (> 10 years) and non-recent (< 10 years) Hispanic immigrant women living in Edmonton contributed both quantitative and qualitative information.

Results show that overall; 86% of the participants reported gained weight since coming to Canada. There was also a significant difference in weight status between the groups, with more non-recent participants being overweight and obese. Anthropometric measured (Body Mass Index and Waist Circumference), however, do not support the healthy immigrant effect. Both recent and non-recent participants appear to be overweight and no significant differences existed between the groups. Globalization processes may be able to explain why recent immigrant women experience high levels of overweight and obesity. Globalization is changing societies and cultures across underdeveloped countries. With the upsurge of fast food restaurants and the increased availability of technologies to replace active transportation, overweight and obesity is on the rise in many Latin American countries.

Studies have shown that poorer countries in Latin America are still faced with the "double burden of under- and over-nutrition" (Popkin, 2001). The trend in Latin America is that as socioeconomic conditions improve, undernutrition declines and

obesity increases (Kain, Vio & Albala, 2003). Obesity is now the main nutritional disease in most Latin American countries (Kain et al., 2003). Levels of overweight and obesity among women in Latin America are similar to those in the U.S. (Chopra, Galbraith & Darnton-Hill, 2002).

The World Health Organization (WHO) suggests that levels of obesity in economically developing countries are increasing at a faster rate than in westernized countries (WHO, 2002). It is believed that globalization processes have led to faster nutritional transitions and physical activity reductions around the world. Dietary changes and reductions in physical activity patterns that took between 100-200 years in industrialized countries are now only taking decades in underdeveloped countries (WHO, 2002). Globalization processes have facilitated access to "westernized foods" that contain higher levels of sugar and saturated fats while also promoting more "automated transport, technology in the home, and [...] passive leisure pursuits" (WHO, 2005). Obesity is now also becoming more prevalent among lower socioeconomic groups, especially among women (Kain et al., 2003, p 85).

It is believed that urbanization processes have produced changes in dietary and physical activity patterns of the Latin American population. People living in rural areas predominantly consume grains, fruits, and vegetables, but migration to urban areas has been associated with a shift towards "westernized diets" or "high energy dense" foods (Kain et al., 2003). Also, as people move to cities, they become more sedentary. People leave behind active working lives involving heavy manual labor to work in sedentary occupations instead. Technologies in the home also promote sedentary lifestyles. Kain and colleagues reported that excessive TV watching,

computer games, and increased utilization of motor vehicles are behaviours that are increasing in Latin America. In Chile, for example, "the number of cars per 1,000 inhabitants was 38.9 in 1970, increasing to 136.6 in 1998" (Kain et al., 2003, p.79). Participants in my study made similar observations and reported that their friends and families are experiencing many lifestyle changes in their countries. Similarly, participants themselves experience these changes when settling in Canada.

Another explanation for the high prevalence of overweight among recent Hispanic immigrants relates to Canada's immigration categories. To meet its immigration goals, Canada accepts more immigrants in the economic category. These are highly educated immigrants that are expected to fulfil growing shortages of skilled labour in Canada. Since, it is the higher SES groups that are able to immigrate to Canada recent Hispanic immigrants may already be overweight. Research also shows an upsurge in global labour migration, whereby economically developing countries are seen as the source of cheap skilled professionals (Robinson, 2006). Capitalist globalization has also resulted in more inequities between countries since "increased global market integration disproportionately benefits [...] the world's wealthiest nations" (Speigel, Labonte & Ostry, 2004). Consequently, more and more people from underdeveloped countries are forced to leave their homes in search of better work opportunities. As demonstrated in my study, many Hispanic immigrant women come to Canada independently in search of better work opportunities.

Participants give many reasons for their weight gain, both in Canada in their own country. However, one of the overriding concepts that emerged was globalization. Women believed that overweight and obesity are increasing worldwide. Speigel et al.,

(2004) propose that globalization is the determinant shaping other determinants of health. Globalization is the process of shifting "economic, geographic, cultural and social relations", which influence living conditions around the world (Speigel, et al., 2004, p 360). By changing the environment we live in, globalization influences population health overall. People's health beliefs, cultural norms, behaviours and practices are influenced by these globalization processes. In the case of obesity, it is now evident that this disease is no longer confined to industrialized countries and that it is becoming more prevalent in countries with developing economies. People around the world are exposed to similar obesogenic environments and this is one of the driving forces behind the global obesity epidemic.

Globalization is leading to socio-cultural transitions in many countries. As the women in this study explained, transnational corporations are "westernizing" Latin American countries. Globalization has not only led to the massive increase in fast food restaurants and availability of processed foods, but it has also begun to change traditions and cultural norms. The capitalist mentality of transnational companies has changed how people live and work in Latin America. It has also led to the movement of people from rural areas into large cities, where they have increased access to processed foods and technology. Working in the cities also means working longer hours, more stress and less time for recreation and family. Recent research also shows that changes in socio-economic and cultural status among underdeveloped nations "has lead to the current diabetic and atherosclerotic heart disease epidemic" (Lerman-Garber, Villa, & Caballero, 2004, 282). Holmboe-Ottesen (2000) believes that the poorest groups in underdeveloped countries are the ones that will experience the

highest prevalence of chronic conditions. This is a similar disease pattern as in the Western world.

Globalization is one of the causes of emigration of people from underdeveloped countries. When women in this study talked about the reasons for coming to Canada, the primary reason identified was better employment opportunities. The gap between the poor and the rich is growing and skilled professionals are deciding to leave their countries in search for better opportunities for themselves and for their families. Although, immigrants bring skills and education to Canada, their countries end up losing because this "brain drain" creates further barriers to their countries' development (Burnett, 2002).

Similar changes observed in Latin America are mirrored in the migration experiences of Hispanic immigrants in Canada. Non-recent participants almost reached the obese category. According to this group, life in Canada has led to lifestyle changes (e.g., increased consumption of fast foods and processed foods, and inactivity) However, the migration experience also creates chronic stress grounded in social exclusion and loss of social status. Although Hispanics living in their own countries are being exposed to "westernized" lifestyles and are becoming more overweight and obese, they do not experience the added stresses of migration. Immigrant women come to Canada with high expectations (in some cases fuelled by encouraging promises from immigration officials), but upon arrival they are faced with the harsh realities of unemployment and poverty. Both recent and non-recent immigrant women talked about the stress and anxiety in the initial settlement years. Some link the stress and anxiety to their mental and physical well-being. Most women in this study did not talk

about this link directly. It is possible that they did not want to appear to be a burden for the Canadian society.

Figure 2 provides an overview of the themes that emerged from this study. This figure is only one way to organize the data. There is no linear relationship between these concepts, as they tend to blend with one another. Like the ecological model for health promotion, levels interact and it is impossible to differentiate into distinctly separate categories. I will now discuss each component of this diagram.

The first concept, globalization and health, creates obesogenic environments and influences immigration patterns in Latin America. Recent immigrants confirm that societies are changing in their countries. People are working more, walking less and eating more fast foods. Changing body size ideals due to influences of the western media was also noted. Recent immigrants also reported that low paying jobs and unstable economies in Latin America are forcing them to leave their country. These results support the globalization model suggested by Speiget et al. (2004).

Once people migrate, they experience extensive amounts of stress. This is the second concept in Figure 2. Stress has been linked with the development of obesity. I have described the sources of immigrant women's stress including, language barriers, lack of social networks, unemployment or employment in low paying jobs, deskilling of immigrant women, socio-cultural transitions, discrimination, prejudice, and racism, age at migration, lifestyle changes and decreased social status.

