# Building Health Capability and Health Literacy: Exploring Social Support Experiences of Chinese International Students in a Canadian Context

by

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A thesis submitted in partial fulfillment of the requirements for the degree of

Master of Science

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## Abstract

The number of international students studying in Canada has been increasing rapidly in recent years. However at the time of writing, while literature was found on international students' health related experiences in the US and other countries as well, it appeared that very few studies on this topic had been conducted in the Canadian context. Considering this, it is beneficial to bridge the gap between researchers and stakeholders, such as international student services providers, the public health services, as well as the Chinese international students themselves, to understand the international students' health experiences within Canada by looking at the factors – social support, health capability and health literacy – that affect their health. Chinese international students were chosen as a representative group in this study for international students in Canada, as the number of Chinese international students in Canada is the largest among all the international student groups, with a large proportion (60%) intending to become permanent residents of Canada after graduation.

This is a focused ethnographic study, using engaged scholarship. A Community Advisory Board was formed to engage specialists working closely with international students as well as student representatives from the Chinese student organizations on the University of Alberta campus. One-on-one semi-structured interviews, detailed field notes and research journal were used to generate data among twenty Chinese

international students at the University of Alberta.

The findings show that the Chinese internationals students in this study were generally lacking of social support as well as the awareness of social support as a determinant of health. Therefore, they had difficulties when seeking social support in their context. The Chinese international students tended to identify anyone or anything around them that could provide support to them when managing health as their sources of social support. Interestingly, the students had different perceptions of social support sources from what was demonstrated in the literature. Barriers to seeking social support were found among the students, highlighting how culture shaped their social support seeking behaviours in a variety of ways. Health capability and health literacy were found to be improved through the process of managing health independently. Appropriate social support and good heath capability/literacy social network sources were expected by the students in terms of improving health on a community level.

As ideas of what social support entails vary by culture, those working with international students need to find ways to bridge alternate meanings and provide culturally appropriate supports. It is hoped that this study will provide academics and practitioners a starting point to develop culturally sensitive health strategies for international students/future immigrants and raise the awareness among international students of how social support can be a vehicle for promoting health.

## Preface

This thesis is an original work by Yajing Yang. The research project, of which this thesis is a part, received research ethics approval from the University of Alberta Research Ethics Board, project name "Exploring Chinese international students' experiences of using social support to build health capability to become health literate in a Canadian context", No. Pro00041060, 13 September 2013.

## Dedication

To the Chinese international students in Canada.

To my beloved father.

**Acknowledgements**

It would not have been possible to complete this thesis if without the support from so many people and organizations. First and foremost, I would like to express my special appreciation and thanks to my supervisors, Dr. Jane Springett and Dr. Candace Nykiforuk, for their guidance, patience and inspiration throughout my master program. Working under their supervision has been a wonderful journey and an excellent opportunity to learn from their insights and enthusiasm towards health promotion research. I would also like to thank my committee member, Dr. Helen Vallianatos for her continuous support and insightful comments on my thesis.

I am very grateful to my community partners, the University of Alberta wellness services, International Student Services, Residence Services, the Chinese Graduate Students Club and the Chinese Students and Scholars' Association for their engagement, helpful feedback and practical suggestions. I would like to acknowledge the financial support from J Gordin Kaplan Graduate Student Award and the School of Public Health Travel Award for me to disseminate my research results at conferences. I want to say a special thank you to all my peers in the School of Public Health, the Eco-PAtH research team and the PLACE research lab in the Centre for health promotion studies. You are an amazing team that gives me much courage to be the better me

I would like to thank my mother and my family to support me both emotionally and

financially though I am thousands of miles away from them. Lastly, a special thanks to my beloved fiancé, Wenfei Zhang. Words cannot express how grateful I am for his love, patience, support and encouragements throughout my master studies.

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# Chapter One: Introduction

## 1.1 Social support and health status

Social support, one of the social determinants of health, has been highlighted in public health research as a factor that affects individual health status, both in terms of physical and mental wellbeing (Cobb, 1976; Cohen & Wills, 1985; Raphael, 2011; World Health Organization, 1986). Although social support has been defined by many researchers in a variety of ways, most definitions include the love, respect and esteem an individual feels (Cobb, 1976; P. Williams, Barclay, & Schmied, 2004). In this study, social support is defined as support received from social networks meeting individual needs and leading the individual to believe that s/he is cared for and loved, esteemed and valued, and s/he belongs to a network of communication and mutual obligation (Cobb, 1976; Cohen & Wills, 1985; P. Williams et al., 2004; T. Wills & Shinar, 2000; Wu & Cheng, 2011; Yang & Ye, 2014).

Among the potential mediating factors that link social support and health status, health capability and health literacy are two factors that affect individual health status by empowering people from a health equity perspective. Health capability consists of health agency, an individual's ability or skills to engage with the external environment to achieve what s/he values and be an agent when managing their own health skills, and the

context or environment that enable excellent wellbeing (Mulvaney-Day, Womack, & Oddo, 2012; Ruger, 2010; Sen, 1993). When social support is provided, active engagement in health decision making is encouraged with an intermediate outcome of developed health knowledge and capability (Ruger, 2010; Weaver, Lemonde, Payman, & Goodman, 2014).

Health capability has been recognized as a key factor in this study because there has been interest over the past five years in conceptually integrating the social determinants of health, as conceptualized in health research, with the concept of capability in the context of social justice (Venkatapuram, 2009). Sen and Nussbaum propose a capability approach which highlights that every individual should have equitable freedoms and capabilities to live their lives and achieve desired health outcomes (Martha Nussbaum, 2011a; Sen, 1993, 2005). Health capability can be a supporting factor that improves health literacy, as it enables individuals to assess and critique the information they obtain and identify the issues in their surroundings that prevent them from accessing the things they need for sustaining and promoting health.

Health literacy can be a very effective tool in improving health status, as it empowers people to better control their health and the factors that shape their health including social support and health capability (Cho, Lee, Arozullah, & Crittenden, 2008; Lee, Arozullah, & Cho, 2004; Nutbeam, 2008).

## 1.2 Social support during migration

Although social support affects health status in all populations and at all times, it has been considered especially critical during the migration process (Stewart et al., 2010; Stewart et al., 2008). Immigrants' are more likely to be isolated as their social support systems are often disrupted when they are relocating overseas; therefore, they tend to be lacking in social support during and/or after migration and so need to rebuild their social support system (Simich, Beiser, Stewart, & Mwakarimba, 2005; Stewart et al., 2008).

Research has suggested that the cultural background (e.g., ethno-cultural background, community/social norms) in which immigrants are embedded often impacts their social support seeking behaviours and experiences (Andrade, 2006; Haugh & Hinze, 2003; Liang & Bogat, 1994; Taylor et al., 2004; Taylor, Welch, Kim, & Sherman, 2007). Researchers have explored social support seeking behaviours from a variety of cultural perspectives. The topic that has been most commonly debated in research on immigrants is collectivism versus individualism (Liang & Bogat, 1994; Swagler & Ellis, 2003; J. Zhang & Goodson, 2011). From the perspective of collectivism and individualism, such researchers explore and discuss other potential factors that may influence immigrants' social support seeking behaviours and go beyond predominating assumptions that narrowly consider Asians as collectivist and westerners as individualists (Castro, 2004; Kim, Sherman, & Taylor, 2008; Moore & Constantine, 2005; Taylor et al., 2004). To

identify a single set of social norms to explain social support behaviours of a group of people who have the same ethnicity but are embedded in diverse living contexts can be problematic. (Castro, 2004). Therefore, it is proposed that social support research among immigrant populations should seriously consider the complexity of the context/culture that they are embedded in, as multiple types of culture can intertwine and affect their social support perceptions and seeking behaviours interactively (P. Williams et al., 2004).

### 1.3 International students' social support in Canada

Studies conducted in the Canadian context have examined the perceptions and experiences of social support among immigrants and refugees (Beiser, 2002; Simich, Beiser, & Mawani, 2003; Stewart et al., 2010; Stewart et al., 2008; Zanchetta & Poureslami, 2006). If we consider "immigrant" as a broader term – that is, as people who migrate from one place to another – then the international student population in Canada has been neglected in previous immigrant health research. Studies on immigrant social support in Canada cannot be appropriately generalized to the international student population, as they are embedded in university/college contexts, which are different from other immigrant settings. International students' experiences, cultures, resources and social networks can be different from those of other immigrants who do not attend university/college, as the university/college contexts that they are embedded in may shape their experiences differently compared with other immigrant communities.

Researchers argue that people's perceptions of social support and social support seeking behaviours are influenced by their contexts (Galman, 2007; Williams et al., 2004). Following this argument, university/college contexts may also affect students' perceptions of social support and social support seeking behaviours.

Although there are support services on campus for international students, university/college life itself could be a stressor to the international students (Atri, Sharma, & Cottrell, 2007). Moreover, international students often have more difficulties while integrating into new college/university environments in a foreign country for several reasons including lower perceived social support, compared with domestic students (K. T. Wang et al., 2012). Thus, social support, as a stress buffer, can be a critical factor that shapes international students' health from a psychological perspective (Kanekar, Sharma, & Atri, 2010).

To summarize, social support, health capability and health literacy are all important factors that influence health status, especially during migration. An abundance of studies on perceptions as well as experiences of social support among immigrants and refugees in Canada have been identified. However, most previous research on international students' health has been conducted in the US but not yet in Canada. One quantitative study explored social support experiences among international students in Canada but this was some time ago (Chataway & Berry, 1989). It was found in this study that Chinese (Hong Kong) students in Canada experienced more adaptation and

communication problems, lower perceived social support, poor health and lower coping satisfaction. However, no up-to-date qualitative study looking at international students' social support experiences in Canada has been identified. Therefore, it can be argued that compared with the international students in the study conducted almost thirty years ago, the social support experiences of current international students in Canada may have changed significantly. According to the statistical data from Citizenship and Immigration Canada (2013), the total entry of international students to Canada increased by approximately 24% in the past four years. Considering the gap in the literature, this thesis explores social support experiences among international student populations in Canada, focusing on Chinese international students, who constitute the largest international student group in Canada (Citizenship and Immigration Canada, 2012, 2013).

### 1.4 Research question and objectives

To address the existing research gap as indicated, this study aims to explore Chinese international students' health related social support experiences in the Canadian context. The overall research question is: *What are the experiences of Chinese international students at the University of Alberta obtaining and using social support to build their health capability and health literacy in the Canadian context?*

The objectives of this study are as:

- To understand Chinese international students' perceptions of social support

- To explore the relationships between social support, health capability and health literacy from the Chinese international students' perspectives to understand whether they perceive social support as a tool that affects their health capability and health literacy
- To identify the nature of social support that is deemed acceptable and effective by Chinese international students in improving their health status or coping with health related issues that they have encountered or will encounter during their stay in Canada.

## 1.5 The structure of this thesis

This thesis is presented in five chapters. Chapter two (literature review) is dedicated to examining previous studies on social support, health capability and health literacy from an immigrant health perspective. This chapter identifies gaps in existing literature and emphasizes the importance of exploring Chinese international students' social support experiences within a Canadian context. Chapter three (research procedure) introduces the approach and methodology employed by the study. It also describes the process of conducting this study and researcher positionality. Chapter four (results) provides the findings of this study, along with quotes from interviews to support the findings. Chapter five (conclusions and discussions) offers a discussion of the study results as well as limitations, provides recommendations for future research and

concludes by summarizing the implications of this study.

## Chapter Two: Literature Review

This chapter examines previous literature on social support, health capability and health literacy, which are important in informing this study. It highlights the relationship between social support, health capability and health literacy and how these factors affect health status, from an immigrant health perspective.

There are existing comprehensive reviews on social support, health capability and health literacy (Barrera, 1986; Kaplan, Cassel, & Gore, 1977; Sørensen et al., 2012; Wells, n.d.; Williams et al., 2004). Wells (n.d.) reviews the work of two key researchers, Sen and Nussbaum, on Capability Approach research, discussing the development and structure of Sen's account as well as identifying theories developed by Nussbaum within the Capability Approach. Sørensen and colleagues reviewed definitions and conceptual models of health literacy (Sørensen et al., 2012). They integrated definitions and developed a conceptual model that captured the most comprehensive evidence-based dimensions of health literacy. Kaplan et al. (1977) introduces the basic dimensions of the social support concept from a biomedicine perspective. Later on, Barrera (1986) clarifies the confusion around the concept of social support by examining criticisms, such as too broad definitions on social support or too little consensus on defining social support, and by proposing guidelines that help reduce sources of confusion when studying social support. Williams and others reviewed social support articles published between 1996

and 2001 and appraised the social support definitions in each article (Williams et al., 2004). More recently, researchers conducted reviews to comprehensively identify the relationships between social support and various health outcomes from both physical and mental health perspectives, targeting specific population groups (Chen, Hicks, & While, 2014; Mendonça, Cheng, Mélo, & de Farias Júnior, 2014; Razurel, Kaiser, Sellenet, & Epiney, 2013; Uchino, 2006) . Although an increasing number of studies have been conducted to explore the effect of social support on health status, a more recent review on the concept of social support has not been identified.

### 2.1 Understanding social support and its effect on health status

Social support can be defined as support from social networks that meets individual needs and leads the individual to believe that s/he is cared for and loved, esteemed and valued, and s/he belongs to a network of communication and mutual obligation (Cobb, 1976; P. Williams et al., 2004). Perceived and received social support are the two main types of social support that have been studied in previous research. Perceived social support, which is a subjective feeling/perception of being supported, has been commonly identified as a factor that has causal relationship with health status (Chu, Saucier, & Hafner, 2010; Tajvar, Fletcher, Grundy, & Arab, 2013; Tardy, 1985). From the abundance of the recent research on perceived social support and health, perceived social support appears to be proven effective in protecting individuals from depression, suicide, and

other mental health conditions. For example, it was found among adolescents that perceived social support was negatively associated with stress and positively related to wellbeing (Glozah & Pevalin, 2014). Wang and others also affirm the effect of social support on health status by revealing the fact that perceived social support moderates the influence of stress on depression among university students (Wang, Cai, Qian, & Peng, 2014).

In addition to perceived and received social support, social support can be defined and measured based on different aspects. Tardy (1985) demonstrates a framework (figure 1) where social support definitions are articulated from five aspects (p.189). In the figure, *direction* indicates whether the individual is receiving social support from others or providing it to others. *Disposition* describes situations where there is social support available for people to use (*available*) and conditions where people actually utilize social support (*enacted*). Regarding *description/evaluation*, social support can be described as experiences or evaluated based on people's satisfaction with it. More specifically, the *content* of social support can be categorized as (a) emotional support, which offers empathy, concern, affection, love, trust, acceptance, intimacy, encouragement, or caring; (b) instrumental support, which provides practical help or tangible aid; (c) informational support, which is the provision of knowledge relevant to problem-solving; and (d) affirmational/appraisal support, which involves the communication of information that is pertinent to self-evaluation and encompasses

expressions that affirm the appropriateness of emotions, cognitions, and behaviours (Dennis, 2003; Tardy, 1985; Wills, 1985; Wills & Shinar, 2000). *Network* captures where people can obtain social support.

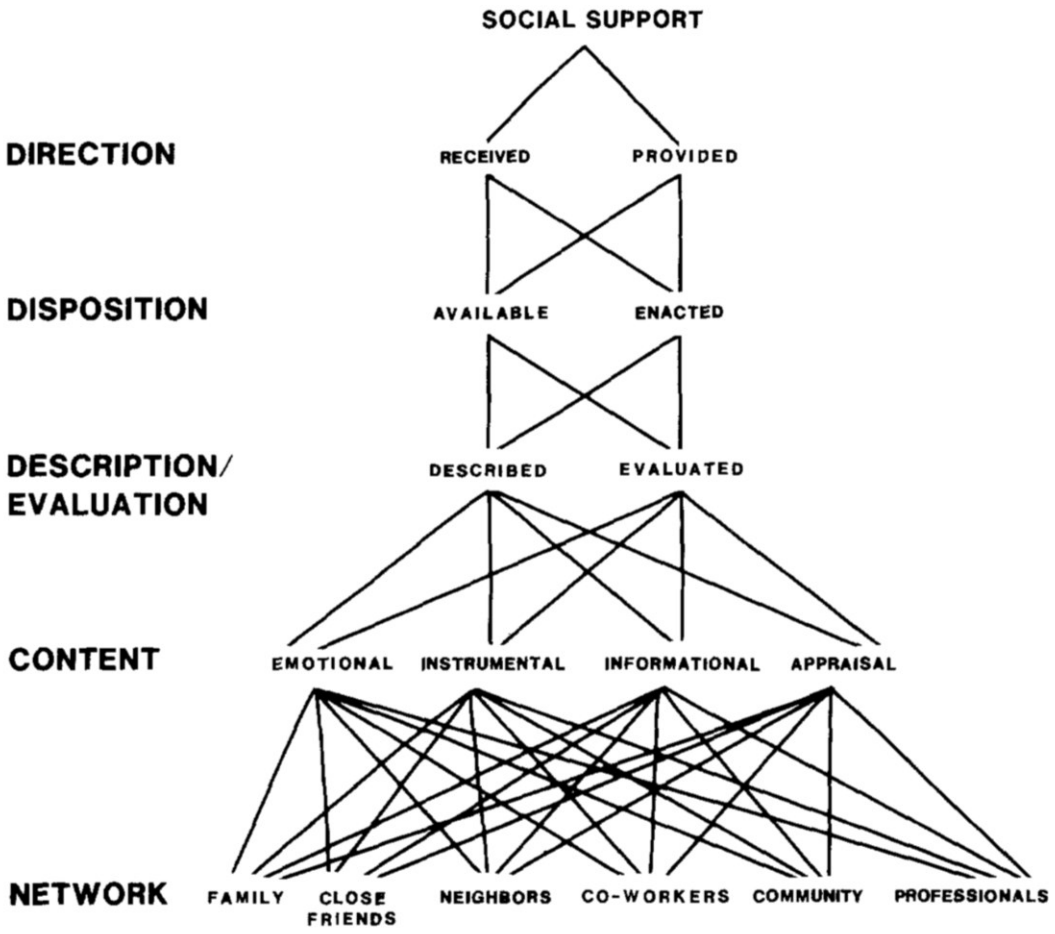


Figure 1. Aspects of social support (Tardy, 1985)

Although social support is a concept that has been studied for some time, it is not without its criticisms, especially with regard to its definitions. Barrera (1986) argues that the definitions of social support are too broad to sufficiently make it a specific research concept. More recently, Williams et al. (2004) follow this argument by claiming that

social support should be defined in specific research contexts. Considering the limited consensus on defining social support in the literature (Barrera, 1986), this study defines social support from a rather broad perspective. That is, as indicated in the previous paragraph, support from social networks that leads the individual to believe that s/he is cared for and loved, esteemed and valued, and s/he belongs to a network of communication and mutual obligation. This definition was created after reviewing the literature and examining the similarities among the definitions and major types of social support utilized in previous studies (Cobb, 1976; Cohen & Wills, 1985; Williams et al., 2004; Wills & Shinar, 2000; Wu & Cheng, 2011; Yang & Ye, 2014). Social support is broadly defined in this study due to one of the objectives of the study, that is, exploring how the Chinese international students perceive social support while understanding their social support experiences.

### 2.1.1 Social support affecting health status

Social support has been identified as one of the social determinants of health (Raphael, 2011; World Health Organization, 1986). It is recognized that the social support we receive from others, our feelings of loneliness, and the quantity and quality of the interactions can predict health and wellbeing (Cohen, Gottlieb, & Underwood, 2000; Kiecolt-Glaser & Newton, 2001; Uchino, Cacioppo, & Kiecolt-Glaser, 1996).

The critical effect of social relationships for human wellbeing has been known for

some time (Darwin, 1859; Durkheim, 1897). It was found that the more socially integrated an individual was, the healthier s/he would be. The concept of social support first emerged in the mental health literature (Caplan, 1974; House, Landis, & Umberson, 1988). Since then, a lot of research has been conducted to address the relationship between social support and health status including both physical and psychological health. It has been identified often as a stress buffer, that has a significant effect on protecting people from mental health conditions, for example, depression or suicide tendencies (Cohen & Syme, 1985; Cohen & Wills, 1985). Strong and consistent evidence supporting the positive relationship between social support and mental health was identified by Tajvar and others, after systematically reviewing studies on social support and health of older people (Tajvar et al., 2013). Quality of perceived social support was found effective in preventing depression and improving psychological wellbeing among older people (Jawad, Sibai, & Chaaya, 2009; Rambod & Rafii, 2010). Similar results have also been found among children and adolescents (for example, see Chu, Saucier, & Hafner, 2010; Mendonça et al., 2014).

Deconstructing the mechanisms and implications of social support for health status has been particularly of interest to health researchers with an increasing emphasis on physical health (Cohen, 1988; Uchino et al., 1996). Uchino (2006) discloses that social support affects physical health through the pathway (figure 2) developed from different theoretical framework and literature that link social support to physical health (Berkman,

Glass, Brissette, Seeman, & Dur, 2000; Cohen, 1988; Gore, 1981; Lin, 1986; Thoits, 1995; Uchino, 2004). He uncovers that social support is associated with lower risk of getting cardiovascular diseases and better neuroendocrine as well as immune function. Other researchers also confirm that social support affects physical health status (Cantwell, Muldoon, & Gallagher, 2014; Johnson, 1996; Tajvar et al., 2013). For example, it was found that the old who lived in isolated rural areas reported decreased social support and physical health, as they had to rely on themselves when there was an urgent situation needing others' help or suggestions (Johnson, 1996). Researchers suggest, in a study on parents caring for children with disabilities, it is social support that buffers the association between the parents' stress and poor physical health (Cantwell et al., 2014).

