

Healthy Campus Development: The International Student Experience

by

Robyn Dawn Wiebe  
BSN, University of British Columbia, 2008

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in the School of Nursing

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University of Victoria

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Supervisory Committee

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Dr. Marjorie MacDonald, Supervisor  
(School of Nursing)

Dr. Bernadette Pauly, Departmental Member  
(School of Nursing)

Dr. Claire Budgen, Departmental Member  
(School of Nursing)

## Abstract

### **Supervisory Committee**

Dr. Marjorie MacDonald, Supervisor  
(School of Nursing)

Dr. Bernadette Pauly, Departmental Member  
(School of Nursing)

Dr. Claire Budgen, Outside Member  
(School of Nursing)

### ABSTRACT

There is a breadth of literature on educating international students. The typical foci are on international students as economic contributors to foreign countries, or on challenges they face. Canadian educational institutions have the most rapidly growing population of international students, yet literature on how to create successful and health-promoting experiences and campus environments is lacking. The purpose of this study was to break new ground by using a mixed-method, secondary analysis approach guided by settings-based health promotion and Health Promoting University theories to explore and understand the health-related experience of international students. The secondary analysis drew on international student data generated from a CB-PAR guided study, *The VOICE Study 2012: Revisiting healthy campus development at UBC's Okanagan campus* (UBCO). The two research objectives were: (a) to identify and understand health-related experiences of international students on post-secondary campuses; and (b) recommend strategies for enhancing health-promoting change in campus communities, particularly UBCO, that take into account the international student health-related experience. Responses to 378 community dialogue questionnaires, transcripts from two focus groups (4 participants) and one interview were analyzed. Quantitative analysis was done using descriptive and frequency statistics, and Pearson's Chi-square test was performed to further understand the

statistical findings. Qualitative analysis was done to identify over-arching categories related to participants' health-related experiences. A synthesis of the qualitative and quantitative findings identified fourteen categories that encompassed the health-related experience of international students at UBCO, and are consistent with the principles of health promotion. The fourteen categories are policy/rules, cleanliness, campus environment, sense of community, orientation, discrimination, food, water, activity, transportation, services, substance use, expenses, and cheating. Of the fourteen categories, international students most frequently selected food, study spaces, and physical activity. Each category was discussed in detail and linked to relevant literature when possible. In the end, this Master's thesis reflects the health-related interests and experiences of international students, and suggests ways to create a university that promotes health and well-being.

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## **Chapter 1: Introduction**

### **Post-Secondary Education for International Students**

Educating international students in Canadian colleges and universities is not a new trend, but it has become increasingly prominent and important in North American universities. According to the Minister of International Trade report on the Canadian international education strategy, Canada is experiencing the fastest growing rate of international students compared to any other country (Foreign Affairs, Trade and Development Canada [FATDC], 2014). The rapid expansion of international students coming to Canada is experienced in all levels of education - elementary, middle school, high school, and post-secondary. However, educating international students on Canadian post-secondary campuses is the focus of this Master's thesis.

International students represent a large economic contribution to Canadian educational systems. The Association of Universities and Colleges of Canada (2009) claim that each year international students contribute \$6.5 billion to the Canadian economy and provide jobs for more than 83, 000 Canadians. Therefore, international students represent an important economic contribution, as well as social, cultural, and educational contributions. As of 2010, there were approximately 90, 000 international students studying full-time at Canadian universities (Xiaobin, DiPetta & Woloshyn, 2012). Of those 90, 000 international students, 809 are studying at the University of British Columbia's Okanagan campus (UBCO), the setting of this study (University of British Columbia [UBC], 2013/2014). These 809 international students represent many different countries around the world. However, the number of enrolled international students constantly changes as students enroll, graduate, transfer, or withdraw from UBCO. While the economic contribution of international students is important for Canada, it is also important to focus on the experience international students have on Canadian campuses (Crosby,

2010). In order to recruit and retain international students, positive experiences and opportunities are important. In their discussion of the benefits of a positive experience, Adrian-Taylor, Noels, and Tischler (2007) state, “Not only does the international student acquire an education abroad but both the student and the host country nationals benefit from the enriched learning and social environment that results from intercultural interaction” (p. 91). For instance, the FATDC (2014) argues that to maintain a desirable location for international students, Canada needs to create and maintain safe, welcoming, and accepting educational institutions that offer high quality education, research, and skill development. Furthermore, Adrian-Taylor et al (2007) argue that international students need to have a positive experience beyond academics.

Thus, it is not enough to open our doors to international students. We need to create campuses that welcome international students and provide full experiences and opportunities for skill, research, and educational development. This is especially true in a smaller campus setting like UBCO that is actively trying to recruit and retain international students, and may not have the same draw and resources as larger cities and institutions. In the end, it is a benefit for both the host country and international students to have a positive experience (Adrian-Taylor et al., 2007) because healthy and happy students are more likely to succeed in their academic pursuits (Doherty, Cawood, & Dooris, 2011).

### **Why do International Students Study Abroad?**

Why the phenomenon of studying abroad? People study abroad to experience new cultures, communities, languages, perspectives, and people (Sherry, Thomas & Chui, 2010). In turn, international students bring diversity, new perspectives, and financial revenue to their host countries. International students spend billions of dollars in Canada and help create thousands of jobs for Canadians (FATDC, 2014). Thus, in addition to benefiting the host country, educating

international students offers benefits to the international students. Guo and Chase (2011) claim that international students reported benefits and positive experiences studying abroad. These benefits may include exploration and understanding of different perspectives, a new community and culture, and academic and career opportunities. Despite these potential benefits, international students also face a number of challenges, such as isolation, depression, homesickness, and academic challenges. These challenges may not be different from those experienced by domestic students, but international student transitions to new countries, communities, and languages heighten the risk of facing the challenges listed above (Pilote & Benabdeljalil, 2007). Obviously, struggling with feelings of isolation, depression and homesickness influence the health and well-being of an individual. According to Zhang and Zhou (2010), international students face greater health-related challenges than domestic students. It is unfortunate that research on the experience, particularly the health-related experience, of international students in post-secondary campuses has been limited in spite of much research on factors that promote the success of international students (Adrian-Taylor et al., 2007). It is also unfortunate that the Canadian government focuses on international students as a source of income and economic stimulation without emphasizing the diverse perspectives and cultural knowledge that international students bring to Canada. We forget there is much to learn from international students studying in Canada, when the conversation revolving around international students is often focused on recruitment and retention, and economic benefits.

### **Health and Educating International Students**

The health-related experience of international students, not recruitment, is the focus of this study. While educating international students does provide a significant economic contribution, there are other issues that need to be addressed. In his paper on the international

student experience in Canadian education, Crosby (2010) argues that the focus on increasing international student recruitment in Canada often overshadows the issues that influence the experience of international students studying in our country. Similarly, Lee and Rice (2007) argue that we tend to dismiss the experience of international students once they have been enrolled in our universities. There is so much to gain when international students have a positive experience, and so many challenges and missed opportunities when they do not (Adrian-Taylor et al., 2007). A negative experience studying abroad personally affects international students, as well as their host countries.

A negative experience studying abroad not only affects a student's health and well-being, it has an impact on recruitment and retention, which is a focus of government initiatives (Association of Universities and Colleges of Canada [AUCC}, 2009; FATDC, 2014). For example, the federal government created an initiative, Edu-Canada, focused on attracting international students to Canada (AUCC, 2009). In 2009, the AUCC (2009) recommended that Edu-Canada invest twenty million dollars every year for five years to increase international student recruitment. The recruitment strategy proposed by AUCC recommended specific recruitment and marketing strategies, investment in scholarships and bursaries for international students, and support for students seeking study permits (AUCC, 2009). Promoting the health of international students or positive non-academic experiences was not mentioned.

The notion of a positive experience is related to the academic and non-academic experiences of students studying abroad (Adrian-Taylor et al., 2007). Khawaja and Stallman (2011) claim that many quantitative studies have explored the non-academic challenges that international students face, including discrimination, adjustment, culture shock, and psychological and psychosocial issues such as loneliness, homesickness, and depression.

According to Khawaja and Stallman (2011), these negative non-academic challenges international students face can influence their well-being as well as their academic success. Therefore, integrating health promotion into university life, culture, and policy is important.

The American College Health Association (ACHA) is one organization that is advocating for the integration of health promotion into university life, culture, and policies. The ACHA developed guidelines and standards of practice for health promotion in higher education settings, such as university campuses (2012). According to the ACHA Task Force on Health Promotion in Higher Education (2012), higher education institutions are communities that are responsible for promoting the health of the community members. The ACHA (2012) argues that the specific goal of health promotion in higher education institutions is to promote student success through the creation of socially and physically inclusive and supportive environments. As communities of their own, university campuses are therefore responsible for creating relationships and networks among people and the institutional systems to influence health. This guideline for health promotion in higher education institutions represents a social and ecological lens that addresses health from the individual to the community level (ACHA, 2012). In other words, the guideline focuses on health promotion from the level of personal health all the way to system-wide policies for health. According to the ACHA (2012), rigorous and inclusive health promotion and illness prevention strategies are key to creating health-promoting higher education institutions. These guidelines for health promotion practice in university settings help to set the stage for the inclusion of health as a priority for educating international students, but require an understanding of the definition of health.

## The Definition of Health

There are many different definitions of health. One of the most commonly used definitions of health comes from the World Health Organization (WHO). WHO (1946) defines health as, “A state of complete physical, mental and social well-being and not merely the absence of disease or infirmity” (p. 100). Though WHO’s definition of health is widely used, it has not been adapted since it was developed, and is not without critics. Üstün and Jakob (2005) claim that critics argue WHO’s definition of health is too rigid and is not realistic, and therefore it would be difficult for a person to be deemed “healthy”. WHO’s definition of health can also be viewed as idealistic. How do we use WHO’s idealistic definition of health for guidance? How do we promote health? According to the World Health Organization’s (WHO) Ottawa Charter for Health Promotion (1986), health requires peace, shelter, education, food, income, a stable ecosystem, sustainable resources, social justice and equity. As you can see, WHO’s definition of health promotion is not confined to the realm of illness, but includes a broad array of factors that influence our overall health and well-being, sometimes referred to as the social determinants of health. Therefore, health and well-being would be considered a state influenced by social, cultural, political, and personal factors (WHO, 1986). For this study, the Ottawa Charter for Health informs the broad definition of health I have used. In addition, WHO’s (1986) perspective of health fits with the notion of health used in VOICE 2012 (the larger study of which this is a part) to develop questions for the data collection tools. The data collection tools ask students to think about the notion of health as broadly as possible, including the personal, social, and cultural factors. Therefore, in addition to a broad definition of health, the perspectives of the participants largely define the meaning of health in this study. Participants define what health means to them by describing what they feel is healthy or not healthy about their experience at



UBCO. Health and health-related experiences may be positive or negative. It all depends upon what is pertinent to participants.

### **Significance of the Study**

Based on the information presented in the previous sections, I will explore international student health-related experiences in post-secondary campuses. International students are the population of interest, because North American universities are actively seeking to recruit and retain international students. There are benefits and issues for students and host countries/communities. However, we lack knowledge of how to properly address the diversity of issues international students face in our colleges and universities, and the literature on international student experiences has missed the opportunity to identify international student strengths (Moore & Popadiuk, 2011) or health related experiences in relation to their campus community. There are many qualitative and quantitative studies that explore and report on the health of international students, but quantitative studies often use a pre-determined definition and measurement of international student health experiences that then limit participant responses (Khawaja and Stallman, 2011). For instance, quantitative studies often limit responses because of the assumptions developed from previous knowledge, or responses are limited to a set of responses already coded (Khawaja & Stallman, 2011). Similarly, qualitative studies tend to focus on one specific health experience, often the mental health of international students, or qualitative methods are only used to identify issues or complement the findings from quantitative studies (Khawaja and Stallman, 2011). Additionally, the focus of the literature is seemingly on the negative health experiences of international students. As stated by Moore and Popadiuk (2011):

There is a paucity of research exploring the international student experience beyond the struggles reported in the literature, and research identifying the strengths and resources of

this population is lacking. The gap concerning international student strengths exists partly because of a focus on alleviating distress (p. 292).

Clearly it is important to identify and address the challenges that international students face in our post-secondary institutions, but should we not identify the strengths of international students and the factors that promote their health too? If we know what strengths international students have, and what factors promote their health, universities can implement health-promoting approaches that are effective and build on the capacity of international students.

This study is unique to the literature on international students and international student health-related experiences, because it seeks to understand positive and negative international student health-related experiences at a personal level, as well as in relation to their campus community. This study does not focus on *a priori* assumptions or one specific health issue; rather the aim is to understand all health-related experiences of international students. Therefore, one of the objectives of this study is to identify positive and negative health-related experiences of international students. This is lacking in the literature on educating international students, and speaks to the limited success post-secondary institutions have had creating effective and meaningful health promotion programs and approaches.

Although people may ask why health is important to a post-secondary institution, post-secondary institutions have an obligation to promote health (Cawood, Dooris, & Powell, 2010; Doherty et al., 2011; WHO, 1981; WHO, 1986; WHO, 1997; WHO, 1998). Health is a basic right, and health promotion is an approach for the development of health (WHO, 1997). Post-secondary institutions are just one of many possible settings for health promotion. Students undergo a great transition during their time in post-secondary institutions; they develop independence and often long lasting health-related behaviours (Budgen et al., 2011; Cawood et

al., 2010; Doherty et al., 2011). Post-secondary institutions must recognize that they foster the growth and development of students, and have the opportunity to facilitate healthy personal and societal development (WHO, 1998). In addition, post-secondary institutions have the capacity to create change in their communities and society at large (WHO, 1998). Therefore, they must invest in health in order to foster healthy individuals, campus communities, and societies (Cawood et al., 2010; WHO, 1998). How does a university or college integrate health and health promotion into the campus culture, lifestyle, and policies? The settings-based health promotion approach provides a theoretical framework for creating post-secondary institutions that value health.

### **Settings-Based Health Promotion**

Settings-based health promotion focuses on the promotion of health for people in the settings in which they live and work. As stated by WHO (1986), “Health is created and lived by people within the settings of their everyday life; where they learn, work, play and love” (p. 4). As a result, settings-based health promotion takes into account the personal, social, cultural, and political factors unique to each setting that influence the health of individuals and the community as a whole. A campus community is a perfect example of a setting where people learn, work, play, and love. Thus, it only makes sense that a post-secondary campus community would be seen as a vehicle for settings-based health promotion. Furthermore, international students are members of their campus communities, not separate entities. Therefore, the campus community setting has a direct influence on the health of international students.

Based on the theoretical framework of settings-based health promotion, WHO has actively been working to create university cultures that support health and well-being. In 1995, WHO’s initiative for Health Promoting Universities was created based on the principles of the

Ottawa Charter for Health Promotion and the settings-based health promotion framework.

According to Dooris, Dowding, Thompson and Wynne (1998), implementing a settings-based health promotion framework, “Requires explicit political commitment, enabling infrastructure, openness to innovation and institutional reform, broadly based ownership and effective leadership” (p. 13). In addition, there are four key processes to creating a healthy setting: secure political commitment, give visibility to health, make institutional changes, and create innovative actions for health (Dooris et al., 1998). The settings-based framework and key processes can be used and adapted to create a health-promoting approach to universities and institutions of higher education (Dooris et al., 1998). For instance, the Health Promoting University initiative aims to create strategies that foster health and health promotion in universities; the goal is to promote the health and well-being of students, and all other campus community members (WHO, 2014). In their paper on universities and health, Abercrombie, Gatrell, and Thomas (1998) state:

A university provides an environment in which students are not only formally educated but develop personally and socially at a significant time in their lives. This development has profound effects not only during their time in higher education but throughout the rest of their lives – in the choices they take, in their values and priorities and in their jobs, homes and communities. A health-promoting university should support healthy personal and social development – enabling students to discover and explore their potential, facilitating them in making healthy choices and encouraging them to explore and experiment safely (p. 35).

In other words, post-secondary institutions are responsible for creating health-promoting policies and environments that foster the development of healthy individuals and communities. For this

study I used the settings-based and Health Promoting University frameworks to help conceptualize a healthy setting and health-promoting university, and to interpret my findings.

The setting of this study, UBCO, has a strategic plan with strategies specific to international students. The UBC strategic plan is focused on intercultural understanding and international engagement, but health and well-being are not part of the picture (UBC, 2009). Instead, the goals are to increase the capacity and recognition of UBC within the global community, while also promoting diversity and intercultural learning within UBC (UBC, 2009). These are important goals for UBC, but once again the health-related experiences of international students attending the campus are omitted. UBCO does have an International Programs and Services (IPS) office, which offers international students support and advice through their peers and international student advisors. IPS offers a variety of services that help international students adapt to and navigate Canadian culture and the education system. IPS also provides a link to resources on campus and a space for building a sense of community with their peers. It is common for universities and colleges to offer at least some services to international students including visa, academic, and language assistance, help adapting to a new culture, and support navigating educational systems (Guo and Chase, 2011; Kenyon, Frohard-Dourlent, & Roth, 2012).

Despite the benefit of the support services listed previously, Lee and Rice (2007) argue that post-secondary institutions still leave international students completely responsible for their adjustment and adaptation to a new setting. So, the current support systems help to address some of the factors that influence health, but how do post-secondary institutions promote health? Student success is not determined merely by their academic abilities. As described by Moores and Popadiuk (2011), relationships with peers and faculty, supportive living environments, and

academic growth contribute to successful transitions for international students. Students need to feel healthy, have a sense of belonging, and be supported by their peers and the educational system to have a healthy and successful experience. This requires a campus community that has strategies and services to promote health and well-being. As such, a settings-based health promotion approach, integrating services and strategies that promote health into university plans for international student education, is incredibly important. In the next chapter, settings-based health promotion and Health Promoting Universities will be described in detail, because these two theoretical frameworks inform and guide this study.

### **Situating the Study**

This Master's thesis is a discrete or individual component of a larger community-based participatory action research (CB-PAR) study called, *The VOICE Study 2012: Revisiting healthy campus development at UBC's Okanagan campus* (VOICE 2012). The purposes of the VOICE 2012 study are to, "Translate knowledge from previous healthy campus development research, and to increase knowledge about diverse perspectives, when students and non-students are working together to create, renew and sustain health promoting change. (Non-students include faculty, administrators, staff and campus business people.)" (Budgen, 2012, p. 1).

The VOICE methodological framework guides VOICE 2012. The VOICE framework consists of three interconnected components: 1) community-based participatory action research (CB-PAR) methods, 2) setting-based health promotion strategies, and 3) student/non-student partnerships (Budgen, 2012). CB-PAR reflects research that is situated within a community and engages community members as co-researchers with the research team. Through research, education, and action, the CB-PAR process is used to engage community members in identifying priority interests and creating meaningful and relevant community change about issues important

to the community (Budgen, 2012). According to WHO (2014), setting-based health promotion approaches are action oriented, and take into account all aspects of a setting. In other words, setting-based health promotion approaches are holistic. In the end, the central principles of a healthy setting are equity, partnership, empowerment, and community participation (WHO, 2014). Additionally, VOICE 2012 aims to have students and non-students collaborate as co-researchers in a healthy campus community development process (Budgen, 2012). In this case, healthy campus development is composed of cyclical phases of engagement, community assessment, issue identification, planning and taking action, reflecting, renewing, and sustaining (Budgen, 2012).

Data for VOICE 2012 is collected throughout the study process to support research activities, project work on interests identified by the community, and to ensure research objectives are adequately explored (Budgen, 2012). The development of tools and data collection methods has been a collaborative exercise among research team members, and the methods and tools continue to be collaboratively refined as the project progresses; the goal is to ensure that the most appropriate tool or method is used for each research activity (Budgen, 2012). Altogether, several data collection methods have been used including: photovoice, community dialogue questionnaires, mapping, policy assessments, field notes, individual interviews, and group interviews (focus groups and talking circles). For this Master's thesis, a secondary analysis was undertaken on VOICE 2012 data that is specific to international students. The data analyzed included community dialogue questionnaires, group and individual interviews, for the purpose of identifying the health-related experiences of international students at UBCO.

### **Research Purpose and Objectives**

As previously stated, this Master's thesis is a discrete or individual component of VOICE 2012 that created knowledge about international student health-related experiences in post-secondary education. Research on the experience and 'success' of international students in Canadian universities has been extremely limited (Pilote et al., 2007). While other research focuses on international student success and experiences because of recruitment and retention issues, this study uniquely aims to explore and identify the international student experience related to health within a campus community setting. Because this study is a component of VOICE 2012, I developed recommendations and new knowledge about international student health-related experiences to feed back into the larger study. My intention was to translate knowledge that will help create relevant and meaningful health-promoting change at UBCO, to benefit the overall health of international students and the campus community. There are two research objectives for this Master's thesis.

1. To identify and understand health-related experiences of international students on post-secondary campuses.
2. Recommend strategies for enhancing health-promoting change in campus communities, particularly UBCO, that take into account the international student health-related experience.

In this next section, I describe my role as a researcher. This description is important because I am a research team member with VOICE 2012, in addition to being the principal investigator for this thesis. My aim is to explain my role with the VOICE 2012 study, and differentiate that role from my position as the researcher for this study.



### **Position of the Researcher**

I was the Research Coordinator for VOICE 2012 from May 2012 to August 2013.

Though I am no longer the Research Coordinator, I continue to be part of the core research team as the study has progressed. In an attempt to be transparent about my role in the larger study and for this Master's thesis, I will describe my involvement in VOICE 2012 to date. As the Research Coordinator for VOICE 2012, I was involved in the planning and design of the study, as well as data collection; I took a lead in recruiting and collecting data from all study participants, including international students. Participants for VOICE 2012 were recruited using several strategies. Posters were circulated around campus in September 2012 detailing the study and contact information. Posters were placed in areas where the student sub-groups of specific interest tend to locate. Also, we invited non-students who work in these areas to draw the co-researcher opportunity to the attention of these students. Information about the study was also made available through word-of-mouth strategies, and at "kick-off" celebrations and orientations for both students and non-students. Similar invitational strategies, such as word-of-mouth, posters, and classroom visits were used later in the study as recruitment for photovoice, community dialogue questionnaires, and group (focus groups and talking circles) and individual interviews.

This Master's level thesis is a secondary use of VOICE 2012 international student data generated from the data collection strategies listed above. Data collected from study participants who self-identified as international students were analyzed. This analysis and interpretation of the international student data from VOICE 2012 is for the purposes of this thesis. However, the findings from this study will also inform VOICE 2012, because of the similarity in research objectives. VOICE 2012 is designed to study the health-related experiences of all campus

community members, but specifically examines the diverse perspectives of international students, Aboriginal students, graduate students, student athletes, and members of the LGBTQ community. In this Master's thesis I only seek to identify the health-related experiences of international students, and do so in as much depth as possible. Because my study is dedicated to one student group and not all people at UBCO, I have the time and resources to provide a more detailed and in-depth analysis of the international student data than is the case in the larger VOICE 2012 study. The data will include numbers, pictures, and words, because data were analyzed from photovoice results, community dialogue questionnaires, and individual and group interviews. The data collection methods and sources of data will be described in detail in chapter three.