The third and final concept is acculturation. Acculturating to Canadian lifestyles also influences immigrants' health. My results show that acculturation does take place in the context of changing meal times and dietary habits such as decreased consumption of fruits and vegetables. The loss of dietary habits such as "comer con gusto" was identified as an important factor that could explain declines in health and changes in body weight. Decreased access to fresh fruits and vegetables and increased consumption of processed foods were also linked to weight gain. More sedentary lifestyles were attributed to decreased levels of non-leisure activity such as active transportation and less time for recreational activities.

All three concepts, globalization, migration and integration, and acculturation are factors that influence the levels of overweight and obesity among Hispanic immigrant women. It is possible, also, that the prevalence of overweight and obesity is associated with their overall health declines. However, I did not explore this link in my study.

My study provides partial support for the healthy immigrant effect. Although, acculturation does lead to changing health behaviours among Hispanic immigrant women, it is not the only reason for the weight gain and health decline in this group. Larger ecological forces that are changing the global environment also influence their health and body weight. For example, globalization processes that are changing today's world influence the environments in which we live and work. These environments are becoming increasingly obesogenic as demonstrated by the current global obesity epidemic. Migration stress is a contributing factor of the increased levels of weight in the Hispanic immigrant community in Edmonton. The process of migration causes chronic levels of stress, which can cause physiological responses

that lead to increased central adiposity. Moreover, stress can also cause fatigue and depressions, which can contribute to overweight and obesity.

Migration stress can also be attributed to larger socio-cultural factors such as inequitable immigration policies. Participants in this study identified many barriers to integration. Lack of social support and failure to integrate economically leads to social exclusion, which has been associated as a risk factor for many chronic diseases.

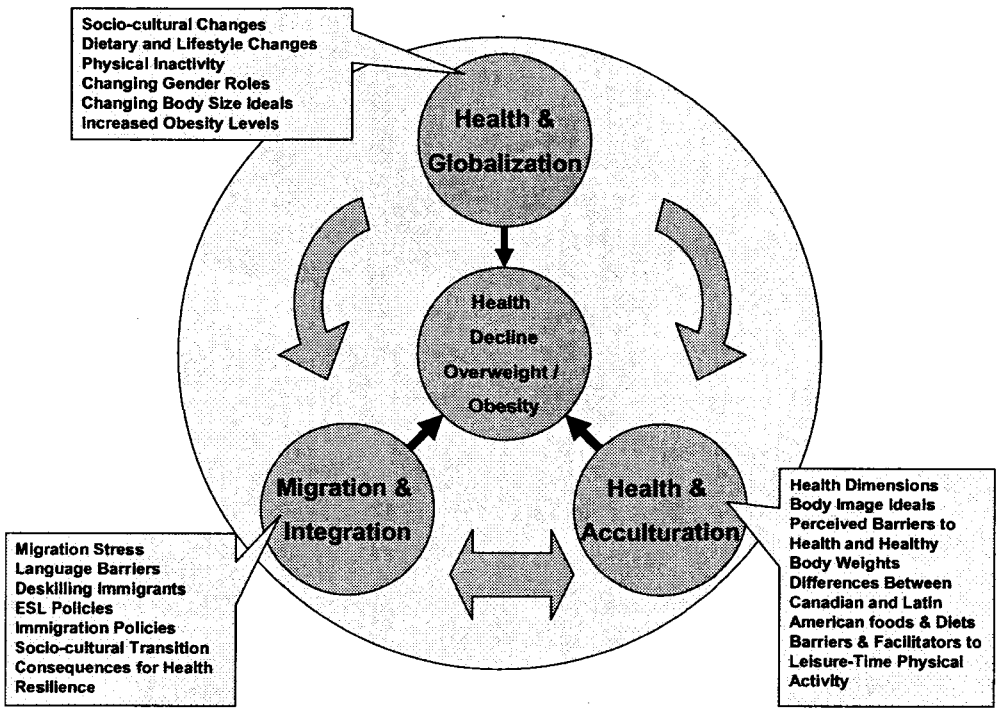


Figure 1: Diagram of the emergent theory of the paths to health decline and overweight and obesity.

Non-recent immigrant Hispanic women agree that their behaviours and practices have changed since they arrived in Canada. However, they did not change these behaviours by personal choice only. There are larger forces at work causing immigrant women to change their health behaviours and practices. Peoples' behaviours and health practices

must be seen from the perspective of the broader environment. This is consistent with the perspective of the ecological health promotion model.

It is important to understand that it is not just Hispanic immigrant women who have gained weight over the last decades. Rates of obesity have increased in the general Canadian population as well. However, rates of obesity among Hispanic immigrants are increasing faster because of their experiences with migration stress. It appears that the initial years of the settlement experience are the most challenging for women. It is during these years that health behaviours may change the most. Trying to provide for themselves and their families definitely takes a toll on immigrant women's health. More support should be available for recent immigrants.

I have used the ecological model of health promotion to interpret women's experiences with respect to dietary changes and inactivity. This study provides more evidence that personal, interpersonal, social, environmental, and policy indicators influence women's physical activity and dietary behaviours. The ecological model seems to be appropriate for research with Hispanic immigrant women. Particular personal and interpersonal factors were identified, such as maternal roles and responsibilities related to nutrition and physical activity for their families. In terms of particular public policies, there seems to be specific barriers for immigrant women who come to Canada in the dependent category. For instance, being classified in this category may prevent women from gaining access to English as a Second Language (ESL) programs, which in turns inhibits integration and well being.

Linking qualitative and quantitative data has also helped me get a broader perspective on the barriers and facilitators to health. For example, in the MLTPA questionnaire women identified the activities they engage in and how frequently they do those activities. The qualitative data provided more information about women's perceptions, attitudes, and knowledge of physical activity. It is clear that Hispanic immigrant women value exercise as a health promotion resource. From the qualitative data, I understand that not many women engaged in structured physical activity in their home countries. Walking (as a mode of transportation) was the most commonly undertaken activity before coming to Canada. However, this activity is reduced with years of living in Canada. Walking at work was reported more frequently by non-recent immigrant women. Many of these women worked in janitorial jobs and reported more than 6 hours per day. Many women suggested that having a group to exercise with would be a strong motivator for them. Dancing and socializing are important motivators for women.

There was a debate about whether household activities or recreational activities such as dancing would be considered physical activity. Many women believed that to gain the health benefits of physical activity, one must engage in an activity that is designed to raise your heart rate and improve your cardiovascular health. There is an important implication for health promotion policy makers and practitioners in this finding. Messages about increasing physical activity through more active living activities (e.g. taking the stairs instead of the elevators, going out dancing, or including household activities as a source of physical activity) may not be appropriate for Hispanic immigrant women. More education needs to accompany such messages so that

women can understand why these types of activities would be beneficial for their overall health.