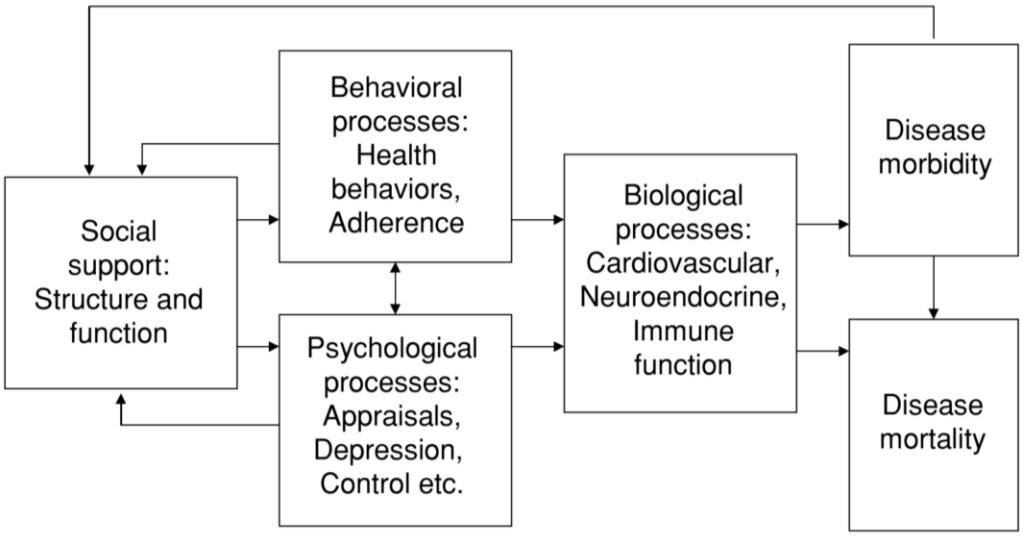


Figure 2. Broadmodel highlighting potential pathways linking social support to physical health (Uchino, 2006)

However, the effect of social support on health status can vary due to other the complex factors, such as gender or context. Researchers have not yet come to a consensus on the effect of gender differences on social support experiences (Chu et al., 2010; Cumsille & Epstein, 1994; Kendler, Myers, & Prescott, 2005; Santos, Richards, & Bleckley, 2007; H. a. Turner, 1994). Some studies showed no gender differences in the relationship between social support and wellbeing (for example, see Santos et al., 2007), whereas others found the relationship to be significant only for male participants (Cumsille & Epstein, 1994). Chu and others further uncovered the relationships between social support and wellbeing in children and adolescents by conducting a meta-analysis, where they found social support had stronger protective effect on wellbeing of teenage girls (Chu et al., 2010). This correlation was also found among adults in a longitudinal study, where researchers claimed that supportive relationships were more protective against depression for women (Kendler et al., 2005). While having more social support, women were also found more likely to experience depression, because they had more frequent contact with network members and a tendency to possess more intimate and emotional relationships; however, at the same time, they tended to encounter more negative interactions with network members and were more adversely affected by marital conflict than men (H. a. Turner, 1994).

Regarding the effect of context, social support was found having no moderating effect on the interaction between anxiety and poor physical health in the context of

military spouses of returning Iraq and Afghanistan service members in the US (Fields, Nichols, Martindale-Adams, Zuber, & Graney, 2012). In another study among teenage mothers, it is also implied that social support may not always be positive in terms of improving wellbeing, as previous studies tend to focus on benefits of the social support relationships in the context of teenage mothers, rather than on the potential conflicts (Borcherding, Smithbattle, & Schneider, 2005). Further, some researchers found, in quantitative studies, that youth with higher level of perceived social support were more likely to feel hopeless, depressed, or have drug problems (Borum, 2000; Kerr, Preuss, & King, 2006). Therefore, it appears that more qualitative research is needed to address the complexity of social support within different context by uncovering the reasons underneath data.

### 2.2 Factors that link social support and health status

Current research on health status is often focused on health outcomes rather than the process of seeking health (Glozah & Pevalin, 2014; Puyat, 2013; Razurel et al., 2013; Ruger, 2010). Individual experiences of using or obtaining social support to achieve health status as desired have been neglected. In fact, people tend to seek good health and the ability to pursue it, emphasizing the process of improving health status rather than only fixing health problems (Ruger, 2010).

### 2.2.1 Understanding health capability and health literacy

**The concept of health capability.** Health capability originates from the concept of "capability" when a capability approach was established by Sen (1979) in his concerns with other approaches to evaluating wellbeing (Wells, n.d.). Sen (1979; 1993) addresses the complexity of wellbeing evaluation in reality by highlighting the significance of being open-minded, as there can be multiple factors influencing quality of life including what he defined as "functionings" – that is, various things an individual manages to do or be in leading a life with the capabilities s/he has. He states that the capabilities people have may vary. To expand on this statement, Sen (1979) uses riding bicycle as an analogy, where he brings out that a bicycle can be a very useful vehicle for people who are able to ride it but not for people who do not have legs (Sen, 1979). After Sen's (1979) first publication on the capability approach, he elaborated the concept "capabilities" and its relationship with human wellbeing and social justice in his later work (Sen, 1985, 1989, 2001, 2004).

Sen (1993) proposed that quality of life could be assessed "functionings". He also emphasizes that considering what people are able to be and do is critical when looking at wellbeing. Through a equity lens, he argues that everyone should have equitable freedoms and capabilities to achieve valued health outcomes as desired (Sen, 2002). The argument has been affirmed by other researchers, as some agree that it is the choices

people make while having the opportunities and resources to live a healthy life that shape their health and wellbeing (Weaver et al., 2014).

Another researcher who has collaborated with Sen and is deemed the most high-profile writer with Sen in the Capability Approach is Nussbaum, who develops theories within the Capability Approach in a more cohesive, rigorous, and complete manner; Sen's work is sometimes considered a predecessor to hers (Wells, n.d.). While acknowledging the contribution of Sen's insights, Nussbaum critiques that Sen's capability approach is too vague to be employed to support normative judgments (Nussbaum, 2003, 2011). Nussbaum further queries Sen's argument in relation to freedom and gender justice. On the one hand, she does not agree with Sen's idea that freedom is always good. She uses the motorcycle rider riding without a helmet as an example to support her argument and argues that freedom is "neutral and trivial in itself, probably bad in use" rather than "always good" (Nussbaum, 2001, p. 24). One the other, she points out that Sen does not provide a fully formulated account of gender justice in his work (Nussbaum, 2003). She argues that often there are inequalities between males and females because women are not given equal freedoms as men in many cases. Some freedoms given to men can be badly used and so create injustice between the two genders; for example, the freedom to have male strength allows men to have the power to beat up women (Nussbaum, 2003). She claims that any society that allows people these freedoms has allowed a fundamental injustice. However, the answer to the boundaries or the

appropriateness of freedom still requires uncovering, though Nussbaum (2003) has pointed out that certain "badly used" freedom (e.g., the freedom to pollute) should be constrained by law.

More recently, the concept of capability has been unpicked further within a health context when Ruger (2010) develops a conceptual model of health capability (figure 3). This model potentially provides a useful framework that combines both the individual and the broader environmental determinants consistent with a social determinant approach to health. Within this model, Ruger (2010) explains that, *"health capability enables us to understand the conditions that facilitate and barriers that impede health and the ability to make health choices"* (p. 42). She emphasizes that it is health capability that illuminates the conditions that affect health and one's ability to make health choices. Health capability is not only about health agency – an individual's ability or skills to engage with external environment to achieve what s/he values and be an agent when managing their own health skills – but also the context or environment that enable excellent wellbeing, or health "functionings" as introduced by Sen (Mulvaney-Day et al., 2012; Ruger, 2010; Sen, 1993). Underpinning this model is the argument that individual interactions with a number of factors, including social network, within intermediate social context can potentially affect his/her health capability and health literacy, which are strong indicators of individual health status. .

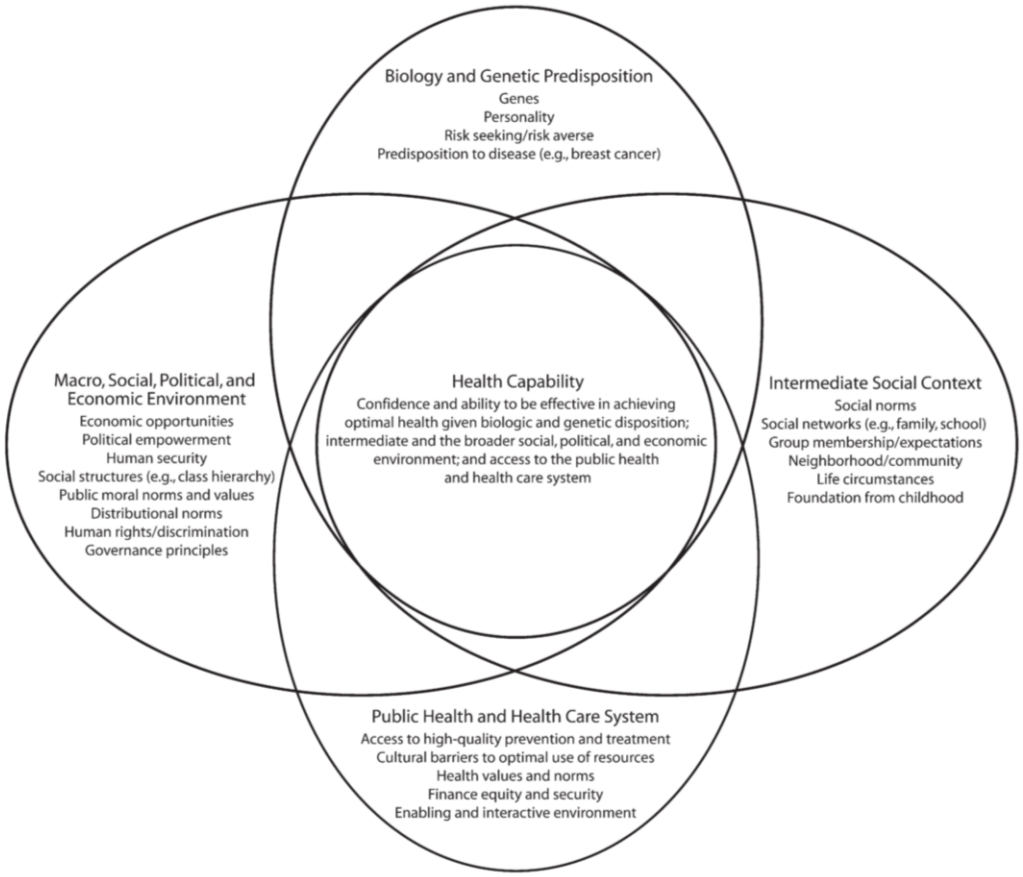


Figure 3. Conceptual model of health capability (Ruger, 2010, p.47)

Researchers have employed Ruger's (2010) health capability model as a theoretical framework in their studies that qualitatively identify the factors influencing individual health capability in terms of healthy eating choices in different settings. After interviewing the staff at the fast food restaurants, Mulvaney-Day and colleagues found that social network influenced how the interviewees chose food (Mulvaney-Day et al., 2012). For example, if co-workers snacked on French fries, the interviewee would tend to neglect the fact that fries was not a healthy food choice; whereas interviewee who worked at a restaurant with more healthy food choices was encouraged by co-workers and started

to like healthier food. Another group of researchers conducted a similar study but in a different setting, a primary care clinic in Ontario (Canada) (Weaver et al., 2014). They suggest that social support from people's social ties influences health capability indirectly and directly by adding meaning to everyday life and extra motivation to be healthy.

Ruger's (2010) conceptual model of health capability contributes to more comprehensive considerations of the social-ecological perspective of health (Mcleroy, Bibeau, Steckler, & Glanz, 1988). Not only an individual's capability has been considered critical to conceptualizing health capability, other environmental factors, such as the economic/social/political environment, public health system and biology/genetic factors, are also key components that integrated the model into the broader social-ecological context. It was therefore chosen as an overarching framework to guide the research. Thus health capability and its relationship with social support, health literacy and health status are considered in this study from a socioecological perspective rather than at an individual behavioral level alone. Thus, rather than focusing on coping behavior and internal resilience, it conceptualizes health agency as acting within a context. Thus the focus is on an individual's interaction with that context as influenced by culture and background.

In addition, Ruger's model aligned with the health equity lens of this study, where the participants are considered a minority group as well as a vulnerable population. This model is derived from Sen's capability approach, which is embedded in the social justice

context and aimed to address inequity (Sen, 1979, 2004, 2005). Through a health equity lens, this study explored the sources of potential inequities experienced by the Chinese international student population by exploring their social support experiences as well as their health capability when managing their health and navigating the Canadian public health system.

**Health capability vs. health capacity.** Capacity building has been central to health promotion since the past decades (Hawe, Noortb, King, & Jorden, 1997; Labonte & Laverack, 2001). Health capability is related to but distinguished from health capacity (Ruger, 2010), although in the Oxford dictionary *capacity* and *capability* both have the meaning of "someone's ability to do something" (Oxford University Press, n.d.). Given the similarity of the capability and capacity, the two concepts are elaborated in the following paragraph, to justify why this study uses health capability instead of health capacity, given that many past studies have employed health capacity (Crisp, Swerissen, & Duckett, 2000; Labonte & Laverack, 2001; Narushima, Wong, Li, & Sutdhibhasilp, 2014; Ronald Labonte , Georgia Bell Woodard, 2002).

This thesis uses "health capability" as opposed to "health capacity" because it is built upon the theory of Ruger's (2010) health capability model. According to Ruger (2010), capacity often implies volume or quantity and has specific conditions as company such as "the ability to receive or contain" (p.44); whereas capability is "an ability or power to perform with the potential for achieving desired ends" (p.44). Moreover, the aim of

capacity building is often improving health practices that are sustainable by providing external conditions to create new structures, approaches and/or values on organizational and community levels (Crisp et al., 2000). Rather than directly improving population health, capacity building ensures that "the conditions are in place to achieve health improvement and to ensure that this can be multiplied and sustained over time, independent of external events (p. 38)" (Aluttis et al., 2014). For example, Labonte and Laverack (2001) point out that capacity building makes the community more likely to sustain the health practice/program once the funding from health agency runs out. In comparison to capacity building, building health capability enables individuals to achieve good quality of life as they desire (Sen, 1993). Capability also incorporates social factors as a component of its definition (Ruger, 2010). It is believed, from a social justice perspective, that a society should provide individuals practical freedom to pursue what they value for good reasons, so that they can shape their lives as they wish (Nussbaum, 2003; Sen, 2002). Simply put, capacity building is expected to achieve sustainability of health promotion practices, whereas building health capability aims at making sure social factors empower individuals provide them freedom to achieve desired good quality of life, which is the focus of this thesis.

Few other researchers have examined the differences or similarities of capability and capacity in health research. This implies that a comparison between these two concepts may be needed for future research. One study with theoretical importance was completed

by Holsbeeke and colleagues, who recognized the significance of the environment in assessing capacity, capability and performance in the motor skills of young children with cerebral palsy (Holsbeeke, Ketelaar, Schoemaker, & Gorter, 2009). They distinguished between capacity, capability and performance capacity is what an individual is able to do in a controlled environment; capability is what an individual can do in daily environment; performance is what an individual actually does in daily environment. From this perspective, health capability is a more useful concept in this thesis because the focus of interest is in what Chinese international students can do in daily life in order to live healthier in the Canadian context. This also aligns with Sens' (1993) belief that health capability enables people to have the choices to live good quality of lives according to their wishes.

**The concept of health literacy.** There are many definitions of health literacy. Broadly, the World Health Organization (WHO) defines health literacy as individual cognitive and social skills necessary to obtain, process, understand and use health information – that is information in one's environment that can potentially guide/shape individual health behaviours and support decisions (Wyatt & Sullivan, 2005)– in ways which promote and maintain good health (Nutbeam, 1998, 2008). The WHO emphasizes that health literacy is a critical tool to empower people both in terms of personal and social benefits. In addition to the definition by the WHO, other researchers also consider accessing or negotiating health services and making health decisions, which lead to "a

state of complete physical, social and mental wellbeing, and not merely the absence of disease of infirmity" (World Health Organization, n.d.), to be critical components of health literacy (Institute of Medicine, 2004; Sørensen et al., 2012). These definitions consider health literacy to be a set of individual capabilities, which enable people to access, understand and apply health information. Some researchers argue that the definition of health literacy should also include the health system context, because health literacy not only depends on the individual, but also relates to the type of disease, the skills of health care providers, and differences among health systems (Baker, 2006; Institute of Medicine, 2004).

The original concept of health literacy appeared after the National Adult Literacy Survey (NALS) was conducted in 1992 in the United States (Kirsch, Jungeblat, Jenkins, & Kolstad, 1993). It was found in this survey that low literacy might negatively impact an individual's ability to understand, communicate or judge health information (Kirsch et al., 1993; Lee et al., 2004; Nutbeam, 2008; Parker, 2000). Moreover, the Institute of Medicine points out that even if an individual has a high education level, it does not necessarily mean s/he is able to obtain and understand health information or manage their health (Institute of Medicine, 2004). Therefore, researchers began to realize the importance of connecting literacy and health status as well as the significance of advancing health literacy in the 21st century (Nutbeam & Kickbusch, 2000; Nutbeam, 2000).

Health literacy has been variously defined as the ability to read and understand health information, but the term has developed a much wider scope after Nutbeam (2000) configured a conceptual model of health literacy that went beyond basic literacy and knowledge of health care. In this model he articulates three dimensions of health literacy progressing from the most basic to the most advanced: "functional literacy", "interactive literacy" and "critical literacy" (Nutbeam, 2000; Sørensen et al., 2012). Functional literacy is the most basic level, existing in everyday situations, where individuals are able to read and write effectively; interactive literacy is more of a medium literacy level, which enables people to gain advanced literacy skills as well as new knowledge from everyday communication, and then apply new things they have learnt to different situations; critical literacy, the highest level of health literacy, allows individuals to critically analyze information and have better control of various life conditions. For example, individuals with functional literacy can fill out forms and read doctors' notes; individuals with interactive literacy can learn about health information from doctors, their peers, the internet, etc. to use it when they have related health concerns; individuals with critical literacy can assess and critique the information they obtain from the resources indicated above and identify the issues in surroundings that prevent them from accessing the things they need for sustaining and promoting health, and then come up with strategies tailored to different situations to better control their lives.

Moreover, past health literacy research, especially in the US, has focused on patient

populations on a functional literacy level (Baker et al., 2002; Kalichman et al., 2000; Parker, 2000; Williams, Davis, Parker, & Weiss, 2002). However, health literacy can be viewed as a more comprehensive concept with application to in everyday life, rather than just in clinical settings (Nutbeam, 2000, 2008). Nutbeam (2000) explains that in the US, the definition of health literacy, which only captures the relationship between patient literacy levels and their compliance with doctors' advice, is fundamental but relatively narrow. Besides being considered a clinical risk in the American literature, Nutbeam believes that health literacy has another aspect that is worth noticing – health literacy can be a personal asset, which empowers individuals to have greater control of their health and the factors (e.g., social support and health capability) that shape their health (Nutbeam, 2008). By improving people's access to health information and their capability to use it effectively, health literacy is critical to empowerment. Thus, health literacy is often seen as the outcome of health education and health promotion (Nutbeam, 1998).

With most of the attention focused on the functional health literacy, very little has been published on approaches to promoting interactive or critical health literacy (Gillis, Gray, & Murphy, 2013; Gillis, 2009; Parker, Baker, Williams, & Nurss, 1995; Scott, Gazmararian, Williams, & Baker, 2002; Williams, Baker, Parker, & Nurss, 1998). Gillis and colleagues have done most of the work linking functional with critical and interactive concepts in the context of health education (Gillis, Gray, & Murphy, 2012). They explores the barriers encountered by health professionals in terms of integrating more

interactive health literacy promotion into their daily practice (Gillis, Gray, & Murphy, 2012). They emphasise the importance of collaborative and interactive learning between teachers and learnings in health education to achieve critical health literacy, highlighting the process of co-creating knowledge.

### 2.2.2 Relating social support to health capability and health literacy

When social support is provided, active engagement in health decision making is encouraged with an intermediate outcome of developed knowledge and capability. Building health capability is the focus of this study because there has been interest over the past five years in conceptually integrating the social determinants of health as conceptualized in health research, with the concept of capability in the context of social justice (Venkatapuram, 2009).

As previously demonstrated, the capabilities approach frames health and well-being as having opportunities to do what a person chooses to do and to be what they value, and so have the freedom to achieve wellbeing (Sen, 2005). This directly relates to social justice in health and the right to be capable of being healthy (Venkatapuram, 2012). Theoretically, the health capability approach is intended to enable people to take responsibility for their own health, and consequently, empower the whole population in terms of building health literacy (Ruger, 2004, 2010). However, from a social-ecological perspective, managing health is not the individual's own responsibility, as environmental

factors have inevitable influence on health behaviours (Mcleroy et al., 1988). It is noted that a person's health capability is not independent. It is often shaped by: intrapersonal factors, such as knowledge, attitude and skills; interpersonal factors including formal and informal social support systems; institutional factors, for example, rules for operation of social institutions; community factors, such as relationships among organizations; and public policy (Belsky, 1980; Eng, Hatch, & Callan, 1985). More recently, Ruger's (2010) health capability model aligns with the social-ecological perspective. Health capability is not only individual skills to manage health, but also the environments and conditions that enable individuals to achieve optimal health. As previously articulated, in the model health capability relies on both internal factors (agency) including health knowledge, health seeking skills, etc., and external factors (social structure), such as socials support, social/political/economic environment and public health system, that provides resources that enable individuals to achieve wellbeing as they desire.

In theory, social support aims to improve health literacy with the aim of increasing agency – the ability to interact with the surrounding material and social conditions to get what one is entitled to in terms of health. At present, the capabilities *approach* is not a fully developed theory – it has been described as a model or a partial theory (Venkatapuram, 2009). It is felt that using Ruger's (2010) capability model is important for examining whether social support could promote capability and health literacy, particularly in relation to dealing with conditions that create health inequities.