## **Chapter 2: Literature Review**

### **Introduction**

In this chapter, I will do three things: (a) review theoretical frameworks of settings-based health promotion and Health Promoting Universities, because they represent a theoretical basis for creating post-secondary institutions that protect and promote health; (b) review the available literature on international students studying abroad in post-secondary institutions; and (c) review what is known about the experience of international students studying at the University of British Columbia's Okanagan campus (UBCO). Finally, I will further describe the gap in the existing literature, which is a lack of research on the health-related experiences of international students, especially from a health promotion or settings-based health promotion perspective.

### **Settings-Based Health Promotion**

In their white paper on settings-based health promotion, Whitelaw, Baxendale, Bryce, MacHardy, Young and Whitney (2001) state, "The notion of health promotion operating in a context beyond the individual is one that has found increasing popularity over the years" (p. 339). In other words, health promotion is no longer concerned merely with individuals, but with communities and the settings in which we live, work, and play (WHO, 1981; WHO, 1986). Certainly, since the 1980's and the development of the Ottawa Charter for Health Promotion (WHO, 1986), health promotion approaches that focus on health within the context of any given setting have gained popularity and influenced public health and population health approaches to move beyond individual lifestyle interventions to consider the context in which individuals and communities live (MacDonald & Green, 2001; Whitelaw et al., 2001).

According to WHO (1981), health begins and ends where we live, work, learn, and play. Our surroundings impact our health, both positively and negatively. What strengths within a

setting can be mobilized, and what needs should be addressed? Approaches to health promotion should consider the unique strengths and needs of each setting (WHO, 1986). Furthermore, each setting has unique social, cultural, political, and economic factors that influence the health of individuals and the community (WHO, 1986). Settings-based health promotion takes into account all the aforementioned factors that affect health, and adapts approaches to create the most effective and relevant health promotion strategies for the unique context of each setting (Doherty et al., 2011; Shareck et al., 2013; WHO, 1986).

The settings-based health promotion theoretical framework views the context in which people live, work, learn, and play as a crucial component of the health of individuals and communities (Doherty et al., 2011). As Dooris and Doherty (2010) explain, settings-based health promotion approaches consider setting as a determinant of health, and not just a place to carry out health promotion strategies. In their paper, Shareck et al. (2013) summarize settings-based health promotion into three components:

1. Settings-based health promotion is grounded in an ecological view that considers a multiplicity of factors that determine health (social, cultural, physical, and political).
2. Settings are considered complex and dynamic systems made up of interconnected people and structures.
3. Settings-based health promotion approaches work to change the setting itself as well as the people.

Health can be improved in many different settings, including post-secondary institutions like universities (Budgen et al., 2011; Doherty et al., 2011). Though post-secondary institutions have had success in improving the health of campus communities through settings-based health promotion (Budgen et al., 2011), this approach is not commonly taken up and applied (Doherty

et al., 2011). Cawood et al. (2011) and Doherty et al. (2011) claim that post-secondary institutions often lack the leadership or administrative desire to apply a healthy settings-based approach, even though they have great potential for promoting the health of campus community members and broader society. Students go through a time of great transition while at college or university and develop lasting health-related behaviours (Budgen et al., 2011; Doherty et al., 2011). As such, a settings-based health promotion approach can protect and promote the health of students, as well as the other campus community members by integrating a health promotion approach into the campus culture and policies, which in turn can influence broader society (Doherty et al., 2011; Tsouros et al., 1998).

How can a settings-based health promotion approach be applied to a university or other post-secondary institution? Building from the Ottawa Charter for Health Promotion and settings-based health promotion theory, the theoretical framework, Health Promoting Universities (HPU), was created (Doherty et al., 2011; WHO, 2012). In the next section, I will describe the Health Promoting University movement.

### **Health Promoting Universities**

In 1995, HPU was launched at the University of Central Lancashire and continues to this day (WHO, 2012). The HPU initiative recognizes that universities and other post-secondary institutions have the power and responsibility to support the health of individuals and the whole campus community, and the potential to serve as a leader in creating health-promoting societal change (Budgen et al., 2011; Cawood et al., 2010; Doherty & Dooris, 2006). Universities and other post-secondary institutions are powerful resources for the people who live, work, and learn within them, and for the communities in which they are situated (Tsouros, 1998).

In other words, Dooris and Doherty (2010) call for, “A broader higher education mandate

that serves the dual purpose of enhancing both personal and collective well-being” (p. 14).

Dooris and Doherty (2010) are acknowledging that universities have the responsibility to be leaders in health promotion for campus communities and society at large.

The aims of HPU are to integrate health-promoting structures and policies within university culture that create campus environments that support the health of students, staff, faculty, administrators, as well as the broader society (WHO, 2012). According to Tsouros (1998), “It means understanding and dealing with health in a different way and developing an action framework that blends such factors as empowerment, dialogue, choice and participation with goals for equity, sustainability and health-conducive living, working and learning environments” (p. 11). As such, HPUs are guided by the principles of inclusion, diversity, respect, equity, participation, collaboration, and empowerment (ACHA, 2012; Dooris & Doherty et al., 2010; WHO, 2012). In this way, universities and other post-secondary institutions can become leaders in settings-based health promotion (Tsouros, 1998).

Post-secondary institutions are faced, however, with barriers to becoming HPUs. There are structural constraints, limited resources (personnel and finance), competing political agendas, and the tradition of post-secondary institutions not to focus on integration of health as a strategic goal (Dooris & Doherty, 2010; WHO, 1998). These barriers do not have to prevent post-secondary institutions from becoming HPUs. Universities can creatively mobilize existing resources (Doherty et al., 2011). That is why it is so important for universities to engage students and the leadership to take action and participate in the HPU process. The process of securing political commitment described by Dooris et al. (1998) is key to gaining the support of university leaders and decision-makers. As described by Dooris et al. (1998), securing political commitment from university leaders provides legitimacy, guidance, and resources for the

initiative.

In summary, universities that buy into the HPU movement are making investments into citizens and our societies (Tsouros, 1998). Post-secondary institutions have the capacity to positively influence the health of students, the whole campus community, and society through health-promoting institutional practice (Dooris & Doherty, 2010). If for no other reason, post-secondary institutions should take up an HPU approach because there is recognition that integrating health into university culture and policies leads to greater student recruitment and retention (Dooris & Doherty, 2010), which are primary goals of Canadian colleges and universities. In the following sections I will discuss the current body of literature on health and educating international students, as well as describe what is known about international students being educated at the University of British Columbia's Vancouver and Okanagan campuses.

### **International Students Studying Abroad in Post-Secondary Institutions**

Who are international students? International students can be defined as any student of a foreign nationality studying in a country outside of their origin (Abdullah, Abd Aziz, & Mohd Ibrahim, 2014). Educating international students abroad is a worldwide phenomenon that is only increasing. Globally, the competition among countries and post-secondary institutions to attract international students is fierce (FATDC, 2014). Based on reports from the AUCC (2009) and FATDC (2014), educating international students is an excellent source of revenue. Not only do international students contribute economically by paying higher tuition fees, they spend money in our countries, and create jobs for citizens (AUCC, 2009; FATDC, 2014). The economic contribution that comes from educating international students is a benefit for countries, but also creates a perspective of international students as commodities. In reviewing Canadian reports on attracting international students, it is clear that the focus is on the economic benefits of educating

international students (Crosby, 2010). This is unfortunate because international students contribute so much more than money to our communities and educational institutions. They bring unique and diverse knowledge, perspectives, and experiences from which we can learn and help us broaden our ways of viewing the world and what we consider knowledge. Furthermore, welcoming international students into our educational institutions helps to create global networks and relationships that broaden and challenge our taken-for-granted approach to education and research.

When reviewing the vast body of literature on educating international students, the focus is not merely on international students as economic commodities. There is also a focus on the challenges they face. In their review of 497 journal articles related to international students, Abdullah et al. (2014), found that the literature focuses on consistent challenges that international students face on campuses. The most common challenges are navigating new cultures (Cemalcilar & Falbo, 2008; Chavajay & Skowronek, 2008; Guo & Chase, 2011), languages (Crosby, 2010; de Araujo, 2011; Guo & Chase, 2011; Kenyon et al., 2012; Khawaja & Stallman, 2011), discrimination (Brown & Jones, 2013; Chavajay & Skowronek, 2008; Crosby, 2010), educational systems (Cemacilar & Falbo, 2008; Guo & Chase, 2011), building relationships and a sense of community (Khawaja & Stallman, 2011), and physical and psychological health issues (Cemalcilar & Falbo, 2008; Khawaja & Stallman, 2011; Moores & Popadiuk, 2011). Although some of these challenges are not unique to international students they sometimes face the unique challenges of navigating a less familiar language and a new culture (de Araujo, 2011). Overall, the challenges international students face studying abroad in a new culture and environment affect their health and academic success (Cemalcilar & Falbo, 2008; Chavajay & Skowronek, 2008). Challenging or negative experiences and environments put



international students at risk for personal and academic issues, but as we know from the ACHA (2012) guidelines for creating health-promoting post-secondary institutions, supportive learning environments help create successful students both personally and academically. As a result, Abdullah et al. (2014) conclude that the responsibility for dealing with the common challenges that international students face lies with the educational institution. Abdullah et al.'s (2014) conclusion is consistent with settings-based health promotion and HPU approaches, because those theories put the onus on post-secondary institutions to take responsibility for supporting student health and success.

Still, other researchers argue that post-secondary institutions leave international students responsible for facing the challenges of studying abroad (Crosby, 2010; Gu, Schweisfurth & Day, 2010; Lee, 2010). In fact, Gu et al. (2010) found in their study of international students studying at four higher educational institutions in the United Kingdom that they very successfully managed and grew from facing the challenges of studying abroad. However, the question remains, given the continuous push to attract international students to post-secondary institutions in Canada. Are universities prepared to take on their responsibility to provide the support that students need, and in this case international students, to be healthy and successful in these new and challenging environments?

### **International Students, Health, and Campus Communities**

The focus on economic contributions of international students, and on the challenges that these students face, pervades the literature. The majority of articles focus on the challenges of navigating new cultures, environments, and languages; facing discrimination and isolation; learning within new educational systems; building relationships and a sense of community; and managing physical and psychological health issues. As a result of the persistent focus on the

negative aspects of studying abroad, there are gaps in the literature. The overall experience of international students is often overlooked (Cemalcilar & Falbo, 2008; Chavajay & Skowronek, 2008; Crosby, 2010). Moores and Popadiuk (2011) argue that the positive aspects of their experience have largely been ignored to focus on the challenges that international students face in order to identify and address the issues. de Araujo (2011) identified six factors key to the adjustment of international students to a new setting including a lack of language proficiency and social support. Obviously, this research is incredibly important. However, we could also learn from the strengths of international students and positive aspects of their experiences.

A settings-based health promotion framework suggests that positive experiences, the strengths of international students, and the setting itself impact health. The strengths of students and the settings in which they live and study can be mobilized to contribute to creating a health-promoting environment. For instance, Khawaja and Stallman (2012) claim, “While universities often provide support services for international students, the personal stories of international students, identifying challenges and strategies to overcome them can be helpful to other international students” (p. 203). In other words, relevant and effective health-promoting strategies can be learned from the experiences of other international students (Khawaja & Stallman, 2012).

Despite a growing body of literature on the experiences of international students (Abdullah et al., 2014; Gu et al., 2010), it remains very limited. In addition, there are almost no recommendations in the literature for decision-makers in post-secondary institutions on creating a campus community that is both academic and health-promoting. There is a body of literature on settings-based health promotion and HPU, but these theoretical frameworks are rarely applied to post-secondary institutions. The research tends to have narrow foci (Gu et al., 2010). What we

need to know is what capacity and strengths international students have, and what kind of day-to-day supports they need, just like domestic students (Madgett & Bélanger, 2008; Moores & Popadiuk, 2011). Settings-based health promotion takes into account all the factors that affect health, both positive and negative, and individual and campus-wide, in order to create the most effective and meaningful health promotion strategies based on the context of each academic setting (Doherty et al., 2011; Shareck et al., 2013; WHO, 1986).

### **Educating International Students at the University of British Columbia's Campuses**

The Canadian government has put considerable time, effort, and funding into plans for attracting international students (AUCC, 2009; FATDC, 2014; Kenyon et al., 2012). According to the FATDC (2014), some of the countries most successful at attracting international students are the United States, United Kingdom, Australia, Germany, and France. Though each of these countries has attracted more international students in the past, Canada has the fastest growing rate of enrollment than any other country (FATDC, 2014). This means that each year Canada attracts more and more international students to study at our colleges and universities. In 2012, British Columbia had 68,321 long-term international students enrolled at all levels of study, not only at the post-secondary level. Even so, that number is quite staggering. In Canada, only Ontario had more long-term international students enrolled in their educational institutions. At the University of British Columbia's Vancouver campus (UBCV) and UBCO there are 58,284 students (UBC, 2013/2014). Between the two UBC campuses, there are 10,181 international students from over 149 countries (UBC, 2013/2014). For the 2013/2014 academic year, 19% of the students at UBCV are international students (n=9,372). According to UBC (2013/2014), this is a 2% increase from the 2012/2013 academic year. On the other hand, only 9.6% of students at UBCO are international students (n=809). Though UBCO has a smaller percentage of

international students, the numbers show a 16% increase from the previous academic year (UBC, 2013/2014). This increase shows the growing number of international students attending UBCO.

Over the years, the UBC-wide strategic plans have highlighted the University's desire to attract more international students, develop international learning opportunities, and to create better support services for international students (Kenyon et al., 2012). The current UBC strategic plan, *Place and Promise: The UBC Plan*, outlines strategies for intercultural understanding and international engagement, but the experiences and health-related experiences of international students are not part of the picture (UBC, 2009). Once again, the goals are to increase the capacity and recognition of UBC within the global community, while promoting diversity and intercultural learning within UBC campuses (UBC, 2009). These are important goals for UBC, but again internationalization and economic growth are the foci. The consequence of neglecting the actual experiences of international students is that they are put at risk for poor health and limited academic success.

In their study of the internationalization of higher education in Canada, Guo and Chase (2011) found that international students who felt they had a supportive learning community were helped to transition to a new country, culture, and educational system. Also, Moores and Popadiuk (2011) claim that experiencing the difference between home and host countries can be traumatic for international students, and can lead to psychological difficulties. On the other hand, international students that have a positive and satisfying experience abroad are likely to experience lower levels of stress, and fewer mental or physical health issues. For instance, Moores et al (2011) state, "Participants noted that "getting involved" and "staying busy" provided numerous benefits including a way to relax, meet new people, explore the environment, learn new skills, fill free time, and avoid loneliness" (p. 297). It seems that international students

that find community, acceptance, and engage in non-academic activities experience healthier adjustments to a new university life.

Nonetheless, Guo and Chase (2011) found in their study at UBCV that international students generally reported having a very positive experience. Participants reported sharing a wealth of cultural and educational knowledge with their peers and vice versa (Guo & Chase, 2011). However, in the same study, many students described the common challenges of navigating a new culture, building relationships, and dealing with psychological issues (Guo & Chase, 2011). Altogether, Khawaja and Stallman (2012) summarize the issue well: universities promote international relationships, work to attract international students, and provide support services for international students, but often struggle to identify the strengths of international students and strategies for addressing the unique challenges they face.

The gap in the literature that this Master's thesis addresses is the voice of international students on their experiences in our post-secondary education systems (Abdullah et al., 2014). This study creates and facilitates an opportunity for international students at UBCO to assess and identify their own health-related experiences within our post-secondary educational system, both positive and negative. International students have the opportunity to define what a healthy experience is, what a health-promoting campus community is, and what change they want to see at UBCO to make it a HPU for international students. This may be one of the first studies to explore the health-related experiences of international students in their own words and as engaged community members within their educational setting. Furthermore, this study will offer recommendations for enhancing health-promoting change in campus communities, particularly UBCO, drawing on settings-based health promotion and HPU theories, and directed by the self-reported health-related experiences of international students. This approach to research on

international student experiences is summarized well by Gu et al. (2010) when they say that it is the stories of international students, as well as their interaction with the educational system and campus community environment, that influences their experiences.

### **Summary**

There is a broad range of literature on educating international students. The typical focus is on international students as commodities or economic contributors to foreign countries. Canadian educational institutions have the most rapidly growing population of international students, yet literature on how to create successful and health-promoting experiences and campus environments is greatly lacking. This information is important because health-promoting academic environments help students become healthy and successful personally and academically. Focusing on a field of study for which there is little research is one of this study's greatest strengths. It will address this gap in the literature and help break new ground (Dooris & Doherty, 2010).

## **Chapter 3: Research Methodology**

### **Introduction**

In this chapter I will describe the research design for this study. The first section will provide a detailed overview and discussion of the research process, which drew on data from an overarching participatory action research process called Community-Based Participatory Action Research (CB-PAR). This is a secondary analysis of mixed methods data from VOICE 2012. Second, I will describe the data collection methods used and the various sources of data that were gathered. Next, the setting of the study and the characteristics of the study participants will be presented. Then, the corresponding qualitative and quantitative analytical processes will be discussed. Finally, I will conclude with a discussion about the ethical considerations when researching human subjects, and the impact these principles have on this Master's thesis.

### **Research Process**

For this Master's thesis I used a mixed methods approach, which is the complementary implementation of both qualitative and quantitative methods. I conducted a secondary analysis of the international student data from VOICE 2012. CB-PAR is the overarching action research process that guides VOICE 2012. In this first section I will describe CB-PAR and how it guides VOICE 2012 and the data used in this study.

### **Community-Based Participatory Action Research (CB-PAR)**

CB-PAR is referred to as a process or orientation to research (Budgen et al., 2011; D'Alonzo, 2010; Minkler & Wallerstein, 2010), and encompasses approaches to research like action research and participatory action research (Minkler & Wallerstein, 2010). Also, Shareck et al. (2013) claim that CB-PAR links well with a settings-based health promotion approach, because involvement of the setting and community is crucial to the CB-PAR process; capturing

the imagination, attention, trust, and participation of community members is crucial to a settings-based approach (Dooris et al., 1998). The CB-PAR approach values the knowledge and power of community members, community and individual capacity-building, emancipation, and societal change (D'Alonzo, 2010; Minkler & Wallerstein, 2010). Using CB-PAR as a framework for research supports a community-based, emancipatory approach to address and create change based on community-identified complex health and social issues within a community (D'Alonzo, 2010; Minkler & Wallerstein, 2010). Also, CB-PAR is meant to create a balance between research and action (D'Alonzo, 2010), which in turn offers a tangible outcome for the community of interest. In addition to the overarching goal of emancipatory change, the aims of the CB-PAR process are to integrate research, education, and action. It is the ongoing and iterative process of research, education, and action that facilitates participatory and emancipatory change.

Unlike traditional research approaches, one of the main goals of CB-PAR is to shift the power from researchers to community members. Community members direct the research process, the knowledge of community members is valued, and community members are considered experts. Therefore as D'Alonzo (2010) explains, CB-PAR depends on the collaboration of community members and researchers working as co-researchers. The research team facilitates a dynamic and cyclical process to engage community members as co-researchers in identifying health and social issues important to themselves and the community. Once the issue(s) are identified, the co-researchers (researchers and community members) plan, take action, and reflect on the changes made. However, the community must direct the social action and change according to their wishes and not those of the research team (D'Alonzo). If the



research is not directed by the community, the approach is no longer community-based, community-driven, or emancipatory, which are key values of the CB-PAR process.

CB-PAR is a process that uses various methods rather than one distinct method. The CB-PAR approach allows co-researchers to continually develop and evaluate research methods based on the aims of the study (Budgen et al., 2011). In other words, the CB-PAR process allows the researcher to tailor the research methods to the community and issues of interest in a dynamic way. Consequently, qualitative and quantitative research methods can be used collaboratively within a CB-PAR approach (D'Alonzo, 2010). For instance, Chavajay and Skowronek (2008) state that using quantitative and qualitative methods in a complimentary way, "...is essential in examining and advancing understanding about complex and dynamic processes involved in acculturating to living and studying in a new cultural environment in the USA or elsewhere" (p. 834). They are referring to research on international student experiences studying abroad. In this study, qualitative and quantitative data collection research methods and analyses are applied to capture a rich and broad array of the complex data related to international student health-related experiences.

As the reader you may be wondering whether this study represents a CB-PAR process. This study is a discrete component of VOICE 2012, which is a study guided by CB-PAR principles. One component of the CB-PAR process used by VOICE 2012 is the action research cycle. Action research is a cyclical and ongoing process of engagement, assessment, issue identification, partnering and planning, action, and reflection. In the engagement phase, researchers come together with community members to engage them in the research process. This involves building trust and relationships with the community of interest. In the assessment phase, community members and researchers work as co-researchers to assess the issues of

importance to the community. Once again, this phase should be community-driven. The researcher must be interested in what the community is interested in addressing. Once issue(s) are identified through community-driven assessments, researchers and community members partner and plan for action. Action is taken in response to the issues identified by community co-researchers. As action is being taken, it is reflected upon and evaluated. Have the voices of the community been heard? Are the actions taken driven by community interests? Who holds the power, and who is creating the change? How has that change been received by the community? Do changes to the process need to be made? This process continues on as new issues arise or until community members are satisfied.

As already described, this Master's thesis drew on international student data from VOICE 2012 for a secondary purpose: to identify and understand the health-related experiences of international students at UBCO. Following a CB-PAR approach and the action research cycle the goals are to identify the health-related experiences of international students, and to develop recommendations based on the international student experiences for the larger CB-PAR study of VOICE 2012. Consequently, this study involves a few components of the action research cycle including community engagement, issue identification, and reflection. Data collection had already occurred for VOICE 2012, but as needed I engaged international students (got their consent for the use of their data) in my research and analyzed the international student data to identify health-related experiences at UBCO. I did not plan, partner, or take action as part of this Master's thesis, but I participated in the action research cycle by making recommendations for action/change, based on my reflection on the findings, which are directed by the responses of the participants.

## Secondary Analysis

Secondary analysis uses data gathered from a previous study, in this case VOICE 2012, to answer new research questions or test new hypotheses (Connelly, 2010). The researcher may do a secondary analysis of data from their previous research or on data collected by others (Connelly, 2010). In addition, secondary analysis can be done on qualitative and quantitative data. For this Master's thesis, I did a secondary analysis using qualitative and quantitative data gathered using mixed methods in the original VOICE 2012 study.

There are strengths and limitations to doing a secondary analysis. Savings of time and cost are two of the main strengths of a secondary analysis (Connelly, 2010; Doolan & Froelich, 2009). As a student with limited resources, secondary analysis provided the opportunity to analyze part of a larger set of data that would be incredibly challenging to collect on my own. Another strength of secondary analysis for this thesis is that I am familiar with the data and collection methods because of my research coordination with VOICE 2012. Connelly (2010) and Doolan and Froelicher (2009) advocate that researchers make the most of the data they have collected to limit the burden on potential research participants. By using the existing international student data I helped collect for VOICE 2012, I avoided asking potential participants to give more time.