The healthy immigrant effect has been associated with acculturation. In this study, I used an acculturation scale based on language use. The scores are consistent with the qualitative information from the focus groups and the interviews. Many women who scored low on the acculturation scale (i.e. very low acculturation levels) had achieved neither economic nor social integration in Canada. The use of this acculturation scale is debatable. Explaining health differences by assuming that "individual-level factors such as the ability to speak the dominant language" conforms to a reductionist view of health (Thurston & Vissandjee, 2005). The ecological model is much better in this case, because it emphasizes the integration of micro (individual level factors), meso- and macro-level to explain population rates of illness. Based on this model, it is clear that most of the women who participated in this study were not acculturated with respect to dietary habits or social integration. Qualitative results show that women have adopted some behaviours of the Canadian culture, but they have also kept up with traditions and norms from their country. They encounter, however, difficulties in trying to maintain traditional ways of eating and cooking. For example, they cannot find traditional foods and ingredients and they do not have the time to be able to cook traditional foods. Women in this study provided many reasons for the increased levels of overweight and obesity in their community. Increased consumption of processed foods was a significant concern. Additives and preservatives are perceived to be bad for health and are even believed to cause weight gain. Access to fresh and organic foods was identified as a barrier for healthy body weights.

With respect to physical activity, however, the women in this study seemed much more acculturated. Walking less because of the weather in Canada was a major barrier to healthy body weights. Lack of social support (family and friends) was a major reason for decreased physical activity and weight gain. Hispanic immigrant women prefer to engage in physical activities that are centered on building and maintaining social networks. This should be a major consideration when developing interventions and programs to promote physical activity in this community.

Hispanic immigrant women in Canada are a heterogeneous group. They have different socio-economic backgrounds, family structures, ethnicity, age, social and political interests, traditions and values. Conclusions from this study must be considered carefully within this context. Women came to Canada independently, not just for family reunification or as dependents. Family context is important, but some women came to Canada to better themselves. Hispanic immigrant women are persistent, resilient and hard working. They pursue personal goals while at the same time meeting their obligations towards their family. They seem to handle stress well. However, many recent immigrant women report symptoms of depression and fatigue.

The deskilling of immigrant women causes loss of social status and social exclusion. Other studies have shown that the double burden of being a visible minority and a woman has a cumulative effect on immigrant women's health decline (Das Gupta, 1996; Ng, 1993). Policies such as English as a Second Language (ESL) programs covered by the province of Alberta are a good tool for immigrants but they are not always adequate. They do not offer the language skills immigrants need to integrate into the professional workforce. ESL courses often mix immigrants with different

skill levels. This makes for slower learning progresses among some students. Without English language skills, immigrants are forced to take cleaning jobs or other types of low paying jobs without health benefits. With less integration into Canadian society there is more marginalization of immigrant visible minority women. Immigrants need more social support as this can temper health impacts of migration stresses (Kristiansen, Mygind & Krasnik, 2006). Better access to ESL programs should be available if Canada really wants immigrants to integrate socially and economically.

Immigration policies are inconsistent. They require immigrants to have a work permit before applying for employment in Canada and at the same time make employers demand that immigrants have their work permit before they are offered a job. This creates a vicious cycle of stress for immigrants. The experiences of the Hispanic immigrant women I have interviewed show that gender division of labour is linked to migration patterns. Hispanic women who come here because their husbands find work in Canada must stay at home or work in jobs where they cannot learn English. This prevents integration and causes stress that in turn can lead to anxious overeating. Gobson (2006) has shown that "stress, especially depression has negative affect on eating" (p.53). Specifically, stress alters (increase or decrease) overall food intake.

Migration stress also leads to increased risk behaviours and impact immigrants' physical and mental health. The adverse stresses of migration can lead to many chronic conditions including central obesity (through increased cortisol levels) and hypertension (Kaplan & Nunes, 2003; Rosmond, Nilsson, & Bjorntorp, 2000). U.S. studies have shown that acculturation affects the health behaviours of middle-aged Latinas more so than men. Since, this age coincides with the critical period for the

development of chronic diseases, it is important to consider interventions for this particular age group (Cantero, Richardson, Baezconde-Garbanati, & Marks, 1999). In this study, most non-recent immigrant women were in this age group.

Body size preferences have been linked to overweight and obesity among immigrant women. In this study, women perceive that there is a larger body size ideal in the Canadian culture. Hispanic women face strong social pressures to be attractive and to be "not too thin or not too fat". Many young women worry about their appearance and this may be a protective factor against obesity. Middle age women, however, accept a larger body size for themselves. Again, this points to the importance of health promotion program for this particular age group.

Lack of integration and social exclusion could be contributing to obesity levels in the immigrant community. Lack of integration, should not, however, be obscurely attributed to culture factors (Thurston, & Vissandjee, 2005). In their model, Thurston & Vissandjee, consider the migration experience as an important determinant of health, not to be confused with culture. The authors also warn against considering "categories such as skin colour and country of origin to explain health differences" (p. 233). Such categories are not processes of culture and cannot be used as cultural determinants of health. For instance, it may not be necessary to conduct individual studies with people from different countries in Latin America. Nationality will not explain health differences alone.

In addition, explaining health differences because immigrants' "social norms and practices" differ from those of the dominant culture gives more power to the dominant

culture by allowing it to be able to define what normative behaviour should be. Hispanic immigrant women in this study face many barriers to integration, but they continue to fight for survival. In this study, I presented a case of a non-recent woman who has not been able to achieve full economic integration. It goes without saying that this person has encountered many policy barriers that have influenced her level of integration.

4.1 Policy and Program Recommendations

The outcomes of this study have direct policy and program implications. For example, women identified language as a significant barrier to integration (i.e. finding employment). Although, the province of Alberta offers English as a Second Language programs to immigrants, they are sometimes inaccessible for immigrants who need to work to support their families and study at the same time. More gender equity is required with respect to ESL programs. Also, the level of English language skills that immigrants obtain in these short –term programs is not sufficient for adequate integration. ESL programs should be designed to meet the individual needs of immigrants. For example, skilled professionals need to learn advance English skills specific to their professions. The cost of these courses should also be based on immigrants' financial situation. Finally, these programs should be longer in duration, especially since it takes longer for older immigrants to learn a new language.

Recognition of foreign credentials has been raised as a barrier to integration in many studies (Thurston & Vissandjee, 2005; Newbold & Danforth, 2003). In Canada, the processes that are in place now are not adequate and there seems to be inconsistencies in how the rules apply to skilled professionals that come to Canada through trans-national companies. These processes should be more equitable.

Canada's immigration policy can also be a barrier for the integration of "dependents". Often, women who come to Canada as dependents do not have the same opportunities as the main applicants. For example, access to language programs is restricted.

Canada is missing out on a large group of highly skilled professionals. Opportunities should be more equitable in terms of gender and immigration categories.

Overweight and obesity is a growing concern among many ethnic groups in Canada. In this study, I talked to immigrant women from Latin America. Culturally relevant health promotion programs for Hispanic immigrant women should be developed to prevent further health declines among this population. Specifically, programs that focus on middle age immigrant women are required. These programs should be designed with the community to ensure they are culturally and linguistically sensitive. For example, physical activity programs that include strong social and family components may be appropriate. Messages to promote physical activity by encouraging more active lifestyles many not be culturally relevant since Hispanic women do not associate physical activity with non-leisure time activities such as household activities (Crespo, Smit, Carter-Pokras, and Andersen, 2001). Workplace programs may also be a good strategy.

Social support programs should also be considered. Many recent immigrant women in this study reported feeling depressed and fatigued. Untreated symptoms of depression can lead to further health concerns. Programs that support low-income families are specially needed. Many older women who participated in this study were living with serious financial constraints and in isolated conditions. Without the ability to speak English, they are further excluded. Their inability to navigate the Canadian social system is a strong barrier to their health and well-being.

4.2 Research Recommendations

While, I focused on first generation immigrants, the perspectives of other generations are needed to understand the extent of the healthy immigrant effect. It would also be important to understanding the effects of acculturation on health behaviours and practices of other generations.