In the health capability model, Ruger (2010) considers social support to be an external factor that helps people enhance agency and build health capability. Therefore social support affects health literacy as well as health status positively. A variety of other studies have confirmed the importance of social support in terms of managing personal health status. For example, Lee and colleagues viewed social support, defined as resources provided by a network of individuals and social groups, as a buffer which moderates the negative impact of low health literacy on people's health status, and bolsters their agency in negotiating the public health system (Lee et al., 2004). They also demonstrate that low health literacy may affect individual's capability to understand health information and navigate medical systems. Lacking health capability is highlighted as one of the essential reasons why health literacy efforts have been moderately effective (Ruger, 2010). At the time of this literature review, the concept of health literacy was still relatively new and the number of articles linking health literacy and health capability are few in number (Nutbeam, 2000). The health capability model is expected to help stakeholders assess their individual needs, as well as the current barriers to addressing their needs in society (Ruger, 2010). In other words, health capability can be a supporting factor that improves critical health literacy, which allows individuals to assess and critique the information they obtain and identify the issues in surroundings that prevent them from accessing the things they need for sustaining and promoting health status.

### 2.2.3 Health literacy and health status

**Health literacy and health status.** With growing awareness of the relationship between health literacy and health status, efforts have been made to discover how health literacy affects health status. Self reported health status is usually used to measure health status, for example, asking people to rate their health status on a five-point Likert-scale (poor, fair, good, very good, and excellent) (Cho et al., 2008; Williams et al., 2002; Wolf, Gazmararian, & Baker, 2005). Many studies in this area look at the relationship between low health literacy, patient decision making and compliance with medication, and the ability to self-mange disease, when explaining how health literacy impacts health status (Nutbeam, 2008).

Findings from previous research on how health literacy impacts health status have been relatively consistent. Baker and colleagues were among the earliest to report on research looking at the impact of low health literacy on patients' health status (Baker, Parker, Williams, Clark, & Nurss, 1997; Baker, 2006; Parker et al., 1995; Schillinger et al., 2002; Scott et al., 2002). They developed an instrument, the Test of Functional Health Literacy in Adults (TOFHLA), as well as a short version (S-TOFHLA), to measure patients' literacy skills (Baker, Williams, Parker, Gazmararian, & Nurss, 1999; Parker et al., 1995). These authors found that although low health literacy did not affect disease outcomes, it negatively impacted patients' knowledge of disease and self-reported health

status; that is, the lower health literacy level the patients had, the worse health status and the less knowledge of disease they would report. Researchers also recognized that inadequate health literacy was a major barrier to disease knowledge education and patient-physician communication (Williams et al., 2002). Later on, Kalichman and associates confirmed the findings of Baker et al. by examining health literacy and health-related knowledge among HIV/AIDS patients (Kalichman et al., 2000). The results of their study also showed that the patients who had low health literacy knew less about the indicators of their disease.

**Health literacy and health services utilization.** Health services utilization is a common indicator used in previous studies to indicate health status (Cho et al., 2008; Scott et al., 2002). However, no consensus has been reached on how health literacy impacts health services utilization. In the study conducted by Weiss and associates, little difference was found in health services utilization by health literacy level (Weiss et al., 1994). Baker and colleagues also found no relationships between health literacy level and ambulatory care use (Baker et al., 1997). On the contrary, Nutbeam demonstrates that low literacy levels is related to declining utilization of health services in many developed countries (Nutbeam, 2008). Cho and others also found that health literacy was negatively associated with hospital utilization (Cho et al., 2008). They suggested that health literacy might be the most effective approach to reduce hospital utilization among elderly patients.

## 2.3 Social support and the immigrant

Notwithstanding the paucity of literature looking at international students' health, there is some value in exploring immigrant health in general. Specifically, in the context of immigrant health, social support has been found to be critical for maintaining physical and psychological health during overseas relocation and migration (Simich et al., 2005; Stewart et al., 2010). Simich and colleagues interviewed several refugees regarding their social support experiences during migration and resettlement in Canada (Simich et al., 2003). They stated that lack of social support, which was defined as informational, instrumental and emotional help, negatively impacts refugees' health and wellbeing, as the refugees who lack meaningful and supportive relationships are more likely to report social isolation, stress, and mental as well as physical health problems. While refugees may have different social support needs compared with other immigrants, they share similar challenges (Hynie, Crooks, & Barragan, 2011). As Stewart and others demonstrate, from newcomers' perspectives, that inadequate social support can negatively impact their health and use of health-related services (Stewart et al., 2010). Simich and others explain that individuals often have higher stress level when relocating overseas because their social support systems are often disrupted (Simich et al., 2005). Due to this disruption, immigrants are more likely to be isolated and in need of rebuilding their social support network (Stewart et al., 2008). Therefore, immigrants in general lack

the social support they need to cope with health problems, and adverse health outcomes may result.

### 2.3.1 Cultural and social norms affect social support seeking behaviours

Social support is based on concrete cultural and social contexts (Cobb, 1976; Galman, 2007). Different populations often have developed various social and culture norms due to social, environmental or historical factors, which may affect people's social support seeking behaviours (Galman, 2007).

For example, social support can be differently perceived in Chinese culture, which is more collectivistic, than that in American culture, which is more individualistic (Chen & West, 2008; Hui, 1988). Individualism emphasizes personal freedom and responsibility, while collectivism underlines social relatedness and interdependence with others in one's family or social group (Chen & West, 2008). The relationship between collectivism and individualism is just like it between "we" and "I": people within collectivistic culture tend to have closer and more supportive networks, and they are often emotionally dependent; in contrast, people within individualistic culture are more like to value independence and individual privacy as well autonomy (Chen & West, 2008; Hui, 1988).

Research has uncovered that how people perceive, seek, and access social support is associated with their culture that shapes their behaviours and these different notions shape individual behavior and social norms as well. From a relatively narrow definition

of individualistic and collectivistic perspectives, individualists/westerners believe that they are separate from others and can survive on their own whereas collectivists/Asians see others as part of the self and consider their group or community as the basic unit of survival (Hui, 1988; Moore & Constantine, 2005). However, from a broader cultural perspective, the individualistic and collectivistic perspectives ignore the fact that realities vary based on urban/rural, social class, socio-economic status, ethnic identity, etc. Multiple cultural contexts, such as ethno-culture and youth culture or university/school culture, shape individual health behaviours at the same time within their distinct contexts, resulting in different health outcomes. For example, for some time, researchers have claimed that cultural expectations of thinness in women can be associated with serious eating disorders, as some people may believe that weight control is equal to self-control and will lead to beauty and success, when the cultural expectation of thinnest shift from standard to a thinner size (Garner, Garfinkel, Schwartz, & Thompson, 1980). Castro (2004) also reported difficulties when identifying a single set of social norms that affect the social support seeking behaviours among Blacks and Hispanics in the US who use menthol cigarettes, given the diversity of the US context in which they are embedded.

Furthermore, Taylor and colleagues point out that considering Asians as collectivists and westerners as individualists may have led to a predominating assumption. That is, coping with social support should be a common sense and an efficient means among Asians (Taylor et al., 2004). They state, in contrast, that in American or western culture,

individuals only look after themselves and their direct family members, so they only care about finding the right person to help accomplish their goal of coping with stress when seeking social support. However, Asian individuals may be more cautious about which person they should be turning to when seeking social support because they need to consider the interdependence with their social network.

However, we should recognize that the findings showing Chinese/Asians are less likely to seek social support do not necessarily mean Chinese do not need social support. In fact, studies have shown that Chinese are often reluctant to ask for help when they need it, and that forcing themselves to seek help can itself sometimes be stressful to them (Liang & Bogat, 1994). Moreover, it has found that Asian Americans are more reluctant to seek social support compared with European-Americans because of concerns that such behaviour may possibly have negative impacts on relationships, such as disrupting group harmony or receiving criticism from others (Kim et al., 2008). Moore and Constantine (2005) provide another possible explanation to this phenomenon using the concept of forbearance. They found that forbearance often exist in collectivist cultures, such as African, Asian and Latin American cultures, where individuals are often encouraged to sacrifice and endure distress so as not to trouble or burden others.

Previous researchers have debated about the social support experiences shaped by the differing cultures of Asians and westerners. Researchers found that Chinese students were more likely to seek social support from people who came from the same ethnic

background, especially when they first arrived in a foreign country (Andrade, 2006; Wang et al., 2012). However, the percentage of social support from Chinese students and western students appeared to be almost equal one year after, and the Chinese students who received equal social support from Chinese students and western students were more likely to be better integrated into foreign country (Swagler & Ellis, 2003; Wang et al., 2012).

Because of the concern in previous research about how cultural and social norms shape individual behaviour in terms of seeking social support, Williams and colleagues emphasize the importance of defining social support in context as a necessary step to improve research, interventions and practices (Williams et al., 2004). They reviewed social support articles published between 1996 and 2001 and appraised the definitions of social support in each article using a four-step process guided by grounded theory. They recognize that using qualitative methods to explore how the group of people for whom the study is ultimately intended define social support is critical for research which aims to measure or influence social support. Although there are a large number of studies on social support, some authors draw heavily on previous research when defining social support for their own studies. Williams et al. (2004) argue that researchers tend to build the definitions of social support in their studies on previous research, without critically assessing the specific context of their own study. This is also one of the most important reasons why the definitions of social support derived from the literature as opposed to

from practical research all include some common characteristics but only the terminology is different, such as emotional support and emotional assurance (Williams et al., 2004).

As explained by Williams and others (2004), it is important to realize that social support is a complex phenomenon for which definitions in the western literature may not be appropriate to be generalized to different contexts, let alone different cultures. One way of remedying this is to explore research in non-western literature. The following paragraph draws on Chinese literature.

In Chinese literature, researchers often refer to western literature when defining social support for their study, as there have not been very much research on social support (Dong, Wang, & Xing, 2012; Y. Wang & Shen, 2012; Wu & Cheng, 2011; Yang & Ye, 2014). Most commonly, social support is defined as to what extent an individual feels respected, supported, and understood in the society (Yang & Ye, 2014). However, it is worth noticing that in some of the Chinese research literature, in addition to the common social support sources in western literature such as family, friends and colleagues, groups and organizations are also included as sources where individuals obtain social support (for example, see Wu, 2008). Compared with western literature, it was not surprising that groups and organizations were defined as social support sources. This, to some extent, shows how influence of the collectivistic culture on the Chinese definitions of social support, as people embedded in collectivistic culture are more likely to have interdependence with others in one's family or social group (Chen & West, 2008).

However, as previous indicated, it is too narrow to determine the effect of one type of culture for such a complex phenomenon as social support. Other cultures, such as urban/rural culture or youth culture, can also affect perceptions on social support with the collectivistic culture in China. Therefore, it is importance for this thesis to explore the Chinese international students' perceptions on social support, as they are behaviours can be shaped by multiple cultures due to their migration from China to Canada.

### 2.3.2 Immigrant health literacy in Canada

Health literacy, which strongly predicts the health status of an individual, is an important means of promoting and maintaining health at the population level, especially for immigrants (Simich, 2009). This is supported by Nutbeam and Kickbusch, who emphasise that health literacy, especially critical health literacy level, not only is a personal resource which brings individual benefits, but also achieves social benefits at higher population level in terms of community capacity building (Nutbeam & Kickbusch, 2000). Research suggests that immigrants have relatively lower health literacy levels; about 60% of immigrants fell below the prose literacy level, which was considered the minimum for coping with the demands of everyday life, compared to 37% for the Canadian-born population (Simich, 2009). One may argue that Chinese international students, the population this study looks at, have higher education levels than previous immigrants; however, evidence has shown that years of being educated in school does not

necessarily positively relate to individual health literacy (Kirsch et al., 1993).

### 2.3.3 Issues and strategies in immigrant research

**Language differences.** How to overcome language differences is always a critical question researchers need to face when conducting immigrant health research or cross-cultural research (Brislin, 1970; Eremenco, Cella, & Arnold, 2005; Sechrest, Fay, & Zaidi, 1972; Strohschein, Merry, Thomas, & Gagnon, 2010; Temple & Young, 2004). Considering the literacy level of target populations, it is usually easier for participants to use their first language, which researchers may know little or nothing about (Ogilvie, Burgess-Pinto, & Caufield, 2008). Participants whose first language is not English may find it difficult to articulate themselves using English, which may lead to inaccurate data or misleading interpretation (Ogilvie et al., 2008; Strohschein et al., 2010).

Researchers have discussed various approaches to overcome the language differences issue in immigrant health research. A back-translation method has been suggested for the questionnaire-type projects (Brislin, 1970). The premise of back-translation is having two bilingualists translate the questionnaire from the source to the target language and then translate back to the source language respectively, and then see if the original questionnaire and the back-translated one are identical.

However, not all immigrant health research uses a questionnaire design, as interviews are commonly used to generate data in qualitative studies (Mayan, 2009). The

researcher, who is fluent in the language of the communities s/he is working with, can be the translator at the same time, although the situation can be rare (Temple & Young, 2004). Attending to this, researchers propose an approach where bilingual interviewers are hired and trained to conduct interviews either independently, or with researchers or project coordinators as observers, with the interviewers debriefing immediately after each interview and maintaining constant contact with researchers throughout the study (Ogilvie et al., 2008; Stewart et al., 2010). The use of bilingual liaisons can also be a means of strengthening the quality of data (Strohschein et al., 2010). However, Ogilvie and colleagues indicate that interview questions in qualitative studies are often open ended and the participants can talk about whatever they want, so it is sometimes hard for bilingual interviewers, who are hired outside from the research team, to capture complete information that has been talked about in the interviews. Thus, training bilingual interviewers to be familiar with the research method and have background knowledge of the research topic, forms the foundation for obtaining good data regardless of translation approaches (Ogilvie et al., 2008).

**Positionality.** The standpoint of a researcher in immigrant research is often critical, as it may affect the researcher's perspective and how s/he interprets data (Dwyer & Buckle, 2009). Two types of researcher positionality are highlighted in immigrant health research: insider and outsider (Ogilvie et al., 2008). An insider is a researcher who studies the population of which s/he is also a member; an outsider is a researcher who conducts

study among people who do not share ethnic background, culture or experience with him/her (Kanuha, 2000).

Research has uncovered advantages and disadvantages for being an insider or outsider. Normally, it is easier for a researcher who is also an insider to overcome the language differences issue and build rapport with the target population because s/he shares a language, culture, or experience with the target population (Dwyer & Buckle, 2009; Merriam et al., 2001). Being an insider often adds depth and breadth to the data, as the researcher knows which is the right question to ask from his/her understanding of the shared experiences (Kanuha, 2000). However, Insider status is not as unproblematic as is sometimes suggested (Temple & Young, 2004).The drawback of an insider researcher is that both the researcher and the participant may assume that they understand the experience of each other, resulting in experiences not being fully explained in detail during interviews; also, the researcher may have difficulty separating her own feelings or experience from that of the participants because s/he considers himself/herself as one of the participants (Dwyer & Buckle, 2009; Ogilvie et al., 2008). Even so, although outsiders come from a different context with a relatively fresh eye and are often more curious about the unknown population, some researchers argue that it does not necessarily mean that outsiders will have immunity to the influence of personal perspective (Dwyer & Buckle, 2009).

Although there have been continuous debates on the insider-outsider status of a

researcher, being an insider or outsider does not make a researcher good or bad; it just makes him/her a different type of researcher (Dwyer & Buckle, 2009; Merriam et al., 2001). Moreover, very few researchers can be complete insiders or outsiders because they may be similar to the community on one aspect (e.g., ethnicity) but can be completely different on many other aspects (e.g., education level) (Gans, 1999; Kusow, 2003; O'Connor, 2004; Ogilvie et al., 2008). To balance out the different effects the insider-outsider status has on research, it is important to build insider-outsider research teams when studying immigrant health (Ogilvie et al., 2008; Thomas, Blacksmith, & Reno, 2000). For example, forming a community advisory board as suggested by Ogilvie and colleagues, enables insider researchers to stay open-minded and allows outsider researchers to be familiar with the cultural context where the target population is embedded (Asselin, 2003; Ogilvie et al., 2008).

**Engaged scholarship.** Engaged scholarship often allows researchers, community members and stakeholders to come together to enhance understanding of the problem that the community is facing and to better solve it (Van De Ven, 2008). Within the framework of engaged scholarship, different specific approaches can be identified based on different levels and types of participation (Arnstein, 1969; Cornwall, 2008; Springett, Wright, & Roche, 2011). The most commonly known engaged scholarship is community-based participatory research, which involves all partners in the research process.

Participatory research has its roots in education and community development.

Research in education and community development has shown that helping people learn requires active involvement; that is, participation is central to learning (Green & Tones, 2010). Brazilian adult educator Paulo Freire provides critical grounding for participatory research in his development of a dialogical method accenting co-learning and action based on critical reflection (Freire, 1970). Drawing on a long history based on the work of researchers such as Freire, Kolb, Mezirow, Brookfield and more recently Wenger as well as communication theorists such as Shorter there has been a shift to realising that process is as important as content (Brookfield, 1998; Freire, 1970; Kolb, 1984; Mezirow, 1991; Shorter, 2000; Wenger, 1988). Learners are no longer viewed as empty vessel that needed to be filled with knowledge by educators in community, but encouraged to build on their prior learning and experience to co-create knowledge (Ledwith, 2011; Rogers & Freiberg, 1969; Ryder, Campbell, 1988).

Community-based participatory research has been identified as an important opportunity to work and partner with communities in ways that can enhance both the quality of research and its potential for helping address community needs to achieve health equity (Minkler, 2005). However, due to the higher demands on resources and a slower pace of research that a participatory approach would require and considering the participant's busy school schedule, this study did not follow a thorough community-based participatory approach that involves participants in all the research processes, but adopts a collaborative approach to engaged scholarship (Springett et al., 2011). With the

understanding of that how to differentiate collaborative approach and participatory approach was still a contested area, the collaborative approach applied within the context of this study is defined as follows.

Collaborative engaged scholarship is about involving stakeholders — whom may be the consumers of the finished product, that is, this thesis — in the research process (Van De Ven, 2008) but not necessarily actively all the stages. Applying a collaborative approach to engaged scholarship allows researchers and practitioners to co-produce knowledge about a complex problem or phenomenon by leveraging their different perspectives and expertise (Centre for Collaborative Research for an Equitable California, n.d.; Holsspple & Joshi, 2002; Willis, Riley, Taylor, & Best, 2014). Engaged scholarship has been widely employed as an approach in research that aims for co-creating knowledge or identifying community needs (Bremner, Bennett, & Chambers, 2014; Powell et al., 2013; Willis et al., 2014). In a community setting, community-engaged scholarship results are often most meaningful locally, however not easily generalized (Meurer & Diehr, 2012). Although collaborative approaches to immigrant health research have not been identified in literature, they have the potential to guide immigrant health research in order to achieve outcomes and knowledge translation that are more relevant to the community with the assistance of culture brokers.

**Culture broker.** Culture broker is a role where the person not only understands his/her own culture identity and values, but also has knowledge of the values, beliefs and

practices of other culture groups (Abrahamsson, Andersson, & Springett, 2009). A culture broker often act as a mediator between his/her own culture and culture of the host country, in immigrant researcher context (Jones & Trickett, 2005; Kaufert & Koolage, 1984). Culture broker has been named variously in the literature, including bridge-builder, cultural mediator, lay health advisor and mental health advocate (Al-Krenawi & Graham, 2001; Eng, Parker, & Harlan, 1997; Owen & English, 2005; Rai-Atkins, 2002).

The role of culture broker has been widely studied among immigrant populations. For example, children of immigrant families often act as culture brokers for their parents as they are born/educated in the new country and so are more familiar with the culture (Jones & Trickett, 2005; Trickett, Sorani, & Birman, 2010). Researchers have studied how the use of the culture brokers addresses community needs and influences health services utilization (Abrahamsson et al., 2009; Al-Krenawi & Graham, 2001; Eng et al., 1997; Rhodes, Foley, Zometa, & Bloom, 2007). Abrahamsson and colleagues found that culture brokers could be an information provider and assist their community members in integration (Abrahamsson et al., 2009). Rhodes and others conducted a qualitative systematic review on research looking at lay health advisor interventions among Hispanics/Latinos (Rhodes et al., 2007). They identify that lay health advisors often serve as health advisors, referral resources, advocating on behalf of community member, etc. It is found that Health professionals/agencies often recruit community members and train them as culture brokers, who then become paraprofessionals between communities and

academics (Abrahamsson et al., 2009; Rhodes et al., 2007). However, studies where researchers act as cultural brokers have not yet been identified.

## 2.4 Chinese International Students in Canada

Increasingly, international students are coming to study in Canada and immigrating after graduation. From 2009 to 2013, the annual number of international students coming to Canada has increased from 84,870 to 111,841 (figure 4) (Citizenship and Immigration Canada, 2013). China is one of the top source countries for international students in Canada, which means that Chinese international students represents the largest group (30%) of foreign students in Canada (figure 5) (Citizenship and Immigration Canada, 2012; Department of Foreign Affairs and International Trade, 2012; Government of Canada, 2012; Zhang, 2010). Among all Chinese international students in Canada, 60% intended to become permanent residents of Canada (Zhang, 2010). This implies that a large proportion of the future immigrant population will be coming from the Chinese international students who are currently studying in Canada.