There are several limitations to a secondary analysis. First, the researcher is confined by the original study design (Doolan & Forelich, 2009). For example, the data used for a secondary analysis reflects the research question or hypothesis from the original study design (Connelly, 2010). Therefore, the new researcher must be sure that the new research question is appropriate for the data being used, because no new data can be collected. In addition, the data used for a secondary analysis may be dependent on time and context, which may affect the new research

question or hypothesis (Connelly, 2010). I have avoided a couple of the major limitations of a secondary analysis, because my research objectives are consistent with the original study design from VOICE 2012. Also, I am analyzing the data in a timely manner, in hopes that it still reflects the experience of the international student participants currently living and learning at UBCO.

### **Data Collection Methods**

In this section, I will provide a detailed overview of the mixed method approach used for data collection in VOICE 2012, including photovoice, community dialogue questionnaires, and interviews (group and individual). It is important to note that I was unable to include photovoice data in this study as originally planned, yet it is important to describe the method, because photovoice informed the creation of another data collection tool, the community dialogue questionnaire.

### **Mixed Methods**

There are a variety of mixed method approaches to research. For example, a mixed method approach to research may combine one complete method with another supplementary method (Mayan, 2009). Also, mixed methods can be a combination of qualitative and quantitative methods, a qualitative method with another qualitative method, or a quantitative method with another quantitative method (Mayan, 2009). VOICE 2012 is primarily a qualitative study that uses supplementary quantitative data collection. VOICE 2012 uses multiple qualitative data collection methods including: photovoice, open-ended questions from a community dialogue questionnaire, and interviews. In addition, VOICE 2012 collected quantitative data to produce frequencies and demographic statistics from the community dialogue questionnaire. Therefore, this Master's thesis employs a mixed method approach that uses a combination of qualitative and quantitative data from VOICE 2012.

Unlike VOICE 2012, I did not have consent to use all the qualitative data that were collected. Therefore, the qualitative data I have to analyze is somewhat more limited than the larger study. Thus, I have emphasized the quantitative data analysis by creating crosstabs and employing a non-parametric test, Pearson's Chi-Square test. In addition, I have examined the qualitative and quantitative data in relation to relevant literature thus creating a robust collection of results.

### **Photovoice**

Photovoice is a method often associated with CB-PAR. It is a photographic technique used to capture the lived experience of people, and identify themes of importance in communities (Wang & Burris, 1992). There are three main goals of photovoice. First, photovoice is used to record and reflect on the strengths and concerns of communities, through community member participants and researchers collaborating as co-researchers. Second, photovoice promotes critical discussion of key themes among co-researchers, particularly community participants, while being facilitated by the research team. Finally, the photovoice method is used to connect community members with decision-makers, in order to create an opportunity for dialogue and action around community-identified issues.

In September 2012, thirty student co-researchers participated in photovoice for VOICE 2012. Student co-researchers went out with digital cameras and took pictures of their day-to-day experience on campus, particularly thinking about aspects of the campus that do or do not promote health and well-being. After student co-researchers took photographs and each selected five pictures that best represented their experience at UBCO, the research team facilitated a series of critical discussions to analyze the photographs for areas of interest. The student co-researchers that participated in photovoice participated in the critical discussions.

Student co-researchers presented their photographs first in small groups to make the amount of data to review more manageable, and to allow students to dialogue with their peers. For example, students met with their classmates or with students from the sub-group with which they identified (e.g., international students or Aboriginal students). Reviewing and discussing their photographs allowed students to identify preliminary areas of interest. Next, in two large groups the student co-researchers presented their more refined data set, and once again reviewed and discussed the photographs and areas of interest. Through this process of analysis, the co-researchers came to consensus during the large group discussions on a series of areas of interest.

In the end, nineteen different areas of interest were identified (i.e., physical activity, signage, unique spaces, landscaped environment, natural environment, smoking, trails/paths, parking, bicycles, buses, substance misuse, recycling/compost/garbage, study spaces, food, safety, water kiosks, school spirit, gender sensitivity, cultural sensitivity). In VOICE 2012 and this study an area of interest comprises an issue that has healthy and/or unhealthy, aspects and that needs to be improved, increased or decreased. The areas of interest identified through photovoice informed the development of the community dialogue questionnaire. These nineteen areas of interest were used to develop a ranking question. The ranking question listed all nineteen options, as well as an option for selecting and describing “other” areas of interest. In cases where the research team felt the area of interest was vague a description was offered. For instance, the meaning of the term “unique spaces” might not have been clear to respondents, so examples of unique spaces were provided on the questionnaire. People who participated in the community dialogue questionnaire were asked to pick three of the nineteen areas of interest that were most important to them.

## Community Dialogue Questionnaire

Campus-wide surveying began October 2012. The community dialogue questionnaire was administered by student co-researchers and in some cases non-student members of the research team. In an attempt to offer a modality that would appeal to all campus community members, as well as respect their time, questionnaires were administered via iPads, online, or through paper and pen. All members of the campus community were asked to participate. No one was excluded. Approximately thirty percent of the campus community participated in the survey (n=3,208). Surveying occurred for five weeks, until a proportionately representative sample of the population had been captured. This meant that the sample proportionately represented the demographics of all members of the campus community. For instance, 41% of respondents were male and 59% percent of respondents were female. These statistics are proportionately representative of the UBCO entire campus community, because approximately sixty percent of the campus population identifies as female. In addition to demographics, the community dialogue questionnaire was composed of four open-ended questions and the ranking question. The following were the four open-ended questions on the community dialogue questionnaire.

1. What makes a healthy campus? (use a broad definition of health and consider: People, Environment, Policy)
2. What is healthy about UBC Okanagan campus?
3. What is unhealthy about UBC Okanagan campus?
4. What would make the situation better? See appendix A for a copy of the community dialogue questionnaire.

Convenience and purposive sampling techniques were used. Convenience sampling involves the recruitment of the participants that are easily accessible. The survey was

administered online and in person by student and non-student co-researchers all around campus without targeting particular demographic groups, which means that convenience sampling occurred, because participants were selected due to the ease of their accessibility to the co-researcher. At the booths set up around campus, co-researchers approached campus community members and asked if they would be interested in taking five minutes to fill out a survey about their health-related experiences on campus. The booths also had signage promoting and inviting community participants to get involved in making UBCO a healthier campus community. Co-researchers walked around campus working in pairs and approached individuals or groups of students and asked if they would be interested in taking five minutes to fill out a survey about their health-related experiences on campus. In both cases, participants were given the choice of filling out the survey using an iPad or pen and paper. Additionally, participants had to read the one page consent form and give consent prior to participating. See appendix B for a copy of the community dialogue questionnaire consent form.

Though convenience sampling worked well in terms of recruiting a large number of participants, it did not provide a sample that was proportionately representative of the campus community. In contrast to convenience sampling, purposive sampling is the deliberate recruitment of particular populations or groups. Purposive sampling was used for VOICE 2012 to create a sample that was proportionately representative of the campus community. To do this, the demographic make up of the participants was monitored as data collection occurred by the research team with the assistance of the Institutional Research Office. Therefore, purposive sampling techniques occurred to ensure a sample that was proportionately representative of the campus community. Specific classrooms were surveyed if the sample did not proportionately represent a particular faculty or student group. For instance, co-researchers went into graduate



and engineering classes, because our sample was not proportionately representative of these students groups. In some cases, non-student community members (i.e., faculty) were targeted for recruitment. For instance, co-researchers would approach underrepresented faculty groups in their offices if the door was open. In the end, convenience sampling created the large sample size, and purposive sampling helped to create a sample that was proportionately representative of the UBCO campus community.

### **Interviews**

To further explore the perspectives about health-related experiences at UBCO (beyond the photovoice and survey data), focus groups, talking circles, and semi-structured interviews were held with the specific student sub-groups, in this case, international students. Focus groups and individual interviews were held at the convenience of participants. A trained research team member(s) facilitated focus groups and individual interviews. Student co-researchers participated as recorders or participants. The focus groups and individual interviews were semi-structured. Three of the four open-ended questions from the community dialogue questionnaire were posed to participants.

1. What is healthy about UBC Okanagan campus?
2. What is unhealthy about UBC Okanagan campus?
3. What would make the situation better?

The questions provided a structure for the discussion, but facilitators were encouraged to follow the lead of participants. Facilitators were present to stimulate and encourage discussion, ask for clarification or expansion of ideas, and provide an overall summary of the conversation, while not directing the conversation. The overall summary was provided to ensure that participants felt

the conversation and their responses were properly captured. Please refer to appendix C to view the complete focus group facilitator guide.

All focus groups and individual interviews were audio recorded and transcribed verbatim. Either trained core research team members or student co-researchers called recorders took field notes. There were two recorder roles for each focus group. The complete guidelines for each recorder role can be found in appendix D. The responsibilities of the first recorder was to draw the layout of the room, to record group dynamics, non-verbal communication, and anything that may be missed by relying merely on audio recording. The second recorder used a flip chart to catch the highlights of the conversation. Throughout the focus group, the second recorder would check in with participants to make sure they felt the flip chart notes reflected their conversation. The flip chart notes were also used to help create the overall summary at the end of the focus group. Focus group interviews and field notes were transcribed as soon as possible after each interview by student or non-student co-researchers. Participants were recruited for focus groups and individual interviews until redundancy in the data occurred. Listening to the audio files and reviewing the transcripts after each focus group or interview determined redundancy. Once redundancy in the data emerged, focus group and interviews were no longer held.

Of the seven international students who participated in an interview, five consented to the secondary use of their data for this Master's thesis. Though demographic data was not included in the interviews, it is known what type of interview the participant engaged in, and whether the participant was male or female. Four of the participants participated in a focus group, and one participant participated in an individual interview. Two participants were female and three participants were male. The first focus group consisted of two male participants who both consented to the use of their data for this study. The second focus group had four participants,

two male and two female. Two of the four participants, one male and one female, consented to the use of their data. The data from the other two participants in this focus group was omitted from my analysis. Lastly, one interview was held with a female participant who also consented to the use of her data for this study. In the end, I only received consent to access data from the community dialogue questionnaire and five of the seven interview (focus groups and individual interviews) participants, and not the photovoice data that was collected for VOICE 2012.

### **Setting and Participants**

#### **Setting**

This study takes place at UBCO, a mid-size campus situated in the southern interior of British Columbia, that has undergone rapid expansion. The campus student population has expanded from more than 3000 students in 2007 to 8,388 students in the 2013/2014 academic year (UBC, 2013/2014). The land size of the campus has also dramatically increased. The campus community now encompasses over 500 acres of land, which means there has been a lot of construction over the past several years. Rapid expansion and international engagement are both part of UBCO's strategic plan which aims to create an environment that engages international students, staff, and faculty, and also to be a University that engages with the global community (UBC, 2009). Therefore, the recruitment and engagement of international students has become a priority.

#### **Participants**

All data collected from students who self-identified as an international student on the community dialogue questionnaire were included for VOICE 2012. There was no description or definition of an international student provided in the data collection tools. Participants were asked only whether they identified as an international student. In terms of participation in

VOICE 2012, of the 3,208 campus community members who completed a community dialogue questionnaire, approximately 400 self-identified as international; 378 of these also self-identified as a student and thus were included in this study. This is about 50% of the international student population on campus. Additionally, 7 international students participated in a focus group or individual interview; 5 of these gave secondary consent and were included in this study. Two international students participated as co-researchers in photovoice however their photographic data and narratives could not be included due to lack of secondary consent.

Demographics were collected as part of the community dialogue questionnaire. The demographics included gender, number of years on campus, and program of study. Table 1 is a summary of the data collection methods used and the number of international student participants in VOICE 2012. Refer to appendix A to view the full community dialogue questionnaire.

Table 1	
<i>Data Collection and Results</i>	
<u>Data Collection Method</u>	<u>Number of Participants</u>
Photovoice	2 (10 photos and narratives)
Community Dialogue Questionnaire	378
Focus Groups	2 groups (6 total participants)
Individual Interviews	1

In the end, no response was received from the two students who participated in photovoice, and only five of the seven interview participants consented to the secondary use of their data. Thus, I was unable to include data from photovoice or from two particular interview participants in this study. The two focus group participants that did not consent to the use of their data for a secondary study were part of the same focus group. To respect their wishes their

responses were omitted from the analysis, which limited my ability to analyze the context of the group discussion, as well as the interconnectedness of the responses. Table 2 is a summary of the data collection methods and the number of international student participants who consented to the secondary use of their data.

Table 2	
<i>Number of Participants who Consented to the Secondary Use of their Data</i>	
<u>Data Collection Method</u>	<u>Number of Participants</u>
Photovoice	0
Community Dialogue Questionnaire	378 (54 pages of text)
Focus Groups	4
Individual Interviews	1

### **Methodological Rigor**

This study incorporated criteria for rigorous research through several verification strategies. Mayan (2009) states, “Verification is the process of checking, confirming, disconfirming, and accounting for variability, and being certain, even if your goal is to represent uncertainty” (p. 108). This research represents rigor through the verification strategies of methodological coherence, sampling, prolonged engagement, participant checks, and peer review (Mayan, 2009).

Methodological coherence is about congruence between the theoretical underpinnings, research objectives, and research methodology. I have demonstrated methodological coherence by basing my research on theoretical frameworks (settings-based health promotion and Health Promoting Universities) that are congruent with a CB-PAR research process. Also, the theoretical frameworks and CB-PAR research process are appropriate for the two research objectives, and for a secondary analysis using mixed methods.

In terms of sampling, rigorous sampling techniques require that there are enough participants and that they are appropriate for the research topic (Mayan, 2009; Morse, Barrett, Mayan, Olson, & Spiers, 2002). According to Mayan (2009) and Morse et al. (2002), the sample should be made of participants that could best speak to the topic of the research. In this case, the topic of the research is the health-related experiences of international students studying at UBCO. Who better to sample than international students currently studying at UBCO? They represent the people who have the best knowledge and experience of international student health-related experiences. In addition, the close to 400 participants in this study represent almost half of the international student population at UBCO. However my sampling was limited because I did not have consent to use photovoice data or the responses from two focus group participants. Therefore, it could be questioned whether I have enough participants to constitute rigorous sampling related to the focus groups. I would agree that my focus group sample is limited, but I argue that I have done everything possible to ensure a rigorous focus group sample, without burdening participants. This issue is more relevant to a limitation of a secondary analysis. I cannot collect more data.

Another verification strategy for judging rigor in this study is prolonged engagement. Prolonged engagement means that the researcher spends considerable time in the research setting and with the research participants (Mayan, 2009). Through a variety of roles, including that of a student, Nurse Clinician, and researcher, I have spent six years at UBCO. I have been involved with the various iterations of The VOICE Study for four years. Over that period of time I have engaged with international students as peers and co-researchers, which has helped me understand some of the day-to-day experiences of international students. Consequently, I am offering findings about international students' health-related experiences after engaging with the research

setting and participants many times over a prolonged period of time. To not do so would limit rigour (Mayan, 2009). As Mayan (2009) states, “Prolonged engagement is about spending a considerable amount of time in the setting to avoid making grandiose interpretations based on limited contact” (p. 111). I argue that I have spent a considerable amount of time in the research setting, even though my role has varied over the years.

Additionally, this study has used participant checks to verify the validity of the data collection during the focus groups, although I was not responsible for the participant checks. As part of VOICE 2012, the procedure for facilitating focus groups was to have the facilitator and recorder(s) check in with participants during the discussion and provide a summary at the end of the discussion to ensure that their responses were adequately captured. In this case, rigor is supported because participant checks were done during the focus groups while participants could still identify themselves and their stories in the data (Mayan, 2009).

In a similar vein, peer review was used to add to rigor. A second research colleague from the VOICE 2012 core research team, Doris Callaghan, analyzed the same qualitative data with my oversight. After analyzing the qualitative data separately, D. Callaghan and I met to review one another’s analyses. We found that our analyses were incredibly similar. We had the same categories; the only differences were in the language we used to describe our findings. The process gave me an opportunity to question my own process of analysis, and verify my findings with another skilled researcher.

Finally, of the many strategies available for ensuring a rigorous study, the VOICE study utilized triangulation. Triangulation involves studying a phenomenon using multiple viewpoints or methodologies (Jick, 1979). Researchers can use multiple methods of data collection and multiple sources of data to study and understand the same phenomena (Jick, 1979). Also,

qualitative and quantitative methodologies can be seen and used in a complementary manner (Chavajay & Skowronek, 2008; Jick, 1979). For example, in addition to collecting and analyzing quantitative data, qualitative data may show consistencies or discrepancies between the responses within and between the different data sets and analyses (Chavajay & Skowronek, 2008). In this study, triangulation was achieved through the use of data generated through VOICE 2012 using multiple methods of qualitative and quantitative data collection (community dialogue questionnaires, and focus group and individual interviews) and analysis (frequencies, descriptive statistics, Pearson's Chi-Square tests, and inductive, descriptive and categorical qualitative analysis) about the same phenomenon; that is, the health-related experiences of international students. For example, when the category related to food emerged, I compared and synthesized the data from community dialogue questionnaires, both qualitative and quantitative, and interviews to ensure all viewpoints were captured and a thorough description of the international student experience related to food could be created.

## **Data Analysis**

### **Qualitative Analysis**

Analysis of qualitative data from the community dialogue questionnaire and interviews was carried out to identify and understand the experience of international students at UBCO. The community dialogue questionnaire comprised four open-ended questions, one ranking question, and a series of demographic questions. As previously stated, there are four open-ended questions:

1. What makes a healthy campus? (use a broad definition of health and consider: People, Environmental, Policy)
2. What is healthy about UBC Okanagan campus?



3. What is unhealthy about UBC Okanagan campus?
4. What would make the situation better? See appendix A for copy of the community dialogue questionnaire.

The ranking question for the community dialogue questionnaire question was developed using the nineteen areas of interest identified through photovoice. Participants were asked to select the three areas of interest most important to them. The areas of interest included topics such as food, study spaces, physical activity, and gender/cultural sensitivity.

The analysis of the qualitative data from community dialogue questionnaires, focus groups, and interview was inductive and guided by Green et al.'s (2007) four steps for generating best qualitative evidence. Green et al. (2007) propose that the four steps are data immersion, coding, creating categories, and identifying themes. First, data analysis began with a reading of the raw data (i.e., transcripts, field notes, open-ended survey responses). This is one of the first steps of immersing myself in the data. Reading and re-reading the data helps to stimulate ideas and possibilities for a detailed examination (Green et al., 2007). Also, immersion in the raw data through initial readings helps make analysis more manageable, especially when there are a large amount of data (Green et al., 2007).

The initial reading was followed by line-by-line (Benaquisto, 2008) reading and coding of the raw data. According to Mayan ((2009), coding happens as soon as researchers engage with their data. Mayan (2009) states, "When you assign a word to part of your data, when you write something in the margin of a transcript, when you underline a word in a document...you are coding" (p. 88-89). As I read through the raw data I highlighted words, made notes in the margins, created diagrams and posed questions. These actions represent coding. While I was reading and coding the raw data, I would make note of my questions and reflections. This

represents memoing. Memoing is the documentation of researcher reflections upon the raw data (Groenewald, 2008; Mayan, 2009). I recorded my thoughts, hunches, questions, and ideas as I re-read the raw data. According to Groenewald (2008) and Mayan's (2009) discussion of qualitative analysis, this process helps to identify conceptual ideas or "codes".

Next, I developed preliminary categories by identifying repetitive, similar, or distinctive codes and memos (Green et al., 2007). Then, preliminary categories were refined using subsequent readings of the raw data and critical reflection upon the codes and memos. It is important to ensure that all the codes 'fit' within the categories (Mayan, 2009). Checking the consistency of the raw data, codes, and memos within the corresponding category does this. For example, once I created a category labeled 'food', I checked my memos, codes, and the raw data to ensure that what I had captured under the category of 'food' was in reference to 'food'. Altogether, nine categories emerged from the qualitative data. I gave each category a title and used the codes, memos, and quotations from the text that captured the essence of the categories to describe participant responses.

The analysis was not taken to a higher level of abstraction to represent themes. This decision was made because the qualitative data were quite limited in depth of description. The community dialogue questionnaire data were responses to open ended questions in a single page survey format and thus rarely provided extensive responses. Some participants only used a word or a phrase to respond to the questions. In addition, I only had access to five of the seven interview participants. In the end, categories were kept close to the text, which means they were developed using the language of the participants. In other words, I pulled directly from the text of the raw data to develop the categories. In addition, examples from the text were required to verify each category (Firmin, 2008). Categories were also verified by once again reviewing the

raw data, codes, memos, and preliminary categories for consistency. Each category is thoroughly discussed in the findings chapter.

### **Quantitative Analysis**

In addition to the qualitative analysis, the frequencies, descriptive statistics, and Pearson's Chi-Square test results were compared to the categories identified through the focus groups and individual interviews, and open-ended community dialogue questionnaire questions. For VOICE 2012, the international student participant responses were separated from all other respondents using SPSS. The responses to the ranking questions showed what areas of interest are most important specifically to international students. In other words, the ranking question identified priority health-related issues for international students. Also, the ranking question showed where further research would be appropriate.

Furthermore, the demographic statistics were segmented to understand what areas of interest were most important to different groups of international students. For instance, are there areas of interest that are more important to participants living off campus than on campus or does a participant's gender influence what areas of interest they choose as most important? The analysis comparing participant demographics and areas of importance was done using Excel and with the support of the UBCO Institutional Research office. The use of Excel spreadsheets for statistical analysis was chosen, because of my limited familiarity with the SPSS software program. In addition, Pearson's Chi-square test was chosen to examine the association between the demographic variables and how participants prioritized the areas of interest.

Pearson's Chi-square test was chosen because the quantitative data are categorical and not distributed normally. The null hypothesis in a Chi-square test assumes that there is no difference between two groups. Therefore, Chi-square can be used to test whether or not

differences between two groups are statistically different. In this study, differences are considered statistically significant if the p value is less than 0.05. For example, if parking was the fifth most selected area of interest by male international students, and tenth by female international students, the Chi-square test tells us if the difference between genders for the ranking of parking are statistically significant. Pearson's Chi-square tests were run using SPSS with the support of the UBCO Institutional Research office. Once the qualitative and quantitative analyses were completed, any similarities or differences between the analyses were identified and will be discussed in the following chapter.

### **Ethical Considerations**

Ethical approval from two institutions was required for this Master's thesis, because I am a graduate student from the University of Victoria (UVic) and I used data from VOICE 2012, a research study located at UBCO. I received ethical approval from both the UVic and UBCO research ethics boards. To be approved by the UBCO research ethics board, I completed the Tri-Council Policy Statement (TCPS) course on ethical conduct when researching human subjects. Completion of the TCPS course helped to ensure that I adhered to the ethics principles of research when studying human subjects.

Study participants who participated in photovoice, focus groups, and individual interviews, and also self-identified as international students, were contacted via email to request consent for the secondary use of their data for this study. Contact information for participants was obtained from VOICE 2012 participant records and consent forms. This consent process was necessary because a thesis is considered a public document, and the VOICE 2012 consent process did not explicitly mention the use of data for graduate student work. Only in situations in which consent was given was data used for this study.

