

Mount Saint Vincent University
Department of Applied Human Nutrition

Understanding the Factors Influencing Career Decisions of Chinese Dietetic Students

by
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Abstract

The Canadian population has become more ethnically and culturally diverse. The need for ethnic and cultural diversity within the dietetics profession is paramount to improve dietetic practice. Limited research has been conducted to determine the reasons for visible minorities' low representation in the dietetic field. In addition, there has been little research exploring academic experiences of Chinese dietetic students in Canada. The purpose of this study was twofold: Firstly, to explore the career selection factors and experiences of Chinese dietetic students; secondly, to examine the impact of these factors and experiences in order to provide a better understanding of Chinese students' experiences thus providing a basis upon which barriers and challenges to entry into the profession of dietetics could be addressed. The study employed a mixed method research approach. Critical theory and Social Cognitive Career Theory formed the theoretical framework. The data set were made up of secondary data collected as part of a larger study (Lordly, 2008) and personal experiences of the researcher through autoethnography, which provided further insight and richness to the analysis. The sample consisted of 41 Chinese dietetic students from seven university dietetic programs across Canada who completed an in-class or online survey. This study provided findings on the career perceptions of Chinese dietetic students and insights into their academic experiences as well as factors leading them to choose dietetic as a profession. Analysis revealed that family, culture, ethnicity, gender, intrapersonal factors and career opportunities influence Chinese students' career decisions. Family, Chinese culture and career interest were the most salient influences. The dietetics profession can reevaluate recruitment strategies and promote visible minority groups as important members of the Association. Dietetic educators need to be aware and find ways to acknowledge and address the challenges that culturally diverse students' experiences.

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CHAPTER 1: INTRODUCTION

My Context

I am Asian; I am Chinese; I am Malaysian; I am a graduate dietetic student; I work part time; I love to travel the world; I love to meet people; I speak 5 different languages; I listen to any kind of music; my true passion is in health promotion; I believe I was born to somehow make a difference in at least one person's life using my knowledge and experiences.

Before coming to Canada, I did not realize that the field of dietetics even existed. Raised by a traditional Chinese family, I was pressured daily by my parents to go to college or university to earn a stable career as a pharmacist or an accountant. Not many people in my parents' generation have a lot of education due to poverty. Both my parents stopped going to school when they were young. My father is a businessman and my mother is a stay-at-home mother. I am not from a wealthy family. However, my parents did not let our economic situation affect our family. This is especially true when it comes to education. My parents' perception of success is very narrow and consists of high grades in academic study and a high paying job. Despite their hardship, they sacrificed financially and personally to ensure that I and my brothers had good educations and would not suffer financially when we are adults.

I grew up in a health-conscious family. My parents were always aware of the importance of eating a balanced diet. Originally, I had dreams of becoming a doctor, but later changed my mind in favor of a career that focused on disease prevention and nutrition education. I remember I first developed an interest in healthy eating when I saw my uncle laid up for long periods of time after half of his body went numb. I knew people with chronic conditions that were treated and cured by simple modifications to their food intake. In my last year of high school, I was questioning what would bring me closer to my true passion – health by searching through

university catalogues and websites, I found a major called Nutrition. At that time, the importance of nutrition had not come to the serious attention of the medical profession and the general public in Asia. I chose Nutrition because I liked the idea that it is possible for people to ‘change their fates’ by simply eating right. It was hard to convince my parents to invest in my education because they did not know anything about a nutrition degree.

I am originally from Malaysia. This is technically the 9th year I have been away from home. Being an international student studying in another country can bring many life changing consequences and effects. I went to Acadia University for my BSc in Nutrition with a concentration in Dietetics. I thoroughly enjoyed studying nutrition. I graduated in 2007 and decided to continue with the MScAHN program (with internship) at Mount Saint Vincent University. During my university life, I was surrounded by others who shared similar interests, future goals and passions in life but not my language and cultures. Going into my second year of an undergraduate program, there were still no other Asians in my class. A question that has perplexed me for years was: “Why do so many Asians pursue computer science or a business major?” When I thought about my experiences, another question that arose was: “Is there something different in my personality or culture that influenced my becoming a international dietetic student in Canada?” I always desired to know how other international students thought about and experienced dietetics at other Canadian universities

In most Asian countries, the general public simply follows its conventional diet habits, without sufficient scientific guidelines. In 2007, I went home for Christmas. The best thing about going home was that I realized that the nutritional conditions of Asia are far from being satisfactory. In rural areas, the diseases resulting from malnutrition are widespread. By contrast, urban citizens tend to show surplus nutrition, resulting in the development of chronic diseases

such as obesity and cardiovascular diseases (Ke-You & Da-We, 2001; Tee, 2002). The trip home also reinforced the importance of my career choice and that the study of nutrition will become one of the most effective ways to improve human health and the quality of life.