Many community members suggested that my study should have included men. They perceive that men have more weight problems than women. Some women talked about how their cooking habits have influenced weight changes for their husbands as well. Thus, future studies should investigate men's experiences with migration and weight.

This study did not differentiate between the perspectives of refugees versus those of economic immigrants. I hypothesize that migration experiences can be different and can influence peoples' health differently. Future studies should take this into consideration.

The Hispanic immigrant community would clearly benefit from health promotion programs focused on promoting healthy body weights. More research should be conducted to develop and test adequate health promotion interventions. A potential study could focus on how to support immigrants so that they can maintain protective health practices. In the case of Hispanic immigrants, it appears that "comer con gusto" could be a protective health practice that could promote healthy body weights.

Research on how migration policies create health inequalities is also needed. In this study, several women felt that policies served as barriers to their overall integration.

4.3 In Summary

Overweight and obesity are growing health concerns among immigrant communities. This study found some supporting evidence for the healthy immigrant effect. However, larger forces such as globalization processes are perceived to be driving overweight and obesity among Hispanic women, both in Canada and in Latin America. Increasingly obesogenic environments, migration stresses, acculturation (diet and physical activity), and cultural norms are also factors that influence the health and healthy body weights of Hispanic immigrants in Canada. To prevent further health decline in this population, culturally and linguistically sensitive health promotion programs should be developed. These programs should be ecological in nature, targeting change at the micro- and macro levels. Helping immigrant women to integrate into Canadian society can decrease migration stress. This in turn can prevent weight increases and improve overall well-being.

References

Ali J. (2002). Mental health of Canada's immigrants, Statistics Canada, catalogue 82-003, *Supplement to Health Reports, 13*, 101-113.

Ali, J.S., McDermott, S. & Gravel, R. G. (2004). Recent research on immigrant health from Statistics Canada's Population Surveys. *Canadian Journal of Public Health, 95* (3), 19-25.

Baker, C. (1996). The Stress of Settlement Where There Is No Ethnocultural Receiving Community. In R. Masi, L. Mensah, and K. McLeod (Eds.), *Health and Cultures: Exploring the Relationships- Programs, Services, and Care, Vol. 2*, (pp. 263-276). Oakville: Mosaic Press.

Beiser, M. (2003). Reducing Health Disparities and Promoting Equity for Vulnerable Populations- Synthesis Paper: Immigrants and Refugees. Retrieved on March 1, 2005 from: http://www.igh.ualberta.ca/RHD/synthesis.htm

Beiser, M. and Hyman, I., 1994. Mental health of immigrants and refugees. In: Bacarach, L. et al., 1994. Mental *health care in Canada: New directions for mental health services. No. 61*, Josey–Bass, San Francisco, pp. 73–86.

Bélanger-Ducharme, F. & Tremblay, A. (2005). National Prevalence of Obesity: Prevalence of obesity in Canada, *Obesity Reviews, 6*, 183–186.

Bengoechea, E.G., Spence, J.C., & McGannon, K.R. (2005). Gender differences in perceived environmental correlates of physical activity. *International Journal of Behavioural Nutrition and Physical Activity, (2)*: 12, 1-9.

Berrigan, D., Dodd, K., Troiano, R.P., Reeve, B.B., Ballard-Barbask, R. (2005). Physical Activity and Acculturation Among Adult Hispanics in the United States. Research *Quarterly for Exercise and Sport, (77)*:2,147-157.

Bowen, D.J., Tomoyasu, N., & Cauce, A.M. (1991). The triple threat: A discussion of gender, class, and race differences in weight. *Women and Health, (17)*:4, p.123-143.

Boychuk Duchscher, J.E. & Morgan, D. (2004). Grounded theory: reflections on the emergence vs. forcing debate. *Journal of Advanced Nursing, (48):* 6, 605–612.

Buliki, C.M., Wade, T.D., Heath, A.C., Martin, N.G., Stunkard, A.J. and Eaves, L.J. (2001). Relating body mass index to figural stimuli: population-based normative data for Caucasians. *International Journal of Obesity*, 25, 1517–1524.

Burnett, A. (2002). Globalization, migration and health. *Medicine, Conflict & Survival.* (18):1, 34-43.

Brunner, E. (1997). Socioeconomic determinants of health: Stress and the biology of inequality. *British Medical Journal, 314*: 1472-1476.

Cachelin, F. M., R. M. Rebeck, G. H. Chung, and Pelayo, E. (2002). Does ethnicity influence body-size preference? A comparison of body image and body size. *Obesity Research, (10)*:158 –166.

Cantero P.J. Richardson J.L. Baezconde-Garbanati L., and Marks, G. (1999). The association between acculturation and health practices among middle-aged and elderly Latinas. Ethnicity & Disease. (9): 2, 166-80.

Carling, J. (2005). Gender dimensions of international migration. Global Migration Perspectives, 35. Retrieved on October 5, 2006 from http://www.gcim.org/en/ir_gmp.html

Casidy, C. (1991). The good body: when big is better. *Medical Anthropology, 13*: 181-214.

Calle EE, Rodriguez C, Walker-Thurmond K, & Thun , M.J. (2003). Overweight, obesity, and mortality from cancer in a prospectively studied cohort of U.S. adults. *New England Journal of Medicine, 348*:1625-1638.

Citizenship and Immigration Canada, (1999). Canada ... The Place to Be: Annual Immigration Plan for the Year 2000. Retrieved October 10, 2006, from http://www.cic.gc.ca/english/pub/anrep00.html#message

Citizenship and Immigration Canada, (2001). Immigration and Refugee Protection Act 2001, c. 27. Retrieved on December 20, 2006 from: http://laws.justice.gc.ca/en/I-2.5/index.html

Citizen and Immigration Canada. (2003). Facts and Figures 2003- Immigration Overview: Permanent and Temporary Residents. Retrieved December 10, 2004, from: http://www.cic.gc.ca/english/pub/facts2003/overview/index.html

Citizen and Immigration Canada. (2006). Annual Report to Parliament on Immigration. Retrieved December 20, 2006, from: http://www.cic.gc.ca/english/pub/annual-report2006/section6.html

Chen, J., Ng, E., & Wilkins, R. (1996). The health of Canada's immigrants in 1994-95, *Health Reports, (7)*: 4, 33-45. Ottawa: Statistics Canada.

Chen, J., Wilkins, R., &Ng, E. (1996b). Health Expectancy by Immigrant Status, 1986 and 1991, *Health Reports, (8):* 3, 29-38. Ottawa: Statistics Canada.

Chui T. (2003). Longitudinal Survey of Immigrants to Canada: Process, Progress and Prospects (Statistics Canada, Catalogue 89-611) Ottawa: Statistics Canada.

Chopra, M., Galbraith, S., and Darnton-Hill, I. (2002). A global response to a global problem: the epidemic of overnutrition. *Bulletin World Health Organization, (80):* 12, 952-958.

Cohen, J. (1992). Quantitative methods in psychology: A power primer. *Psychological Bulletin, (112)*: 1, 155-159.

Crespo, C.J., Smit, E., Carter-Pokras, O., & Andersen, R. (2001). Acculturation and Leisure-Time Physical Inactivity in Mexican American Adults: Results From NHANES III, 1988–1994. *American Journal of Public Health*, 91 (8): 1254-1257.