To avoid any unintentional influence by me on research participants, the request for secondary use of data (informed consent) was requested on my behalf by another member of the VOICE 2012 research team. In accordance with the guidelines set out in my approved ethics applications for UVic and UBCO, I drafted emails requesting consent from participants for the secondary use of their data. Melissa Feddersen, a core research team member of VOICE 2012, sent the email requests to participants. In cases where participants did not respond, a maximum of two email reminders were sent. Participants who did respond were directed to send their response and/or signed consent form to Melissa Feddersen. The consent form can be viewed in appendix E. In terms of data collected from community dialogue questionnaires, consent for the secondary use of data was not obtainable or necessary, because privacy is protected since there is no contact or identifying information attached to the surveys.

## Chapter 4: Findings

### Introduction

The data from community dialogue questionnaires of 378 international student participants, and from interviews with 5 international students, were analyzed for this study. In this section I will describe the demographics of the participants from the community dialogue questionnaire and the interviews. Then, I will describe the findings from my qualitative and quantitative analysis of the data sources (community dialogue questionnaires, focus groups, and an interview).

### Demographics

#### Community Dialogue Questionnaire

First, when asked how long the participants have been on campus, 331 responses were received. Almost half of the international student respondents have been on campus up to one year ( $n = 149$ ), while the rest have been on campus for more than one year ( $n = 182$ ). Figure 1 captures the length of time participants have been attending UBCO.

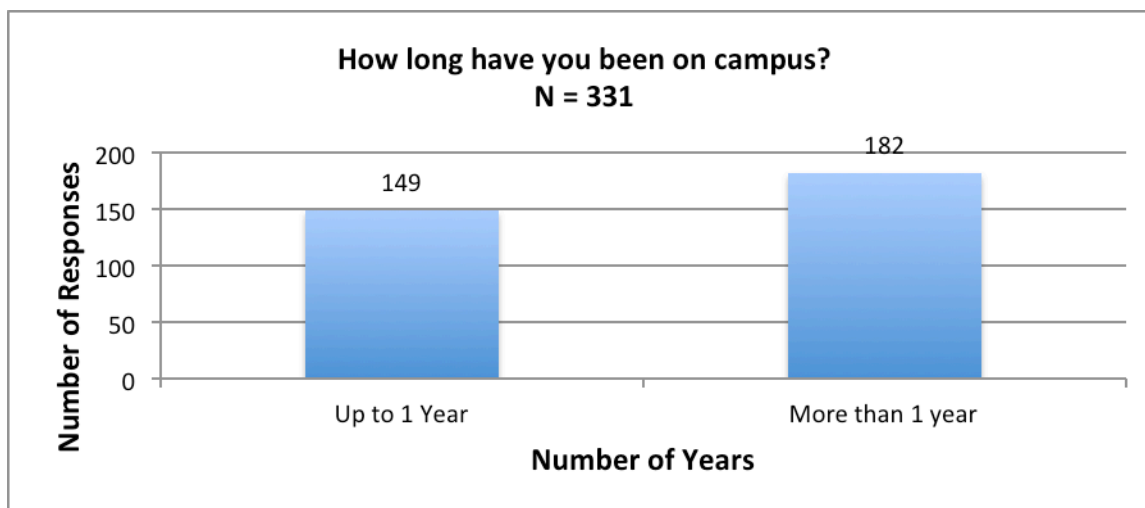
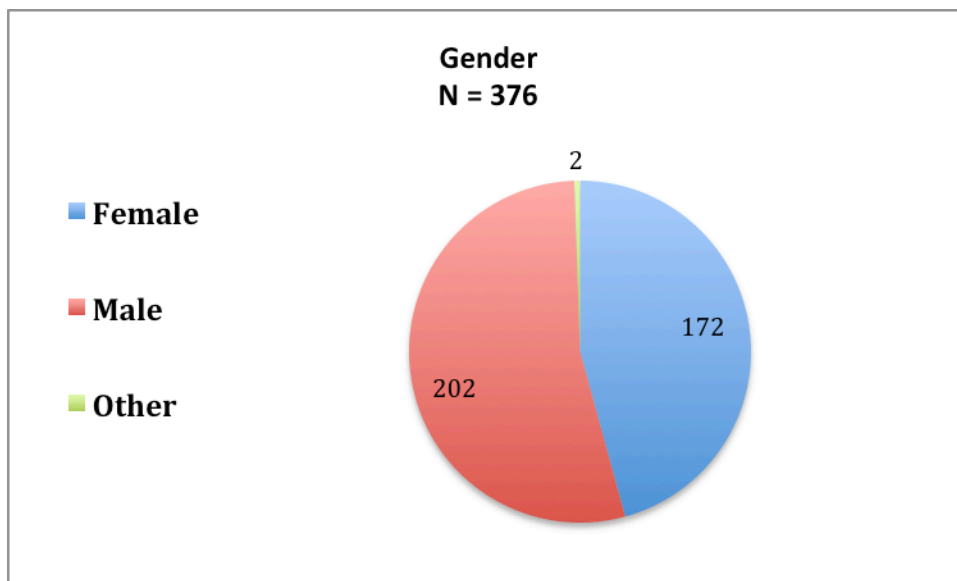


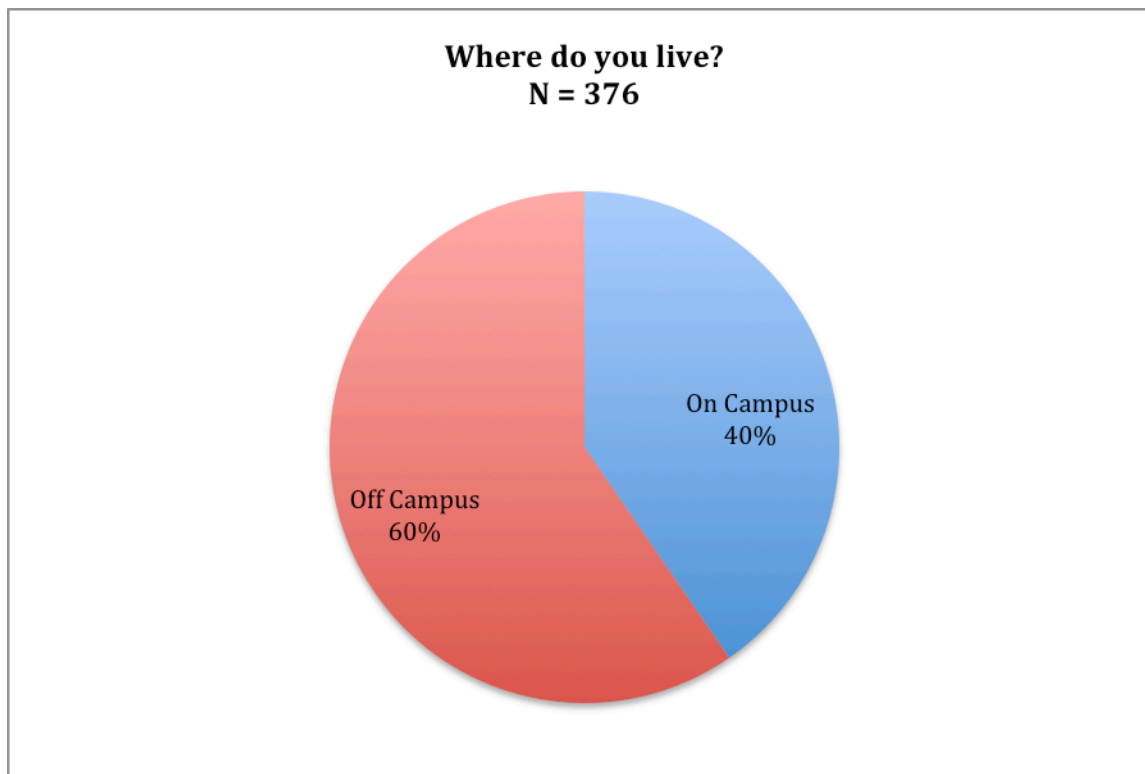
Figure 1. Number of years on campus.

Second, when participants were asked to self-identify as a gender, 202 (53.7%) participants selected male, 172 (45.7%) selected female, and 2 (0.5%) selected other. Figure 2 illustrates the expression of gender among the participants.



*Figure 2.* Gender of participants.

Third, participants were asked to describe whether they lived on or off campus; 59.3% selected off campus, while 40.4% selected on campus. Figure 3 shows where participants currently live in relation to the campus.



*Figure 3.* Residence of participants.

Fourth, students were asked to identify their faculty/major/department. This was a written response. The responses were categorized according to the schools on campus, general studies, or other. The majority of international students stated that they are studying in the School of Management or currently focused on a general arts and sciences degree. Figure 4 shows how international students are enrolled in a variety of faculties and schools.



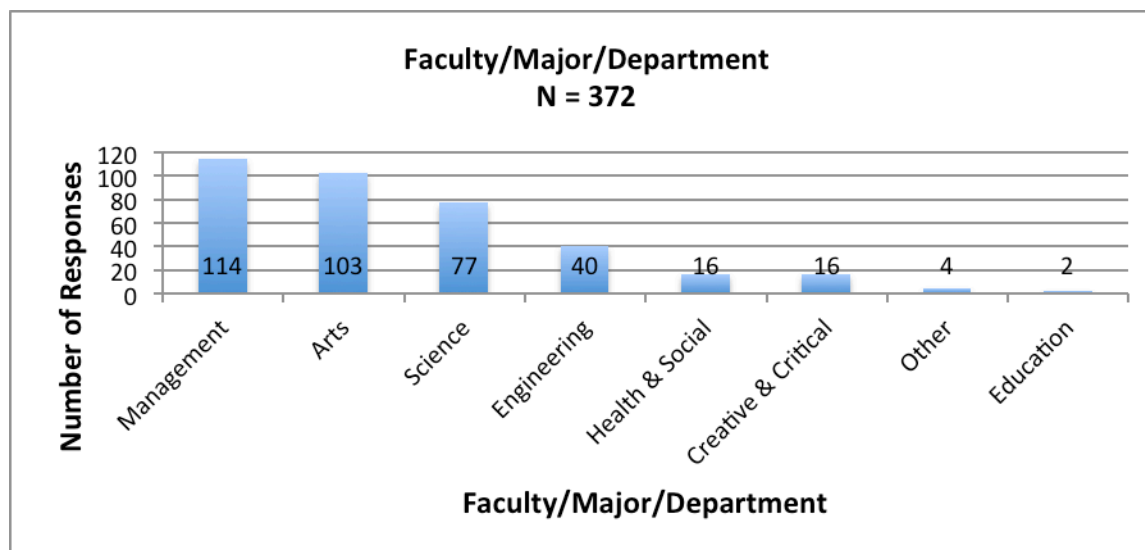


Figure 4. Faculty/Major/Department.

In summary, many international students are new to campus, but more than half have been students for more than one year. One implication of this is that students who have been at UBCO for longer could potentially be enlisted to mentor or support those new to campus. Most international students live off campus, potentially putting them more at risk for isolation or a sense of disconnection from a larger community. Significant minorities of students do, however, live on campus making it both their home and their workplace. Thus, they may be a captive audience for providing campus resources and supports that can be readily offered on location. The majority is concentrated in two faculties/departments, potentially making it easier to create a sense of community and inclusion in those departments among international students. The remainder are scattered throughout the faculties/departments and thus may be more at risk of social disconnectedness. More creative strategies to link them together may be necessary.

### Quantitative Analysis

The first four questions on the community dialogue survey are open-ended. The fifth question is the first question amenable to statistical analysis. Participants were asked to select three areas out of nineteen possible areas of interest that are most important to them to improve

or increase. Altogether, 378 international students responded to question five. Food was overwhelmingly identified as the area of interest most important to international students with 64.4% of students identifying it as important. Study spaces and physical activity rounded out the top three areas of interests with frequencies of 41.5% and 29.1% respectively. Figure 5 shows the frequency of responses for each of the nineteen areas of interest in order of priority.

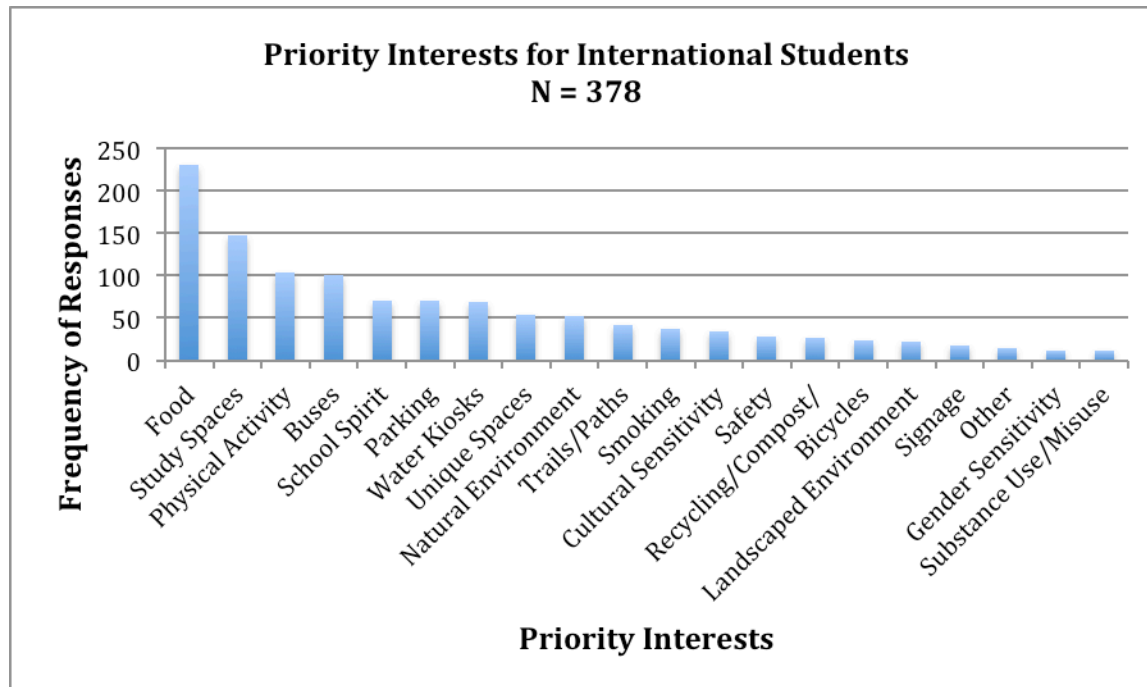


Figure 5. Areas of interest most important to improve or increase.

In comparison to the responses from all respondents, the international student priorities were very similar. Food, study spaces, and physical activity were the most frequently selected interests for all respondents, including international students. However, there are differences in the frequency of responses worth noting. For instance, 64% of international students selected food as a priority interest compared to 52% of all VOICE 2012 respondents. Pearson's Chi-Square test, which was used to test statistical significance for the comparisons between demographic variables and the areas of interest could not be used for the comparison of international students to all respondents. This is because Chi-Square tests are swayed by large

sample sizes to find statistically significant differences. Therefore, using a descriptive analysis of the differences, it could be assumed that the 12% increase in the frequency of selection of food as an interest among international students compared to the rest of the study population, means that food is an even greater priority for international students. In a similar vein, 6% more of the international students selected cultural sensitivity as an important topic, compared to all other students. On the other hand, parking was 7% less frequently selected as an issue by international students than by all respondents. A complete comparison of the frequency of responses to question five from all respondents and international respondents has been compiled into a chart in Table 3. The percentages have been rounded up to the nearest whole number. The difference in percentage reflects the difference for international students compared to all students. For example, a difference in percentage of +8 means that the frequency of the response was 8 percentage points higher among international students, and a difference of -6 means that the response frequency was 6 percentage points less among international students.

<u>Area of Interest</u>	<u>All Respondents</u> N = 3, 256		<u>International Student Respondents</u> N = 378		<u>Difference in Percentage</u>
		<u>%</u>		<u>%</u>	
Food	1587	52%	230	64%	+12
Study Spaces	1333	44%	148	42%	-2
Physical Activity	1049	34%	104	29%	-5
Buses	776	25%	100	28%	+3
School Spirit	530	17%	71	20%	+3
Parking	811	27%	71	20%	-7
Water Kiosks	564	19%	69	19%	-
Unique Spaces	424	14%	54	15%	+1
Natural Environment	333	11%	52	15%	+4
Trails/Paths	451	15%	42	12%	-3
Smoking	307	10%	37	10%	-
Cultural Sensitivity	113	4%	34	10%	+6
Recycling/Compost/ Garbage	335	11%	27	8%	-3
Safety	93	3%	28	8%	+5
Bicycles	207	7%	23	6%	-1
Landscaped Environment	156	5%	22	6%	+1
Signage	118	4%	17	5%	+1
Gender Sensitivity	75	3%	12	3%	-
Substance Use/Misuse	72	2%	11	3%	+1

Table 3 shows that all respondents, including all international students, most frequently selected food, study spaces, and physical activity as areas of importance. It can be surmised that the overall campus community is facing a very similar experience related to concerns about food, study spaces, and physical activity. Beyond the three most selected areas of interest, we begin to see differences between the priorities of international students versus those of the overall campus community. So, international students are having some similar and some different experiences to

those of the overall campus population and therefore have similar and different priority areas of interest.

To better understand the relationship between the frequency of responses for each area of interest and demographic characteristics of the international participants, tables were created to see what relationships might be present. In addition, Pearson's chi-square test was used to test whether the differences between categories on the demographic variables were statistically significant (e.g., male versus female; on campus versus off campus living). Pearson's chi-square test was chosen because it can be used to discover associations/relationships between categorical variables (Laerd Statistics, 2013). In this study, the quantitative data has categorical nominal variables. According to Laerd Statistics (2013), nominal variables have two or more categories, but do not have an inherent order. The variables are areas of interest and demographic data, none of which have an inherent order. As such, the quantitative data for this study meet the first assumption of Pearson's chi-square test, that the data is categorical, meaning ordinal or nominal variables (Laerd Statistics, 2013). The second assumption is that the data consist of two or more independent categorical variables. For example, gender represents two variables that are categorical and independent. Therefore, the demographic variables pass the second and final assumption of Pearson's chi-square test. Altogether, Pearson's chi-square test was employed because the quantitative data are categorical and not distributed normally (no inherent order).

The null hypothesis in a chi-square test assumes that there is no difference between two groups. Therefore, chi-square can be used to test whether or not differences between two groups are statistically different. In this study, differences are considered statistically significant if the p value is less than 0.05. With the help of the UBCO Institutional Research office, chi-square tests were run using SPSS software and copied onto Excel spreadsheets. Appendix F contains the

tables that compare the international student participant data in terms of each demographic variable: gender, location, faculty, and years on campus, as well as the results of the chi-square tests.

In an attempt to limit the number of variables, the faculty/major/department demographic was collapsed into four categories.

1. Arts
2. Sciences
3. Engineering
4. Management.

Of all the international student participants, 103 international students responded that their academic focus is Arts, 77 Sciences, 40 Engineering, and 114 Management. The analysis focuses on these four categories, Arts, Sciences, Engineering, and Management, because they comprise over 80% of the responses.

Across all of the demographics for international students, food continued to be the most frequent response. Study space was the next most frequent selection across all demographics, except in the case of international students enrolled in Engineering. Other frequently selected interests included buses, physical activity, school spirit, and parking. Generally, gender sensitivity, substance use, and signage were the least selected areas of interest. The following five tables show the frequency of responses across all demographic variables.

Table 4					
<i>Pearson's Chi-Square Test of International Student Responses to Areas of Interest by Gender (N = 374)</i>					
Area of Interest	Gender		Pearson's Chi-Square Test		
	Male n = 202	Female n = 172			
	Count (%)	Count (%)	$\chi^2$	<i>df</i>	<i>p</i>
Food	121 (65)	105 (63)	.051	1	.821
Study Space	70 (37)	78 (47)	4.444	1	.035*
Physical Activity	70 (37)	33 (20)	11.137	1	.001***
Buses	48 (26)	49 (30)	1.080	1	.299
School Spirit	38 (20)	33 (20)	.008	1	.927
Parking	35 (6)	34 (21)	.368	1	.544
Water Kiosks	38 (20)	30 (18)	.117	1	.732
Unique Spaces	25 (13)	29 (18)	1.512	1	.219
Natural Environment	30 (16)	21 (13)	.551	1	.458
Trails/Paths	26 (14)	16 (10)	1.187	1	.276
Smoking	23 (12)	13 (8)	1.565	1	.211
Cultural Sensitivity	15 (8)	18 (11)	1.067	1	.302
Recycling/Compost/Garbage	15 (8)	12 (7)	.028	1	.867
Safety	13 (7)	14 (8)	.403	1	.526
Bicycles	15 (8)	8 (5)	1.239	1	.266
Landscaped Environment	18 (10)	4 (2)	7.277	1	.007**
Signage	10 (5)	7 (4)	.166	1	.684
Substance Use	8 (4)	3 (2)	1.598	1	.206
Gender Sensitivity	6 (3)	5 (3)	.001	1	.971

*Note: \*p<0.05, \*\*p<0.01, \*\*\*p<0.001*

Table 4 shows the areas of interest of international students according to gender, and the results of the Pearson's chi-square test to identify statistically significant difference between the genders. The relationship between gender and physical activity and landscaped environment are statistically significant. When the chi-square test was performed it showed that males were more likely to select physical activity [ $\chi^2 (1, N = 375) = 11.137, p = .001$ ]. In addition, males were more likely to select landscaped environment [ $\chi^2 (1, N = 375) = 7.277, p = .007$ ]. However, this finding may not be trustworthy. Chi-square tests are not appropriate for sample sizes less than five, and females only selected landscaped environment four times. Therefore, the validity of the

chi-square test and presumed statistical significance between gender and landscaped environment is not trustworthy. Interestingly, the chi-square test identified a statistically significant relationship between gender and study spaces. Females were more likely to select study spaces as important [ $\chi^2 (1, N = 375) = 4.444, p = .035$ ]. The gender difference for selection of study spaces as important did not seem noteworthy prior to performing a chi-square test. The rest of the chi-square tests between gender and the other areas of interest showed no relationship.



Area of Interest	Location		Pearson's Chi-Square Test		
	On Campus (n = 152)	Off Campus (n = 224)	$\chi^2$	<i>df</i>	<i>p</i>
Food	95 (68)	134 (62)	.273	1	.601
Study Space	45 (32)	101 (47)	9.140	1	.003**
Physical Activity	42 (30)	62 (29)	.000	1	.992
Buses	34 (24)	66 (31)	2.336	1	.126
School Spirit	31 (22)	39 (18)	.532	1	.466
Parking	11 (8)	58 (27)	21.034	1	.000***
Water Kiosks	33 (24)	36 (17)	1.922	1	.166
Unique Spaces	20 (14)	33 (15)	.185	1	.667
Natural Environment	15 (11)	36 (17)	2.972	1	.085
Trails/Paths	22 (16)	20 (9)	2.806	1	.094
Smoking	19 (14)	18 (8)	2.034	1	.154
Cultural Sensitivity	12 (9)	22 (10)	.409	1	.523
Recycling/Compost/Garbage	12 (9)	15 (7)	.195	1	.659
Safety	14 (10)	14 (7)	1.152	1	.283
Bicycles	9 (6)	14 (7)	.017	1	.896
Landscaped Environment	11 (8)	11 (5)	.889	1	.346
Signage	6 (4)	11 (5)	.195	1	.659
Substance Use	6 (4)	5 (2)	.938	1	.333
Gender Sensitivity	2 (1)	10 (5)	2.905	1	.088

*Note: \*p<0.05, \*\*p<0.01, \*\*\*p<0.001*

Table 5 shows the areas of interest of international students according to their location of residence, and the results of the Pearson's chi-square test to identify statistically significant differences on priority issues between on and off-campus students. The relationship between parking and location of residence are statistically significant. When chi-square test was performed it showed that participants living off campus were more likely to select parking as an issue of importance to them [ $\chi^2 (1, N = 377) = 21.034, p = .001$ ]. This finding makes sense,

because participants living off campus require some form of transportation to get to and from campus. Those who rely on a vehicle would require a parking pass.