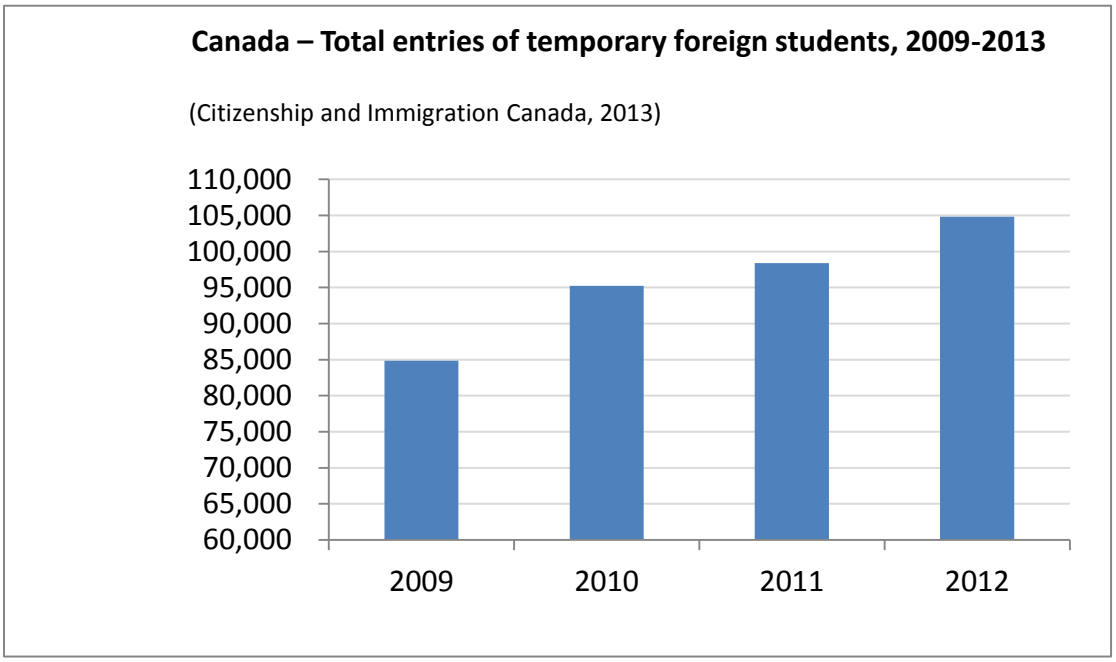


Figure 4. Total entries of temporary foreign students, 2009-2013 (Citizenship and Immigration Canada, 2013)

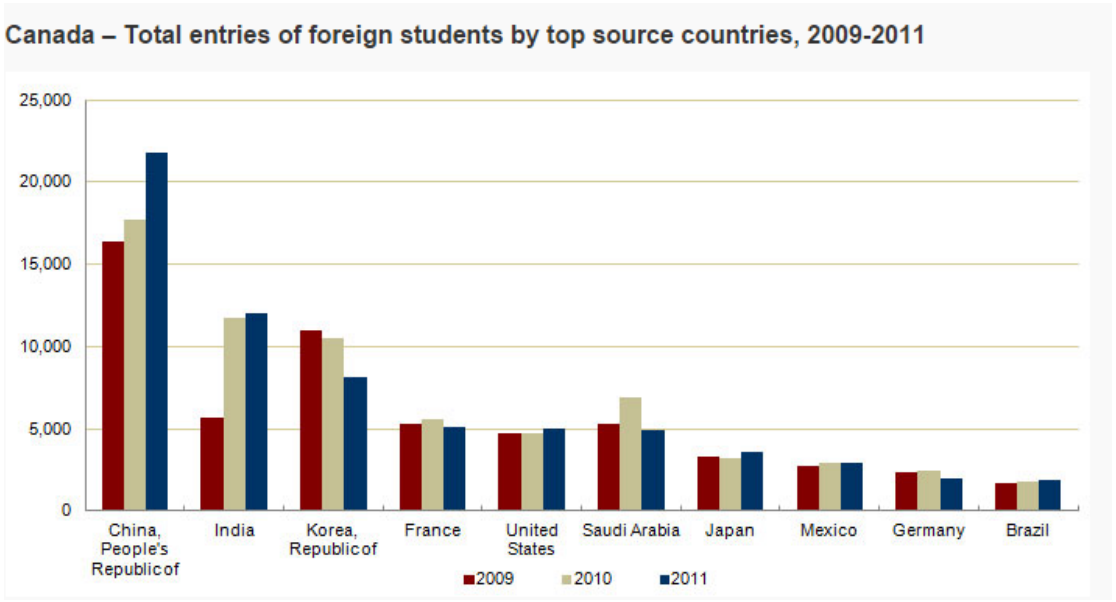


Figure 5. Total entries of foreign students by top source countries, 2009-2011 (Citizenship and Immigration Canada, 2012)

While most previous Canadian research looks at social support experiences of

immigrants (Beiser, 2002; McDonald & Kennedy, 2005; Simich et al., 2003, 2005; Stewart et al., 2010; Stewart et al., 2008), international students' experiences with social support have been neglected. The reason may have been that students are usually considered embedded in the context of institutions such as universities and schools that provide enough social support. For example, at the University of Alberta (the setting of this thesis study), international students can access support services provided by the International Centre, Wellness Services, Residence Services, student groups, etc.

In this literature review, most of the studies on international students' social support experiences were conducted within the US (Andrade, 2006; Hechanova-Alampay, Beehr, Christiansen, & Van Horn, 2002; Yeh & Inose, 2003); arguably, their experiences may be different in the Canadian context. One quantitative study uncovered that Chinese (Hong Kong) students in Canada experienced more adaptation and communication problems, lower perceived social support, poor health and lower coping satisfaction (Chataway & Berry, 1989). However, this study was conducted almost thirty years ago, and no qualitative study on international students' social support experiences was identified in the literature.

A systematic review was conducted recently to identify the predictors of psychological adjustment to life in the US (Zhang & Goodson, 2011). In the review, researchers affirm that social support is one of the most frequently reported predictors Other researchers also recognize that although relocating to colleges or universities away

from home can be challenging for all students, there is still a difference between the social support experiences of international and domestic students (Andrade, 2006; Hechanova-Alampay et al., 2002; Yeh & Inose, 2003). For example, Hechanova-Alampay and colleagues found that when comparing domestic and international students, greater adaptation difficulties were found among international students (Hechanova-Alampay et al., 2002). They also reinforce the fact that social support is one of the predictors of adjustment. Generally, international students tend to lack access to social support resources and opportunities to interact with others because of barriers such as language and cultural differences (Andrade, 2006). Dao and others identified a significant association between perceived social support and depressions among female Chinese (Taiwan) students in the US (Dao, Lee, & Chang, 2007). A need for effective orientation and support programs during the first four months of the transition for international students has been suggested (Cemalcilar & Falbo, 2008).

In the past, considerable attention has been given to understanding experiences of immigrants in Canada because Canada is considered a nation of immigrants (Beiser, 2002; Simich et al., 2003; Stewart et al., 2010; Stewart et al., 2008; Zanchetta & Poureslami, 2006). Although international students can be considered immigrants according to a broader definition of immigrants (people who migrate from one place to another) a gap exists in that international students' social support experiences have not yet been studied within the Canadian context. This study attempts to bridge this gap by contributing this

missing piece to the Canadian literature.

Given that the international student population in Canada is growing rapidly, there is enormous significance in looking at the health related experiences of international students in Canada, considering that they are potential immigrants to the Canadian society and the fact that immigrant health status tend to decrease during their stay in Cananda (known as the *healthy immigrant effect*, see Hyman & Jackson, 2010; Lou & Beaujot, 2005; Ng & LHAD research team, 2011). Considering this, a better understanding of the factors that influence these international students' health such as social support, health capability and health literacy, may help future immigrants sustain their health in Canada.

Ruger (2010), in the conceptual model of health capability as previously demonstrated, recognizes intermediate social context as one of the external factors what affect an individual's health capability by articulating the relationship between social support, health capability and health literacy, and highlighting the fact that health capability is the key to achieve success in health literacy efforts. There are other factors demonstrated in Ruger's (2010) conceptual model of health capability that impact health capability including public health and health care system, macro, social, political and economic environment, and biology and genetic predisposition. This thesis focuses on Chinese international students' perceptions and experiences of social support and whether, in their perspectives, social support influences their health capability and health literacy.

# Chapter Three: Research Procedure

This chapter presents and discusses the research procedure. It begins with demonstrating the engaged scholarship that shapes this study, followed by explaining researcher positionality from an insider-outsider perspective. Focused ethnography is then presented as the research methodology that drives the study. Study setting, the issue of language, as well as research participant pool are introduced, followed by elaborating on the details of data generation and analysis. Finally, ethical issues, trustworthiness, and the ideal research procedure are discussed. Limitations of the research procedure are identified both within the data analysis and ideal research procedure sections.

## 3.1 Engaged scholarship

Engaged scholarship guided the whole development of this study from study design to knowledge translation, allows researchers, community-based organizations, and policy makers to work together in the research process to co-produce knowledge and enhance the significance of the study results for communities and for policy change (Centre for Collaborative Research for an Equitable California, n.d.; Van De Ven, 2008; Willis et al., 2014). Guided by this approach, the researcher formed a Community Advisory Board by engaging the stakeholders/knowledge users throughout the whole study process. The Community Advisory Board was consisted of the staff/student specialists who worked

closely with the international students at the University of Alberta (figure 6). Potential Community Advisory Board members were recommended by the University of Alberta Wellness Services based on their knowledge of who might be interested among the student services on campus, as these services were under the umbrella of the Wellness Services. The researcher then communicated with each potential Community Advisory Board member on a one-on-one basis to understand their experiences with Chinese international students and their interests of being a member of the Community Advisory Board. This ensured that the researcher did not purposively select Community Advisory Board members that shared her perspective and biases and ensure that people making up the Community Advisory Board were closely working with the Chinese international students and would be able to shape the study based on their actual experiences.


Figure 6. The Community Advisory Board

After the Community Advisory Board was formed, the researcher had meetings and ongoing discussions with the Advisory Board members before participant recruitment, during the study process, and after preliminary data analysis was completed. Throughout the project, the Community Advisory Board maintained engagement during research question development, data analysis, and knowledge translation strategy building. The data analysis results were given to the Community Advisory Board members for them to provide recommendations for future research and knowledge translation strategies based on the study results, using their expertise and experiences. Feedback was incorporated

after careful consideration.

The Community Advisory Board members came from different ethnic and professional backgrounds but had the same experience of working with Chinese international students. For example, one non-Chinese member had lived in China for several years so could speak some Chinese; one Canadian member was a consulting psychologist. In the meeting prior to participant recruitment, the advisory board members assisted in shaping the interviews by commenting on the interview guide based on their previous experiences of interviewing Chinese international students and by providing suggestions or feedback on how the interviews could be more effectively conducted to generate richer data. For example, instead of starting the interview with "Could you tell me a story about …", the advisory board members suggested using the word "experience" to replace "story" or even starting the interview with easier questions to avoid potential awkward situations if the participants did not know where to start. In the meeting after preliminary data analysis, the Community Advisory Board provided valuable feedback that helped the researcher reflect on her ways of data interpretation and provided suggestions on knowledge translation to the students, such as a video or presentation to inform the students of how social support can affect their health. Moreover, the Community Advisory Board helped address researcher positionality with their different perspectives and values. By consulting the Community Advisory Board, the researcher gained information from a variety of perspectives, which enhanced integrated knowledge

translation throughout the project and, to some extent, encouraged the researcher to reconsider her positionality and stay open-minded during the research process.

### 3.2 Researcher positionality

In the context of Chinese international student community, the researcher was similar to the participants, a Chinese international student at the University of Alberta, and so identified herself as an insider. Although self-identified as an insider with similar social support experiences, the researcher stayed reflexive by keeping a researcher journal and constant contact with her supervisors as well as the Community Advisory Board during the study process to avoid using her own perspectives to interpret participants' experiences. However, with the study proceeding forward, the researcher no longer identified herself as a complete insider solely based on shared cultural background and experience as a Chinese international student, with the assistance from the Community Advisory Board and the thesis supervisory committee. From the literature, it is clear researchers that have shared experiences or cultural backgrounds with their participants, can still be completely different in other aspects such as education level and social class (O'Connor, 2004; Ogilvie et al., 2008; Thomas et al., 2000). Given that the researcher was educated in a health promotion context whereas the majority of the participants were not, the researcher started to change her position from an insider to somewhere between an insider and outsider, or a culture broker between the Chinese international students

and the health/social support services providers (i.e., the Community Advisory Board).

In the context of the Canadian society, the researcher identified herself as an outsider because she had only been in Canada for two years and was still in the process of getting familiar with the local environment. Considering this, the researcher was cautious about the influences on the study caused by her unfamiliarity with the local context. The researcher had constant contact with the Community Advisory Board and thesis supervisory committee. These communications allowed the researcher to hear from different people coming from different perspectives, enabling her to stay open minded as well as preventing her from misinterpreting data due to her unfamiliarity with the Canadian context. Further discussion on the collaborative approach and researcher positionality can be found in the discussion chapter of this thesis.

### 3.3 Research methodology

This study design was based on focused ethnography. Focused ethnography is a research design that is led by a specific research question, conducted within a particular context, among a small group of people with shared experiences and culture, to inform decision-making in regard to a distinct problem (Galman, 2007; Mayan, 2009). Focused ethnography was chosen as the methodology that drove this study because its ontology and epistemology aligned with the researcher's. Ontology is what we can learn about our world; epistemology is how we can know our world (Mayan, 2009). The ontology and

epistemology that align with focused ethnography is interpretivist/constructivist (Mayan, 2009). The researcher aligned herself with a constructivist perspective in terms of ontology and epistemology, as she believes that knowledge is constructed by the society. From this perspective, the researcher did not define social support in a narrow or specific way, but expected to find out how the concept of social support was constructed by the Chinese international students. Liberal critics of Sen's (1979) capability approach confirm this by questioning the way he defines what a good life should be (Wells, n.d.). They argue, from a liberalist perspective, that every individual should have the fundamental right to live a good life based on their own conceptions. From this perspective, the researcher did not identify what the health capabilities were for the Chinese international students in the study although Nussbaum (2011) has developed a list of potential capabilities, such as bodily health, emotions, affiliations, etc., which people need to live a quality life.

More specifically, according to Mayan (2009), the key elements that indicate whether focused ethnography is a suitable methodology for a study include: a specific research question, a particular context, a group of people with shared experiences and culture, and decision-making regarding a distinct problem. This study has a specific research question, which is "what are the experiences of Chinese international students using social support to build their health capability and health literacy". It was conducted in a particular Canadian context, focusing on the Chinese international students at the University of

Alberta who had shared culture and experiences of being Chinese international students in Canada. More importantly, the researcher decided to use focused ethnography, which was often utilized in research on experiences of cultural groups, because the Community Advisory Board was very interested in knowing the culture among Chinese international students that shaped their perceptions and behaviours regarding social support within the local Canadian context. This study will inform decision-making regarding how to provide more effective social support to Chinese international students to improve their experiences and sustain their health in Canada.

### 3.4 Study setting and language

This study was conducted in the setting of the University of Alberta campus. According to the statistical data provided by Office of the Registrar and Student Awards at the University of Alberta, among all 4250 full time international students (on study permit) who registered for fall term 2010, 42% (1791) of them are from China (University of Alberta, 2011). Among these 1791 Chinese international students, 74% (1316) of them are undergraduate students, 26% (475) are graduate students. This high percentage of Chinese international students on campus makes the University of Alberta an appropriate, convenient and accessible research setting of this study. The Community Advisory Board was also very interested in understanding the culture and experiences within the Chinese international student group on Campus, as they formed the largest

client group.

In order to understand the experiences of the participants in this study more thoroughly and precisely, as well as to build rapport with the participants more smoothly, all the interactions with the participants were conducted in Chinese, as the researcher herself was a Chinese international student who speaks Mandarin as her mother tongue. Chinese international students who were on study permit often could not fluently use English to express detailed, rich, or complicated personal feelings and experiences, which were the subject of this study. Moreover, differences in language proficiency, language preference, and communication styles can result in misrepresentation or misunderstanding of consent information (Fisher et al., 2002). Using Mandarin, which is the official and most widely used oral language of China, potentially would make the participants feel more comfortable, relaxed, and familiar with the researcher.

Just as every coin has two sides, there are certainly limitations in using Mandarin to interact with the participants as well. Before conducting each interview, the researcher sent an interview preparation document to participants, which included brief explanations of the terms that would be used in the interviews. The definitions of the terms were acquired from literature in English; therefore, the researcher needed to translate the terms from English to Chinese. During the translation process, misinterpretation can occur even though Chinese is the researcher's mother tongue. Similarly, translating transcriptions in Chinese was challenging to the researcher when reporting and presenting the results in

this thesis as well as at conferences. Another concern was that, none of the supervisors on the thesis supervisory committee understood Chinese (Mandarin). This posed a real challenge when consulting the supervisory committee as well as the Community Advisory Board regarding the interview process or results. To address this limitation, one of the interview transcriptions was translated for the thesis supervisory committee and Community Advisory Board members to review and provide feedback, which confirmed that the depth of the interview was enough and the direction that the interview was going was correct.

### 3.5 Participants

Within the study setting, the participant pool of this study consisted of all the Chinese international students studying at the University of Alberta. Aligned with focused ethnography, the researcher recruited participants by purposeful sampling (Mayan, 2009). The aim of purposeful sampling is to find individuals with characteristics or experiences that can provide the best information about the research topic and help understand the phenomenon of interest in-depth (Mayan, 2009). Thus, participants were recruited from the pool of University of Alberta Chinese international students, who were on study permit, had been studying in Canada for at least 1 year but no more than 3 years, and spoke Mandarin as their first language. The number of participants were not predetermined but dictated by data saturation, when no new data was emerging

(Higginbottom, Pillay, & Boadu, 2013).

Participants were recruited by posting on-campus and online posters on *Weibo*, an online social network website which many of the Chinese students in Edmonton used. Potential participants who were interested in participating in the study contacted the researcher by email or over the phone. An information letter was then sent to the potential participants to inform them of the details of their involvement if they agreed to participate in the study. After discussing with the supervisory committee and the Community Advisory Board, the potential participants' residence duration in Canada was limited to one to three years for the following two reasons: (a) it usually takes newcomers at least one year to get themselves familiar with the local society so that they have some experience to talk about in the interviews; (b) it is better to understand the Chinese international students' social support experiences as soon as they have experienced it, so that their memory is still fresh. The researcher tried to balance the proportion of males and females among potential participants, since the experiences of obtaining and using social support as well as the effect of social support on health might vary between genders (Chu et al., 2010; Kendler et al., 2005; H. a. Turner, 1994). However, in the final research sample, there were more female than male participants. There were twenty participants in this study, including twelve female participants and six male participants as well as two female participants with whom the researcher conducted pilot interviews.

### 3.6 Data generation

Interviews, field notes and researcher's journal were used as data generating strategies. Data was generated by conducting 20 one-hour one-on-one semi-structured interviews (see appendix A for the interview protocol) in four months between September and December, 2013, with detailed field notes and researcher's journal for each interview.

In focused ethnography, focus groups and interviews are often used to generate knowledge on individuals' own views within their culture and how they construct their own interpretations about cultural norms and behaviours (Mayan, 2009). One-on-one interview is a valuable method to gain insight into people's perceptions, understandings and experiences in a given area and can contribute to in-depth data collection (Ryan, Coughlan, & Cronin, 2009). Compared to group interviews or focus groups, one-on-one interviews were particularly suitable for this study because the interviews might touch upon some of the participants' sad/embarrassing experiences or memories due to lack of social support. In Chinese culture, people consider "losing face", which means s/he loses prestige, has been insulted or has been made to feel embarrassment before a group, as fundamentally cultural important (Chang & Holt, 1994; Haugh & Hinze, 2003; Hu, 1944; Yu, 2003). Therefore, in order to protect participants' privacy and to ensure that the participants did not hide their words because they were afraid of "losing face" in front of other people, one-on-one interview was chosen as the most suitable data generating

strategy for this study.

The interviews were conducted in a semi-structured conversational mode and held in private meeting rooms to protect the participants' privacy and provide a quiet environment for audio recording the interviews, in Edmonton Clinic Health Academy (ECHA) on the University of Alberta campus, to which the participants all had easy access. As suggested by the Community Advisory Board, An interview preparation document (appendix E), introducing the terms that would be used during the interviews, was provided to the participants prior to the interviews to ensure the interviews would be conducted smoothly. In order to understand the participants' perceptions of social support, the researcher only described social support for the participants in a very broad way: the support/care that you feel, gain, or accept from others. Semi-structured interviews were chosen rather than unstructured interviews based on the experience from the pilot interviews. In the pilot interviews, the researcher found that the Chinese international students were not as talkative as expected; most of the time, the participant waited for the researcher to ask the next question after answering the previous one. However, although the conversations were semi-structured and directed with the research question in mind, the position of the interview questions on the interview protocol was interchangeable and probing was based on specific responses provided by each participant (Davies, 2008). The researcher stayed reflexive to keep the conversations on the right track. For example, if the participant was talking about an interesting experience that the researcher

also had, rather than simply affirming what the participant was saying, the researcher kept her attitude neutral so that the participant's response was not dominated by the researcher. Moreover, if the participants went too far talking about something irrelevant to the study, the researcher would asked him/her how s/he thought this experience related to social support experience.

Given that the interviews were audio recorded with the participants' informed consent, the researcher did not take notes in front of the participants to show engagement and respect during conversations, except for when asking about demographic information at the beginning or unless the participants had big gestures (i.e. body language) while talking on a specific point or other situations deemed critical by the researcher that might influence data analysis; the research jot down notes only in these situations. After the interviews were completed, future contact with the participants for clarifying information and member check happened with the participants' permission. Regarding member check, the researcher sent the transcriptions back to the participants to check with them whether the transcriptions had precisely represented what they meant. They participants were allowed to provide feedback or comments if they found anything of their words were incorrectly articulated.