In my community dietetic internship, I worked with a clinical dietitian who taught me a lot about the complexities of providing a nutrition education class to different ethnic groups whose first language was not English. It was a very enriching experience and I began to realize cultural differences can create a huge gap between communication and health belief.

In conversations with my thesis supervisor back in July 2009, I discovered that I have unique ‘undiscovered’ aspects of personal experiences which I was never aware of before. In this study I chose autoethnography method as part of my methodology. I wanted my writing to feel personal and to fully express myself. An autoethnography invited me to write a piece of art reflecting my own cross-cultural learning experiences, which in turn enabled me to explore and articulate new realms of my existence. My thesis work was a very rewarding experience, both on a personal and professional level, and I am looking forward to using the research findings to provide a deeper understanding of why visible minorities in general, and Chinese in particular are not adequately represented in the dietetic field.

Statement of Problem

Over the past several decades the Canadian population has become more ethnically and culturally diverse (Statistics Canada, 2006), posing a unique challenge for all health care professions. All health care professionals will encounter many opportunities to counsel visible minority patients, in particular the Chinese. Health care professionals’ lack of cultural sensitivity and language knowledge may discourage visible minority patients from seeking health care or sharing personal information required for appropriate treatment. Multicultural competence and

sensitivity are required within the health care professions to improve patient outcomes since visible minority groups have been experiencing poorer health outcomes (Curry, 2000; Sarto, 2005). Accordingly, there is an increased need for all health care professionals to better respond to the population health and health care necessities of visible minorities.

Allied health professions¹, such as dietetics, provide a source of stable employment, social mobility and opportunities for public service. Yet, despite a growth of opportunity in the dietetic field, the dietetics profession is marked by low representation of visible minorities (Greenwald & Davis, 2000). Currently, there is no information available indicating the diverse backgrounds among the members of Dietitians of Canada.

The number of racially and ethnically diverse students entering health profession programs should reflect the diversity of the population that they will eventually serve (McQueen & Zimmernan, 2004). In an effort to enhance the diversity of their membership, the American Dietetic Association adopts several initiatives. Incentive programs, professional recruiting, and networking groups are some of the initiatives that have been undertaken to enhance minority recruitment and retention efforts (Saracino & Michael, 1996). However, the Association has not experienced any significant increases in minority representation from 1981 to 1999 (Baldyga, 1983; Bryk, 1987; Bryk & Kornblum, 1991; Bryk & Kornblum, 1993; Bryk & Soto, 1997; Bryk & Soto, 2001).

The limited research conducted in regards to career selection factors of dietetic students has not adequately been addressed in visible minorities (Kobel, 1997; Markley & Huyck, 1992;

¹ Allied health professionals are involved with the delivery of health or related services pertaining to the identification, evaluation and prevention of diseases and disorders; dietary and nutrition services; rehabilitation and health systems management, among others. Allied health professionals, to name a few, include dental hygienists, diagnostic medical sonographers, dietitians, medical technologists, occupation therapists, physical therapists, radiographers, respiratory therapists, and speech language pathologists (Allied Health Professionals, n.d.).

Suarez & Shanklin, 2002). More specifically, there exists no research that explores the academic experiences of Chinese dietetic students in Canada. The lack of literature, coupled with increasing diverse population in Canada, provides the rationale for this study. More research is needed to gain a greater understanding of the unique experience of Chinese dietetic students and to provide insight into their academic experiences and the career selection factors that lead them in a direction of becoming a dietetic professional.

Purpose of the Study

The purpose of this study is to explore the career selection factors and experiences of Chinese dietetic students and to examine the impact of these factors and experiences. This research study aims to provide a broader understanding of Chinese students' experiences. Thus, it provides a basis upon how to address the barriers and challenges that entry-level dietetic professionals might face.

Significance of the Study

The study presents a detailed account of Chinese dietetic students' perception of their academic and career pursuits in Canadian universities and provides references and insights for future studies concerning visible minority dietetic students in Canadian universities. By understanding what influences visible minority students to choose a career in dietetics, dietetic professionals and educators will be able to implement culturally sensitive nutrition education programs. This will help to increase the recruitment and retention of visible minority students in dietetics, and lead to a more diversity in the profession. Within a more supportive and effective educational environment, minority students will be able to develop multicultural competencies in order to improve the quality of health care in Canada.

Research Questions

Research questions were designed to elicit answers that would illuminate what it is like to be a Chinese dietetic student. These questions were derived largely from my cross-cultural learning experiences being a visible minority in a dietetic education program and my extensive knowledge of an international student's experiences. Therefore, this study sought to address the multiple issues related to the factors influencing the selection of dietetics as a career. This research, therefore, specifically addresses the two broad research questions below:

1. What factors influence Chinese dietetic students' career choices?
2. How does increasing number of visible minorities influence the profile of dietetics profession?

Definition of Terms

The following terms are defined as they are used in the thesis.

Autoethnography: An autobiographical genre of writing and research that displays multiple layers of consciousness as it connects the personal to the cultural (Ellis & Bochner, 2000, p. 739).