When chi-square test was performed a relationship between study spaces and location of residence was also found [ $\chi^2 (1, N = 377) = 9.140, p = .003$ ]. The relationship between location of residence and study spaces makes sense, because students living off campus have to find spaces to study. Students living on campus can go to their residence or the university library if they need to study. The rest of the chi-square tests showed no relationship between location of residence and the other areas of interest.

Table 6					
<i>Pearson's Chi-Square Test of International Student Responses to Areas of Interest by Years Spent at UBCO (N = 331)</i>					
Area of Interest	Years Spent on Campus		Pearson's Chi-Square Test		
	Up to One Year n = 149	More Than One Year n = 182			
	Count (%)	Count (%)	$\chi^2$	df	p
Food	88 (62)	116 (68)	.757	1	.384
Study Space	43 (30)	87 (51)	12.327	1	.000***
Physical Activity	41 (29)	50 (29)	.000	1	.993
Buses	32 (23)	55 (32)	3.232	1	.072
School Spirit	31 (22)	29 (17)	1.310	1	.252
Parking	20 (14)	43 (25)	5.535	1	.019*
Water Kiosks	35 (25)	27 (16)	4.031	1	.045*
Unique Spaces	18 (13)	29 (17)	.999	1	.318
Natural Environment	23 (16)	18 (11)	2.322	1	.128
Trails/Paths	18 (13)	19 (11)	.222	1	.637
Smoking	18 (13)	14 (8)	1.807	1	.179
Cultural Sensitivity	15 (11)	15 (9)	.331	1	.565
Recycling/Compost/Garbage	13 (9)	9 (5)	1.886	1	.170
Safety	14 (10)	11 (6)	1.318	1	.251
Bicycles	10 (7)	9 (5)	.472	1	.492
Landscaped Environment	13 (9)	7 (4)	3.435	1	.064
Signage	9 (6)	6 (4)	1.425	1	.233
Substance Use	6 (4)	5 (3)	.418	1	.518
Gender Sensitivity	3 (2)	7 (4)	.939	1	.332

Note: \*p<0.05, \*\*p<0.01, \*\*\*p<0.001

Table 6 shows the frequency and proportion of international students who identified each area of interest as important to them by the number of years they have spent at UBCO, and used Pearson's chi-square to test for statistically significant relationships. When chi-square tests were performed, three positive relationships were found. International students who had spent more than one year at UBCO were more likely to select study spaces as an important issue for them [ $\chi^2 (1, N = 331) = 12.327, p = .000$ ]. This finding is likely because most first year students live on campus, and therefore always have a place to study. This finding links well with the

relationship between location of residence and study spaces. In addition, I found that participants who had been on campus for more than one year were more likely to select parking [ $\chi^2 (1, N = 331) = 5.535, p = .019$ ]. This finding could also be due to the fact that participants who have been at UBCO for more than one year are more likely to live off campus, and therefore require parking and/or transportation to campus. Finally, international students in their first year at UBCO were more likely to select water kiosks [ $\chi^2 (1, N = 331) = 4.031, p = .045$ ]. Once again, most first year students live on campus, and therefore rely on the water supply provided. The water kiosks offer free, cold, filtered water.

	Faculty			
	Arts n = 103	Sciences n = 77	Engineering n = 40	Management n = 114
<u>Area of Interest</u>	<u>Count (%)</u>	<u>Count (%)</u>	<u>Count (%)</u>	<u>Count (%)</u>
Food	66 (65)	43 (61)	22 (60)	74 (71)
Study Space	40 (39)	32 (45)	9 (24)	52 (50)
Physical Activity	25 (25)	16 (23)	14 (38)	33 (31)
Buses	30 (29)	19 (27)	8 (22)	27 (26)
School Spirit	22 (22)	15 (21)	7 (19)	16 (15)
Parking	20 (20)	9 (13)	2 (5)	27 (26)
Water Kiosks	23 (23)	11 (16)	4 (11)	26 (25)
Unique Spaces	18 (18)	12 (17)	8 (22)	11 (11)
Natural Environment	18 (18)	11 (16)	9 (24)	11 (11)
Trails/Paths	12 (12)	15 (21)	5 (14)	6 (6)
Smoking	13 (13)	5 (7)	2 (5)	13 (12)
Cultural Sensitivity	11 (11)	7 (10)	6 (16)	7 (7)
Recycling/Compost/Garbage	7 (7)	3 (4)	3 (8)	10 (10)
Safety	12 (12)	3 (4)	2 (5)	10 (10)
Bicycles	8 (8)	8 (11)	3 (8)	2 (2)
Landscaped Environment	4 (4)	10 (14)	4 (11)	3 (3)
Signage	2 (2)	2 (3)	6 (16)	4 (4)
Substance Use	4 (4)	2 (3)	2 (5)	2 (2)
Gender Sensitivity	3 (3)	1 (1)	2 (5)	2 (2)

Table 7 shows the areas of interest of international students according to their faculty. The difference in priority of parking, trails/paths, smoking, and signage across faculties seem noteworthy, but Table 8 presents Pearson's chi-square test to identify statistically significant differences between faculties for each area of interest. A separate table was created to show the results of the chi-square test because of the amount of information that needs to be presented.

Table 8			
<i>Pearson Chi-Square Test of International Student Responses to Faculty/Major/Department</i> ( <i>N</i> = 334)			
<u>Area of Interest</u>	$\chi^2$	<i>df</i>	<i>p</i>
Food	2.598	3	.458
Study Space	6.743	3	.081
Physical Activity	3.399	3	.334
Buses	1.568	3	.667
School Spirit	2.126	3	.547
Parking	9.466	3	.024*
Water Kiosks	4.995	3	.172
Unique Spaces	3.903	3	.272
Natural Environment	4.912	3	.178
Trails/Paths	9.299	3	.026*
Smoking	3.228	3	.358
Cultural Sensitivity	3.132	3	.372
Recycling/Compost/Garbage	1.731	3	.630
Safety	4.165	3	.244
Bicycles	6.657	3	.084
Landscaped Environment	10.397	3	.015*
Signage	13.554	3	.004**
Substance Use	1.480	3	.687
Gender Sensitivity	1.875	3	.599

*Note: \*p<0.05, \*\*p<0.01, \*\*\*p<0.001*

Table 8 shows which differences between the areas of interests by faculties are statistically significant. When chi-square tests were performed, four relationships were found, but only one finding can be trusted due to sample size issues. International students enrolled in an arts or sciences degree were more likely to select trails/paths as an important interest to them [ $\chi^2 (3, N = 331) = 9.299, p = .026$ ]. I am not sure what factors have created this finding. Relationships were also identified between faculty and parking, landscaped environment, and signage. However, in each case the sample sizes were not all five or above. Therefore, the validity of the relationships found using chi-square tests are not trustworthy.

### Summary

In summary, 378 international students responded to question five by selecting the three areas of interest most important to them. In accordance with the results from all respondents, international students most frequently selected food, study spaces, and physical activity respectively as most important to them. There was a 12% increase in the frequency of selection of food by international students when compared to all respondents. In fact, food was the most frequent selection across all demographics. Additionally, there was a 6% increase in the frequency of selection of cultural sensitivity. On the other hand, parking was 7% less frequently selected by international students. International students may be less likely to have vehicles. Other frequently selected interests by international students included buses, physical activity, school spirit, and parking, while gender sensitivity, substance use, and signage were the least selected areas of interest.

To further understand the statistical findings, Pearson's Chi-square test was performed to test for relationships between demographics and areas of interest. The relationship between gender and physical activity and landscaped environment are statistically significant. Males were more likely to select physical activity [ $\chi^2(1, N = 375) = 11.137, p = .001$ ], while females were more likely to select study spaces as important [ $\chi^2(1, N = 375) = 4.444, p = .035$ ]. In terms of location of residence, participants living off campus were more likely to select parking as an issue of importance [ $\chi^2(1, N = 377) = 21.034, p = .001$ ]. A relationship between study spaces and location of residence was also found [ $\chi^2(1, N = 377) = 9.140, p = .003$ ]. International students who had spent more than one year at UBCO were more likely to select study spaces as an important issue for them [ $\chi^2(1, N = 331) = 12.327, p = .000$ ], and participants who had been on campus for more than one year were more likely to select parking [ $\chi^2(1, N = 331) = 5.535, p$

= .019]. In addition, participants within their first year at UBCO were more likely to select water kiosks [ $\chi^2(1, N = 331) = 4.031, p = .045$ ]. Finally, international students enrolled in an arts or sciences degree were more likely to select trails/paths as an important interest to them [ $\chi^2(3, N = 331) = 9.299, p = .026$ ]. Other relationships were identified, but they could not be trusted because the count (sample size) was less than 5.

### **Qualitative Analysis**

Between the four open-ended questions on the community dialogue questionnaire and the questions from the focus groups/interview, analysis revealed seventeen preliminary categories pertaining to the health-related experience of international students at UBCO. The categories emerged through the process of coding, memoing, and categorizing the data as described in chapter three. In the end, combining the findings from both the interviews and community dialogue questionnaire created the categories. Categories identified through both data sets were collapsed when possible, because incredibly similar categories were identified in both data sets. The primary difference between the data sets was the language used to describe categories. In the end, fourteen unique categories were identified.

Five of the categories that emerged were directly in line with the areas of interest ranked by participants, but nine new categories emerged as well. It can therefore be assumed that there are areas of interest for international students that photovoice did not capture. This is important to note, because photovoice was used to develop the areas of interest on the community dialogue questionnaire. So, further data collection beyond the community dialogue questionnaire, such as focus groups and individual interviews, was key to further understanding the phenomena. Altogether, there were nine unique categories of interest to international students identified



through the open-ended community dialogue questions, and focus group and individual interviews, and not the community dialogue questionnaire ranking question.

1. Policy/rules
2. Cleanliness
3. Services
4. The campus environment
5. Sense of community
6. Discrimination
7. Orientation
8. Expenses
9. Cheating.

Overall, fourteen categories were identified. Five of the categories (food, transportation, substance use, activity, and water) are in line with areas of interest on the community dialogue questionnaire, while the other nine emerged from the open-ended community dialogue questions and focus groups/interview. In this section, each of the fourteen categories will be discussed. In addition, differences between the results of the community dialogue questionnaires and interviews will be identified and discussed. The depth of the description of the categories is limited according to available data. Participants rarely provided extensive responses in the community dialogue questionnaire. Some participants only used a word or a phrase to respond to the questions. Therefore, I have done my best to describe the categories, while keeping in mind that I may have little more than a word a participant used to respond to the questions about what is or is not healthy about UBCO. Additionally, some responses in most of the categories contradict each other. For example, one participant may say the food at UBCO is healthy, while

another participant will respond with the exact opposite. The contradictory responses show that a variety of perspectives and experiences were captured, thus demonstrating more trustworthy findings.

Finally, it is important to note again that a second VOICE 2012 researcher, D. Callaghan, separately analyzed the same data sets. We met to discuss our findings, and found there were no substantive differences between our analyses. The only differences between our findings were in the language we used to describe our findings. For example, we may have chosen a different word to title our categories. The order in which the categories are discussed holds no bearing on the priority or importance of the categories. This is an inductive approach to understanding the health-related experiences of international students at UBCO, not an attempt to prioritize which category is most important to participants.

### **Policy/Rules**

When international student participants were asked what makes a healthy campus, and what would make the situation better at UBCO, policy and rules continually arose as important in contributing to a healthy campus. The category of policy and rules was reflected in words and phrases, such as “fair rules and policies”, “university rules”, “inclusive policies”, “rules and regulations to protect students”, and “enforcement”, during the coding process. For example, one participant responded that, “...rules and regulations which protect and benefit the students and teachers” make a healthy campus. Other participants focused on the importance of policy and enforcement to make the campus a healthier place. For instance one participant responded that, “Strong law and policies in the Campus” make a healthy campus, while another participant responded that the healthy campus should, “Enforce the rules with cons[e]quences.”

However, it is still somewhat unclear what participants meant by policy and rules. Participants would use these words in their responses, but not define or describe in detail what they meant by policy or rules. In any case, this response was unique to the community dialogue questionnaire. Policy and rules did not emerge as a category from the focus groups or individual interviews. Furthermore, it is interesting to note that policy and rules was not an area of interest participants could select on the community dialogue questionnaire ranking question. Thus, policy and rules is a category that emerged only from the responses to the open-ended questions on the community dialogue questionnaire.

I was surprised to see participants focus on policies and rules. Do students feel that the correct policies and rules are in place? If so, do they feel they are not being enforced? International students are identifying a link between policy and health that had not been identified through photovoice. It may be that photovoice is a method that is not amenable to capturing rules and policies. Also, it may be that international students understand the broad factors that support health, including policy. It would be interesting to engage in further research about the link international students are making between policy and health. How do they see policy influencing their health? What policies currently in place do they believe are having a positive or negative impact on their health?

### **Cleanliness**

Cleanliness was another category that emerged from analyzing the qualitative data. In this case, the responses were primarily positive. Participants described the campus community as a clean, sanitary, and tidy environment. A healthy campus was described by one participant as a, “clean environment that supports student learning.” Despite the overwhelmingly positive comments about the cleanliness of the campus, in the focus groups, specific problem areas

around campus were identified. Participants identified shared residence spaces, the gym showers, and water fountains as unclean. One participant commented on the gym showers during an interview, “The state of the showers in the gym, they’re ya, ya they need to be cleaned more regularly and really cleaned cause people are gross [laughter].” This participant felt the gym was one area on campus where cleanliness was an issue. Another participant remarked about the cleanliness of water fountains on campus, “I saw a water fountain once be fixed with a plunger. I don’t like seeing that, just saying. That was scary.” Participants also identified garbage as an issue, with an emphasis on littering. One participant responded by saying, “People are stupid, there is garbage all over campus, nobody actually cares to throw garbage away.” This participant felt that cleanliness was an individual issue, and not an issue with campus cleaning procedures.

Despite the emergence of cleanliness as a category in the open-ended responses, cleanliness was not an area of interest identified through photovoice. In terms of ranking areas of interest, cleanliness fell within the ‘other’ category. Thus, it was community dialogue and interview participants that identified cleanliness as an area of interest important for the creation of a health-promoting campus community but it did not emerge as a significant priority.

### **Food**

Across all respondents and demographics, food was most frequently identified as an area of interest. It did not matter where participants resided, how many years they had been on campus, or what they were studying. Food is the most frequently selected and discussed area of interest for international students. In their open-ended responses, participants identified some healthy aspects about food at UBCO, but a lot of issues were identified. Thus, the category of food is fraught with issues and contradictions. Some participants responded that food was a healthy aspect of UBCO, that there are healthy options, and a lot of variety. Other participants

would share the exact opposite responses. For instance, when asked what makes a healthy campus, the need for fresh, cheap and good quality food options emerged as a category. One participant summarized the category well by stating a, “Diverse selection of food and services at affordable price allows people to live healthier.” When it came to what is healthy at UBCO, participants reported that there were some healthy options on campus and that they felt they had choice. However, when participants were asked what is not healthy about UBCO, the mirror image of what was reported as healthy related to food was seen. Participants responded saying that food is unhealthy and expensive. One participant stated, “The food is quite expensive leading to having to choose between what is healthy and what is cheap,” while another responded, “FOOD! We should have broader choice for having a balanced meal! It seems like our meal plan options are either fast food or sushi.” These two participants clearly felt that healthy, balanced food options are expensive and hard to access. Some participants also felt there was a lack of options, particularly for people with dietary restrictions or preferences. In an interview one participant described the struggle to afford healthy food:

The food for me would be one of the most unhealthy aspects of this campus. Not only is it, not is it, not only is it expensive, but also its it’s unhealthy in the sense that there’s too much of fast food being served on campus and then since the fast food is served at the cheapest, people still end up, so it’s kind of like a cycle that keeps going and going and going and then also the fact that there’s no variety in the foods.

This participant explains the struggle students face to eat healthy when the affordable options, based on a student budget, are the unhealthy options.

Furthermore, participants in the focus groups expressed a desire for food from home or for better facilities in residence to do their own cooking. Participants felt limited by the meal

plan, which they are forced to buy depending on which residence building they call home. One participant explained:

I felt really boxed in by that [meal plan] and I felt like that maybe led to some like not healthy options as far as food goes and I think that that was pretty unfortunate. The food here isn't very diverse so getting, and I know, I know they try, I can tell they try but like I miss food from home so much.

This quote seems to explain the desire for more variety in the food options on campus, as well as the struggle international students face in adjusting to new foods and cultures. Food could be a comfort for international students, especially if it reminds them of home. This may explain why food is so frequently selected and discussed by international students. The quantitative data, which shows that food is the most important area of interest to all participants, also confirms that food is particularly important to international students. A larger percentage of international student participants (12% more) selected food as important than all respondents combined.

Despite the seemingly negative tone to the category of food, participants offered many suggestions on how to make the situation better. "Introduce healthier and more affordable foods." Participants responded that fresher, cheaper, better quality, and more affordable food options would make the situation at UBCO better. Participants also expressed a desire for more international cuisine and student-run or student-led food services. When discussing the need for more international cuisine, one participant commented, "Sometimes I miss my food so it makes it sort of unhealthy for me and affects me." This participant drew a direct link between their experience with food on campus, the cultural experience of food from home, and their health. As an alternative to eating on campus, participants brainstormed ideas in the focus group and individual interviews for arranging group trips to the nearest grocery store. "I guess if the

idea of like I don't know how people would do this but like if the RAs maybe talked to the res about doing like a group shopping thing.” The idea was that group shopping trips could be arranged by Residence Advisors (RAs) for student living on campus.

There are a variety of issues related to food that have emerged from the category. The notion of arranging group shopping has potential, because access to food is an issue at UBCO. The campus is isolated from the city, and the nearest grocery store is two kilometers away. In this sample, 41% of international students live on campus. If participants do not have access to a vehicle, they rely on public transport to get to and from the campus. As you will read in the next section, participants identified issues with public transport. In combination with the limited access to grocery stores and cooking facilities in residence, international students face challenges in preparing food on campus, an alternative to purchasing the food that is available. They want access to food that is familiar to them, that is “food from home” or international cuisine. Altogether, participants stated they wanted healthier, better quality, more affordable, and more diverse food options at UBCO and that this would contribute to making UBCO a healthier campus.

### **Transportation**

Transportation to and from campus emerged as a distinctly unhealthy category. Participants discussed how there are too many people for the public transit that is available. Also, the lack of bike paths was expressed as a concern. Furthermore, participants found parking on campus stressful due to cost of fees and the limited number of spots. As one participant wrote, “Not enough parking=more stress=unhealthy.” This participant drew a link between parking and health. Overall, participants felt there were not enough options for transportation beyond driving to and from campus. In particular, one participant expressed concern about vehicle

transportation, “As always, our reliance upon vehicle transportation for campus is a concern.”

This participant did not further explain his or her concern about the reliance on vehicles, but we do know that relying on vehicles increases costs for students (e.g. gas, insurance, parking), adds to pollution, and limits opportunities for exercise.

Participants who had been on campus for more than a year recognized improvements in the bus system, but identified issues that persist. In particular, the timing and location of buses were described as issues in the interviews. As one interview participant explained:

It’s you know they’ve done a lot to improve the the transportation leaving to campus going, let’s say downtown or towards that area, and well they just recently opened a new route, the one to Quail Ridge but that one only runs at I’ll say inconvenient times you know you have like inconvenient times you know but they are mostly at the beginning of the day and at the end of the day and then in the middle of the day you are basically on your own.

So public transit has improved, but there is a long way to go to make the bus routes and schedules more convenient for students travelling to and from campus.

### **The Campus Environment**

Participants described a healthy campus environment as clean, beautiful, and sustainable. In addition, a healthy campus environment included enough space to accommodate everyone on campus. UBCO was described as a clean, safe, and secure environment that is full of space, beauty, nature, and fresh air. “UBC Okanagan is placed in the beautiful Okanagan Valley that has minimal levels of pollution that makes it a healthy peaceful place to live in.”

Despite the healthy aspects of the campus environment, some participants did not feel there was enough space. One participant responded that, “The campus is too small for a large



flow of students.” Other participants wanted more spaces to study and socialize. The library and gym were particular buildings that were mentioned as being too small. The lack of study space was identified as a stressful experience. The following quote described one student’s stressful experience finding study space, “Studying inside is limited with space, feels cramped and slightly stressful.” In order to make the situation better, participants requested that the current facilities on campus should be expanded, and more spaces dedicated to studying. For instance, one participant asked for, “More personal spaces available for students to either study or rest.” Altogether, some participants felt the campus is too small for the amount of people, and that campus spaces need to be expanded with more dedicated study spaces. This finding corresponds with the quantitative data. Study spaces is clearly an important issue for international students, as it was the second most frequently selected area of interest across all demographics, except for international participants enrolled in Engineering. This is an important finding for future building construction, because the building where Engineering students spend most of their time was designed with many spaces for studying and gathering.

### **Sense of Community**

A respectful, caring, and accepting community was identified as an indicator of a healthy campus community. A healthy campus is a place where people can connect and build relationships without the fear of discrimination or exclusion. As one participant stated, a healthy campus reflects, “A well integrated and supportive community where it is easy to be involved academically and socially.” According to participants, UBCO has a friendly, respectful, and tight-knit campus culture. Participants felt that the community welcomed diversity and encouraged interactions and relationships between students. The small size of the campus and the small classes were considered factors in creating a tight community. The following quotes are

from community dialogue participants, “Smaller campus so more opportunities to interact with people, bond, learn and grow,” and “We foster a diverse community of students and it’s a place where we diverge both local and international concerns and work on them.” In summary, the small size of UBCO fosters relationships, personal development, and societal change at the local and international levels.

Throughout the data sets, the sense of community continued to emerge as a part of what makes UBCO a healthy campus. Participants felt that people really wanted to know each other, and they felt that diversity was welcomed and encouraged. However, the interview participants felt that school spirit is lacking. School spirit was distinctly discussed in terms of school pride and sport teams. Participants wanted to see the community come together to celebrate the school. They felt that increased school spirit would further facilitate unity among throughout the community. One interview participant reflected on his/her experience in high school:

I think what he said is right, like we need something that unifies the students cause right now there’s really nothing, I remember like, when I was in high school there’s a time, there was a time when just all students used to go to the field and we just had, you know, we just chants cause that was something that used to unite us and everyone was friendly towards each other and all that, it was this school spirit so yea. That’s why I think there should be something that unites us as students.