As previously mentioned, the researcher conducted two pilot interviews with two Chinese international students who were not the participants of this study before conducting any formal interviews. The pilot interviews were audio recorded with the

interviewees' permission. After listening to the recordings, which allowed the researcher to reflected on the pilot interviews by hearing the interview from a third person's perspective, the researcher referred to interview strategies in the literature to reflect on her interview skills (Bryman, Bell, & Teevan, 2012; Hermanowicz, 2002; Mayan, 2009), checked with her supervisors to ensure the quality of the pilot interviews, and got feedback from the two interviewees. The two pilot interviews were included as data in the study after confirmation from the researcher's supervisor. In order to make sure that the interviews were on the right track, the researcher transcribed and translated the first formal interview verbatim and asked for feedback from her supervisor on the translated transcription. The supervisor provided valuable feedback that confirmed the depth and precision of the interview content, but at the same time reminded the researcher to stay reflexive by suggesting her to clearly examine whether the change of the participant's social support experience was because of maturing/leaving home or coming to Canada.

### 3.7 Data analysis

Content analysis was employed as the data analysis strategy in this study. Content analysis is suitable for this study because it is the most fitting analytic technique in a focused ethnography, which is the methodology that drove this study (Mayan, 2009). There are two types of content analyses defined by Mayan (2009): manifest content analysis and latent content analysis. This study followed the latter type, latent content

analysis, because the objective of this study was not, according to the meaning of manifest content analysis, to count the specific words used or ideas expressed by the participants, but to identify, code, and categorize the primary patterns in the data, then tried to form themes that weave throughout and tied the categories together and finally made overall conclusions about the study (Mayan, 2009).

The data analysis process of this study was inductive and iterative. Qualitative inquiry is primarily an inductive activity, it usually starts with individual pieces and creates an overall theory, or story, or description (Mayan, 2009). Through inductive data analysis, the researcher tried to find out how Chinese international students perceived social support as a tool in affecting their health capability and health literacy by analysing, categorizing, and synthesizing their detailed experiences and perceptions generated from one-on-one interviews. Therefore although it was understood from the literature that there were four major types of social support (Dennis, 2003; Tardy, 1985; T. A. Wills, 1985; T. Wills & Shinar, 2000), the data analysis was completed inductively without pre-dominating assumptions based on previous research results.

In order to analyze the data as soon as possible after the interviews were completed, the researcher did not transcribe all the interview recordings, but recruited eleven volunteers who were also Chinese international students to assist with this after providing clear instructions based on methodological standards. As mentioned before, all the interactions with the participants in this study were in Chinese, including the interviews,

so the researcher, as well as each volunteer who signed a confidentiality agreement (see appendix B), transcribed one of the interview recordings verbatim in Chinese. The researcher reviewed each of the transcriptions from the volunteers while listen to the original recordings of the interviews to make sure that the interview were transcribed verbatim and precisely. In order to retain the original meanings of the data and minimize the misrepresentations, the transcriptions were analysed in Chinese but coded in English for further analysing, categorizing, and data presentation (Twinn, 1997).

As demonstrated by Mayan (2009), latent content analysis is about the process of coding, categorizing and generating themes based on the primary patterns in the data. Qualitative data analysis software NVivo 10 was used to assist the data analysis process. The researcher read and reread all the data and highlighted points or paragraphs of interests as codes within specific contexts, such as "I have the knowledge about the vaccination and decided to get it" or "I have the knowledge about the vaccination and decided not to get it". Then the researcher started to examine the meanings of the coded paragraphs in the transcriptions and started categorizing them by collated similar codes into one category, for example, making health decisions with health knowledge. The researcher then read through the data again to make should that the codes fit in the categories. During this process, the researcher considered how the categories were related to generate themes/sub-themes that weaved through and tie the categories together. In the case of the codes as previously indicated, the subtheme was "self-reported good health

capability/literacy does not necessary lead to comprehensive health decisions", and the theme was "managing health with limited social support and health literacy".

### 3.7.1 Limitations in data analysis

Normally in qualitative studies, data analysis process happens concurrently with data generation, so that the researcher can follow up on some important points, or confusing information, or negative cases that emerge from previous interviews. The researcher then conducts subsequent interviews building on the data obtained from the previous ones to reach data saturation, which means, as noted by Mayan (Mayan, 2009), no new data emerge, and the story or theory is complete.

However, in order to fit the interviews into the participants' school schedule, the researcher could not analyse data concurrently while generating data. One may argue that this weakened the trustworthiness of this study. However this was ameliorated because: (a) the researcher herself is the only person who conducted all the interviews so she had a good idea of how the interviews were going; (b) the researcher kept an audit trail to keep track of the decisions or changes that had been made to the interviews; (c) the researcher completed follow-up calls to ensure interview consistency after she listened to the interview recordings. After all the interviews were done, the researcher listened to the interview recordings, read through all the transcriptions as well as the audit trail, and called the earlier participants who were not asked about certain questions at the beginning

of the interviews for more information. In this case, the questions asked to later participants but not to the earlier participants were asked again over the phone; phone interviews were audio recorded and incorporated into corresponding transcriptions with the participants' permissions. During this process, although the researcher have not formally analysed data while generating data, the researcher became more and more familiar with the data during the process of reading through all the transcriptions and calling back the earlier participants.

After the transcriptions were completed, the researcher sent the transcriptions to each participant in order to do a member check to ensure that the transcriptions had correctly represented what the participants had talked about during the interviews. However, the process ended up being one of the limitations of the data analysis process because the response rate of member check was low – only five of the eighteen participants responded. However, it may have been the case that the participants had no problem with the transcriptions after reading them, so they did not reply to the member check email. Another potential reason for this might be the timing when member check happened was during Christmas vacation; therefore, many participants might not be on email at that time and so neglected or forgot about the email when the New Year began.

Another limitation in the data analysis process was language. Language is a limitation that constantly occurs in studies conducted with populations whose first languages are not English (Sechrest et al., 1972; Temple & Young, 2004; Twinn, 1997). In this study, the

researcher made every effort to minimize the language limitation. Data was transcribed and analysed in Chinese to retain the original meanings of the data and minimize misrepresentations; however codes, categories and themes were demonstrated in English in order to make it easier for the researcher to articulate the results to the stakeholders in Canada and to maintain constant communication with the thesis supervisory committee as well as the Community Advisory Board. Particularly, when writing this thesis and presenting results at conferences, the researcher needed to translate some of the quotes into English. During this process, although efforts had been made to ensure the quality of translation, the meaning of the quotes might not have been translated into English completely due to different expressions between the two languages. However, despite this concern, translation was completed with high quality.

## 3.8 Ethical issues & trustworthiness

### 3.8.1 Ethical issues

This study obtained ethics clearance from the University Research Ethics Board 1 at the University of Alberta before interacting with any participants. Written consent (appendix D) was obtained from each participant with their complete understanding of the study content. At least one day prior to each interview, the researcher sent the participant the information letter (appendix C) along with the interview preparation,

where the terms that would be used in the interviews were explained. Before each interview started, the researcher again introduced to the participant the study purposes and explained the research process, including follow-up contact for clarifying information they provided, member check, and their permission to audio record the interview. The participants were allowed to ask questions at any time if they were not clear. The contact information of the researcher and her supervisors was provided in the information letter given to the participants so that they could contact the research team when they had questions or wanted to withdraw from the study at any time. Given that the participants may touch upon some sad memories of lacking social support during the interviews, information on resources for building social network and getting social support, such as the University Wellness Services, was provided if they needed help to deal with the negative feelings during or after the interviews. In addition, when the participants articulated unfamiliarity with potential social support resources (e.g., Chinese graduate student groups), which the researcher was familiar with, the researcher provided relevant information to assist them accessing the resources (e.g., the Chinese Graduate Students Club).

Eleven volunteers who were also Chinese international students at the University of Alberta were recruited for transcribing interview recordings from the Chinese Graduate Students Club, a graduate student organization register at the University of Alberta. The researcher decided to recruit volunteers from the Chinese Graduate Students Club,

considering that graduate students often had participated in research ethics workshops and were more familiar with rigour of conducting research, compared to undergraduate students from the Chinese Student Scholar Association. The volunteers were not compensated. However, some of the volunteers told the researcher that they benefited a lot from the transcribing process, as they started to be aware of how social support could affect their health and reflected on their own social support experiences. With the approval of the University Research Ethics Board, all the volunteers signed confidentiality agreements with the researcher to guarantee that they would never share the information they heard in the interview recordings with anyone other than the researcher.

Regarding incentives for the participants, the researcher provided each participant with an equal opportunity to be randomly drawn to win one of five $20 Tim Horton's gift cards. The decision to use this incentive was made after consulting the thesis supervisory committee in order to avoid recruiting participants who did not have relevant experiences, but only participated for the gift card.

### 3.8.2 Trustworthiness

The criteria (credibility, transferability, dependability and comfirmability) proposed by Guba and Lincoln and the verification strategies (as demonstrated in the following paragraphs) provided by Morse, Olson and Spiers were used to establish trustworthiness

of this study (Guba & Lincoln, 1989; Morse, Olson, & Spiers, 2002). Guba & Lincoln argued that, instead of copying the positivist paradigm's prescriptions of rigor (validity, generalizability and reliability), there should be a different way of speaking about rigor that adheres to qualitative research (Denzin, 2009; E. G. Guba & Lincoln, 1981). This study addressed trustworthiness as follows.

**Credibility.** Credibility assesses whether the findings make sense and if they accurately represent the participants and data (Denzin, 2009; Mayan, 2009). In this study, the researcher kept a researcher's journal and field notes for each interview to ensure that the way in which the researcher worked with data was not altered because of any personal or environmental issues- for instance, a bad day. During the interviews, probing helped make sure that the researcher understood the participant correctly. As previously indicated, the researcher followed up with the participants for information clarification and member checking to ensure that the data represented the participants' thoughts correctly. The researcher validated the data by listened to the recordings of the interviews and reviewing the volunteers' transcriptions to make sure that the volunteers had transcribed the interviews verbatim and precisely with high quality. Transcriptions were then emailed back to the participants for member checking to make sure their words and opinions had been accurately represented.

**Transferability.** Transferability is defined as the applicability of the findings being transferred to other settings (Denzin, 2009; Mayan, 2009). This thesis had a very detailed

and thick description of the research settings and the participants. The context of this study was adequately described, which would enable other researchers to make judgments about whether or not the findings or approaches of this study can "fit" into other contexts outside this study situation. Based on the thick description of the study background, setting, and demographic characteristics of the participants, the audience of this study could also judge if the findings are meaningful and applicable when contextualising to their own experiences (Koch, 1994).

**Dependability.** Dependability is established when the research process, especially how decisions were made, can be clearly followed. During the whole study process, the researcher kept an audit trail, which recorded meetings, discussions with the thesis supervisory committee as well as the Community Advisory Board and how each decision was made at every stage of the study. For example, keeping track of what questions were added to the interview protocol at which point helped the researcher decide which participants to follow up and what questions to ask after all the interviews were done. In addition, except for discussions with the researcher's supervisors and assistance from the volunteers who helped with trasncription, the whole study was conducted independently by one researcher. This enhanced the dependability of transcription and translation, as the researcher was the person who had the best knowledge about the whole study to interpret data contextually (Poland, 1995; Twinn, 1997).

**Confirmability.** Confirmability is used during the data generation and analysis

phases to ensure that the research findings are logical. As indicated in previous sections, although the semi-structured interviews were conducted in a conversational mode, the researcher stayed reflexive and directed the conversations with the research question in mind. During the whole research process, the researcher had constant contact with both of her supervisors and the supervisory committee members to guide and modify the study process as necessary. Moreover, meetings with the Community Advisory Board helped the researcher obtain insights from various perspectives which might balance out the insider-outsider issue and helped the researcher to stay reflexive during the data generation and analysis process (Ogilvie et al., 2008).

**Verification strategies.** Another way to approach trustworthiness in this study was using verification strategies, as suggested by Morse et al. (Morse et al., 2002). During the whole study process, the researcher stayed creative, sensitive, and flexible by constant contact with the supervisory committee and the Community Advisory Board to ensure that: (a) every stage of this study had methodological coherence, that is, the research methods used all aligned with focused ethnography; (b) the participants were the people who could speak to the research topic and they provided data to reach saturation; (c) the researcher thought theoretically and was able to stay open minded and suspend judgment without jumping to conclusions after viewing data from the first few interviews.

### 3.9 The ideal and limitations of the research procedure

Ideally, the researcher was expecting to apply a participatory approach by engaging the participants from the very beginning of the study process, starting with building rapport and relationship with them. The researcher hoped to have informal meetings with the participants to get to know each other and hear about their opinions on designing the study to better fit it in their context before conducting the interviews. Unstructured interviews were supposed to be utilized as one of the data generating strategies, as it would better align with the nature of qualitative research. The researcher herself expected to transcribe all the interview recordings. It was hoped that all the transcriptions that were sent to the participants for member checking could receive feedback from them.

However in reality, it appeared that the participants' school schedules were too busy to have time to participate in the study for more than the one hour long interview. Considering this, the researcher had to reform the study approach to a modified engaged scholarship approach by forming a Community Advisory Board with the stakeholders on campus, who helped shape the study and interpret the results. The researcher also had difficulties when recruiting participants. Potential participants contacted the researcher and asked if the $20 gift card was for participant. Unfortunately, when the researcher told them that it was not for everybody because of ethical issues, some of them decided not to participate. Due to the participants' busy school schedules, the researcher ended up

chatting only a little bit with the participants before each interview. The interviews were changed from unstructured to semi-structured because the participants were not as talkative as what the researcher had imagined during the interview process. Most of the time, the participants stopped talking after answering one question and looked at the researcher, waiting for the next question to be asked. Although at certain time points the researcher probed and asked questions that were not on the interview guides, the interviews were not as unstructured or conversational as desired. In order to analyse the data as soon as possible after the interviews were completed, the researcher did not transcribe all the interview recordings, but recruited volunteers who were also Chinese international students to assist with this after providing clear instructions. Transcriptions were sent to the participants, but the researcher received very limited responses from participants.

# Chapter Four: Results

This chapter presents the findings of this study, based on five major themes. After analyzing the interviews with 20 Chinese international students, the five major themes that emerged from the data were: (1) sources of social support; (2) barriers when obtaining social support; (3) how social support affected health capability directly and indirectly in different ways and directions; (4) issues found when the participants were making health decisions with social support and health literacy; (5) that the participants were generally not aware that social support was one of the social determinants of health. Quotes from the interviews are used to represent and further elaborate on these themes in the following sections.

## 4.1 Perceptions on sources of social support

None of the Chinese international students who had been interviewed had heard about the concept of social support before they were involved in this thesis study. In order to understand the Chinese international students' perceptions of social support, the researcher only gave them a very broad definition of the concept– that is, the support/care that you feel, gain, or accept from others – to assist them prepare for the interview process. In addition to the major social support sources found in previous research on international students or immigrants including friends, family, etc., other social support

sources perceived by the Chinese international students came up in the interviews as well (Fontaine, 1986; Ruger, 2010; Scheppers, van Dongen, Dekker, Geertzen, & Dekker, 2006). It appeared that the Chinese international students perceived anyone or even anything in society that supported their health behaviours as their social support sources.

### 4.1.1 Family and friends

In common with previous research findings on social support with other international students/immigrants, most of the Chinese international students indicated that their social support came from their friends and family (Fontaine, 1986; Ruger, 2010; Scheppers et al., 2006):

> *In Canada I call my parents and ask them when I have health issues, but normally it's unnecessary to ask them when the issue is not big and can be solved by myself. I ask them about the issues that I think they know. Even sometimes my family members may not be able to help me solve the problem I have, it feels different when you are receiving support from family. It feels like you have someone supporting you behind you whenever it is and wherever you are.*

> *I have some relatives in Canada, but I don't think they are a huge support to me practically because most of the time, I can solve the problem myself. They*

*are more likely to be a support me emotionally – make me feel a little bit more relieved.*

*My major social support source in Canada is my friends. Parents were my support at home; friends are my support now that I'm away from home. The biggest support I gain from parents is money now.*

4.1.2 Internet

The internet was also a social support source to the students. It was very common for them to look for health information on the Internet to assist the health problem solving process. However, this was not only the case in Canada; most of the students had been doing this before coming to Canada. Both search engine and social networks on the Internet were mentioned as important sources of social support:

*I follow many professional accounts on Weibo (an online microblogging service in China, similar to Twitter), so I read the information they post and then will understand more health information to help manage my health.*

*Baidu (a Chinese search engine) and Google are effective social support for me to manage my health. When I search my issue, there will be people who have the same problem. I can refer to their experiences. Normally when I have*

*a health issue, I ask my friends or classmates; and then when they have no idea, I will go search on the Internet.*

4.1.3 Intermediate social environment

For many interviewees source of social support was characterised as the intermediate social environment in which they found themselves. Finding themselves surrounded by a different social context from which they were accustomed, they took cues from that environment about health.

*I rarely saw anyone running in the street in China, but I've seen a lot here in Canada. This social environment reminds me of trying to be more physically active.*

*I don't go to the gym very frequently, but whenever I am there, I always see this professor, who seems like in his 60s, consistently working out in the gym. I am impressed and inspired by him. In China, when people get old, very few continue doing heavy exercise, like working out in the gym with the young; most of them just take a walk after dinner or do a little bit of light or slow exercise. I think this is the kind of social support that influences me and reminds me of living an active life.*

### 4.1.4 Public health system and organizations

The Chinese international students also perceived the public health system and other public organizations such as the government and the university as social support sources. Perceiving public health systems and organizations as social support sources was not something that was taken on when coming to Canada but reflected a similar interpretation to their reflections on social support in China. Students reported that they felt safe when knowing there were public organizations or agencies supporting them. They also got health information that helped them manage their health more confidently from these sources:

> *My social support has two circles: a small one and a big one. The small one is your friends around you; the big one is the whole society, the medical system. The high quality medical system here, as well as the professional attitudes of physicians, supported me and affected my definition of health.*

> *The medical system and health insurance make me relieved. Although I'm not using them right now, I know I will be supported if one day when I get sick. It's like a backup plan to me, you know. I would panic if it wasn't there.*

*The university health centre is social support to me, though I've never used it. I know I will have a place to go to if something serious happens one day. It's like a safety net to me*

*I feel like the Canadian society has done a really good job communicating health information to the public. This is a support to me. For example, the flu shot was going on last week, so I saw the news in emails, LRTs, and grocery stores telling us where we could get the flu shot. Thus I went to the university and got the flu shot last week with my friend.*

**4.2 Barriers to social support**

During their stay in Canada, the Chinese international students did try to seek social support, although they did not perceive that as social support but support from the society that assisted them managing their health. However, they identified some barriers that prevent them from seeking or even accepting social support. In general, the priority source where the Chinese international students seek social support was other Chinese people around them. However, they sometimes found it hard as the Chinese community around them did not appear enough health capability or health literacy to provide effective social support to them. Some would turn to Canadians or other international students; however, language and cultural differences as well as other factors were

reported as barriers in this process.

### 4.2.1 Language barriers and cultural differences

Language and cultural differences have always been considered barriers to social support seeking behaviours among immigrants and newcomers in the literature (Hsiao, 2012; L. Ryan, Sales, Tilki, & Siara, 2008; Zanchetta & Poureslami, 2006). Chinese international students hoped to have more contact with local Canadians as well as international students from other countries. However, it was hard for them to have deep communication with Canadians because of language barriers and cultural differences. Normally, Chinese international students had gone through some language testing or training before enrolling in universities, but their language skills were not necessarily sufficient for the complex conversations they were hoping to have with others in English. Moreover, when others' health behaviours were different from what was commonly recognized in the Chinese culture, some of the Chinese international students found it hard to obtain social support from such resources because they did not agree with that. However, it appeared that they did not completely follow what was in the Chinese culture without any further consideration, but judged whether or not certain behaviour was good for their health based on their own experiences:

*I hope to have more contact with local Canadians; I've been trying but it was not effective. I had some communication with them, but it was really superficial. I hope we could have deeper understanding or communication with Canadians but I feel like this would never come true, because of language, and culture differences as well.*

*Interviewee: Now we are talking in Chinese, you can understand me even some of my words or sentence order is weird or upside down. So when I was trying to articulate your illness to a doctor in China – I might not be saying it very clearly - but the doctor can understand what I meant. But when I was communicating to a Canadian doctor, I might not know all the words that I need to use to articulate myself. What if the doctor gave me the wrong prescription because of misunderstanding?*

*Researcher: So regarding language, are you more worried about you can't articulate yourself, or the doctor doesn't understand correctly?*

*Interviewee: Both. So these 2 points are my major concerns in Canada*

*Sometimes I can't gain effective social support from non-Chinese people, as many manage their health differently in their culture. For example, one person I met at my homestay, she's from Thailand. She drinks cold water when she's*

*on her period. This is completely opposite to what's in our culture (where you can't drink cold water during your period) so I don't believe these people when they were trying to provide me support to help with my health. I find some of the traditions in our culture are very true because I do find my belly hurts when I drink cold water on my period.*

4.2.2 Relationships not as close as those in China

Some students found that the relationships between Chinese people here in Canada were not as close as what they had in China because people were too busy with their own lives to have enough time to build close relationships. When the relationships were not close enough, they did not feel comfortable to touch upon health related topics with others. Some e of them also found that fewer people would listen to them when they need someone to talk to, as their social network became smaller than that in China. Among the students who tended to consider other Chinese people as their first choice when seeking social support, this situation was mentioned as one of the reasons why they did not obtain enough health related social support:

*I feel like the relationships between Chinese people here are not as close as those in China. Everybody is just so busy with their own errands. Nobody's caring about what you are doing and experiencing. I'm not saying people are*

*isolated; we still hang out and eat something, but that's it – no more intimate communication. If a person is not my close friend, I will be less likely to get social support from him/her.*

*I don't feel like I have as many friends in Canada as in China. Also I feel like the friends I have here are not as close either because everybody is busy. My social network became smaller here. When I have health issues, fewer people would listen to me because they all have their own issues.*

*I talk about health with my friends, but it depends on what kind of friends they are. If close enough, we talk; otherwise, we don't.*

4.2.3 Reluctance when seeking social support

Some of the students did not bother asking for support for "such little things". Sentence like this – "I didn't ask my friend because it was just a little thing" or "It wasn't serious enough for me to ask for help" – came up very frequently during the interviews. Most of the time, it would only be "a big deal" to the Chinese international students when it was something really serious, for example, a disease or an injury that required surgeries in the hospital and they needed someone to take care of them. Many of them thought they did not need social support as long as they were not sick, and normally they would talk

about health related issues with friends only if there was a problem. Therefore sometimes they waited until the problems became serious before seeking social support. This issue also came up in the discussions with the Community Advisory Board. The Community Advisory Board members said that there were many times that Chinese international students came to them for help when the situation was really bad and they could not possibly wait any more. The following quote came from an interview with a participant who felt very isolated and passive about either seeking social support or managing health

*Interviewee: I wouldn't go to the hospital when it's not serious.*

*Researcher: How to you decide if it's serious enough?*

*Interviewee: I don't know. May be based on my previous experience.*

*Researcher: OK, when you decide it's not serious enough, and if you don't go to the hospital, how would you manage your health?*

*Interviewee: Myself*

*Researcher: Are you saying that you've been managing your health by yourself during your stay that is more than one year in Canada?*

*Interviewee: Almost*

*Researcher: Is it because you think that your health capability is enough for managing your health so you don't need social support?*

*Interviewee: So far, yes.*

*Researcher: So from what you've just said, did you mean that you wouldn't ask for support from others until it was really serious?*

*Interviewee: Yes*

*Researcher: Have you ever thought about changing this or do you just want it be to like this?*

*Interviewee: Just like this*

*Researcher: So you think it's OK to let it be like this?*

*Interviewee: Yes*

*Researcher: You just said your social support is very limited. Why do you think this happens?*

*Interviewee: I don't know*

*Researcher: For example, is this because you don't have social support sources in your environment or is it because you don't ask for social support even it is there?*

*Interviewee: Both. But maybe more because I don't ask for it.*

*Researcher: So do you mean that you have social support sources around you but you just don't ask for them?*

*Interviewee: Yes.*

Sometimes the students found it difficult when they had some issues for which they needed help. They did not want their friends to know about this specific issue, but they did not have anyone else that could contact for social support.