Dibsdall, L. A., Lambert, N., Bobbin, R. F., & Frewer, L. J. (2002). Low-income consumers' attitudes and behaviour towards access, availability and motivation to eat fruit and vegetables. *Public Health Nutrition, (6)*: 2, 159-168.

Drewnowski, A. (2001). Diet image: a new perspective on the food-frequency questionnaire. *Nutrition Reviews, 59*, 370-374.

Dunn J.R., Dyck I. (2000). Social determinants of health in Canada's immigrant population: Results from the National Population Health Survey. *Social Science and Medicine, (51):*11, 1573-1593.

Elosua, R., Garcia, M., Aguilar, A., Molina, L., Covas, M-I., Marrugat, J.and the Maratdon Group. (2000). Validation of the Minnesota Leisure Time Physical Activity Questionnaire in Spanish Women. *Medicine & Science in Sports & Exercise, (32):* 8, 1431-1437.

Employment Equity Act (1995). Retrieved on October 2006 from: http://lois.justice.gc.ca/en/E-5.401/index.html

Fitzgibbon, M.L., Blackman, L.R., & Avellone, M.E. (2000). The relationship between body image discrepancy and body mass index across ethnic groups. *Obesity Research, (8):* 8, p.582-589.

Finch, B. K., & Vega, W. A. (2003). Acculturation stress, social support, and self-rated health among Latinos in California. *Journal of Immigrant Health 5*:109-117.

Flores, G., Fuentes-Afflick, E., Barobot, O., Carter-Pokras, O., Claudio, L., Lara, M., McLaurin, J.A., Pachter, L., Ramos Gomez, F., Mendoza, F., Valdez, R.B., Villarruel, A.M., Zambrana, R.E., Greenberg, R., and Weitzman, M. (2002). The Health of Latino Children: Urgent Priorities, Unanswered Questions, and a Research Agenda. *Journal of the American Medical Association, (288)*:1, p. 82-90.

Froguel, P. & Boutin, P. (2001). Genetics of pathways regulating body weight in the development of obesity in humans. Experimental Biology and Medicine, 226: 991-996.

Gee, E.M., Kobayashi, K.M., & Prus, S.G. (2004). Examining the Healthy Immigrant Effect in Mid-To Later Life: Findings from the Canadian Community Health Survey. Canadian *Journal on Aging Supplement*, S55-63.

Gee, G.C., Ryan, A., Laflamme, D.J., and Hold, J. (2006). Self-reported Discrimination and Mental Health Status Among African Descendents, Mexican Americans, and Latinos in the New Hampshire REACH 2010 Initiative: The Added Dimension of Immigration, *American Journal of Public Health, (96):*10, 1821-1828.

Geller, G. & Thomas, C.D. (1999). A review of eating disorders in immigrant women: possible evidence for a culture-change model. *Eating Disorders, (7):* 279-297.

Godin, G. and R. J. Shephard. (1985). A simple method to assess exercise behaviour in the community. Canadian. *Journal of Applied Sport Sciences,10*:141-146.

Gibson, E.L. (2006). Emotional influences on food choice: Sensory, physiological and psychological pathways. *Physiology & Behavior, 89*, 53–61.

Gonzalez-Barranco J. Lopez-Alvarenga JC. Roiz-Simancas M. Bravo-Garcia AL. Fanghanel-Salmon G. Laviada Arrigunaga E. Castano LR. Garcia Tapia MP. (2001). [Spanish]. Migration from a rural zone to an urban one is associated with android distribution of body fat in obese women. *Revista de Investigacion Clinica.* (53): 2, 129-35, 2001.

Gordon-Larsen, P., Harris, K.M., Ward, D. S. & Popkin, B.M. (2003). Acculturation and overweight-related behaviors among Hispanic immigrants to the US: National Longitudinal Study of Adolescent Health. *Social Science & Medicine, 57*, 2023-2034.

Green, A.G. & Green, D. (2004). The goals of Canada's immigration policy: A historical perspective. *Canadian Journal of Urban Research, (13):*1, p. 102-139.

Harvard School of Public Health and Oldways Preservation Trust (2000). The Latin American Diet Pyramid. Retrieved on October 4, 2006 from: http://oldwayspt.org/index.php?area=latin_american_diet

Health Canada. (2003). Canadian Guidelines for Body Weight Classification in Adults. Ottawa: Health Canada. Retrieved on October 4, 2004 from: http://www.hc-sc.gc.ca/fn-an/nutrition/weights-poids/guide-ld-adult/weight_book_tc-livres_des_poids_tm_e.html

Henderson, L. A. & Ainsworth, B. E. (2001). Researching Leisure and Physical Activity with Women of Colour: Issues and Emerging Questions. *Leisure Sciences, (23):* 21-34.

Holmboe-Ottesen, G. (2000). Global trends in food consumption and nutrition. [Norwegian]. *Tidsskrift for Den Norske Laegeforening, (120)*: 1, 178-82.

Hyman, I. (2004). Setting the stage: Reviewing current knowledge on the health of Canadian immigrants. *Canadian Journal of Public Health, (95):*3, 14-18.

Hyman, I., & Guruge, S. (2002). A review of theory and health promotion strategies for new immigrant women. [Review] [44 refs]. *Canadian Journal of Public Health, (93)*: 3, 183-7.

Hubert, H.B., Snider, J. M., & Winkleby, M.A. (2005). Health status, health behaviors, and acculturation factors associated with overweight and obesity in Latinos from a community and agricultural labor camp survey. *Preventive Medicine, (40):* 642– 651.

Huff, R.M., & Kile, M.V. (1999). Health promotion in the context of culture. In R.M. Huff & M.V. Kline (Eds.), *Promoting health in multicultural populations: A handbook for practitioners.* Thousand Oaks, CA: Sage Publications.

Jacobs Jr., D. R, Shucker, B., Knudsen, J., Leon, A.S., and DeBacker, G. (1978). A questionnaire for the assessment of leisure-time physical activities. *Journal of Chronic Diseases, 31*:741-755.

Jacobs, D.R., Ainsworth, B.E., Hartman, T.J., Leon, A.S. (1993). A simultaneous evaluation of 10 commonly used physical activity questionnaires. *Medicine and Science in Sports and Exercise,* 25:81-91.

Juarbe, T.C. (1998). Cardiovascular disease-related diet and exercise experiences of immigrant Mexican women. *Western Journal of Nursing Research, (20):*6, p.765-782.

Juarbe, T. C., Lipson, J. G. & Turok, X. (2003). Physical activity beliefs, behaviors, and cardiovascular fitness of Mexican immigrant women. *Journal of Transcultural Nursing, (14):* 2, 108-116.

Kain, J., Vio, F., and Albala,C. (2003). Obesity trends and determinant factors in Latin America. *Cad. Saúde Pública,(19):*S77-S86.

Kaplan MS. and Nunes A. (2003). The psychosocial determinants of hypertension. *Nutrition Metabolism & Cardiovascular Diseases, (13):* 1, 52-9.

Kliewer E.V., Ward D. (1988). Convergence of immigrant suicide rates to those in the destination country. *American Journal of Epidemiology, (127):*3, 640-653.

Kristiansen M. Mygind A. Krasnik A. (2006). Health effects of migration. [Danish]. *Ugeskrift for Laeger. (168)*: 36, 3006-8.

. (2000). *Immigrants and Ethnic Minorities on the Prairies: A Statistical Compendium.* Edmonton, Alberta, Canada: Prairie Centre of Excellence for Research on Immigration and Integration.