This participant wants to find a strategy for uniting the campus community with school pride. In the end, the sense of community emerged as an incredibly healthy part of UBCO. Participants felt welcomed and included as part of the campus community. This quote from a participant during an interview summarizes a welcoming experience of coming to UBCO:

As international students you come from, we come from different parts of the world, and you always do not know what you end up receiving or how things will turn out for you in a foreign country and stuff like that, especially a campus that is small and all that, but you come in and everyone is all warm and welcoming and you always get involved. There's so much stuff to be involved in, so many friends, people want to know about you and as long as you're open to share and be part of the big community it's it's inviting.

Therefore, it seems that UBCO is an inviting and welcoming community, especially if you are willing to be open with others.

### **Orientation**

Orientation was a unique category that emerged from the interviews. Participants appreciated the orientation program, Jumpstart, which was created specifically for international students. However, the participants advocated for more integration between the international (Jumpstart) and domestic (Kickstart) student orientations. One interview participant felt that the domestic and international student orientations should be better integrated:

Personally, I think that jumpstart for international students and kick-start, I think it should be one thing because I don't see the reason why like domestic students should have a separate orientation than international students because the main goal is to introduce all of us into the 1st year of university and it leads to like some people go through bad experience like I did. Like I went through a bad experience in my 1st semester with the Canadian students. It's cause we need to understand each other sort of so I would suggest that those two matched, so we're all integrated like in the same way.

As such, some participants felt that the segregation of international and domestic student orientations made it harder to connect with their Canadian peers. Participants described how it

was easy to make friends with other international students, because they were introduced to each other during orientation. Unfortunately, for some participants it was difficult to build relationships with Canadian students. Those participants felt the integration of the orientation programs would help all students connect and build relationships. This participant also felt the domestic and international student orientations should be integrated:

I can totally see where that comes from because in that first week it's like any camp I guess. You get really close to people really fast and you know, you want to keep those friends because it's scary cause we're away from our country... and I can see like I have friends who are only friends with international students and I don't really know why or how they've managed to do that... And I know that when the Kickstarter's were here, when it was Jumpstart and Kickstart, I found that the two groups were very kept apart and I, I thought that was sad you know I thought it would be pretty cool if we had more things together.

The participant feels that integrating student orientations would help foster relationships among domestic and international participants, instead of inadvertently supporting the segregation of student groups.

### **Discrimination**

The sense of community was primarily a category describing what is healthy about the UBCO campus. Unfortunately, not all participants had the same experience. Some participants did not feel welcomed, included or accepted by the community. In the community dialogue questionnaire data, issues of racism and discrimination arose. Some participants experienced racial discrimination, while others noticed sexual or gender discrimination. In addition,

participants felt the campus was too focused on Canadian society and not enough on cultural diversity.

This included the experience of some participants within the classroom. Some classes and professors were considered discriminatory towards international students. This participant felt that academics lack a global perspective, “The focus [is] on prioritizing Canadian society.” One participant commented on discrimination by faculty members, “Some professors have discriminational attitudes towards international students.” Those few quotes demonstrate the responses related to discrimination that emerged from the community dialogue questionnaire.

To make the situation better, participants identified strategies, including accepting more international students, improving the networking among international and domestic students, and promotion of an accepting and respectful campus culture. One participant noted that, “Better knowledge for people who don’t know how hard it is sometimes to be international,” would help make the situation better. While, another participant advocated for, “A culture that welcomes craziness and difference.” In summary, the sense of community at UBCO emerged as a healthy category, but that was not the experience of all participants. Some participants noted or experienced discrimination. In the following sub-category of safety I further explore some of the cultural safety experiences of international students at UBCO.

### **Safety**

Safety was a sub-category that emerged within the category of discrimination. Safety and security were noted as important concepts in the first community dialogue question about what makes a healthy campus, but were not evident in the community dialogue questionnaire responses to what makes UBCO healthy or unhealthy or in the interviews. Yet, some participants still described a healthy campus as a place where people feel physically and culturally safe. One

participant described a healthy campus as a place where, “People are friendly, there is no racism or bullying. The campus is safe; courses are well designed.” Another participant described a healthy campus as a place where, “Student[s] are comfortable and feel safe when on campus.” When looking at the frequency of responses, safety was ranked as the fourteenth of nineteen areas of interest important to international students. Therefore, I assume that international students feel fairly safe at UBCO. Also, no statistically significant relationships were found using chi-square to test for significant differences between participants in the various demographic categories with respect to areas of interest. This means there is no relationship between safety and the demographic variables of gender, location of residence, years on campus, or faculty.

### **Services**

The category of health and support services emerged from analyzing the qualitative data. Participants identified health centres and services at UBCO as healthy, such as the Health & Wellness Centre. Support services included resource centers such as the Writing Centre, International Programs & Services, the Disability Resource Centre, and Aboriginal Programs & Services. In an interview, one participant praised the resources available at UBCO:

The resources that we have on campus so we have the writing center for anyone who is having short comings in the English language and anything like that, Health & Wellness Centre for health related issues and stuff like that, international programs services, aboriginal program services there’s so many different resources on campus... so many resources should you have problems with something or should you want to get involved on campus...it’s there for you so it’s about you taking on the initiative to approach all those resources that are at your disposal.

In contrast to the quote above, other participants expressed a desire for services to expand, in particular the health services. These participants noted that only a few health care professionals are located on campus, and that the hours they work are limited to weekdays. “There could be more resources on campus, such as doctors, psychologists, etc. The wait time is always long, so that would be nice.” Another participant stated during an interview:

I know this again isn't your guys' boat but there currently is a doctor once a month. I think that is appalling. I don't like that and I don't like that Health & Wellness is closed on the weekends because I don't want to have to take a taxi to a walk-in.

Fortunately, this issue has since been resolved. There is a medical doctor available throughout the academic school year (September to May). For the summer months, there are very few students who stay on campus. Those students do have access to counseling services, but not a nurse or medical doctor. Students would have to go off campus to receive medical attention. Clearly, there have been improvements in the accessibility of health services available to students, nevertheless, some participants felt it was hard to access or find the resources that are available on campus.

Once again, this category was unique to the participant responses from the open-ended questions. It was not included as one of the areas of interest on the community dialogue questionnaire. Additionally, support services were a component of this category that only emerged from the focus group and individual interviews. Given the fact that there were so few interview participants, the support services component of this category should only be taken in context and requires further study. Overall, international students are pleased with the health and support services on campus. They feel supported by the campus community in their academic and personal lives, but would like to see that the services already offered are expanded.

### **Healthy People**

When asked what makes a healthy campus, participants responded that healthy people make a healthy campus. In other words, “The most important are the people, if they are healthy then the campus is,” stated one participant. Participants tended to define healthy people as physically, mentally, and spiritually healthy. Participants generally used a very holistic conceptualization of personal health. For instance, the lifestyle and attitude of people was included in the concept of healthy people. All in all, participants felt that a healthy campus was defined by the presence of healthy people. As one participant stated, “People first, if they feel secure and their mental and physical health is good,” that makes a healthy campus.

### **Substance Use**

Substance use, which includes smoking, alcohol, and drug use, was another category that emerged as important to participants, despite the fact that substance use/misuse was the least frequently selected area of interest on the community dialogue questionnaire for international student participants. Across all the demographic variables, substance use/misuse was either the least or second least frequently selected area of interest, and there were no statistically significant differences between the demographic variables related to substance use. In the open-ended questions on the community dialogue questionnaire, a smoke free environment, and limited use of alcohol and drugs were seen as factors in creating a healthy campus. So, perhaps it is other people’s use of substances that contributes to negative international students experiences.

In terms of smoking, the campus is not entirely smoke free, but participants described the designated smoking areas at UBCO as healthy. For example, one interview participant stated, “Oh, I also like that there are smoking pits. I think there should be, ya I don’t like people that don’t use them but I like that they are there a lot. Ya, it’s really important to me.” For this



participant, as long as people used the designated smoking areas, smoking was not an issue. Similar to many of the categories that emerged from the data, there was no consensus on views about smoking. Some participants felt the designated smoking areas were a healthy part of UBCO, while others felt they were unhealthy. Some participants felt there were too many designated smoking areas, or that they were improperly placed, and/or underused. Though smoking on campus seemed largely unsupported by participants in general, some students did recognize the rights and needs of people who do smoke. In that case, the designated smoking areas were seen as healthy for both smokers and non-smokers. This quote demonstrates the concern some participants feel for their peers who smoke:

I was really happy of the fact that there was smoking gazebos although since I'm not a smoker but I would, I would presume that some residences that and like where I live there's no gazebo like you have to walk a long distance and sometimes during winter it's really cold so I guess maybe more smoking gazebos should be set aside.

This participant actually advocated for more designated smoking areas (gazebos). To make the situation better, participant suggestions ranged from making the campus entirely smoke free, decreasing the number of designated smoking areas, increasing the number of designated smoking areas, to enforcing the use of designated smoking areas. As one participant stated, "Encourage students to respect the designated smoking areas," a form of enforcement. Overall, there is no consensus on how smoking should be dealt with on campus.

In the case of alcohol and drugs, community dialogue participants felt the excess use of alcohol and illegal drugs were unhealthy. Some participants felt there was too much drinking and/or open drug use on campus. Also, some participants felt that parties were poorly organized, and that students lacked health-promoting drug and alcohol education. One participant stated,

“The one unhealthy thing I’ve seen so far was the misuse of drugs and booze.” Once again, it sounds like the use of substances by other people contributes to the negative experience of international students.

In the interviews, participants expressed a positive feeling towards the use of alcohol and drugs at UBCO. Participants felt that most people tried to make parties safe, and that the use of alcohol was safe and responsible. However, this finding could be related to selection bias. With so few people in the interviews, participants may not represent the broad range of perspectives on substance use, which would likely be true for all the categories. Interestingly, participants did discuss how they felt that international students were at greater risk related to alcohol use, because they are far away from their usual support systems. This interview participant described the risk international students may face with substances:

I also think that like I saw some international student really, they were kind of exposed to it for the first time to drinking or marijuana and I know it’s partially because they’ve moved out of their home and a lot of, that happens for a lot of Canadian students as well, but I think it can hit them harder because we’re away from our supports.

The concern expressed by this participant shows how international students may be at greater risk because they are away from their supports, and may be exposed to substances for the first time. When asked what would make the situation better, there was a strong tone related to the restriction or abolishment of the use of all alcohol and drugs on campus, “The school should be a little strict towards alcohol control at least in campus.” However, some participants felt that it was up to the individual to make safe choices and decisions related to substance use.

### Activity

The importance of social and physical activity emerged as a category. A healthy campus was considered a place that provided opportunities for social and physical activity. This community dialogue participant said, “Providing adequate support for students, decent food, exercise opportunities, opportunities for safe social interaction,” makes a healthy campus.

At UBCO, the campus setting was identified as healthy. Some participants’ felt the hills and the layout of the campus contributed to it being healthy, because it helped them get exercise walking to and from buildings. For example, one participant responded that UBCO has, “Plenty of walking trails/exercise activities,” that create a healthy campus community. Furthermore, the gym, sports teams, and social events were identified as healthy activities for students. This participant described how social and physical activities help keep students healthy, “Extracurricular activities and nightlife helps the students maintain a good social-work balance and keep stress levels down.” In other words, activities help students live healthy, balanced lives.

Despite activity on campus being seen as healthy by some participants, others felt there were still areas for improvement. Participants identified a need for expanded facilities, such as the gym and fitness options, and social events and gatherings. One participant advocated for, “More activities on campus and keeping it alive.” In addition, some participants felt that the costs of using the gym and fitness facilities are too expensive. According to one participant, the expense of the fitness facilities could be seen as a barrier to health and well-being, especially if it prevents international students from participating:

I use the gym fairly regularly and I think that the price is fair as compared to other facilities but I don’t like that we pay for a fitness thing in our tuition and then if we would

like to actually use the equipment we have to pay another sixty dollars for a year... It, it just, it discourages people I think from getting a gym membership.

This participant did use the fitness facilities, but felt the cost may discourage other people from using them.

The category of activity that emerged from the qualitative data could be separated into two sub-categories, social and physical activity. Social activity was not an area of interest in participants' rankings in the community dialogue survey, but physical activity was an option. So, the category of activity does capture the importance of physical activity to international students, because physical activity was the third most important area of interest overall, and was always in the top five areas of interest selected across all the demographics. In particular, male international students were more likely to select physical activity as an area of interest [ $\chi^2(1, N = 375) = 11.137, p = .001$ ]. What is unique about the category of activity emerging from the qualitative data is the added component of social connectedness. It is clear that international students want to engage in activity that is physical and social, in order to promote their health and the health of their campus community.

### **Water**

Access to clean water from filtered water fountains and kiosks was identified as a healthy component of UBCO. Also, participants appreciated how water fountains and kiosks limited the use of plastic bottles on campus. Unfortunately for students, the tap water on campus and in residence was identified as unhealthy at UBCO. Participants were concerned with the colour and quality of the tap water. Participants living in residence did not feel comfortable drinking the water from their taps. One participant stated, "Water quality on residence is bad," and another participant said, "I can't drink the water from the sink of my living room." It is likely that

participants would expect to feel comfortable drinking water from their homes. Overall, among all international participants, water was the seventh most frequently identified area of interest. Surprisingly, the chi-square test showed no relationship between water and location of residence. I expected international students living on campus to more frequently select water, because of the issues with water quality on campus. The chi-square test showed that despite the slight increase in frequency of selection of water by participants living on campus, the relationship was not statistically significant [ $\chi^2(1, N = 377) = 1.922, p = .166$ ].

In order to make the situation better, participants responded that the quality of tap water should be improved. In a focus group, one of the participants summarized the category of water well by saying:

For me, the water thing, it's a hard one cause you might, it is healthy water to drink but the fact that it has all this questionable colour that people end up not drinking the water so and it's not like we're going to have a new pipeline from somewhere else and that would just be a huge cost for the school but I'm glad that the students union and the university itself has taken measures to kind of counter the whole issue of water cause right now you have water stations on campus and stuff like that.

In summary, students are pleased with the free, filtered water available on campus through the kiosks and fountains, but would like to see the overall system changed. A system change would be necessary to have less turbidity in the tap water and on residence but seems unlikely given the cost.

### **Expenses**

The expense of tuition and university life was a completely negative category that emerged from the qualitative data. Students only discussed expenses as unhealthy. The cost of

tuition and food were seen as stress-inducing issues. Simply put by one participant, “Tuition, food prices – stress inducing.” In addition, participants felt there was limited financial support for international students. One participant found campus resources were, “Not too helpful for International Students when dealing with finances.” The stress and anxiety that international students experience because of finances seem to influence their personal health and well-being, and their academic success.

I feel more anxiety about exams and school but I don't know if that's me because I'm prone to being anxious but my other international friends it's pretty much always on the forefronts of our minds you know like oh man I didn't do well and I'm paying so much for this I really have to try harder because it's, it's, it's a lot of money. Though it's less than it would be in the States it's still a lot.

Thus, in addition to the many challenges all students face at school, international students have the added pressure of success, because they are paying at least double the tuition of a domestic student, in addition to daily living expenses. Failure for international students means the loss of much more money than for a domestic student.

### **Cheating**

I consider the emergent category of cheating as an outlier. There were very few responses about cheating and the responses were only in the community dialogue questionnaire open-ended data, yet I thought it was important to bring forward, because cheating was important enough that a few participants identified it as part of a healthy campus, and what makes UBCO an unhealthy campus. In most cases, it is quite simple to see how a category relates to health. The categories identified by participants fit well within an ecological perspective of health. Do international students feel that cheating influences their health? What association between

cheating and health are international students identifying? Finally, is cheating another category that may be unique to international students or is this a concern of the whole campus community? Unfortunately, the data were limited for this category. These questions are beyond the scope of this Master's thesis, but would be another area for further research.

### **Summary**

In this chapter the results of the quantitative analysis were described and the top five areas of interest were identified: food, study spaces, physical activity, buses, and school spirit. Pearson's chi-square tests were performed to identify any relationships between the demographic variables and the various areas of interest. Some of the categories that emerged from the qualitative analyses were consistent with the areas of interest ranked by participants, like the top five areas of interest (food, study spaces, physical activity, buses, and school spirit). New categories emerged as well. Nine unique categories were identified through the analysis of the open-ended community dialogue questions, and focus group and individual interviews. The similarities and differences between the quantitative and qualitative analyses were presented throughout the chapter. In the next section, a synthesis of the qualitative and quantitative findings will be presented.

### **Synthesis of the Findings**

When you look at the findings from all data sources, both qualitative and quantitative, a picture of the health-related experiences of international students begins to emerge. When asked what makes a healthy campus, a question only asked on the community dialogue questionnaire, participants focused on food, policies, and the health of the people and environment. Participants depict a healthy campus as a place made up of people who feel physically, emotionally, and spiritually healthy, as well as safe and secure. Fair rules and policies that protect and benefit

members of the campus community help to ensure that people feel healthy and safe. Having access to a variety of foods that are healthy and affordable is a key factor in creating a healthy campus. Analyzing all the data shows that food is crucial, if not the most important part of creating a healthy campus for international students. Food was their most frequently selected area of interest across all demographics. Additionally, food-related codes frequently emerged in the qualitative data. The category of food has the most robust data. Thus, I am able to provide a richer description about food and its relationship to the health-related experiences of international students.

For the most part, participant responses to what makes UBCO healthy or unhealthy, and what would make the situation better, reflected the areas of interest identified through photovoice. However, nine unique categories emerged from the qualitative data: policy/rules, cleanliness, services, campus environment, sense of community, discrimination, orientation, expenses, and cheating. Moreover, there were differences in the categories that emerged from the interviews compared to those that were identified in the open-ended community dialogue questions. Orientation was a category that was discussed distinctly in the interview data, but not in the community dialogue data. Similarly, the lack of access to health care professionals, and the focus on support services that were discussed under the category of services emerged in the interview data, but less prominently in the community dialogue data.

Generally, international students described the factors that contribute to health, both positively and negatively, in line with the areas of interest. The key factor in health, food, was usually described as unhealthy, expensive, repetitive and of low quality at UBCO. Participants want healthier, more affordable food options, as well as the availability of more international cuisine choices. They want food that reminds them of home.



In terms of transportation, buses, parking, and bicycles were the fourth, sixth, and fifteenth most frequently identified categories respectively. This finding fits with the qualitative data. The responses of international students generally focused on buses and parking. Participants noted that public transportation has improved, but the bus routes and schedules are limited and inconvenient. In addition, the reliance on vehicle transportation and on campus parking was noted as contributors to financial and emotional distress, because parking passes are expensive and spots are limited. When it comes to parking, chi-square tests found significant relationships between parking and the location of residence and years spent at UBCO. International students that live off campus and/or have spent more than one year on campus were more likely to select parking as an issue. This finding seems consistent within the setting of UBCO. Participants noted in the qualitative data a reliance on vehicle transportation, due to inadequate public transportation options, and suggested that parking causes stress. Also, first year students are the most likely to live on campus, and therefore do not have to rely on vehicle transportation to get to class, home, or food facilities.

The physical campus environment at UBCO is considered clean, safe, secure, and a place that is full of space, beauty, nature, and fresh air. The built and social environment at UBCO was described as supportive for physical and social activity, but the gym and fitness options, as well as social events need to expand. In this case, visible expansions have been made to the gym and fitness facilities since the data were collected. A brand new fitness hangar was opened in 2013.

However, more spaces for studying and socializing are still desired. Interestingly, chi-square tests showed that females were more likely to select study spaces as more important and males were more likely to select physical activity and landscaped environment as important. Additionally, international students from an arts or sciences faculty were more likely to select

trails/paths as an important concern. I do not have an explanation for these relationships, but will further explore these findings in chapter 5 along with the literature on international students.

Participants described the social environment at UBCO as a tight-knit, respectful, and welcoming culture that encourages interactions, diversity, and relationship building. However, people still see and experience racism and discrimination. The discriminatory experiences some international students have seen or experienced may explain why international students more frequently identified cultural sensitivity as important (twelfth most frequent response), than all respondents to the community dialogue questionnaire, for whom this was the sixteenth most frequent response. Racism and discrimination negatively contribute to the health of an individual and community.

The findings in the literature about international students and discrimination will be further explored in chapter 5. The rest of the quantitative findings do not relate to the social environment, other than school spirit. School spirit was the fifth most frequently identified area of interest for international students, who often felt that UBCO lacks school spirit and a sense of unity and pride among students. School spirit may demonstrate another way to develop a sense of community among campus community members or may be a reflection of the sense of community. In a similar vein, the integration of orientation programs for domestic and international students emerged as another way for students to connect and build relationships. Either way, the orientation program for international students is appreciated, but the separation of domestic and international orientations inadvertently supports segregation, which is not health-promoting.

The seventh most frequently selected area of interest, water, was primarily identified as an unhealthy aspect of UBCO. Clean, filtered water is accessible on campus through water kiosk

and fountains, except for people living in Residence where kiosks are only recently available. The quality of tap water in residence is considered poor and in need of improvement. But, when testing for a relationship between water and location of residence, no statistically significant relationship was found. Therefore, water appears not to be a greater concern for international students living on campus, even though the quality of tap water is considered poor according to the qualitative responses. Similarly, substance use was selected the least frequently by international student participants, but still emerged as a category of concern in the qualitative data. Substance use includes smoking, alcohol, and drugs. There was a great contrast in the qualitative data. Participants either wanted all substances banned (illegal and legal) or did not feel there was any misuse of substances occurring on campus. In some cases, participants encouraged the creation and enforcement of substance-related rules and policies, which links to the connection international students made between policy/rules and a healthy campus.

Lastly, international student participants discussed services and expenses as important to their health and well-being, but there are no quantitative data to contribute to our understanding of these categories. What we do know is that the on-campus health (Health & Wellness Centre) and support (Writing Centre, International Programs & Services, Aboriginal Program & Services) services are considered great, but what is already offered needs to be expanded. On the other hand, the expenses associated with university life (i.e. tuition, parking, food) are considered stress inducing, and international students consider financial support limited. The literature on international students in relation to university services and expenses will be further explored in Chapter 5.

## Summary

In this chapter, the data collected from the qualitative and quantitative methods were analyzed and presented. Pearson's chi-square tests were performed to find any relationships among the quantitative data, and the qualitative data were analyzed for overarching categories. In the end, fourteen categories emerged as important to international students and were discussed in detail using both the quantitative data and participant quotes from the interviews and community dialogue questionnaires. Finally, a synthesis of the findings was presented. In the next chapter, I will further interpret the findings using the literature available on international students.

## **Chapter 5: Discussion**

### **Introduction**

This study reflects the health-related experiences of international students at UBCO and their recommendations for creating a health-promoting campus community. In doing so, this study contributes knowledge and understanding of health-related experiences for international students within the UBCO campus community, and highlights voices and issues that may otherwise have been unheard. The findings are intended to be relevant to the UBCO setting, and potentially transferable to other campus settings.