*There was a time when I had rashes all over my body for some reason. I didn't know what to do about it and I didn't want to tell my friends because I thought the rashes were from bedbug bites. I found it so hard having no one to ask for help when these things happened. I didn't go to the hospital because I thought the process would be very complicated. I heard that people had family doctors here, but I didn't know any information about where to find a family doctor. All I knew was the pharmacies in drug stores. So at the end I looked it up on the internet and found a picture with rashes similar to what I had. After I found out it was just a normal kind of rash (not the ones from bedbugs), I told a friend who was in the same class as me at that time. Luckily, s/he had the same rashes before, so s/he recommended me a medicine. I got that from the pharmacy and then I was fine.*

### 4.2.4 Status as an immigrant

Participants found the status of being an immigrant a barrier that prevented them from obtaining social support, especially from the public health system. Some felt

uncomfortable using the public health system because they were not raised in Canada so they did not know about the hospitals or health services in terms of reputation or quality. Surprisingly, the concerns about self-identity sometimes prevented the students from using the public health system comfortably, as some of them may have thought the Canadian public health system is supposed to be built for Canadians but not for people from other countries, like them. In this case, self-identity became a barrier to seeking social support because, as mentioned previously, the public health system was perceived as one of the sources where the Chinese international students could gain social support.

> *Here in Canada, I'm not just a student at the UofA, but I'm also an international student. When I'm outside the setting of the university, I'm more like an immigrant. I don't think I have successfully integrated into this Canadian society, just as the native Canadians here. This self-identity, to some extent, affects me when using the public health system. To me, the public health system is macro social support at the government level, which is different from your personal relationships. I have many Chinese friends here, so the social support I get from my personal relationships are not different from that in China. But when considering the public health system, the relationship is between me and this country, or this social system. In China, these public health services were there for me; but in Canada, although*

*technically everybody in Canada can use the public health system, I would think this system is supposed to be here for the Canadians – it's just that Canada is becoming a multicultural country, so the system expanded and included us in it. Therefore psychologically, this would make the distance between me and the public health system further, though the hospital is just across the street. But this situation might get better if I stay here for some years longer.*

*I grew up in China, so I knew the surroundings, for example, how good this hospital it, what its reputation is. But I only know the University of Alberta Hospital and the Children's hospital next to it. Then there's the clinic next to ECHA (Edmonton Clinic). I've never been to the Edmonton Clinic before. All I know about the hospitals here is where they are. I have no idea about if they are any good. However, even without knowing the reputation of the hospital, you still have to go if you are really sick. But you still don't know what the procedure is in the hospital or whether an appointment is needed. What if I had an emergency? I don't even know where to go.*

### 4.3 Social support affects Chinese international students' health capability directly and indirectly in different ways/directions.

Social support was deemed an important factor that affected the Chinese international students' health capability. However, the relationship between social support and health capability appeared to be complicated, demonstrated by the two subthemes as follows.

#### 4.3.1 Health capability and health literacy are improved in practice when managing health independently regardless of degree of social support they obtain

According to the Chinese international students, the key to improved health capability/literacy was managing health independently (figure 7). They started to manage their health independently because both (a) the social support they had in Canada increased their health awareness; but also (b) they were lacking in social support in Canada so they had to manage health independently.


Figure 7. Social support affecting health capability/literacy

This is not as dichotomous as it first appears, however. Independently does not necessarily mean "alone without social support"; it means that the process of managing health is independent as opposed to someone else does it for them. If they managed health alone without social support, they usually found it hard to accomplish their health goals. For example, one participant who had a relatively narrow social network and who basically managed health alone without much social support in Canada said:

> *I slept earlier when I was in highschool China because I lived in a dorm with other people –they slept when the school shut the lights at 11 pm – so I slept, too. But now I live alone in a room in Lister, I often go to bed at 1 or 2 am. I know this is not good and I feel tired the next day, but I just can't sleep early.*

The participants who had obtained certain amount of support from what they deemed as social support sources appeared to report better health capability and healthier

behaviours. Although some of them indicated that their health capability was naturally getting better because they were getting older, it was emphasized that if without social support affecting their health awareness in this process, their health capability would not have improved so much. One participant said that if the social support s/he received did not affect their health awareness, his/her health capability/behaviour would not be changed.

> *I think the social support I received in Canada mainly comes from my friends and classmates as well as myself – my increased health awareness. I think awareness is very important to me in terms of influencing my health capability. For example, if I am hearing someone telling me how important this health behaviour is without being aware of the importance on my mind, it wouldn't change my health behaviour or my health capability. My health capability would just be the same as it is in China. Only when my health awareness is improved, can my health capability be different from that in China.*

Regarding health awareness, an interesting difference was identified between undergraduate and graduate students. That is, graduate students tended to have stronger health awareness than undergraduate students. Potential reasons to explain this could be that graduate students were more mature than undergraduate students both in terms of age

and experiences. Some students did indicate that their health awareness was increased because they were getting older and starting to realize the importance of health from noticing some changes of their body; for example, they were easier to be tired from staying up late. It was noticed that, excluding two participants who were majoring in health related fields, older participants were more likely to have stronger health awareness than younger participants. However, the oldest participant was just about thirty years old (exact age was not permitted to be presented in public according to the participant), and the youngest was nineteen year old.

Two major reasons why the Chinese international students started to manage health independently were found during the interviews. On the one hand, they were generally lacking social support that could help them take care of themselves in Canada so they had to manage their health independently. On the other, their raised health awareness as well as their changed attitudes towards health because of differing social support in Canada impacted their health behaviours. Some of the students said that they had no health capability and literacy in China because their parents took care of them. Although some still reasonably hoped that there could be someone who managed their health for them just like what their parents did, they realized that modeling or learning from peers and then managing their health independently (based on the health information they obtained) were more effective ways to improve their health capability and health literacy.

*I learnt a lot in terms of how to live a heathier life here in Canada from my friends – I watch how they are living and learn the skills I need. Back in China, my parents did everything for me, and I learnt nothing because I've never done it myself.*

*For example, if I am sick in Canada, I'll ask my friends in Canada or sometimes my parents in China through the internet. They will provide me some suggestions; then I'll need to judge the information, make decisions and do it myself. If it was in China, they would do it for me. I think now doing it myself is better for improving my health capability. I would prefer someone providing useful information to me so that I can make more informed decisions more effectively.*

One thing worth noticing was that, social support sometimes affected Chinese international students' health capability in an indirect way. The students interviewed commonly mentioned that they have heard from their friends or classmates that it was very time consuming going to the public health system (e.g., hospitals or dentists). Therefore they realized that they should take good care of their own health to avoid suffering from waiting in an emergency room or other healthcare office. Sometimes they

would ask their friends in person, on their online social networks, or classmates for effective solutions instead of visiting the hospital with health issues. During this process of obtaining and judging information from social support sources and then taking care of their own health, they found their health capability improved.

> *One time my senior peer told me he broke his leg and was in huge pain at that time, so he went to the hospital. But they just gave him an ice pack and then asked him to wait there for 3 hours until they got to him. Since then, I realized that I should take good care of myself – otherwise I would be suffering in the emergency room when something goes wrong.*

4.3.2 Social support as a tool in terms of building health capability

Among all the Chinese international students who have been interviewed, social support was deemed as an important tool to improve health capability and assist in managing their individual health by most. Some of them articulated that social support was more important for raising their health status to a higher level; others recognized social support as more of a coping mechanism when there were health problems needed to be solved.

*If I did not obtain social support from my friends, I would not care about my health at all except for the situation where I got sick. I am not an active-learning person when it comes to health knowledge; so without my friends telling me the information, I would not learn about how to manage health myself when I do not have any health concerns. I will try to solve the problem when my health is not as good, but I am just not active to improve my health status to a higher level than absence of illness.*

### 4.3.3 Social support expected by the Chinese international students in Canada

**Role models and peer support.** Role modeling and peer support from senior students have been commonly mentioned as effective social support. One participant who considered her/himself a self-sufficient individual said that s/he would not be convinced when only hearing other people teaching her/his what a healthy behaviour was, and it would be more convincing for her if the people around her/him served as role models. Another participant also indicated, at a community level, that it was hoped that peers would have better health capability and health literacy, so that the students could have more effective and high quality social support resources when desired.

**Professional information support.** *"I just wasn't sure whether the information I gained from my social support was correct and precise."* This was a statement that had

been mentioned many times by several participants during the interviews. Some participants even said that, *"I really hope that, for example, I can have a friend who majors in this area tell me what is actually the right thing to do."* The Chinese international students were poised to demand professional-level information from social support sources for which they had easy and equal access, for example, a friend. Thus, it is important to consider building health capability and improving health literacy a community level, as previously mentioned.

**Easy access to public health/medical system.** Easy access to the public health system could be an effective social support that helped Chinese international students build their health capability and health literacy. Many participants articulated the hope of shorter waiting time when accessing the public health system. In addition, being informed/educated about the Canadian medical system can psychologically make the Chinese international students feel closer to it. This might assisting in managing their health, as most of them perceived the public health system as one of places where they could gain social support. As mentioned previously, the participants found it hard to access the public health system. For one thing, their unfamiliarity prevented them from accessing the public health system psychologically. For another, hearing about the long waiting experiences in hospitals from other peers created a pre-dominating impression on the Chinese international students' minds. This impression caused them to think that it would take them forever to see a doctor in the hospital, and that the doctor would not

efficiently treat them unless they were dying.

*My relative's son once had a fever for three days. The doctor did not prescribe any medicine or treatment and just told the parents to let the kid survive himself. I felt frightened.*

*In China, although people always complain about the hospitals, you still get treated pretty efficiently when you have health problems. Here in Canada, it will take you forever to see a doctor unless you are dying.*

*I don't know what procedures I need to go through if going to the hospital. Do I need to register somewhere? Do I need appointments? What are the costs? Also, I was raised in China so I knew which hospitals had good reputations and famous doctors. Here in Canada, I have no idea how the hospitals are or which one I should be going to.*

**4.4 Managing health with social support and health literacy**

Although many of the students identified themselves as individuals with good health capability and health literacy when the researcher asked what they thought about their health capability and health literacy, they did not always make the best decisions for their

health based on the social support they had.

### 4.4.1 Self-reported good health capability/literacy does not necessary lead to comprehensive health decisions

It was found in the interviews that, the Chinese international students who considered themselves having good health capability were more likely to be confident when making health decisions themselves. They often thought that they had a certain level of health knowledge and the ability to judge, critique and apply the health information they obtained. This can be interpreted as health literacy according to how health literacy is defined in the literature (Gillis, 2009; Nutbeam, 2000; Sørensen et al., 2012). These students only considered social support a consulting resource which helped them in the process of figuring out other resources that might help them make the best decision. However, according to the two different responses from two students regarding the same issue – HPV[1] vaccine, it was found that social support might lead to different decision outcomes when the Chinese international students were making decisions based on incomplete health information or knowledge they had, compared to what was being communicated by the public health system.

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[1] HPV – Human papillomavirus, http://www.hpvinfo.ca/adults/what-is-hpv/

*I got the HPV vaccine at the University Health Centre. (Researcher: did you talk to anybody before getting the shots?) I told my parents and some friends, but it's just to inform them that I've made this decision. My parents are very traditional; they didn't think it was necessary for me to get the vaccine because I hadn't used my uterus yet. But what I learnt was that, even I'm not married, it doesn't necessarily mean that there is no chance for me to get cervical cancer. So I just went for it. When I was in China, I sometimes would listen to what other people said because I had a larger social network; but here I'm more independent since fewer people can give me advice.*

*I saw the posters of HPV vaccine but I didn't get it. From what I've understood, the best timing to get the shots is high school. Besides, this thing (cervical cancer) is mainly related to sexual behaviours, which I don't have any, so I figured I would just wait until when I really need it.(Researcher: so you have learned the background knowledge of this vaccine?) Yes, I know it. There are two types of vaccines: one is for 2 types virus; the other on is for 4 types of virus. Our health insurance can cover 2 shots but we need to get it in different policy years. I've learnt all the knowledge, but I just think, for now, I don't need the vaccine because there is no way the virus can be transmitted to me.*

4.4.2 Having health knowledge does not necessarily lead to good health capability or healthy behaviours

Compared with the Chinese international students who recognized themselves as individuals with good health capability, those who did not consider themselves having good health capability still indicated that they had the health knowledge. They knew what was healthy to do, but they just did not do it. A gap was found between knowing what was healthy and doing what was healthy.

> *I don't think there is anybody who can achieve 100% health capability – even 90% is really hard to achieve. I think the people who achieve 90% are the ones who always carry fruit in their backpack and know exactly what time to have meals is good for their health, plus they have honey. Anyways, it's just those people who have a lot of knowledge on nutrition and health. However, although I know about all of these healthy behaviours, I wouldn't do them. It's just too complicated for me. For example, I know I should have dinner at around 6 pm, but sometimes I don't eat dinner on time because I have too many assignments due. Also, I just don't like the taste of honey, so I don't drink honey water in the morning even I know it's good for my health.*

*I know we should not go to bed too late from a health perspective, but sometimes I just can't go to sleep at night, for I don't know what reason.*

### 4.5 Awareness of social support as a social determinant of health

While interviews were proceeding, it became apparent that none of the Chinese international students had heard about the term "social support" before being involved in this study, let alone the idea of social support as one of the social determinants of health (Raphael, 2011). The interview process, to some of the participants, presented an opportunity for them to reflect on their own experiences in Canada and to think about whether social support affected their lives. One participant, who did not think social support affected his health behaviours at all at the beginning of the interview, became very excited at the end and suggested that the researcher should do something to increase the Chinese international students' awareness of social support and health:

*Oh yeah, this interview allows me to think about the relationship between my life and social support, which I've never considered a factor that affects my behaviour. Now I realize that, the behaviours of my friends and my colleagues around me have affected my behaviours so much! I used to only have meat in my sandwich, but after seeing my colleagues bring sandwiches with tomatoes,*

*lettuce and cheese in them, I learnt from them and started to make healthier sandwiches myself.*

4.5.1 "I don't need social support when managing health"

Some of the Chinese international students indicated that they did not need or think of social support when managing their health in Canada for a variety of reasons. These reasons included their perceptions of health. For example, one participant perceived health as a personal thing that did not involve other people:

*Participant: Health is my own business – people cannot provide help with this; so I don't ask for social support when managing my health. I don't turn to other people because they won't be helpful.*

Another reason why some of the participants thought social support was unnecessary when managing their health was that some had relatively strong self-image. They were not comfortable with showing their weaknesses or unhappiness to people in their lives. Often this type of participant identified themselves as very independent and self-sufficient individuals who could manage things very well without help from others.

*If I went for a mental health consultation, I think I would just be there for*

*practicing my English. I just don't like to tell people the stuff that embarrasses me, even to a psychologist. I would prefer showing my positive and optimistic side to people, and it is true that I am a positive person. I have less negative energy, relatively speaking. I think it might be relevant to my family education – my parents barely disciplined or took care of me when I was a kid, so I was free and I did everything myself. I'm independent.*

Furthermore, it was found in the interviews that the notion of "mianzi" (face in Chinese) in Chinese culture was a strong factor affecting these participants' perceptions as well as behaviours. People often have an idea of how they should appear in front of other people. Just as the participant above mentioned, people care a lot about what side they were showing to others. In Chinese culture, people consider "losing face", which means loss of prestige, having been insulted, or having been made to feel embarrassment before a group, very serious (Chang & Holt, 1994; Haugh & Hinze, 2003; Hu, 1944; Yu, 2003). Mianzi has an even stronger effect when it comes to men, who are always known and appreciated as very tough and strong figures in Chinese culture. The concepts of "man" and "mianzi" is so deeply rooted in the culture that when the participants were talking, some of them had never thought about why they behaved as having been born into the culture that taught them in that specific way.

*Researcher: Was there anyone taking care of you when you were sick?*

*Participant: Who would take care of a man? It was no big deal. I could handle it by myself.*

*I'm quite passive when needing help from social support. It's always the case where other people come to me and ask if I'm not feeling well if I don't look very well. (Researcher: why are you passive?) It's probably, you know, probably because of the education I've accepted. Well, my, my parents both say to me that I'm a man so I can't, I can't be like "oh I don't feel well" or "I was hurt".*

Although the male participants were not as many as female participants, a pattern was found implying that social support seeking behaviours were related to gender. It appeared that compared to the female participants, the male participants preferred "quietly" learning from others or their previous experiences to manage their health independently, rather than seeking for social support. However, there might be other reasons (e.g., personal character or self-image) to explain this phenomenon, as one female participant who considered herself a self-sufficient individual also articulated that she tended not to ask for support but learn from others if they were consider role models.

## 4.6 Summary of results

The results indicated that the Chinese international students in this study had different perceptions of social support sources from what was demonstrated in previous immigrant health research (Briones-Vozmediano, Goicolea, Ortiz-Barreda, Gil-González, & Vives-Cases, 2014; Simich et al., 2005; Stewart et al., 2008). They tended to identify anyone or anything around them that could provide support to them when managing health as their sources of social support. The findings from this research reinforced that social support should be defined differently in different contexts (Williams et al., 2004). Barriers to seeking social support were found among the students. This not only included language and cultural barriers, but also included how culture shaped their social support seeing behaviours. From a social determinants of health perspective, it appeared that the Chinese international students were not aware of the concept of social support, let alone its importance as one of the social determinants of health. Many of the students had never thought that social support might have affected their health behaviours before being engaged in this study. However, based on the Chinese international students' perceptions of social support (support from the society that assisted them managing their health), they received a lot of health-related social support from their families and public organizations (e.g., hospitals) when they were in China. Most of them learned experiences on managing health from their social support, but never actually practiced it by themselves until they

came to Canada. During their stay in Canada, they started to manage health independently while seeking social support with barriers and applying what they had learn from their previous experiences to practice. It was indicated by the students that their health capability and health literacy were improved when managing health independently with appropriate support, such as professional information support and peer support.

# Chapter Five: Discussion

This chapter discusses the approach applied in this study and its strength and weaknesses by highlighting the role of the Community Advisory Board and its effect on shaping the study. It aims to review the value of Ruger's (2010) conceptual model of health capability, situate the findings in literature and present the implications for research, practice and policy. Building on Ruger's model, a tentative conceptual model is presented to understand the relationships between social support, health capability and health literacy. Limitations in the study and knowledge translation activities are also described in this chapter. Finally, recommendations for moving forward are proposed, followed by conclusions from the study.

## 5.1 Engaged scholarship and culture broker

Engaged scholarship is deemed very effective in co-constructing knowledge to address issues in the local context (Small & Uttal, 2005). Previous research has demonstrated that engaged scholarship facilitates a more active and engaged democracy by bringing stakeholders into problem-solving work in ways that advance the community good with and not merely for the community (Van De Ven & Johnson, 2006). Aligned with the researcher's constructivist ontology and epistemology, engaged scholarship enabled the researcher to form the Community Advisory Board, of which the members

significantly contributed to co-constructing knowledge, according to their experiences and expertise in working with international students in the university context.

According to her ontology and epistemology, the researcher believes that knowledge is not objective or context-free but to be constructed and shaped by different types of culture, in this study, for the purpose of improved health capability and health literacy. Moreover, the researcher was very interested in Chinese international students' experiences from a cultural perspective to help inform the Community Advisory Board members' work with these students in the future. This perspective guided the consideration of focused ethnography as the research methodology of this study, because focused ethnography is a qualitative research methodology that is often used to inform decision making in a particular context regarding a specific research question among people who had shared experiences and culture (Mayan, 2009)..