Lerman-Garber, I., Villa, A.R., and Caballero, E. (2004). Diabetes and cardiovascular disease. Is there a true Hispanic paradox? *Revista de Investigacion Clinica. (56)*: 3, :282-96.

Lipson, J.G. & Meleis, A.I. (1989). Methodological issues in research with immigrants. *Medical Anthropology, (12):* 1, 103-115.

Lopez, O., Haigh, C., and Burney, S. (2004). Relationship between hardiness and perceived stress in two generations of Latin American migrants. *Australian Psychologist, (39):* 3, 238 – 243.

Man, G. (2004). Gender, work and migration: Deskilling Chinese immigrant women in Canada. *Women's Studies International Forum 27*, 135– 148.

Marin, G. & Marin, B. V. (1989). A comparison of three interviewing approaches for studying sensitive topics with Hispanics. *Hispanic Journal of Behavioral Sciences, (11):*4, p.330-340.

Marquez,D.X., McAuley, E., and Overman, N. (2004). Psychosocial Correlates and Outcomes pf Physical Activity Among Latinos: A Review. *Hispanic Journal of Behavioral Sciences, (26)*:2, 195-229.

Marty, D. (2003). Qualitative Versus Quantitative Methodologies: And Never the Twain Shall Meet? *Journal of Transcultural Nursing, (14)*: 2, 89

McDonald, T. J., & Kennedy, S. (2004). Insights into the 'healthy immigrant effect': health status and health service use of immigrants to Canada. *Social Science & Medicine, 59:*1613-1627.

McDonald, T. J., & Kennedy, S. (2005). Is migration to Canada associated with unhealthy weight gain? Overweight and obesity among Canada's immigrants. *Social Science & Medicine, 61:* 2469-2481.

McLeroy, K.R., Bibeau, D., Steckler, A., & Glanz, K. (1988). An ecological perspective on health promotion programs. *Health Education Quarterly, 15*, 351-377.

Meadows, L. M., Thurston, W. E. & Melton, C. (2001). Immigrant women's health. Social *Science & Medicine, 52:* 1451-1458.

Meleis, A.I., Lipson, J.G., Muecke, M. & Smith, G. (1998). Immigrant women and their health: An olive paper. Centre Nursing Press: Indianapolis, Indiana.

Mendelson, C. (2002). Health perceptions of Mexican American women. Journal of *Transcultural Nursing, (13):* 3, 210-217.

Mendelson, C. (2003). The Roles of Contemporary Mexican American Women in Domestic Health Work. *Public Health Nursing, (20):* 2, 95-103.

Miller, W.C., Koceja, D.M. & Hamilton, E.J. (1997). A meta-analysis of the past 25 years of weight loss research using diet, exercise or diet plus exercise intervention. *International Journal of Obesity, 21*:941-947.

Morse, J.M. (Ed) (1992). *Qualitative health research.* Newbury Park: Sage Publications.

Mouton, C. P., Calmbach, W.L., Dhanda, R., Espino, D.V., and Hazuda, H. (2000). Barriers and benefits to leisure-time physical activity among older Mexican-Americans. *Archives of Family Medicine, (9)*: 892-897.

Munet-Vilaró, F., Folkman, S., and Gregorich, S. (1999). Depressive Symptomatology in Three Latino Groups. *Western Journal of Nursing Research, (21):* 2, 209-224.

Neuhouser, Thompson, Coronado, et al., (2004). Higher fat intake and lower fruit and vegetables intakes are associated with greater acculturation among Mexicans living in Washington State. *Journal of American Dietetic Association, (104),* 51-57.

Newbold, K. B., & Danforth, J. (2003). Health status and Canada's immigrant population. *Social Science & Medicine, 57:*1981-1995.

Norris, A. E., Ford, K., & Bova, C. A. (1996) Psychometrics of a brief acculturation scale for Hispanics in a probability sample of urban Hispanic adolescents and young adults. *Hispanic Journal of Behavioral Sciences, 18*: 29-38.

Ng, E. , Wilkins, R., Gendron, F., & Berthelot, J. (2006). Dynamics of Immigrants' Health in Canada: Evidence from the National Population Health Survey. Statistics Canada, *Catalogue No. 82-618.*. Ottawa: Statistics Canada.

Otsuka R. Tamakoshi K. Yatsuya H. Murata C. Sekiya A. Wada K. Zhang HM. Matsushita K. Sugiura K. Takefuji S. OuYang P. Nagasawa N. Kondo T. Sasaki S. and Toyoshima H.

(2006). Eating fast leads to obesity: findings based on self-administered questionnaires among middle-aged Japanese men and women. *Journal of Epidemiology, (16)*: 3, 117-124.

Papadopoulous, I. & Lees, S. (2002). Developing culturally competent researchers. *Journal of Advanced Nursing, (37):* 3, 258-264.

Perez, C.E. (2002). Health status and health behaviour among immigrants. Health Reports, Vol. 13 (Statistics Canada, *Catalogue No. 82-003*). Ottawa: Statistics Canada.

Perez, M., Voelz, Z. R., Pettit, J. W., & Joiner, Jr., T. E. (2002). The role of acculturative stress and body dissatisfaction in predicting bulimic symptomatology across ethnic groups. *International Journal of Eating Disorders 31*:442-454.

Picot, G. (2004). The deteriorating economic welfare of Canadian immigrants. Canadian *Journal of Urban Research, (13):* 1, p. 25-45.

Ponizovsky, A.M. and Ritsner, M.S. (2004). Patterns of Loneliness in an Immigrant Population. *Comprehensive Psychiatry, (45):* 5, 408-414.

Popkin, B. M. (2001). The Nutrition Transition and Obesity in the Developing World. The *Journal of Nutrition, (131):* 871S–873S.

Raphael, D. (2000). Increasing poverty threatens the health of all Canadians. *Canadian Family Physician,(47):* 1703-1706.

Rivera Adams, C. (2004). Linguistic differences and culturally relevant interventions for involving monolingual Latino individuals in research efforts. *Journal of Hispanic Higher Education, (3)*:4, :382-392.

Robinson, W. (2006). Aqui estamos y no nos vamos!' Global capital and immigrant rights. *Race & Class, (48):* 2, 77-91.

Rosmond, R., Nilsson, A., and Björntorp, P. (2000). Psychiatric ill health and distribution of body fat mass among female immigrants in Sweden. *Public Health, 114*, 45-51.

Rothe, P. J. (2003). *Social Inquest: a workbook on qualitative methods for injury, safety and social behaviour.* Canada: Lacuna Publishing Solutions.

Spiegel, J.M., Labonte, R. & Ostry, A.S. (2004). Understanding "Globalization" as a Determinant of Health Determinants: A Critical Perspective. *International Journal of Occupational and Environmental Health, 10,* 360-367.

Statistics Canada, (2003). 2001 Census Analysis Series. Canada's ethnocultural portrait: The changing mosaic. Retrieved on December 10, 2005, from http://www12.statcan.ca/english/census01/products/analytic/companion/etoimm/canada.cfm

Statistics Canada, (2003a). Immigrant population as a proportion of total population and proportion of immigrants who arrived from 1991 to 2001, Canada, provinces, territories, health regions and peer groups, 2001. Retrieved on December 10, 2004 from: http://www.statcan.ca/english/freepub/82-221-XIE/01103/tables/html/46_01.htm

Statistics Canada, (2003b). Census of Population: Immigration, birthplace and birthplace of parents, citizenship, ethnic origin, visible minorities and Aboriginal peoples. Retrieved on December 20, 2006, from: http://www.statcan.ca/Daily/English/030121/d030121a.htm

Statistics Canada, (2005). Longitudinal Survey of Immigrants to Canada: A Portrait of Early Settlement Experiences. Catalogue no. 89-614-XIE. Retrieved on September 10, 2006 from: http://www.statcan.ca/english/freepub/89-614-XIE/89-614-XIE2005001.htm

Stunkard, A. J., Sorensen, T., & Schulsinger, F. (1983). Use of the Danish adoption register for the study of obesity and thinness. In S.S. Kety, L.P. Rowland, S.W. Sidman, and S.W. Mathysee (eds.) *The Genetics of Neurological and Psychiatric Disorders.* Pp. 115-120. Raven Press: New York.