In this chapter, I will interpret my findings with the existing literature on settings-based health promotion, Health Promoting Universities, and international student experiences. In addition, I will describe the significance of the study, as well as the strengths and limitations. In closing, I will offer recommendations for further research and for health-promoting change at UBCO.

### **Discussion**

In their respective studies on international student experiences, Moores and Popadiuk (2011), and Zhang and Brunton (2007) found that the basic issues of day-to-day life in a new setting greatly affected international student experiences. These studies reflect principles from the Ottawa Charter for Health Promotion and settings-based health promotion. Health promotion is not only concerned with individuals, but with the settings and context in which we live, work, and play each day (WHO, 1981; WHO, 1986). Approaches to health promotion should consider the unique strengths and needs of each setting, because health is influenced by the settings in which we live, and in the case of institutions of higher education, the settings in which we learn (Doherty et al., 2011). Zhang and Brunton (2007) note that some of the day-to-day issues of life

in a context or setting may seem trivial at first, but they are of great importance to international students. Also, taking into account the day-to-day factors that influence health helps create the most effective and relevant health promotion strategies for the unique context of each setting (Doherty et al., 2011; Shareck et al., 2013; WHO, 1986). For example, Moores and Popadiuk (2011) and Zhang and Brunton (2007) found that food, transportation, cultural norms, feeling safe, and access to and availability of leisure activities had a positive influence on the experience of international students. These findings in the literature are also evident in this study, and will be discussed using the categories from Moores and Popadiuk (2011) and Zhang and Brunton's (2007) studies.

### **Food**

In their study, Ruetzler and Taylor (2012) found that food was an essential part of international students' adjustment to a new setting. That is certainly the case at UBCO. Food was the area of interest most frequently selected across all international student demographic variables.

Doherty et al. (2011) claim that the university setting is a place where students form health-related behaviours, particularly when it comes to food. Additionally, Ruetzler and Taylor (2012) argue food affects the health and well-being of a person, represents an opportunity for social interaction, and can be a source of comfort for people living away from their home cultures and communities. Ruetzler and Taylor's (2012) findings on food were echoed throughout participants' responses in my study. Participants expressed a desire for food that was more international, and food that reminded them of home. In addition, the availability and accessibility of various healthy and affordable food options was consistently identified as key to a healthy experience.

Doherty et al. (2011) argue that students know what a healthy diet is, but face many barriers to healthy eating. For example, food at UBCO was often described as unhealthy, expensive, and repetitive. In addition, the quality of the food that was available and accessible was considered questionable at times. The lack of easy access to healthy food on university campuses is a key barrier to healthy eating, but students would choose healthy food if it was affordable and available (Doherty et al., 2011). In a similar vein, interview participants brainstormed ideas for group shopping trips in order to address issues in accessing healthy and affordable food for students living on campus. According to Doherty et al. (2011), universities and student-led groups should create shopping, cooking, and budgeting resources for students as a way to learn healthy and affordable cooking and eating, while also creating an opportunity for socialization. Altogether, food and food services on campuses cannot be ignored. It was the priority area of interest for international students at UBCO, and we know there is a direct link between what we eat and our health. But, even the participant ideas for group shopping trips face a barrier due to transportation, another day-to-day issue that influences health in community settings and the quality of the university experience.

### **Transportation**

Navigating transportation was described as a distinctly unhealthy experience for international students at UBCO. Public transit options were found to be lacking and limited, while the cost of driving and parking on campus was noted as a stressor. Driving and parking were unhealthy experiences particularly for international students who live off campus and/or have been at UBCO for more than one year, because driving to campus and paying for parking created stress for participants. Therefore, in order to support the health-related experience of international students, an abundant and convenient public transit system to and from campus is

needed. A transportation system that is equipped to handle the number of students, and their schedules, commuting to and from campus will lessen the cost of transportation and reliance on vehicles, and will facilitate easier access to grocery stores and the community at large. Public transit is also better for the larger community because of the environmental benefits.

### **Cultural Norms**

Cultural norms are additional day-to-day issues that contribute to health, and are unique to each setting. In this section, I will discuss cultural norms using the categories that emerged from my findings, and draw in the relevant literature when possible. Unfortunately, cultural norms were not captured by the quantitative data. So, my findings for this concept are limited to the qualitative data. The following categories from my findings capture cultural norms, rules and policies, sense of community, discrimination, and orientation.

### **Rules and Policies**

As described in the previous chapter, participants responded that fair rules and policies that protect and benefit members of the campus community are important. Unfortunately, the data were very limited. Furthermore, I did not come across policies and rules as a factor influencing the university experience for international students in the existing literature, except when the focus was on academic or in-classroom issues. I would argue that participants in this study were not referring to academic or in-classroom issues when their responses were about policies and rules. However, this is my interpretation of very sparse data. What we do know is that healthy policies are important for creating health-promoting settings, and there is a large body of literature that links policies and health outcomes. For example, healthy public policy is one of the key action areas in the Ottawa Charter for Health Promotion (WHO, 1986). Consequently, UBCO policies should integrate a focus on health, in order to create a setting that



fosters health promotion. It would be very interesting to conduct further research about what international students mean by policies and rules, and how they see these being related to their health and the health of the UBCO campus community.

### **Sense of Community**

Social support has been considered a critical resource for health in the health promotion literature (Doherty et al., 2011; WHO, 1998), the stress and coping literature (de Araujo, 2011), and literature on international student adjustment (Khawaja & Stallman, 2011). It has also been identified as a key determinant of health (Wilkinson & Marmot, 2003). Social support for international students comes from a variety of sources, including peers, family, faculty, and university staff. Also, supportive social relationships may come in the form of friendships, romantic relationships, or academic relationships between students and faculty. The sense of community at UBCO reported by participants seems socially supportive. According to participants, UBCO has a friendly, respectful and tight-knit campus culture. Participants felt that the community welcomed diversity and encouraged interactions and relationships between students. The small size of the campus and the small classes were considered factors in creating a tight community. Throughout the qualitative data, the sense of community continued to emerge as a part of what makes UBCO a healthy campus. Participants felt that people really wanted to know them, and they felt that diversity was welcomed and encouraged. However, the interview participants did feel that school spirit is lacking. They felt that increased school spirit would further facilitate unity among throughout the community. This finding is reflected by how frequently international students selected school spirit as an area of interest. School spirit was ranked fifth by international students.

In the end, the sense of community participants feel emerged as an incredibly healthy

aspect of UBCO. Participants felt welcomed and included as a part of the campus community, but wanted to see further unity among the campus community. Therefore, it can be surmised that international students feel UBCO is a socially supportive and welcoming setting.

### **Discrimination**

Feeling like you belong in a setting contributes to health (Moore & Popadiuk, 2011). Being an international student can make you feel like an outsider and excluded from the new community in which you live, learn, and play (Moore & Popadiuk, 2011). Unfortunately, not all participants found the UBCO setting to be socially supportive. Some participants did not feel welcomed, included or accepted by the community. In the words of Crosby (2010), “Racism exists and persists in Canadian post-secondary education” (p. 399). Crosby’s (2010) findings were also reflected in the community dialogue questionnaire data. Issues of racism and discrimination arose. Some participants experienced racial discrimination, while others noticed sexual or gender discrimination. According to Brown and Jones (2013), international students do not have to experience discrimination personally to feel the negative effects. They found that, “a combination of personal and word-of-mouth accounts of racism impacted negatively on students’ sense of personal safety...Once their shock had worn off, students experienced strong and lasting emotional reactions of sadness, depression and disappointment” (p. 1012-1013). Thus stories and experiences of discrimination negatively influence the collective mental and emotional health of international students. Arguably, discrimination creates a cultural norm that is harmful to people living within that setting.

Brown and Jones (2013) claim that research on discrimination against international students is limited. Further research to document the extent of discrimination as well as on creating an inclusive and welcoming culture would be important, because discrimination has

such negative effects at the individual and community levels. To make the situation better, participants identified strategies, including accepting more international students, improving the networking among international and domestic students, and the promotion of an accepting and respectful campus culture.

### **Orientation**

Orientation was a unique category that emerged from the interviews that provides an avenue for creating an inclusive campus culture and an opportunity for building social support among peers. Participants that were involved in the international student orientation program, Jumpstart, really appreciated the program. Orientation programs help students adjust to a new culture and environment (Guo & Chase, 2011). However, participants advocated for more integration between the international (Jumpstart) and domestic (Kickstart) student orientations. International and domestic students can learn from one another and create relationships that provide social support networks (Guo & Chase, 2011; Moores & Popadiuk, 2011). Therefore, integrating the orientations can help foster connections and relationships that will help international students feel like part of their new community. Based on the literature, I would say there is more support for integrated rather than separate orientations. At UBCO, participants felt that the segregation of international and domestic student orientations made it difficult to connect with their Canadian peers. Participants described how it was easy to make friends that were other international students, because they were introduced to each other during orientation. Unfortunately, for some participants it was difficult to build relationships with Canadian students. For those participants, they also felt the integration of the Canadian and international student orientation programs would help all students connect and build supportive relationships.

### **Substance Use/Misuse**

Substance use in this study included smoking, alcohol, and legal and illegal drug use. It can be argued that the use of substances is informed by cultural norms and university policies. Therefore, I am including the discussion of substance use under the heading of cultural norms.

At UBCO smoking is permitted in designated smoking areas, alcohol is permitted for students (who are the legal age) in licensed areas and resident rooms, and the use of illegal substances is strictly banned. Despite the fact that substance use/misuse was usually the least frequently selected area of interest for international student participants across all demographic variables, it was still reported and discussed in the qualitative data. The responses to substance use and misuse were diverse and greatly contrasting. Participants either expressed a desire for all substances, legal and illegal, to be banned or did not feel there were any issues of misuse at UBCO. In their study, Vivancos, Abubakar, Hunter (2009) found that international students studying in the United Kingdom were less likely than domestic students to drink or use drugs. Similarly, Koyama and Belli (2011) found that the majority of international students studying at community colleges in the US had low rates of alcohol consumption, but that was not the case for all international students. In their study on the health and well-being of students at an Australian university, Rosenthal, Russell, and Thomsen (2008) found that students from the UK, US, Canada, and Europe were more likely to use drugs than students from other countries. The same finding arose in terms of alcohol consumption (Rosenthal et al., 2008). So, depending on a student's country of origin and location of study, health promotion related to substance use may need to be tailored to specific student groups. Finally, at another Australian university it was reported that international students were more likely to smoke (Jancey, Bowser, Burns,

Crawford, Portsmouth & Smith, 2014). However, that is not necessarily the case for all international students.

Altogether, it is hard to interpret what substance use policies students believe would make a health-promoting university for international students. Likely, each international student would have a different perspective, depending on his or her family, background, and belief system (Ramachandran, 2011). What we do know is that most guidance policies for institutions of higher education recommend safe and health-promoting substance use policies (Dooris & Doherty, 2010), such as safe alcohol consumption, the prevention of tobacco use, and/or banning tobacco and drugs.

### **Feeling Safe and Secure**

Another day-to-day issue that emerged in my findings was the importance of feeling safe and secure. When looking at the frequency of responses, safety was the fourteenth most frequently identified area of interest by international students. Also, Pearson's chi-square tests did not show any significant relationships between safety and specific participant characteristics. In other words, no particular group of students was more concerned about safety than any other group. Therefore, safety was not one of the top priorities. This may be because international students feel safe and secure at UBCO and indeed, many of them reported feeling safe. According to the literature on health promotion and health-promoting universities, a healthy campus is a place that enhances safety for individuals, groups, and the overall campus setting (ACHA, 2012). In addition, health-promoting universities need policies and system-wide approaches that contribute to personal safety and safe physical environments (WHO, 1986; WHO, 1998). A health-promoting university is a place where students can learn, grow, and

develop safely (WHO, 1998). The responses from international students reflect that UBCO is generally a safe setting.

Another environmental factor that international students identified as part of a health-promoting campus experience was the clean and safe natural and landscaped environment of UBCO that is full of space, beauty, nature, and fresh air. International students selected the natural environment ninth and trails/paths tenth among the nineteen areas of interest.

Interestingly, Pearson's chi-square test showed a relationship between trails/paths and the faculty that students belonged to, and between males and landscaped environment. International students enrolled in an arts or sciences degree were more likely to select trails/paths. Also, males were significantly more likely than females to select landscaped environment as important. Though I did not come across the importance of the natural and landscaped environment for international students in the literature, it is clearly a health-promoting factor for international students at UBCO. It would be difficult not to see a beautiful and vibrant campus environment as an influential factor for the health-related experience of international students. Our surroundings have a direct influence upon our experience in communities (Shareck et al., 2013). In other words, the physical environment of the settings in which we live is a direct determinant of health (Shareck et al., 2013). Consequently, a clean, safe, and beautiful campus environment is an important factor for creating a health-promoting experience. This is confirmed by the WHO literature on health promotion. The Ottawa Charter for Health Promotion advocates for clean, enjoyable, and sustainable natural environments (WHO, 1986). WHO (1986) claims that a sustainable natural and built environment must be part of any health-promoting strategy. According to Doherty et al. (2011), universities can use a settings-based approach to create a fair and healthy environment.

### **Social and Physical Activity**

Physical activity was the third most frequently selected area of interest by international students, with males significantly more likely than females to select physical activity as an area of importance. The importance of physical activity emerged in the qualitative data as well, and also further highlighted the need for activities that facilitate social interactions. For example, Moores and Popadiuk (2011) found that enjoyable activities outside of the classroom were important for building social connections and exploring the environment. Furthermore, Zhang and Brunton (2007) found that social, cultural, and sporting events provided international students with another opportunity to foster supportive social settings. On another note, Allen, Drane, Byon, and Mohn (2010) found that sports could particularly be an instrument for foreigners to maintain their cultural identity, while adapting to a new culture. In addition, they found that sport is a way to build relationships and therefore develop social support networks.

In the next section I will explore other factors that contribute to health beyond food, transportation, cultural norms, feeling safe, and access to and availability of leisure activities. These factors were identified by international students, and are also key factors in health promotion. The factors that will be discussed include access to clean water, finances and expenses, and health and support services.

### **Access to Clean Water**

The issue of access to clean and filtered water on campus is likely quite unique to UBCO. I did not see any mention of campus water in the existing literature on international students, but access to clean and safe water has been a cornerstone of the public health movement since the nineteenth century (WHO, 1998). At UBCO, access to clean, filtered water has been an ongoing issue. The issue has been addressed throughout the campus buildings, but continues to be a

problem for those living in residence. In this study, 41% of international student participants live on campus. This means that they face poor water quality in their homes. Surprisingly, Pearson's chi-square test showed that there was no significant difference between on-campus and off-campus international students with respect to the importance of clean water. Nonetheless, qualitative findings indicate that to improve the health-related experience of international students, particularly those living on campus, the campus water system needs improvement.

In Canada, most provinces, including British Columbia have regulations to protect water resources (Ministry of Health, 2007). Interestingly, British Columbia does not require the protection of water sources, but treatment of water is regulated (BC Ministry of Health, 2007). All in all, the *Guidelines for Canadian Drinking Water Quality* require that communities provide the most clean, safe, and reliable water possible (BC Ministry of Health, 2007). Therefore, accessing clean water should not be an issue, and is an unexpected issue for students new to the UBCO community. Addressing student concerns related to water would show that UBCO is responsive to community issues.

### **Finances and Expenses**

We know that income and employment are determinants of health. The expense of tuition and university life was a completely negative category that emerged from the qualitative data. The cost of tuition and food were seen as stress-inducing issues. In addition, participants felt there was limited financial support for international students. Some people may argue that it is unreasonable for international students to expect financial support, because they chose to study in this country, their families are not long-term Canadian taxpayers and therefore support is not the responsibility of Canadian governments or universities. However, Sherry et al. (2010) also found that international students experiencing financial difficulties felt there was limited



financial aid. Furthermore, the stress and anxiety that international students experience because of finances seems to influence their personal health and well-being, and their academic success, which is important to universities. In their study, Sherry et al. (2010) suggested that clarity in fees would help international students prepare for the costs of studying abroad. For example, students claimed that it would be helpful to know exactly how much tuition fees, health insurance, and on campus living expenses would cost (Sherry et al., 2010). While clear communication about costs is a goal of UBC international recruiters, cross cultural misunderstanding occurs, and international students can find it challenging to manage their finances independent from their families, often for the first time, in a new culture. Thus, in addition to the many challenges all students face at school, international students have the added stress of high tuition and living expenses they may not have understood or anticipated.

### **Health and Support Services**

In a different vein, it was interesting to see the lack of responses related to physical or psychological health as an area of concern in this study when compared to the literature on international students. This difference is curious. Is the difference due to the research objectives and questions in this study? Did the interview questions not evoke experiences related to physical and psychological health or were they just not of greatest priority for international students? What did emerge was the notion that having healthy people creates a healthy campus. Furthermore, participants noted that healthy people demonstrated health physically, mentally, and spiritually. Also, the lifestyle and attitude of people was included in the concept of healthy people. Participants focused on the available opportunities for promoting health through support services and social opportunities.

In this study, support services came from the educational institution and included resource centers like the Health & Wellness Center, Writing Center, International Programs and Services, the Disability Resource Center, and Aboriginal Programs and Services. These resource centers were seen as key contributors to the health and academic success of international students. Yet, participants expressed a desire for expanded services, especially in relation to the Health & Wellness Center.

So, how do UBCO and other institutions of higher education make sure that students feel supported in their academic and personal lives? Institutions of higher education must understand their responsibility for creating support services. They must create on-campus support services that are adequate, easily accessible, and relevant to the health and academic success of international students.

### **Recommendations**

I recommended that VOICE co-researchers, international students, and key stakeholders plan, partner, and take action to create change on the interests that international student participants want to see changed and/or improved, based on the findings described in this thesis. Additionally, it is important that key stakeholders at UBCO are made aware of the findings from this study, because they have the capacity to create and sustain health-promoting change. Moreover, the involvement of international students at UBCO is essential to creating relevant health-promoting change, because they are the population of interest for this data set. In general, I also recommend that other universities and institutions of higher education consider the health-related experiences of international students identified in this study in relation to their own settings. Both the study methods and the results may have transferability to other campuses where there is an interest in promoting the health and well-being of international students.

Based on the findings of this study, some new experiences of international students have emerged, while other findings reflect the existing body of literature on international students. Though participants identified a number of interests, the data available in the study was at times limited, because participants did not always provide extensive responses. Further research is recommended to develop a deeper understanding of international student health-related experiences, especially from a settings-based health promotion approach or Health Promoting University theory.

### **Significance of the Study**

This Master's thesis addresses a gap in the literature on educating international students. There is a lack of literature on international student experiences, especially any literature driven by the voice of international students. Furthermore, this Master's thesis identifies the health-related experiences of international students that move beyond the challenges typically discussed in the literature, such as homesickness, mental health issues, and adapting to a new or less familiar language. Using the principles of settings-based health promotion, Health Promoting University theory, and CB-PAR, this study describes international students as active and engaged members of their campus communities, and not economic commodities. International students give voice to their health-related experiences studying at UBCO. International students decide what is important about their experience, what about the UBCO setting contributes to health, and what changes should be made.

In summary, this study creates and facilitates an opportunity for international students to assess and identify their own health-related experiences, define what about the UBCO setting contributes to health, and explain what change is necessary to create a health-promoting university at UBCO. As previously stated, this may be one the first studies to identify

international student health-related experiences and recommendations for creating a health-promoting campus community. These findings are based on the experiences of international students at UBCO.

### **Strengths and Limitations of the Study**

The strengths and limitations of this study have been discussed throughout this paper. In this section I will pull together and review all the strengths and limitations. These should be kept in mind as you review the findings and recommendations from this Master's thesis.

#### **Strengths**

The primary strength of this study is that I am breaking new ground. This study is helping to create new knowledge about the health-related experiences of international students on a university campus, informed by settings-based health promotion and health promoting university theory, and guided by a participatory, mixed method study design. This may be one of the only studies to use this theoretical and methodological approach to study the health-related experiences of international students studying in Canada. Consequently, this study has demonstrated that settings-based health promotion and health promoting university theories are useful in exploring and understanding the health-related experiences of international students studying in Canada.

Other strengths of this study are based on my decision to do a secondary analysis. As a student with limited time and resources, the choice to do a secondary analysis provided me with a large set of data to analyze, particularly the community dialogue questionnaire data that I otherwise would not have been able to collect. Also, as a researcher with VOICE 2012, I was familiar with the data and how the data were collected. Finally, the use of a secondary analysis limited any potential burden on the international students that participated in VOICE 2012. I did

not have to approach international students and ask for their time and responses again.

Finally, the analysis of data from different data collection methods is a strength of this study. Questionnaires, focus groups, and individual interviews provide different kinds of data that were analyzed and interpreted in a complementary way. For example, when the open-ended responses to the community dialogue questionnaire were brief and not sufficiently detailed, the interviews provided greater detail and understanding. Likewise, when I had limited qualitative data, the quantitative data helped to create further understanding. Lastly, the individual interview and focus groups provided different kinds of data. Individual interview data provided a rich and detailed description of one international student's experience. On the other hand, focus group data provided detailed descriptions of more than one participants' experience, while also fostering a process of group dialogue and consensus building. Using a focus group method helps the researcher facilitate a process and space for participants to dialogue, disagree, and build off the experiences of one another. Sometimes, this process fosters conversations that may otherwise not be captured in an interview or through a questionnaire. In the next section, I will discuss the limitations of this study, starting with the limitations related to a secondary analysis.

### **Limitations**

There are several limitations to a secondary analysis, but the main limitation of this study is that I was not able to collect any new or original data that explicitly addressed my research questions. This limitation presented an issue, because I did not have complete access to the international participant data from VOICE 2012. I did not receive consent from all international participants, which meant that my analysis is missing the photovoice data and interview data from two other focus group participants. The inclusion of the missing data would have helped to create a richer picture of the health-related experiences of international students at UBCO. This

leads into another limitation of this study.

In some cases, the data that were collected, particularly with the community dialogue questionnaires, provided little to analyze. Rarely, did participants in the community dialogue questionnaire provide extensive responses. Often, participants would only use a word or a phrase to respond to the questions. It is hard to use an inductive approach and move the analysis to higher levels of abstraction when all you may have is a word or a phrase. It begs the question at times, how inductive was my qualitative analysis of the community dialogue questionnaire data?

Finally, it could be argued that the data analyzed in this study speaks to what is healthy or unhealthy about the campus setting, and is not very descriptive of the personal experiences of international students. Using additional data collection methods like in-depth interviews would likely have offered more descriptive and personal accounts of participant experiences of health as an international student. In contrast, it could be argued that the data analyzed are consistent with a settings-based health promotion approach, because both the data and the theory speak to the day-to-day settings-based factors and experiences that contribute to the health of international students on a university campus, UBCO.