In community-based research that involves people from difference ethnic or cultural backgrounds, it is often difficult for researchers to position themselves in terms of finding an appropriate personal standpoint that fits best with their studies (Dwyer & Buckle, 2009). In addition, researchers who have the same cultural background with the community can be very different in many other aspects, such as social class or education level (Kusow, 2003; O'Connor, 2004). While conducting this study, the researcher herself also had a hard time finding her personal standpoint. The researcher positioned herself as an insider at the beginning because she felt similar to the participants, herself a Chinese

international student who had been studying at the University of Alberta for two years. However, as it was found congruent with the literature that, the researcher started to realize that she was not totally an insider because she was also embedded in a public health culture in which most the Chinese international students were not; she was educated about social determinants of health whereas the participants in this study were not. Therefore from this perspective, the researcher was an outsider to the participants in this study. Debating between being an insider or an outsider might have threatened the researcher's reflexivity during the study. However, meetings and discussions with the Community Advisory Board helped the researcher gain a wider perspective by providing clear suggestions and feedback around the points that the researcher might have misinterpreted.

For example, the interview guide was shaped by incorporating feedback from the Community Advisory Board. For example it was advised that the interviews would need some ice-breaking questions to warm the participants up for more in-depth communications on their health or social support experiences. In addition, the way in which the interviews were processed was also influenced by the advisory board. The members suggested that sending an interview preparation document to the participants would be helpful in facilitating the actual interviewing process by allowing the students to recall their memory of their experiences before coming to the interview. Additionally, the students might feel more comfortable talking about their experiences with a basic

understanding of the terminology used in the study. These contributions from the advisory board thus affected how data was generated in the study.

The Community Advisory Board also played a very important role in helping the researcher reflect on data interpretation. During the preliminary data analysis process, the researcher tended to interpret all the themes as culturally specific to the Chinese international students. However, the advisory board members pointed out to the researcher that these findings might not be culturally specific, as other populations could have similar issues, for example, not being aware of the social determinants of health. This view is supported by previous research as well (Niederdeppe, Bu, Borah, Kindig, & Robert, 2008). Such contributions significantly assisted the researcher in reconsidering her ways of interpreting the data ensuring an enhanced sensitivity to data analysis and interpretation.

At the same time, these specialists and student representatives coming from different cultural backgrounds and various communities helped address issues around the researcher's personal standpoint, assisting the researcher to stay open-minded as well as reflexive during the research process. It was very valuable when the community advisory board provided feedback based on their previous experiences interviewing some Chinese international students. They found that the students would actually make up a story to answer their question "Can you tell me a story when you …". Neither the researcher nor the thesis supervisory committee members had realized that "story" might not be the

appropriate word to articulate the question, as the students often perceived "story" as something they made up. When the advisory board members pointed this issue out, the researcher completely understood the language/cultural differences that caused this situation because she was Chinese; however, the researcher was not made aware of this until the advisory board provided the comment on the word "story". This again emphasized the important role the advisory board was playing throughout the study because although the researcher was familiar with the Chinese culture, she might not think reflexively from the participants' perspectives when she was in the role of researcher and culture broker as the same time. These nuances of interpretation and understanding amongst the members of the Board in dialogue with the researcher shaped the direction of the study in ways that would not have been possible without their involvement.

In this study, the participants, the researcher and the Community Advisory Board had overlapping and differences in terms of perceptions as well as experiences. From the perspective of the Chinese international students, their behaviours and perceptions were shaped by both Chinese and Canadian culture because they were raised within Chinese culture but had become embedded within Canadian society. Their behaviours and perceptions might have been different from the students who were always in China because of the interactions they had within the Canadian culture. From the perspective of the researcher, her perspectives had been influenced by Chinese culture and Canadian

culture, but at the same time, her perspectives were shaped by the health promotion culture she was situated in. From the perspective of the Community Advisory Board, although the members had the experience of working with international students and knowledge of health promotion, most of them were Canadian and drew from western culture to understand Chinese international students' health needs. Looking at the differences and similarities among the three parties, the researcher, to some extent, acted as a culture broker between the Community Advisory Board and the students.

As indicated in the literature review, previous studies often look at trained community members as culture brokers (Abrahamsson et al., 2009; Rhodes et al., 2007), which have not been studied as a role of researchers. In this study, the researcher herself acted as the culture broker between the community-based organizations (i.e., the Community Advisory Board) and the community members (i.e., the Chinese international students). The position of the researcher was tricky, as she was, at the same time, a community member of the Chinese international student community and a researcher. Advantages and disadvantages were found from the researcher's role as a culture broker. On the positive side, the researcher was the person who knew the most about the research project; hence, she was able to directly provide and receive feedback to/from the Community Advisory Board. During this process, the community needs went straight to the stakeholders/policy makers without being translated by a third person/party, who might miscommunicate critical information. For example, the Community Advisory Board

members were very interested in the part of results where the Chinese international students articulated their needs or expectations regarding the social support services on campus. In the advisory board meeting, they provided suggestions tailored to these needs mentioned by the students, such as providing services that are more active and more reachable to the students. Moreover, they were surprised by the fact that the Chinese international perceived social support services providers as potential social support sources. They realized that they could be social support sources to the Chinese international students if they correctly addressed the needs indicated by the students. The researcher being a culture broker enabled this direct two-way communication to happen. However, the culture broker role of the researcher was not without its drawbacks. As indicated previously, it was sometimes hard for the researcher to stay reflexive when she was constantly switching positions between a culture broker and a researcher. Previous research indicates hat culture brokers needed to be settled in the host country for some years before they became familiar with the culture of the host country (for example, see Abrahamsson et al., 2009), while the researcher had only been in Canada for more than a year at the time she interacted with the participants and the Community Advisory Board. Compared to culture brokers from community members in previous studies, the researcher had experience and understanding of the culture of her home country but the host country. Therefore, the researcher need to consult the Community Advisory Board or the supervisory committee when encountering some Canadian cultural issues, such as,

whether the social determinants of health were well known by the Canadian population. Moreover, culture brokers are often needed when researchers have difficulties reaching out to some communities due to issues like limited time and culture differences (Eng et al., 1997). The timeline of this study was very limited as the researcher needed to conduct every research activity herself only with minimum transcribing support from the volunteers. The communications with the participants and the Community Advisory Board were constrained due to this reason.

The study results showed that the Chinese international students received information from other people (e.g., friends, classmates) in their living contexts in Canada. These "other people", of which the Chinese international students' social networks were consist, could be considered culture brokers as well. This could also attend to one participants' hope of having more people with good health capability and health literacy on his/her social network. Living in a foreign country, especially during the first couple of years, every Chinese international student was acting as a culture broker on someone's social network, which provided social support that might affect others' health capability and health literacy. However, as pointed out by some participants, these culture brokers had not have the competency to qualify a strong culture broker that had the understanding and experience in the Canadian culture yet. There is scope here for health education to improve health literacy.

## 5.2 Health education

Recently, the development of the concept of health literacy duplicates and builds upon health education concepts. Within the field of health education the distinction is made between health education as persuasion and health education as empowerment. The persuasive health education is associated with "pushing" people to adopt "approved" behaviours to prevent disease and improve health and health education. On the other hand, the empowering health education aims to strengthen capability to control individual health and work collectively to achieve supportive environments for health (Green & Tones, 2010). In either case some type of learning is required for change to take place. The aim of health education thus is to create the conditions for learning. Learning can be considered a process that has the potential to permanent change in capability. This process needs to be cognitive, affective and conative e.g. directed toward action and change.

Chinese researchers have critiqued health education in China and pointed out that it is centrally-led and top-down in its messages as opposed to a two-way communication (Wang, 2000). While interviewing the Chinese international students, a gap was found between "knowing what is healthy" and "doing what is healthy". There were students saying *"I know that is healthy, but I just don't want to do that" or "I don't know why but I just did that because I was told when I was a kid that I should do so"*. This gap was

between heath knowledge and health behaviour. The gap may have been created by the top-down health education approach in China, as this approach would not allow audiences to be engaged. The students were barely engaged in a health education process or had few chances to practice their health education in their lives. As a result, they only knew what was healthy in theory without doing what is healthy in practice; another possibility could be they kept doing what they were told without thinking about it. Essential health education should not focus on persuading people to adopt healthy behaviours, but rather on empowering and supporting people to achieve health functioning (Green & Tones, 2010).

Freire (1970) proposes that there are two types of education relating to empowerment or the lack thereof: the '*banking' approach* to education and the *conscientization approach* to education. The *"banking" approach* is similar to the top-down education approach in China, as the teacher often take the top position to "deposit" information within the learners as if they know nothing. The learner as a "bank" only receives but rarely sends and never thinks about how they have the knowledge to educate the teacher in a way that engages dialogue (Freire, 1970). The idea that students can bring experiential knowledge to their understanding of health and wellbeing remains largely unrecognized. On the contrary, the *conscientization approach* to education is based on dialogue that encourages reflection and action. The learner is seen as an active agent who engages reflexively with the surrounding environment. The dialogue produces a critical

consciousness of the factors outside of one's individual situation – environmental, political, and social – that may constrain wellbeing, therefore shifting the emphasis from individual responsibility to collective reflection on what can be changed from an ecological perspective.

As Nutbeam (2000) demonstrates, health education should not only focus on improving people's knowledge and capability to act, but also raise awareness of the social determinants of health. Other researchers also state that enhancing health literacy and health awareness will enable ethnocultural populations to live more enjoyable lives in Canada (Zanchetta & Poureslami, 2006). In the results of the study, one thing that could not be ignored was that raised health awareness with social support was deemed very important in changing behaviors and affecting health capability by the Chinese international students. This is consistent with previous research indicating that that social support coming from the internet, friends and family is very effective in raising health awareness (Gray, Klein, Noyce, Sesselberg, & Cantrill, 2005; Lydakis, Kerr, Hutchings, & Lip, 1998). However, it was found in the study results that gaining information from these sources could sometimes be misleading. Even the participants who considered themselves having good health capability and health literacy did not always make the best health decisions, because they were lack of the resources to receive comprehensive health information. Given that the Chinese international students, in common with many other populations, lacked awareness of social support as a social determinant of

health(Niederdeppe et al., 2008), health education could be critical in raising awareness among Chinese international students, any other new comers or even Canadians who had not had the opportunity to engage in health education along the lines suggested. Health education can also be a means of communicating information on navigating the public health system, which is necessary to international students, newcomers or even Canadians who are not familiar with local hospitals or who do not know how to navigate the medical system.

Peer support can be a potential mechanism that promotes health education. Peer support has been used in health education and health promotion for decades (Dennis, 2003; Kerr et al., 2006; Simoni, Franks, Lehavot, & Yard, 2011; Turner & Shepherd, 1999). Much of peer support falls under the banner of peer education. Peer education has been most popular when working with adolescents and young people in educational settings, focusing on behavioural change around smoking, alcohol, substance abuse, and HIV/AIDS (Campbell & MacPhail, 2002; Turner & Shepherd, 1999). This was confirmed by the findings of this study, as the Chinese international students recognized peer support as appropriate social support that educated them in a way that improved their health capability and health literacy. Peer supporters fall into two groups, those that tap into existing social friendship groups and those who construct groups for the purpose of peer education (Campbell & MacPhail, 2002; Simoni et al., 2011). They may be placed to

work within networks that are created by the health service, or they may act as a culture broker between created and embedded social networks.

### 5.3 Ruger's conceptual model of health capability

Ruger's (2010) conceptual model of health capability has explicitly outlined and elucidated the factors that affect health capability. However, it does not explain the process as to how one's health capability can be influenced by these factors or how they interface with health literacy. Aligned with what Ruger has proposed in the model, the results of this study affirm that social support can affect the Chinese international students' health capability, but in different ways from those described. According to the Chinese international students, the key to improved health capability was the experiences of managing health independently. Social support served as a tool to "speed up" or "slow down" this process. When social support was presented and effectively received, the Chinese international students reported improved health capability when they were managing health independently with accessible social support around and so they received help or see role models when needed. When social support was missing or not effectively received, the Chinese international students reported improved health capability through their self-learning process, without the social support that could have speeded up the health capability building/learning process, for example, navigating the public health system (i.e., hospitals).

In Ruger's (2010) conceptual model of health capability, social support, the public health care system and social environment are separated from each other. However, the results of this study demonstrate that the Chinese international student could not separate their social support from the social environment or the public health system, as they perceived anyone/anything, in the social environment, that provided support assisted them in managing their health as their social support sources, including hospitals and health services providers. It was found that the public social norms within the social environment around the Chinese international students affected their health behaviours, such as going to the gym or not. More importantly, social support could not be separated from the social environment because the social support source identified by the students were embedded in the social environment. It is demonstrated in the literature that where an individual is located in the social structure might influence their likelihood of accessing social support (Lee et al., 2004). Congruent with this, the students articulated their expectation of improving the health capability of the social environment around them because this would make social support easier to access and more effectively received by them.

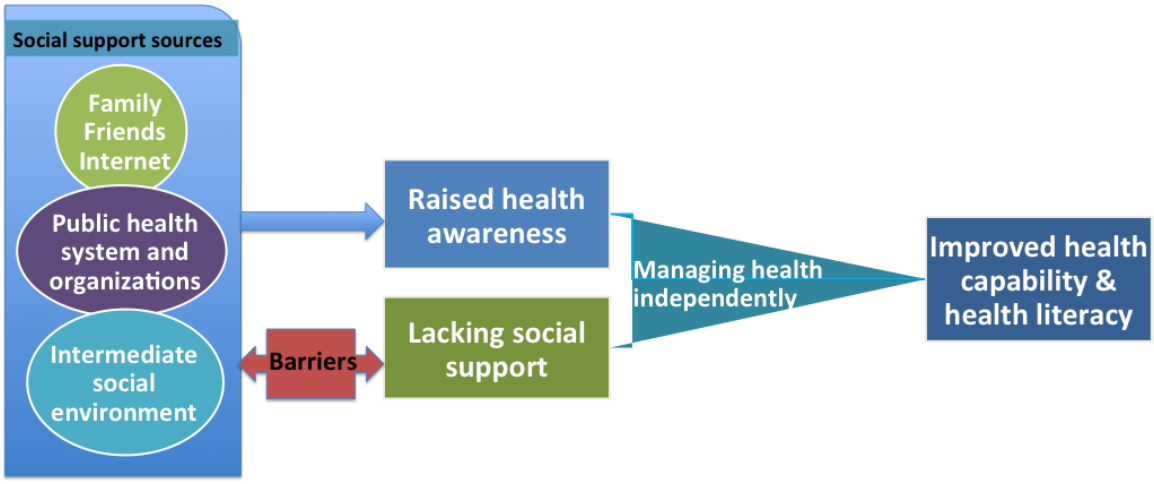


Figure 8. A tentative conceptual model

Figure 8 provides a summary of the findings in the form of a potential model of the relationships outlined between social support, health capability and health literacy. In this model, public health system/organizations and intermediate social environment are included as social support sources together with family, friends and the Internet. These social support sources affect health capability and health literacy directly and indirectly in two ways. On the one hand, if individuals receive social support from these sources, their health awareness appears to be raised, and therefore they start to mange their health independently during which process their health capability and health literacy are improved. On the other, individuals may lack social support because they encounter barriers (as indicated previously in section 4.2) when accessing social support sources. Moreover, they may experience more difficulties accessing social support sources because they lack the social support that assists them in this process. As a result, these

individuals' health capability and health literacy are improved because they have to manage their health independently because there is very limited social support to assist them. Although this suggests that having social support and lacking social support can both lead to improved health capability and health literacy, the extent to which health capability and health literacy can be improved may vary due to different social support one receives. Given that this is was a small focus ethnographic study the model is only tentative but it does suggests areas which researchers can further explore in future studies.

### 5.4 Cultural and context influences on social support perceptions and seeking behaviours

Cultural and social norms can be critical in shaping individual perceptions and behaviours (Kim et al., 2008; Taylor et al., 2004, 2007; Yu, 2003) . As previously indicated, when Chinese people perceive losing face as losing prestige, this perception tends to affect their personal behaviours in front of other people (Haugh & Hinze, 2003; Yu, 2003). Moreover, as it has been demonstrated in previous research, Chinese students may be reluctant to seek social support because their perceptions of such behaviour (e.g., not being optimistic and positive in front of people) possibly have negative impacts on relationships (Kim et al., 2008). The finding of reluctance in seeking social support – don't want to bother friends for "such a little thing" – is not surprising, as it is congruent

with what is in the literature when researchers are studying the collectivistic coping styles of Asian international students (Moore & Constantine, 2005). According to Moor and Constantine, the concept "forbearance" is defined as the tendency to minimize or hide problems or concerns so as not to trouble or burden others. They affirmed this phenomenon in their study where they found that African, Asian, and Latin American international college students might choose to hide their problems and not seek support from friends in times of distress because they did not want to burden them with their concerns. Other researchers follow this statement by demonstrating that people in the more collectivistic cultures may be relatively more cautious about asking for social support from others for their personal problems, as they share the cultural assumption that individuals should not burden their social networks and that others share the same sense of social obligation (Kim et al., 2008).

Context can be another critical factor that shapes social support perceptions and seeking behaviours. Good health promotion research/practice should include the process of understanding the context where people are coming from, because the same health behaviour/concept can be perceived completely differently among people from different cultures, different socio-economic levels, and different living circumstances (Ledwith & Springett, 2010; P. Williams et al., 2004).

As previously indicated in the literature review, such a complex concept as social support needs to be defined in specific contexts (P. Williams et al., 2004). According to

the study results, context shaped Chinese international students' perceptions of social support sources. That is, the context where the students were embedded might have affected how they defined social support and where they thought they could gain social support. Researchers have demonstrated that where an individual is located in the social structure may influence their likelihood of accessing social support (Lee et al., 2004). Here, social structure can be, for example, maintenance of social contacts, participation in community organizations, or immersion in close social networks. Research has shown that it is most likely people perceive family and friends as their first source when they need help related to health concerns, but the majority of Chinese international students in Canada do not have family or relatives in their close social structure (Verbrugge & Ascione, 1987). This might be part of the reason why the Chinese international students started to perceive anyone or anything that supported them managing their health as their social support in Canada.

## 5.5 Limitations

First, the actual level of participants' readiness was not anticipated accurately by the researcher (Ledwith & Springett, 2010). During the interviewing process, the researcher found that the Chinese international students interviewed were not ready to be asked about their perceptions on the relationship among social support experiences, health capability and health literacy. Most of them even had not heard about the term social

support yet before being involved into this study. Thus, the researcher found that the research questions had gone too far from where the participants were at, and part of reason was that the participants were not engaged in the study in a participatory manner because of their busy school schedule and the limited timeline of this study. However, during the interviews, the researcher tried to maximize the opportunities to understand their social experiences by promptly probing and rephrasing questions so that they made sense to the participants.

Second, data around health literacy was not appropriately generated. Although there is Chinese literature that looks at heath literacy, the Chinese international students interviewed in this study had generally not heard about the term "health literacy" (R. Wang, 2000). It was hard for them to talk about health literacy when this concept was so far away from their living context. Therefore there was very limited data generated around health literacy, because it was already difficult for the participants to get on the same page as the researcher on health capability, let alone health literacy, which was an even more abstract notion to them. However, the researcher recognized that the findings in this study, such as that the students were not aware of social determinants of health or health literacy, might not be specific to Chinese international students, as Canadian students or international students from other countries could have the same issue.

Third, the type of engaged scholarship applied in this study was not necessarily the best or only approach to conduct the study. Applying a participatory approach, which

would allow participants to be engaged in the study from the designing stage to help shape the researcher question based on their context, could have given the researcher the opportunity to make sure that the participants shared a common understanding of the aims of the research with the researcher (Ledwith & Springett, 2010). This would also ensure that the study results were what the participants were interested in knowing. With a participatory approach, the researcher would have guidance from participants on how to conduct this study to generate richer data, and to have deeper communication about more detailed experiences with the participants. As a result, the interviews could have gone more smoothly and the study results could have been more beneficial to the participants and the stakeholders.

Last but not least, data generation and analysis were challenged by researcher responsiveness. As previously indicated, the researcher herself was a Chinese international student at the University of Alberta. Therefore the researcher's personal experience and belief may have affected how she interpreted and analyzed the data. Another person who conducted the same study might come to a different conclusion. However, as articulated previously, the formation of the advisory board and constant contact with the supervisory committee assisted the researcher in staying reflexive, which had significantly contributed to addressing this limitation.

In western literature, social support sources are defined based on a western definition of certain people in one's social network such as family and friends (Aroian, 1992).

However when interviewing the Chinese international students, the researcher did not provide them information about where social support could come from. She assumed, in her health promotion context, that the participant would have known at least a little bit about social support. Unexpectedly, the participants did not have a clear idea of what social support was. In the interviews, the Chinese international students spoke about social support experiences based on their own perceptions of where they could gain social support. This perspective might have been part of the reason why they took anybody or anything in the society that they felt was supporting their health into consideration as social support sources. If the students were well educated about what social support was and where it could come from, or if the researcher had clearly told the students where social support usually came from, the study results might have been different.

Moreover, when translating knowledge to the Community Advisory Board and other researchers at conferences, the researcher realized that the unfamiliarity she had with Canadian society might have influenced her in interpreting the study results. This is not surprising as previous research has indicated that culture brokers need time to become familiar with the culture in the new country (Abrahamsson et al., 2009). Because of not being long enough in the Canadian society, the researcher tended to assume that the results of this study were specific to Chinese international students because she did not realize that although she was familiar with Chinese society and culture, she did not know

much about Canadian society and culture. For example, the researcher would have demonstrated one of the main findings as follows: Chinese international students have culturally specific perceptions of social support sources. However, the Community Advisory Board members reminded the researcher of the fact that these perceptions she found among Chinese international students might not be culturally specific to the Chinese students, as in this study the researcher did not look at other international or Canadian student groups. Because the researcher was familiar with Chinese culture but not as much with Canadian or other cultures, she tended to interpret the issues in the data as something culturally specific to Chinese students, while neglecting that it might also be something that would have occurred among other international or Canadian student groups.