Teran, L.M., Belke, K.L. & Anderson Johnson, C. (2002). An exploratory of psychosocial determinants of obesity among Hispanic women. *Hispanic Journal of Behavioral Sciences, (24):* 1, p. 92-103.

Tremblay, M.S., Katzmarzyk, P.T. and Willms, J.D. (2002). Temporal trends in overweight and obesity in Canada,1981–1996. *International Journal of Obesity, 26,* 538–543.

Tremblay, M.S., Perez, C. E., Ardem, C.L., Bryan, S.N., & Katzmarzyk, P.T. (2005). Obesity, overweight and ethnicity. Health Reports, Vol. 16 (Statistics Canada, Catalogue No. 82-003). Ottawa: Statistics Canada.

Trochim, W. M. K. (2001). *Research Methods Knowledge Base.* (2nd ed). Cincinnati, OH.: Atomic Dog Publishing.

Thurston, W. E. & Vissandjee, B. (2005). An ecological model for understanding culture as a determinant of women's health. *Critical Public Health, (15):* 3, 229–242.

Vega, G.L. (2001). Obesity, metabolic syndrome, and cardiovascular disease. *American Heart Journal, 142*:1108-16.

Veenstra, G. (1999). Different Wor(l)ds: Three Approaches to Health Research. *Revenue Canadienne de santé publique, (90)* : S1, 18-21.

Wallen, G. R., Feldman, R. H., & Anliker, J. (2002). Measuring acculturation among Central American women with the use of a brief language scale. *Journal of Immigrant Health 4:*95-102.

Warrix, M. (2005). Cultural Diversity: Eating in American- Mexican American. Retrieved February 18, 2005 from http://ohioline.osu.edu/hyg-fact/5000/5255.html

Wilkinson, R., & Marmot, M. (2003). *Social Determinants of Health-The Solid Facts* (2nd ed.). Denmark: World Health Organization Regional Office for Europe.

Winkleby,M. A., Gardner, C. D.,&Taylor, C. B. (1996). The influence of gender and socioeconomic factors on Hispanic/White differences in body mass index. *Preventive Medicine, 25,* 203-211.

World Health Organization (2002) Globalization, diets and noncommunicable diseases.. Retrieved from http://www.who.int/dietphysicalactivity/publications/en/ on October 15, 2006.

World Health Organization (2005) Obesity and Overweight. Retrieved from http://www.who.int/dietphysicalactivity/publications/facts/obesity/en/print.html on March 10, 2005.

Zsembik, B. A., & Fennell, D. (2005). Ethnic variation in health and the determinants of health among Latinos. *Social Science & Medicine, 61,* p. 53-63.

Zhu,S., Heymsfield,S.B., Toyoshima,H., Wang, Z., Pietrobelli,A., and Heshka, S. (2005). Race-ethnicity–specific waist circumference cutoffs for identifying cardiovascular disease risk factors. *American Journal of Clinical Nutrition, 81:*409 –15.

Appendix A - Demographic Questionnaire

Age: _____

Marital Status (circle):
Single Married without children Married with children Divorced Widowed
Household Size: _____
Household income (circle most appropriate dollar range):
<25,000 25,001-35,000 35,001-50,000 50,001-71,000 71,001-100,000
100,001-115,000 >115,000

Ethnicity: _____
Religious affiliation: _____ Practicing?
_____

Number of years living in Canada: _____
Country from which emigrated: _____
Did you migrate directly to Canada? [If not, list countries and # years in transit]
_____
_____
_____
_____

Highest level of education completed: _____
Is your education recognized in Canada? _____
Occupation: _____
Occupation before migration: _____

Which languages are you: 1. fluent
understand, but am not fluent
do not understand

Language	Speaking	Reading	Writing
English			
French			
Spanish			
Arabic			
Hindi			
Urdu			
Punjabi			
Other: _____			

Do you take any medication for (circle response):
diabetes Yes No
high blood pressure Yes No
heart disease Yes No

Has your weight changed since arrival to Canada (circle)? Yes No
If yes, has your weight (circle): decreased increased

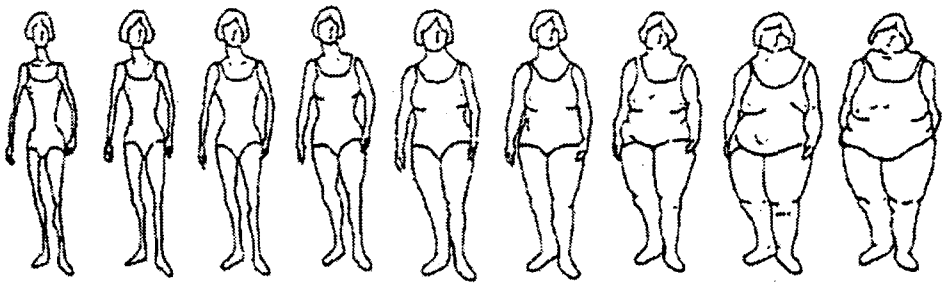
Appendix B – Acculturation Scale

Please answer the following questions, choosing the score that best represents your behaviour:

	I speak XX[a] 100% of the time	I speak XX 75% of the time	I speak XX 50% of the time	I speak XX 25% of the time	I speak English 100% of the time
In which language do you feel most comfortable speaking?					
What language do you prefer to speak with friends?					
In what language do you think?					
What language do you speak at home?					

[a] Substitute here the language most appropriate for each focus group (e.g. Hindi/Urdu, Arabic, etc.)

Appendix C – Body Image Scale



1 2 3 4 5 6 7 8 9

Stunkard, Sorensen, & Schulsinger (1983)

a) Which figure is most representative of their current body size?

b) Which figure is representative of the body size you wish to look like?

c) Which figure represents your cultural body size ideal?

d) Which figure represents the Canadian cultural ideal?

e) Which figure represents the body size most attractive to men?

Appendix D - Physical Activity Survey 1

(Godin, G. and R. J. Shephard, 1985)

We would like you to recall your average weekly participation in physical activity over the past month. How many times per week on average did you do the following kinds of physical activity during your free time over the past month?
When answering these questions please:

- Consider your average over the past month
- Only count physical activity sessions that lasted 10 minutes or longer in duration.
- Do not count physical activity that was done as part of your employment or household chores.
- Please write the average amount of times per week in the first column and the average length of time in the second column for strenuous, moderate, and mild activity.
- Please make sure you fill in all 6 boxes. Mark "o" if a category does not apply to you.