### **Summary**

There is a breadth of literature on educating international students. The typical focus is on international students as commodities or economic contributors to foreign countries. Secondly, the focus is on challenges faced by international students. Canadian educational institutions have the most rapidly growing population of international students, yet literature on how to create successful and health-promoting experiences and campus environments is greatly lacking. This Master's thesis addressed this gap in the literature using a CB-PAR, mixed-method, secondary analysis approach guided by settings-based health promotion and Health Promoting University

theories. Using qualitative and quantitative data, this study identified fourteen categories that encompassed the health-related experience of international students at UBCO, and that are consistent with the principles of health promotion. The fourteen categories are policy/rules, cleanliness, campus environment, sense of community, orientation, discrimination, food, water, activity, transportation, services, substance use, expenses, and cheating. Each category was discussed in detail and linked to relevant literature when possible. In the end, this Master's thesis reflects the health-related interests and experiences of international students, and suggests ways to create a university that promotes health and well-being.

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## Appendix A

**COMMUNITY DIALOGUE QUESTIONNAIRE**

**We invite you to voice your views to improve our campus!!!**

**Completion of the questionnaire indicates you have read the informed consent and agreed to participate.**

*Responses will be summarized and shared within the campus community. Findings will be used for scholarly presentations and publication. Participation is voluntary and anonymous.*

1. What makes a healthy campus? (use a broad definition of health and consider: people, environment, policy)
  
2. What is healthy about UBC Okanagan campus?
  
3. What is unhealthy about UBC Okanagan campus?
  
4. What would make the situation better?
  
5. Select the three most important campus interests that you want increased and/or improved:  
(These interests were identified by students who did a photographic assessment of the campus)

Physical Activity	Signage (Finding Buildings/ Resources)	Unique Spaces (e.g. Collegium, Atrium, Aboriginal & Pride Centres)	Landscaped Environment	Natural Environment
Smoking	Trails/Paths	Parking	Bicycles	Buses
Substance Misuse	Recycling/Compost/Garbage	Study Spaces	Food	Safety
Water Kiosks	School Spirit	Gender Sensitivity	Cultural Sensitivity	Other

6. How long have you been on campus? Less than 1 year \_\_\_ or Number of years \_\_\_
7. Gender: Male \_\_\_ Female \_\_\_ Other \_\_\_
8. Position: Student \_\_\_ Staff \_\_\_ Faculty \_\_\_ Other \_\_\_\_\_  
(Please specify)
9. Where do you live? Off campus \_\_\_ On campus \_\_\_
10. Faculty/Major/Department \_\_\_\_\_(Please Specify)
11. Do you identify as: (Select as many as you wish)  
International: \_\_\_\_\_ LGBTQ:(Lesbian,Gay,Bisexual,Transgendered,Queer)\_\_\_\_  
Student Athlete (Collegiate/Varsity): \_\_\_\_\_ Aboriginal (First Nations,Metis,Inuit)\_\_\_\_\_

### **THANKS!**

Please return questionnaire to a VOICE Student Co-Researcher or \_\_\_\_\_  
For more information or questions contact: \_\_\_\_\_ or \_\_\_\_\_



## Appendix B

**VOICE Study 2012**  
 COMMUNITY DIALOGUE QUESTIONNAIRE  
 Informed Consent

**Core Research Team:**

Dr. Claire Budgen (PI), Health & Wellness, UBC O	(250) 807-9270
Doris Callaghan, School of Nursing, UBC O	(250) 807-9972
Dr. Donna Kurtz, School of Nursing, UBC O	(250) 807-9627
Dr. Linda Hatt, Barber School of Arts & Sciences, UBC O	(250) 807-9323
Melissa Feddersen, Health & Wellness UBC O	(250) 807-9270
Robyn Wiebe, Health & Wellness UBC O	(250) 807-9270

**Study Purpose**

VOICE 2012 replicates and extends previous research. Within the dynamic environment of a campus community, students and non-students will be engaged as co-researchers to translate knowledge from previous healthy campus development research, and to increase knowledge about diverse perspectives, when students and non-students are working together to create, renew and sustain health promoting change. Non-students include faculty, administrators, staff and campus business people.

**Research Objectives**

- Build and maintain student and non-student partnerships throughout the campus community to create, renew and sustain relevant health-promoting change, taking into account diverse perspectives.
- Identify health-related campus experiences of specific student population sub-groups (i.e. Aboriginal, Collegiate Athletes, International, LGBTQ [Lesbian, Gay, Bi-sexual, Transgendered and Queer]).
- Assess factors which support or jeopardize health-promoting change.

You are being asked to answer this questionnaire because we are interested in hearing the opinions of UBC Okanagan community members about the health of the campus. Completing the questionnaire should take about five minutes. There are no risks or benefits associated with participating in this Community Dialogue and participation is voluntary. You do not have to answer all the questions if you don't wish to do so. Completion of the questionnaire indicates your consent to participate.

Your name will not be associated with the questionnaire. Copies of the data will be stored at UBC Okanagan. Only research staff associated with this study will have access to the data. The information will be stored in locked file cabinets. You will not be identified in any reports of this research.

If you have any **questions or want further information**, please feel free to contact Dr. Claire Budgen (Principal Investigator) or Robyn Wiebe at (250) 807-9270, or anyone on the research team.

If you have any concerns about your treatment or rights as a research subject, you may contact the Research Subject Information Line in the UBC Office of Research Services at 1-877-822-8598 or the UBC Okanagan Research Services Office at 250-807-8832.

Results of the study will be made available on the UBC Okanagan Health and Wellness Website:  
<http://okanagan.students.ubc.ca/health>.

**WATCH FOR THE RESULTS!!**

## Appendix C

**VOICE Study 2012*****Focus Group/Talking Circle Guide***

## Sample Questions for Members of Student Population Sub-Groups

1. As you know, you have been invited to participate in this interview because you are a member of a population sub-group on campus that is of special interest in this study.

## Probes:

- Please share your health-related experience as a student on campus.
    - What is healthy about UBC O?
    - What is not healthy about UBC O?
    - What would make the situation better?
  - How do the results from campus assessment, (e.g. the Community Dialogue survey and Photovoice) reflect, or not reflect your experiences on campus?
  - What have you learned (eg today from this discussion)?
  - How would you like to see the discussion in this Focus Group/Talking Circle shared with the campus community?
2. Thank you for sharing your experiences with us. Before we end the interview, is there anything else you would like to share?

## Appendix D

**Talking Circle/Focus Group Moderator Guidelines**

<b>MODERATOR/FACILITATOR</b>	
<p><b>Select the right moderator</b></p> <ul style="list-style-type: none"> <li>• Experience in facilitation/research</li> <li>• Adequate knowledge of topic</li> <li>• Knows details of Human Ethics Approval</li> </ul> <p><b>Be mentally prepared</b></p> <ul style="list-style-type: none"> <li>• Alert and free from distractions</li> <li>• Active listener</li> <li>• Familiar with questioning route (script)</li> </ul> <p><b>Monitor group control</b></p> <ul style="list-style-type: none"> <li>• Balance of power among members <ul style="list-style-type: none"> <li>• Experts/Ramblers</li> <li>• Dominant Talkers</li> <li>• Encourage Shy Members</li> </ul> </li> </ul>	<p><b>Use pauses and probes</b></p> <ul style="list-style-type: none"> <li>• 5 second pause</li> <li>• Refocus off-topic remarks or pause to allow new ideas</li> </ul> <p><b>Probes:</b></p> <ul style="list-style-type: none"> <li>• "Would you explain further?"</li> <li>• "Would you give an example?"</li> <li>• "I don't understand."</li> </ul> <p><b>Alert to Safety of Group Members &amp; Disintegration of Group</b></p> <ul style="list-style-type: none"> <li>• Bullying, arguments, inappropriate language</li> </ul> <p><b>Regulate reactions to participants</b></p> <ul style="list-style-type: none"> <li>• Verbal /nonverbal</li> <li>• Head nodding</li> <li>• Short verbal responses - affirmation</li> <li>• Avoid "that's good", "excellent", "I agree", "really", "that's odd"</li> </ul>
<b>ASSISTANT MODERATOR/FACILITATOR</b>	
<p><b>Be mentally prepared</b></p> <ul style="list-style-type: none"> <li>• Alert and free from distractions</li> <li>• Active listener</li> <li>• Familiar with script</li> <li>• "Observer"</li> </ul> <p><b>Organization of Environment</b></p> <ul style="list-style-type: none"> <li>• Arrange room, refreshment &amp; equipment (flip chart, recorder)</li> <li>• Seating in circle</li> <li>• Welcome participants as they arrive</li> <li>• Ensure consents are signed</li> <li>• Ensure confidentiality/comfort (close door/room temperature)</li> </ul> <p><b>Management of Equipment</b></p> <ul style="list-style-type: none"> <li>• Operate recording equipment (trial before, extra batteries; two tape recorders);</li> <li>• State date/time/location on tape</li> <li>• Flip chart placement; felt pens</li> </ul> <p><b>Go with students who withdraw from the group</b></p>	<p><b>TWO RECORDERS</b></p> <p><b>Note Taker</b></p> <ul style="list-style-type: none"> <li>• Date/time/location/# of participants</li> <li>• Name of facilitator/Elder/assistants</li> <li>• Collect consent forms</li> <li>• Sketch seating arrangement with code names</li> <li>• Record code names of speakers to track the discussion – start with first speaker</li> <li>• Note attitudes and interactions; facial expression; eye contact</li> <li>• Record questions or concerns that arise during the session</li> </ul> <p><b>Flip Chart</b></p> <ul style="list-style-type: none"> <li>• Record concise points</li> <li>• Use participants' exact language</li> <li>• Seek clarification for flip chart - try to allow members do this</li> <li>• Be prepared to provide summary to the group at the end of the session</li> </ul> <p><b>Review</b></p> <ul style="list-style-type: none"> <li>• Debrief with moderator</li> <li>• Give feedback on analysis and reports</li> </ul>

**Ground Rules**

- No wrong answers but rather differing points of view. Feel free to share point of view even if it differs from what others have said.
- Interested in negative/constructive comments as positive comments; at times the negative comments are the most helpful.
- Remind about tape recording; one person speaking at a time; taking notes.... We may ask you to speak louder...
- We're use first names; Talk to each other rather than direct conversation to moderator/researcher
- They don't need to agree with others, but must listen respectfully as others share their views
- Explain rules for cellular phones.

## Appendix E

**Healthy campus development: The international student experience**Secondary Use of Photovoice and Focus Group Data  
Informed Consent**Researcher:**

Robyn Wiebe, Masters Student at The University of Victoria, and Research Coordinator at UBC's Okanagan Campus (250) 807-9270

**Study Purpose**

This study is for a master's level thesis. The purpose is to explore and increase understanding of international student experiences on post-secondary campuses. The setting for this study is UBC's Okanagan campus. The data have been collected as part of a larger study (VOICE Study 2012: Revisiting Healthy Campus Development at UBC's Okanagan Campus).

**Research Objectives**

- To identify and understand health-related campus experiences of international students on post-secondary campuses.

You are being asked to consent to the secondary use of your responses to the VOICE Study 2012-2013 Photovoice and/or Focus Groups, for a master's level thesis. You previously consented to the use of your responses for the purposes of the VOICE Study, but use of your responses for a thesis, as a public document, requires that you be contacted again to request your informed consent to this secondary use of your data. Your photographs and quotes (data) from Photovoice and/or Focus Groups will be analyzed for themes, and may be included in written reports and publications. All data will be anonymous, and any identifying information will be removed. You will not be identified in any reports of this research. There are no risks or benefits associated with participating in this research. Your consent is entirely voluntary. You may consent, or not, to the secondary use of your data. If you do not wish to consent, your data will not be used for the thesis research.

As with the VOICE Study 2012-2013, all data will be stored at UBC's Okanagan campus in locked file cabinets and password protected computer files. Only research staff associated with this study will have access.

If you have any **questions or want further information**, please feel free to contact Robyn Wiebe at (250) 807-9270 or [robyn.wiebe@ubc.ca](mailto:robyn.wiebe@ubc.ca) or Dr. Claire Budgen, Principal Investigator for the VOICE Study at [claire.budgen@ubc.ca](mailto:claire.budgen@ubc.ca) or 250-807-9270. If you have any concerns about your treatment or rights as a research subject, you may contact the Research Subject Information Line in the UBC Office of Research Services at 1-877-822-8598 or the UBC Okanagan Research Services Office at 250-807-8832.

*By signing this consent form, you are agreeing to secondary use of your data for a Master's thesis and acknowledge that you have received a copy of this consent form for your own records. By signing this consent form, you do not waive any of your legal rights.*

---

 Printed Name

---

 Date

---

Participant Signature





## Pearson's Chi-Square Tests

		Gender	
		Male	Female
		Count	Count
Food	0	81	67
	Food	121	105
Natural Environment	0	172	151
	Natural Environment	30	21
Physical Activity	0	132	139
	Physical Activity	70	33
Buses	0	154	123
	Buses	48	49
Recycling/Compost/Garbage	0	187	160
	Recycling/Compost/Garbage	15	12
Safety	0	189	158
	Safety	13	14
Substance Use/Misuse	0	194	169
	Substance Use/Misuse	8	3
Study Spaces	0	132	94
	Study Spaces	70	78
Unique Spaces (e.g. Collegiums, Aboriginal Centre, Pride Centre, Atrium)	0	177	143
	Unique Spaces (e.g. Collegiums, Aboriginal Centre, Pride Centre, Atrium)	25	29
School Spirit	0	164	139
	School Spirit	38	33
Cultural Sensitivity	0	187	154
	Cultural Sensitivity	15	18
Water Kiosks	0	164	142
	Water Kiosks	38	30
Landsaped Environment	0	184	168
	Landsaped Environment	18	4
Trails/Paths	0	176	156
	Trails/Paths	26	16
Bicycles (e.g. Routes, Racks)	0	187	164
	Bicycles (e.g. Routes, Racks)	15	8
Parking	0	167	138
	Parking	35	34

Signage (Finding Buildings/Resources)	0	192	165
	Signage (Finding Buildings/Resources)	10	7
Smoking	0	179	159
	Smoking	23	13
Gender Sensitivity	0	196	167
	Gender Sensitivity	6	5
Other	0	196	164
	Other	6	8

		7. Gender:
Food	Chi-square	.051
	df	1
	Sig.	.821
Natural Environment	Chi-square	.551
	df	1
	Sig.	.458
Physical Activity	Chi-square	11.137
	df	1
	Sig.	.001*
Buses	Chi-square	1.080
	df	1
	Sig.	.299
Recycling/Compost/Garbage	Chi-square	.028
	df	1
	Sig.	.867
Safety	Chi-square	.403
	df	1
	Sig.	.526
Substance Use/Misuse	Chi-square	1.598
	df	1
	Sig.	.206
Study Spaces	Chi-square	4.444
	df	1
	Sig.	.035*
Unique Spaces (e.g. Collegiums, Aboriginal Centre, Pride Centre, Atrium)	Chi-square	1.512
	df	1
	Sig.	.219
School Spirit	Chi-square	.008
	df	1
	Sig.	.927

Cultural Sensitivity	Chi-square	1.067
	df	1
	Sig.	.302
Water Kiosks	Chi-square	.117
	df	1
	Sig.	.732
Landscaped Environment	Chi-square	7.277
	df	1
	Sig.	.007*
Trails/Paths	Chi-square	1.187
	df	1
	Sig.	.276
Bicycles (e.g. Routes, Racks)	Chi-square	1.239
	df	1
	Sig.	.266
Parking	Chi-square	.368
	df	1
	Sig.	.544
Signage (Finding Buildings/Resources)	Chi-square	.166
	df	1
	Sig.	.684
Smoking	Chi-square	1.565
	df	1
	Sig.	.211
Gender Sensitivity	Chi-square	.001
	df	1
	Sig.	.971
Other	Chi-square	.728
	df	1
	Sig.	.393

Results are based on nonempty rows and columns in each innermost subtable.

\*. The Chi-square statistic is significant at the .05 level.

		Faculty_only			
		ART	SCI	ENG	MGMT
		Count	Count	Count	Count
Food	0	37	34	18	40
	Food	66	43	22	74
	0	85	66	31	103
Natural Environment					

	Natural environment	18	11	9	11
Physical Activity	0	78	61	26	81
	Physical Activity	25	16	14	33
Buses	0	73	58	32	87
	Buses	30	19	8	27
Recycling/Compost/Garbage	0	96	74	37	104
	Recycling/Compost/Garbage	7	3	3	10
Safety	0	91	74	38	104
	Safety	12	3	2	10
Substance Use/Misuse	0	99	75	38	112
	Substance Use/Misuse	4	2	2	2
Study Spaces	0	63	45	31	62
	Study spaces	40	32	9	52
Unique Spaces (e.g. Collegiums, Aboriginal Centre, Pride Centre, Atrium)	0	85	65	32	103
	Unique Spaces (e.g. Collegiums, Aboriginal Centre, Pride Centre, Atrium)	18	12	8	11
School Spirit	0	81	62	33	98
	School Spirit	22	15	7	16
Cultural Sensitivity	0	92	70	34	107
	Cultural Sensitivity	11	7	6	7
Water Kiosks	0	80	66	36	88
	Water Kiosks	23	11	4	26
Landscaped Environment	0	99	67	36	111
	Landscaped Environment	4	10	4	3
Trails/Paths	0	91	62	35	108
	Trails/Paths	12	15	5	6
Bicycles (e.g. Routes, Racks)	0	95	69	37	112
	Bicycles (e.g. Routes, Racks)	8	8	3	2
Parking	0	83	68	38	87
	Parking	20	9	2	27
Signage (Finding Buildings/Resources)	0	101	75	34	110
	Signage (Finding Buildings/Resources)	2	2	6	4
Smoking	0	90	72	38	101
	Smoking	13	5	2	13
Gender Sensitivity	0	100	76	38	112
	Gender sensitivity	3	1	2	2
Other	0	100	75	39	110
	Other	3	2	1	4

		Faculty_only
Food	Chi-square	3.931
	df	6
	Sig.	.686a
Natural Environment	Chi-square	7.208
	df	6
	Sig.	.302a,b
Physical Activity	Chi-square	15.965
	df	6
	Sig.	.014a,b,*
Buses	Chi-square	3.376
	df	6
	Sig.	.760a,b
Recycling/Compost/Garbage	Chi-square	4.984
	df	6
	Sig.	.546a,b
Safety	Chi-square	6.034
	df	6
	Sig.	.419a,b
Substance Use/Misuse	Chi-square	2.623
	df	6
	Sig.	.854a,b
Study Spaces	Chi-square	8.719
	df	6
	Sig.	.190a
Unique Spaces (e.g. Collegiums, Aboriginal Centre, Pride Centre, Atrium)	Chi-square	4.519
	df	6
	Sig.	.607a,b
School Spirit	Chi-square	7.744
	df	6
	Sig.	.257a,b
Cultural Sensitivity	Chi-square	3.722
	df	6
	Sig.	.714a,b
Water Kiosks	Chi-square	9.410
	df	6
	Sig.	.152a,b
Landscaped Environment	Chi-square	13.652
	df	6
	Sig.	.034a,b,*

Trails/Paths	Chi-square	10.156
	df	6
	Sig.	.118a,b
Bicycles (e.g. Routes, Racks)	Chi-square	8.182
	df	6
	Sig.	.225a,b
Parking	Chi-square	10.395
	df	6
	Sig.	.109a,b
Signage (Finding Buildings/Resources)	Chi-square	23.997
	df	6
	Sig.	.001a,b,*
Smoking	Chi-square	5.451
	df	6
	Sig.	.487a,b
Gender Sensitivity	Chi-square	10.910
	df	6
	Sig.	.091a,b
Other	Chi-square	4.635
	df	6
	Sig.	.591a,b

Results are based on nonempty rows and columns in each innermost subtable.

\*. The Chi-square statistic is significant at the .05 level.

a. The minimum expected cell count in this subtable is less than one. Chi-square results may be invalid.

b. More than 20% of cells in this subtable have expected cell counts less than 5. Chi-square results may be invalid.

		6. How long have you been on campus?	
		Less than 1 year	Number of years:
		Count	Count
Food	0	61	66
	Food	88	116
Natural Environment	0	126	164
	Natural environment	23	18
Physical Activity	0	108	132
	Physical Activity	41	50

Buses	0	117	127
	Buses	32	55
Recycling/Compost/Garbage	0	136	173
	Recycling/Compost/Garbage	13	9
Safety	0	135	171
	Safety	14	11
Substance Use/Misuse	0	143	177
	Substance Use/Misuse	6	5
Study Spaces	0	106	95
	Study spaces	43	87
Unique Spaces (e.g. Collegiums, Aboriginal Centre, Pride Centre, Atrium)	0	131	153
	Unique Spaces (e.g. Collegiums, Aboriginal Centre, Pride Centre, Atrium)	18	29
School Spirit	0	118	153
	School Spirit	31	29
Cultural Sensitivity	0	134	167
	Cultural Sensitivity	15	15
Water Kiosks	0	114	155
	Water Kiosks	35	27
Landscaped Environment	0	136	175
	Landscaped Environment	13	7
Trails/Paths	0	131	163
	Trails/Paths	18	19
Bicycles (e.g. Routes, Racks)	0	139	173
	Bicycles (e.g. Routes, Racks)	10	9
Parking	0	129	139
	Parking	20	43
Signage (Finding Buildings/Resources)	0	140	176
	Signage (Finding Buildings/Resources)	9	6
Smoking	0	131	168
	Smoking	18	14
Gender Sensitivity	0	146	175
	Gender sensitivity	3	7
Other	0	144	173
	Other	5	9

		6. How long have you been on campus?
Food	Chi-square	.757
	df	1
	Sig.	.384
Natural Environment	Chi-square	2.322
	df	1
	Sig.	.128
Physical Activity	Chi-square	.000
	df	1
	Sig.	.993
Buses	Chi-square	3.232
	df	1
	Sig.	.072
Recycling/Compost/Garbage	Chi-square	1.886
	df	1
	Sig.	.170
Safety	Chi-square	1.318
	df	1
	Sig.	.251
Substance Use/Misuse	Chi-square	.418
	df	1
	Sig.	.518a
Study Spaces	Chi-square	12.327
	df	1
	Sig.	.000*
Unique Spaces (e.g. Collegiums, Aboriginal Centre, Pride Centre, Atrium)	Chi-square	.999
	df	1
	Sig.	.318
School Spirit	Chi-square	1.310
	df	1
	Sig.	.252
Cultural Sensitivity	Chi-square	.331
	df	1
	Sig.	.565
Water Kiosks	Chi-square	4.031
	df	1
	Sig.	.045*
Landscaped Environment	Chi-square	3.435
	df	1
	Sig.	.064
Trails/Paths	Chi-square	.222



	df	1
	Sig.	.637
Bicycles (e.g. Routes, Racks)	Chi-square	.472
	df	1
	Sig.	.492
Parking	Chi-square	5.535
	df	1
	Sig.	.019*
Signage (Finding Buildings/Resources)	Chi-square	1.425
	df	1
	Sig.	.233
Smoking	Chi-square	1.807
	df	1
	Sig.	.179
Gender Sensitivity	Chi-square	.939
	df	1
	Sig.	.332a
Other	Chi-square	.511
	df	1
	Sig.	.475

Results are based on nonempty rows and columns in each innermost subtable.

\*. The Chi-square statistic is significant at the .05 level.

a. More than 20% of cells in this subtable have expected cell counts less than 5. Chi-square results may be invalid.