# Chapter Six: Conclusions

## 6.1 Introduction

The findings in this study suggest that the Chinese international students in this study were generally lacking social support as well as the awareness of social support as a determinant of health. Although they perceived anyone or even anything in the society that supported their health behaviours as their social support sources, they still had difficulties when seeking social support in their context. Barriers to accessing social support were identified as: (a) language barriers and cultural differences; (b) lack of close relationships compared to those in China; (c) reluctance when seeking social support; (d) status as an immigrant. Nonetheless, a relationship between social support and health capability as well as health literacy was identified when exploring the Chinese international students' social support experiences. The experiences of lacking social support and seeking it appeared to be opportunities for the Chinese international students to manage their health independently in practice. During this process, they found their health capability and health literacy improved. One the one hand, the participants who obtained appropriate social support, such as peer support, role models, professional information support and easy access to the public health systems, found their health capability and health literacy to be enhanced. On the other, the participants who reported lacking social support when managing their health reported improved health capability as

well, as they took care of their health to avoid the situation where they had no one to count on if they had any health issues.

Although some of the participants considered themselves having good health capability/literacy, it did not necessary contribute to making the best health decision or health behaviour change. It appeared that more comprehensive health education was needed to prevent them from making health decisions based on the limited information they had.

In common with many other populations, the Chinese international students lacked the awareness of social support as a social determinant of health. This had led to the consequence that some of them thought social support was not even related to managing health. Another reason identified behind this phenomenon was that the culture norms in mind, for example, the concept of *face* or *man* in Chinese culture, prevented them from showing their weaknesses to people.

Two interesting patterns were also uncovered in the results. First, gender could be a factor that influenced the participants' social support seeking behaviours. Although the male participants were not as many as female participants, social support seeking behaviours were found related to gender. It was found that, compared to the female participants, the male participants preferred "quietly" learning from others or their previous experiences to manage their health independently, rather than seeking for social support. However, there might be other reasons (e.g., personal character or self image) to

explain this phenomenon. Second, there was a difference in health awareness, associated with age, between undergraduate and graduate students. As indicated by some participants, their health awareness was increased because they were getting older and starting to realize the importance of health from noticing some changes of their body. For example, they were easier to be tired from staying up late. It was noticed that, excluding two participants who were majoring in health related fields, older participants were more likely to have stronger health awareness than younger participants.

To summarize, culture and social norms affect Chinese international students' perceptions of social support and health status. As a result, their social support seeking behaviours are affected by these perceptions. Although health capability can be improved during the process of managing health in practice, appropriate and meaningful social support that assists them in managing health independently is critical for enhancing Chinese international students' health capability more effectively and therefore sustaining their health in the long term.

### 6.2 Strength, significances and implications

This qualitative study, applying engaged scholarship, is the first attempt to explore and understand the social support experiences and its influences on health capability and health literacy in the Canadian context. It is also the first study targeting the international student population where the researcher also serves as a culture broker between the

community members and the relevant community agencies that provide social support services to the community. It bridges the gap in current literature and provides valuable knowledge to the stakeholders that have direct contact with the Chinese international student community at the University of Alberta.

Although social support has been identified as a social determinant of health and is raising emphasis in the context of health promotion, people's awareness of it as well as of all the other social determinants of health requires further attention. This study affirms that the Chinese international students at the University of Alberta are not an exception in terms of the awareness of the social determinants of health. Health education that empowers the audience by enabling them to be engaged in the education process and so they can reflect and act on the knowledge they learn.

The results suggested that the Chinese international students tended to identify anyone or anything around them that could provide support to them when managing health as their sources of social support. Therefore, the students had different perceptions of social support sources from what was demonstrated in the literature (Fontaine, 1986; Stewart et al., 2008). This reinforces the need for defining social support in context when conducting research with different populations (Williams et al., 2004). Barriers to seeking social support were found among the students, highlighting how culture could shape their social support seeking behaviours in a variety of ways. Health capability and health literacy appeared to be improved through the process of managing health independently.

This implies that appropriate social support and good heath capability/literacy social network sources have the potential to promote health on a community level. More specifically, community outreach social support services providing professional as well as comprehensive information and easy access to health services can be as a means of building health capability and health literacy among the Chinese international students.

This study has implications for future research, practices and policies with regard to Chinese international students. To researchers, the collaborative approach applied in this study can be transferred to future research among international immigrant population, however, acknowledging that the approach may need to be shaped in order to tailor to different contexts. The role of the researcher as a culture broker as well as the discussion around this, serves as an aid to informed development of more comprehensive research programs where researchers act as culture brokers in the future. This study also adds to the conceptual model of health capability by elaborating the ways in which social support affect health capability and by challenging the separation between social environment and social support within the model in different cultural contexts. Future researchers can build on this study to further explore whether social support should be separated from social environment. To practitioners and decision makers, this study provides a starting point for them to consider raising the awareness of the social determinants of health among the Chinese international students by listening to their perceptions of social support. More specifically, the social support service providers at the University of Alberta can

reconsider how their services are structured and develop more tailored social support services according to the results of this study. The following are some suggestions.

First, attending to the Chinese international students' hope of having more in-depth communication with the Canadian students, the service providers can pair a Chinese international student up with a Canadian student by implementing a buddy system/program. By doing this, not only the Chinese international students can have the opportunity to build closer relationships and receive social support from the Canadian students, the social environment on campus can also be better improved.

Second, considering the fact that the Chinese international students tend to be passive when they need social support services on campus, the service providers can propose more outreach programs, such as mental health support during exam seasons or flu influenza campaigns, as mentioned by the Chinese international students. The students found accessing these types of services easier than accessing the University Health Centre, which is itself takes a passive approach to service delivery relying on students coming to them but not actively reaching out to the students.

Last, many students reported having nowhere to obtain comprehensive information about the health services they might use, therefore the university can provide the students with more systematic lectures or information brochures on the public health system in Canada, the social determinants of health and the support services provided on campus. According to the students, information obtained through campus tours on orientation days

is not clear or comprehensive enough to make the student confident in accessing these services. They hoped to receive more tangible information such as the reputation of hospitals, the registration process of each hospital as well as the University Health Centre, the coverage of their health plans, how to access the gym, swimming pools, etc.

### 6.3 Knowledge translation

Knowledge translation is critical to a study. During knowledge translation, researcher can translate the academic research results and provide valuable information back to community stakeholders and policy makers (Davis et al., 2003). It is hoped that research findings can enhance community capacity building as well as affect policy decision-making (Davis et al., 2003; Graham et al., 2006). This study is a community-based collaborative study, where knowledge translation has been especially considered. There are two major types of knowledge translation: integrated knowledge translation (knowledge is translated throughout the study process) and end-of-grant knowledge translation (knowledge is translated at the end when the study is completed) (Canadian Institutes of Health Research, 2013).

The formation of the Community Advisory Board enhanced integrated knowledge translation of the study. As discussed previously, the Community Advisory Board members were engaged at the very beginning of the study, this enabled them to provide suggestions on what their expectations were about the study as well as how to shape the

study based on their experiences and expertise. The Advisory Board members closely discussed the study results in the board meetings. Through this process of collaboration and engagement, the Advisory Board members who worked closely with Chinese international students would have the opportunity to understand how to offer the best and most suitable social support for Chinese international students to sustain or improve their health during their stay in Canada. It was recommended by the Community Advisory Board members that it would be helpful if the researcher could present the study results on events of the Chinese student organizations or on new students' orientation. Ultimately, Chinese international students will, as a result, start to realize the importance of social support as a determinant of health, and so they will seek and gain more effective social support when they need to live their Canadian life in a healthier way.

In terms of "end-of-grant" knowledge translation, the study results have been presented as oral and poster presentations at four academic conferences. Two of the conferences were international health conferences; one of the conferences was a provincial health conference; one was a conference within the School of Public Health at the University of Alberta. Based on the suggestions put forward by the Community Advisory Board members, the researcher may provide language (English/Mandarin/Cantonese) and culturally appropriate presentations, pamphlets or short videos to the Advisory Board members and their audiences as needed, to raise awareness that social support can be an important tool that assists in maintaining and

improving health among international students.

By conducting the knowledge translation activities indicated above, attention can be drawn to Chinese international students' health and experiences among researchers and stakeholders. It is hoped that more and more researchers and/or service providers will start to look at and act upon promoting the health of Chinese international students as well as other international students in Canada. Eventually, international students' health may be improved because of the raised attention and tailored health promotion actions on it.

### 6.4 Moving forward

The results of this study highlighted how differently people in different contexts perceived the same concept – social support. This poses a real challenge for contemporary health research and the type of social support or settlement services, which are widely supported by government and donor agencies—many of which are directed only towards achieving social support as described in the western literature as opposed to that perceived by specific audiences. Moreover, this study only explored the social support experiences among Chinese international students who had been in Canada for one to three years, without following up or comparing the possible differences in experiences of students by length of stay in Canada. However, as Cohen and Syme (1985) indicate, how social support and its importance are perceived can be significantly

different at different stages in life. A hope has been raised that future research can follow up and compare social support experiences at different time points as well as in different contexts (Williams et al., 2004).

As mentioned in the results section, some of the Chinese international students articulated the expectation of having an accessible social support network which had good health capability and health awareness, so that they could have beneficial interactions to build health capability mutually. Although this study only looked at Chinese international students, the researcher recognized the possibility that not being aware of the social determinants of health might not be an issue only among Chinese international students or new comers in Canada, but also something worth studying among other populations such as the Canadians (Niederdeppe et al., 2008). It can be valuable if future studies can look at the Canadian born population as well. From this perspective, health education may have the potential to help raise health awareness and promote health at a community level, in which way health capability as well as health literacy of the population could be improved as a whole (Nutbeam, 2000).

Furthermore, because ideas of what social support entails vary by culture, those working with international students need to find ways to bridge alternate meanings and potentially provide culturally appropriate supports. It is our hope that this study will provide academics and practitioners a starting point to develop culturally sensitive health education strategies for international students/future immigrants and raise awareness

among international students of how social support can be a vehicle for promoting health. As Nutbeam (2000) indicates, “If we are to achieve the ultimate goal that is reflected in that definition of health literacy— trying to promote greater independence and empowerment among the individuals and communities we work with—we will need to acknowledge and understand the political aspects to education, focused on overcoming structural barriers to health” (p. 267).

# Appendices

## Appendix A. Interview Protocol

The following list outlines the key areas and probing points that may be touched upon in the one-on-one unstructured interviews. However, because of the nature of unstructured interviews, the actual wording and order of the questions and probing will vary based on the actual situation of each interview.

1. Why do you decided to come to Canada (when the thought started) (whose idea it was)?
2. How would you say you general health level?
3. The participants' perception of health (happiness, stress)
4. The participants' perception of their ability to manage their own health
5. Opening question: Can you remember a time when having social support was very important to you after you came to Canada?
6. The participants' perception/definition of social support

   Probing:

   - The reason why they perceive social support as…
   - The changes of their perceptions of social support since they came to Canada
7. The source where the participants get social support during their stay in Canada

   Probing:

   - The frequency of getting social support from this source
   - Do they get social support from this source initiatively or passively? Do they find it comfortable/acceptable?
   - In what circumstance do they find the social support provided by this source useful/useless? Why?

8. The level of importance of social support to the participants when living their lives in Canada

   Probing:

   - Why is it important / unimportant?

9. The participants' experiences when dealing with health related issues during their stay in Canada
10. The participants' personal feelings when dealing with health related issues with/without social support
11. The participants' feelings of health capability change with/without social support
12. The participants' interpretation of the reasons why they have or lack of social support when dealing with health related issues
13. The nature of social support that is deemed relatively unhelpful/unacceptable by the participants when dealing with health related issues
14. The participants' anticipation of the social support before coming to Canada services at the UofA or in Canada (what social support did you hope to see before coming to Canada) (ask more than once at different time points)

    Ending question based on your above experience, What do you want and how you want them in terms of social support on Campus? What would been helpful

**Appendix B. Confidentiality Agreement**

## Confidentiality Agreement

This form may be used for individuals hired to conduct specific research tasks, e.g., recording or editing image or sound data, transcribing, interpreting, translating, entering data, destroying data.

Project title - Exploring Chinese International Students' Experiences of Using Social Support to Build Health Capability to Become Health Literate in a Canadian Context

I, _____, the transcriber (specific job description, e.g., interpreter/translator) have been hired to transcribe the interview audio recording(s) .

I agree to -

1. keep all the research information shared with me confidential by not discussing or sharing the research information in any form or format (e.g., disks, tapes, transcripts) with anyone other than the *Researcher(s)*.

2. keep all research information in any form or format (e.g., disks, tapes, transcripts) secure while it is in my possession.

3. return all research information in any form or format (e.g., disks, tapes, transcripts) to the *Researcher(s)* when I have completed the research tasks.

4. after consulting with the *Researcher(s),* erase or destroy all research information in any form or format regarding this research project that is not returnable to the *Researcher(s)* (e.g., information stored on computer hard drive).

5. other (specify).

_____ _____ _____

(Print Name) (Signature) (Date)

*Researcher(s)*

| Yajing Yang | | |
|---|---|---|
| (Print Name) | (Signature) | (Date) |

The plan for this study has been reviewed for its adherence to ethical guidelines and approved by Research Ethics Board 1at the University of Alberta. For questions regarding participant rights and ethical conduct of research, contact the Research Ethics Office at (780) 492-2615.

**Appendix C. Information Letter**

**EXPLORING CHINESE INTERNATIONAL STUDENTS' EXPERIENCES OF USING SOCIAL SUPPORT TO BUILD HEALTH CAPABILITY TO BECOME HEALTH LITERATE IN A CANADIAN CONTEXT**

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*Introduction*

You are being asked to participate in a study on Chinese international students' experience of getting and using social support to build health capability to become health literate. You have been asked to participate because: (1) your nationality is Chinese; (2) you are currently studying at the University of Alberta (UofA) on a valid study permit; (3) you have been in Canada for at least 1 year but no more than 3 years.

Before you agree to participate in this research study, it is important that you read and understand the following explanation of the study. It describes the purpose, procedures, benefits, and risks associated with the study. All research is voluntary. If you have questions after you read through this form, ask the researcher, a family member or a close friend. You should not sign this form until you are sure you understand everything on this form.

*Purpose of the Research*

I, Yajing Yang, am doing this research for my Master of Science graduate thesis in Health Promotion. The study aims to understand the experiences of you, as one of the Chinese international students at the UofA getting and using social support to build your health capability to become health literate, how you perceive social support as a tool to improve health capability, what nature of social support is deemed acceptable and effective by you, how social support affects your ability to cope with health related issues that you encountered or will encounter during your stay in Canada. Direct stakeholders from the Chinese Students and Scholars Association (CSSA), UofA International Support Services, UofA Wellness Services will be engaged in the study. The study result will provide valuable information to the stakeholders so that they can understand the actual social support needs of CISs at the UofA. Your decision to participate or not participate in this research study will have no effect on your CSSA membership, your study at the UofA, or the health services you receive.

*Procedures*

If you are interested in being a participant in our study, you will be asked to be involved in the following stages of the research.

1. In the first stage, a one-on-one, qualitative interview will be conducted with you in person. The interview will explore your experience of getting and using social support to deal with health related issues during your stay in Canada, how you define social support, the source where you get social support in Canada, your perceptions of what nature of social support is important to make you feel confident when dealing with health related issues, and how you evaluate and expect the support services provided by the UofA. The interview is expected to take approximately 1 hour, and will be audio recorded for accuracy. Further contact for clarification of the interview data may happen after the interview.
2. In the second stage, a transcription of your interview will be sent to you. After reading your responses, you will be given a chance to change your answers if desired. You may communicate any desired changes to your own answers in writing or verbally to the researchers. This round is expected to happen before winter term 2014 starts, and will take less than an hour of your time, and you will be given several days to complete this stage at your convenience. Any revisions made to original answers will be changed to create a final compilation of all participants' answers, again with no identifying information.
3. In the third stage, the data analysis result will be provided to you, so that you can gain valuable feedback from the knowledge generated during the study. This may take place in person or through the internet. However, you need to understand that the final result that you see have been joined together with others and abstracted to themes, so you may not see yourself directly in the data.

You may choose not to respond to any questions during the interview, to have any or all of your responses discarded after the interview, and/or to withdraw from the study at any time.

If any information is published from this study, any identifying information will be removed. At no point will your interview responses be connected with your name.

**In addition, we are asking your permission to use your age, you type of visa, and the number of years you have been in Canada to analyze data, and to record your name and contact information for further contact on the purpose of the study (e.g. clarification of interview data, provide feedback to you). However, any personal identifying information will be removed from your answers after the second stage is completed.**

*Potential Harms (Injury, Discomforts or Inconvenience):*
Some questions may make you feel uncomfortable. You can skip any question you don't want to answer. There is potential risk to you if the confidentiality of the information you give us were to be lost. To protect your confidentiality, your information will be kept on a numbered form that does not have your name or other identifying information. We will keep your name and other identifying information (such as age, visa) on a separate numbered form. All information you give us will be kept in a secure research office at the School of Public Health, and only authorized research staff will have access to the information.

*Potential Benefits:*
We cannot promise any benefits to you from your participation in this research process. Still, you will have a chance to let your voice heard by direct UofA support services to make a change for the life of yourself and the whole CIS population group at the UofA as well as in Canada. You may benefit from knowledge generated by this stakeholder engagement process.

*Confidentiality and Privacy:*
Confidentiality will be respected and no information that discloses your identity will be released or published without consent. We will discuss the data that you share with the UofA International Support Services, the UofA Wellness Services and the CSSA because they are the direct stakeholders that can provide support to you, but none of the data will be individually identifiable to you.

All information that identifies you will be kept confidential and stored and locked in the researcher's office at the School of Public Health that only authorized research staff will have access to. In addition, electronic files will be encrypted and stored in a secure computer and will be password protected. Access to data will only be granted to the members of the research team. It is important to understand that despite these protections being in place, experience in similar studies indicates that there is the risk of unintentional release of information. The research investigator will protect your records and keep all the information in your study file confidential to the greatest extent possible. The chance that this information will accidentally be given to someone else is small.

*Publication of Results:*

In the event that the results of this study are published or presented at conferences, seminars or other public forums, no individual information or identifying information will be released. Note that the investigators may choose to not publish or make use of the results of the study. According to the university policy, all research data should be kept for a minimum of five years following completion of the study. The interview data you provide will be securely stored for 5 years after the study is completed. However, your personal information will never be linked to the data under any circumstances.

*Reimbursement:*

If you agree to participate in the study, you will have 1/5 chance to win a $20 Tim Horton's gift card.

*Participation and Withdrawal:*

Participation in research is voluntary. If you choose not to participate, you will not be affected in any way. Your decision to participate or not participate in this research study will have no effect on your CSSA membership, your study at the UofA, or the health services you receive. If you would like to withdraw from the study, you can do so at any time before the second stage is completed (i.e. before winter term 2014 starts) by contacting us by phone or through email.

*Study Contact Information:*

If you have any questions about this research study, you may contact Yajing Yang, Centre for Health Promotion Studies, University of Alberta at 780-695-7618 or email yajing@ualberta.ca.

*Research Ethics Board Contact:*

If you have any questions or concerns regarding your rights as a participant, or how this study is being conducted, you may contact the Research Ethics Office at 780-492-2615. This office has no affiliation with the study investigators.

**Appendix D. Consent Form**

## Consent Form

Exploring Chinese International Students' Experiences of Using Social Support to Build Health Capability to Become Health Literate in a Canadian Context

Research Investigator(s): Yajing Yang, MSc (C)
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**To be completed by the research participant:**

| | Yes | No |
|---|---|---|
| Do you understand that you have been asked to be in a research study? | ☐ | ☐ |
| Have you read and received a copy of the attached Information Sheet? | ☐ | ☐ |
| Do you understand the benefits and risks involved in taking part in this research study? | ☐ | ☐ |
| Have you had an opportunity to ask questions and discuss this study? | ☐ | ☐ |
| Do you understand that you are free to withdraw from the study at any time before winter term 2014 starts without having to give a reason and without no consequence? | ☐ | ☐ |
| Has the issue of confidentiality been explained to you? | ☐ | ☐ |
| Do you understand who will have access to your information? | ☐ | ☐ |

I voluntarily agree to take part in this study: YES ☐ NO ☐

Signature of Research Participant

_____

(Printed Name)

_____

Date: _____

I believe that the person signing this form understands what is involved in the study and voluntarily agrees to participate.

Signature of Investigator or Designee_____
Date _____

**Appendix E. Interview Preparation**

Hi there,

Thank you very much for your support to this study! An introduction to the study has been explained to you in the information letter you received. Please do not hesitate to contact me should you have any questions. You do not need to print out the information letter or the consent form. I will have paper copies for us to sign on the day of you interview after going through the information letter with you and answering the questions you may have.

The interview will be approximately one hour long. You are expected to review the following the day before your interview:

A) Terminology:

1. Social support: Support from others that meets your needs and leads you to believe that you are cared for and loved
2. Health capability: Your ability or skills to engage with the external environment to manage your own health and achieve what you values

B) Potential questions in the interview:

1. Have you had any health related issues after coming to Canada? If yes, please recall how you managed them; if not, please recall how you maintain a healthy life style in daily life.
2. How health is related to your life and your future?
3. Before coming to Canada, what was your anticipation of the social support services you would gain after arriving in Canada?
4. How did you manage your health or approach a healthy lifestyle when you were back in China
5. The nature of social support that you think is relatively unhelpful/unacceptable when dealing with health related issues?
6. What do you want and how do you want them in terms of social support services on Campus?

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