	Times per Week	Average Time per Session (minutes)
A. Strenuous physical activity (heart beats rapidly, sweating) (e.g. running, jogging, hockey, soccer, squash, cross country skiing, roller skating, vigorous swimming, vigorous long distance bicycling, vigorous aerobic dance classes, heavy weight training)		
B. Moderate physical activity (not exhausting, light perspiration) (e.g. fast walking, baseball, tennis, easy bicycling, volleyball, badminton, easy swimming, skiing, dancing) (Salsa, Merengue, etc).		
C. Mild physical activity (minimal effort, no perspiration) (e.g. easy walking, archery, fishing, bowling, lawn bowling, shuffleboard, horseshoes, golf, snowmobiling, Tai Chi)		

Appendix E - Minnesota Leisure-Time Physical Activity Questionnaire

Jacobs, Shucker, Knudsen, Leon, & De Backer (1978)

Translation: Elosua, Garcia, Aguilar, Molina, Covas, Marrugat, and the Maratdon Group (2000)

LISTA DE ACTIVIDADES FISICAS

(Marque con una cruz la casilla correspondiente a las actividades físicas que haya realizado durante el último año)

Andar - Bailar - Subir escaleras

|__| 1 Pasear
|__| 2 Andar de casa al trabajo y del trabajo a casa o durante el periodo de descanso del trabajo
|__| 3 Andar (llevando carrito de la compra)
|__| 4 Andar (llevando bolsas de la compra)
|__| 5 Subir escaleras
|__| 6 Andar campo a través
|__| 7 Excursiones con mochila
|__| 8 Escalar montañas
|__| 9 Ir en bicicleta al trabajo
|__|10 Bailar
|__|11 Aerobic o ballet
|__|12 Jugar con los niños (corriendo, saltando,..)

Ejercicios de mantenimiento general

|__|13 Hacer ejercicio en casa
|__|14 Hacer ejercicio en un gimnasio
|__|15 Caminar deprisa
|__|16 Trotar ("Jogging")
|__|17 Correr 8-11 km/h
|__|18 Correr 12-16 km/h
|__|19 Levantar pesas

Actividades acuáticas

|__|20 Esquí acuático
|__|21 Surf
|__|22 Navegar a vela
|__|23 Ir en canoa o remar (por distracción)
|__|24 Ir en canoa o remar (en competición)
|__|25 Hacer un viaje en canoa
|__|26 Nadar (más de 150 metros en piscina)
|__|27 Nadar en el mar
|__|28 Bucear

Deportes de invierno

|__|29 Esquiar
|__|30 Esqui de fondo
|__|31 Patinar (ruedas o hielo)

Otras actividades

|__|32 Montar a caballo

|__|33 Jugar a los bolos
|__|34 Balonvolea
|__|35 Tenis de mesa
|__|36 Tenis individual
|__|37 Tenis dobles
|__|38 Badminton
|__|39 Baloncesto (sin jugar partido)
|__|40 Baloncesto (jugando un partido)
|__|41 Baloncesto (actuando de árbitro)
|__|42 Squash
|__|43 Fútbol
|__|44 Golf (llevando el carrito)
|__|45 Golf (andando y llevando los palos)
|__|46 Balonmano
|__|47 Petanca
|__|48 Artes marciales
|__|49 Motociclismo
|__|50 Ciclismo de carretera o montaña

Actividades en el jardín

|__|51 Cortar el césped con máquina
|__|52 Cortar el césped manualmente
|__|53 Limpiar y arreglar el jardín
|__|54 Cavar el huerto
|__|55 Quitar nieve con pala

Trabajos y actividades caseras

|__|56 Trabajos de carpintería dentro de casa
|__|57 Trabajos de carpinteria (exterior)
|__|58 Pintar dentro de casa
|__|59 Pintar fuera de casa
|__|60 Limpiar la casa
|__|61 Mover muebles

Caza y pesca

|__|62 Tiro con pistola
|__|63 Tiro con arco
|__|64 Pescar en la orilla del mar
|__|65 Pescar con botas altas dentro del río
|__|66 Caza menor
|__|67 Caza mayor (ciervos, osos...)

Otras (Especificar)
|__|68 .....
|__|69 .....
|__|70 .....

Appendix F - Focus Group Consent Form

Interviewers:
Ximena Ramos Salas
Centre for Health Promotion Studies

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Helen Vallianatos
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Project Description:
As researchers and community members, we know that immigrants are typically healthier than born-and-raised Canadians. But 10 to 14 years after coming to Canada, immigrants appear to have an increase in diseases like obesity and diabetes. Why? In this study, we work on answering this question. Through our investigations, we aim to better understand the health of immigrants in Canada, and the various social factors that affect the health status of immigrants.

To do so, we are focusing on better understanding the food choices made by both recent and non-recent immigrants, as well as possible changes in concepts of culturally-appropriate body size (weight) and physical activity. We are working with three immigrant communities (South Asian, Arabic, and Latin American) in order to understand the similarities and differences in immigrant experiences. In partnership with the Multicultural Health Brokers Cooperative, the findings will give us a chance to pursue further funding to develop culturally relevant obesity programs and improve health of immigrant communities in Edmonton. Your help in this study is greatly appreciated!

****

As the Interviewee, I have been fully informed of the following points before proceeding with the interview:

1. My participation in this research is completely voluntary and I understand the intent and purpose of this research.
2. I understand that my identity will be kept confidential and that I have the right to withdraw from this research at any time. Consent forms will be kept separately from data in a locked file cabinet, so that your identity cannot be matched with the information you provide.
3. I understand that as a participant in this focus group interview, I must respect the confidentiality of other participants, and not share with others information that was discussed during the focus group interview.
4. I know that I may refuse to answer any questions and that I may withdraw at a later date. Any information provided by me can be destroyed at any time upon my request.
5. I am aware that others will be reading the results of this research and that this research will eventually be published. In any publication, I will not be identified by name.
6. I am aware that at the end of the focus group interview, my weight, height, waist and hip circumferences will be measured by Dr. Vallianatos. Choosing not to participate in this aspect of the study does not preclude my participation in other aspects of the study.
7. It is recognized that some of the issues we'll talk about may be sensitive. Also, the body measurements may suggest that I am at risk for overweight/obesity. I know that I can contact the Multi-Cultural Health Brokers, at 423-1973 for information and/or health referrals.
8. I will receive a grocery gift certificate for my participation in the interview.
9. I will receive a copy of this contract.

	Signature	Date
Interviewee		
Interviewer		
Interviewer		

Appendix G- Interview Consent Form

Interviewers:
Ximena Ramos Salas
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Project Description:
As researchers and community members, we know that immigrants are typically healthier than born-and-raised Canadians. But 10 to 14 years after coming to Canada, immigrants appear to have an increase in diseases like obesity and diabetes. Why? In this study, we work on answering this question. Through our investigations, we aim to better understand the health of immigrants in Canada, and the various social factors that affect the health status of immigrants.

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10. My participation in this research is completely voluntary and I understand the intent and purpose of this research.
11. I understand that my identity will be kept confidential and that I have the right to withdraw from this research at any time. Consent forms will be kept separately from data in a locked file cabinet, so that your identity cannot be matched with the information you provide.
12. I know that I may refuse to answer any questions and that I may withdraw at a later date. Any information provided by me can be destroyed at any time upon my request.
13. I am aware that others will be reading the results of this research and that this research will eventually be published. In any publication, I will not be identified by name.
14. It is recognized that some of the issues we'll talk about may be sensitive. I know that I can contact the Multi-Cultural Health Brokers, at 423-1973 for information and/or health referrals.
15. I will receive $30 CAD for my participation in the interview.
16. I will receive a copy of this contract.

	Signature	Date
Interviewee		
Interviewer		
Interviewer		