Career Choice: Selection(s) of occupation made by an individual.

Career Decision Making: A process that not only encompasses career choice but also involves making a commitment and carrying out the actions necessary to implement the choice (Brown & Brooks, 1996, p. 425).

Critical Theory: A research paradigm that "challenges the status quo"; emancipation and transformation are central goals of this type of research. The researcher's values play a prominent role in this research, the product of which is a "form of cultural or social criticism" (Ponterotto, 2005, pp. 129 – 130). "Critical theory is centrally concerned with releasing people from falsely created needs and helping them make their own free choices regarding how they wish to think and live. Framed this way, it is much closer to democratic ideals than people realize" (Brookfield, 2005, p. 364).

Cultural Sensitivity: An attitude of respect for the validity and strength of a person's cultural self-identification, acceptance at the emotional level that expression of culture is okay, especially regarding food habits (Curry, 2000).

Cultural Diversity: The coexistence of different ethnic, gender, racial, and socioeconomic groups within one social unit. (Cultural diversity, n.d.).

Dietitians of Canada: Dietitians of Canada (DC) is the national professional association of dietitians in Canada. It is one of the largest organizations of dietetics professionals worldwide. It is the “voice” of the dietetics profession in Canada. DC leads and supports members to promote health and well being through expertise in food and nutrition (Dietitians of Canada, 1997).

Ethnic or Racial Diversity: A group having people of different races, cultures, religions, nationalities, and backgrounds (Ethnic group, n.d.).

International Students: Students in Canada on a visa or refugees, neither of which have a permanent residency status in Canada (Statistics Canada, 2011).

Multicultural Competence: The ability to discover the culture of each client/patient and effectively adapt interventions to her or him (Curry, 2000).

Registered Dietitians: An individual who has the necessary qualifications to be a member of Dietitians of Canada. Normally qualifications consist of completion of a Bachelor of Science Degree (or equivalent) with major credits in Nutrition, Dietetics and/or Foodservice Administration plus successful completion of a program of supervised practical experience accredited by Dietitians of Canada (Dietitians of Canada, 1997).

Visible Minority: Persons, other than Aboriginals persons, who are non-Caucasian in race or non-white in color, included Chinese, South Asian, Black, Filipino, Latin American, Southeast Asian, Arab, West Asian, Japanese, and Korean (Statistics Canada, 2006).

CHAPTER 2: LITERATURE REVIEW

The growing cultural and ethnic diversity of visible minorities has strong implications for the provision of health care. In order to better understand reasons for the lack of ethnic diversity in the dietetics profession, a number of issues must be considered. The first section of this literature review focuses on certain issues in the profession of dietetics and diversity in dietetic practice. This discussion will be followed by an exploration of career selection determinants by dietetic students.

The Profession of Dietetics

Dietetic students wishing to make a professional career in dietetic field must meet certain academic and professional qualifications. The Dietitian of Canada (1997) defines a registered dietitian (RD) as trained to give advice on diet, food and nutrition. However, the scope of dietetics practice is broad and often categorized by specific job titles such as clinical dietitians, public health dietitians, food service director and managers, or consultants. Clinical dietitians typically assess nutritional status, develop and monitor nutrition interventions, and provide other nutritional expertise in hospitals such as nursing care facilities. Community dietitians often work in public health agencies and also facilitate nutritional care for at risk populations. Administrative dietitians are usually responsible for large scale meal planning, human resources, training, purchasing, regulatory compliance and financial management in institutional settings (Dietitians of Canada, 1997).

Traditionally, there are two educational phases required to qualify as an entry-level dietetic practitioner for becoming an entry-level dietitian to practice in Canada. First, an individual must complete a Bachelor's degree in Foods and Nutrition from a university offering a Dietitians of Canada accredited education program, or equivalent education acceptable to the

provincial dietetic regulatory body (Dietitians of Canada, 1997). Dietetics majors complete a wide array of courses involving food and food preparation, advanced human nutrition, management, biology, microbiology, chemistry, biochemistry, economics, and physiology. The second phase is a dietetic internship, accredited by Dietitians of Canada that consists of a 40 to 50 weeks of practical experience gained under the supervision of Registered Dietitians. The practical training is designed to ensure that the competencies required to practice have been acquired in a wide variety of practice settings (Dietitians of Canada, 1997). Once an individual has completed these two phases of preparatory education, they must write and pass the Canadian Dietetic Registration Examination (CDRE) to be eligible to apply for registered status in one of the provincial regulatory bodies in order to practice.

According to Greenwald and Davis (2000), the dietetic internship selection process has lead to increased stress and competition among students. There are as twice as many applicants for each available internship each year. A recent study by Atkins and Gingras (2009) explored nutrition students' expectations for and experiences of their education. This study included 14 students who were in their first year or final year of an undergraduate nutrition program at Ryerson University. Six final year students unanimously commented that the competition was more intense during internship application time. A student said of the experience "You can't celebrate it. You can't go up to someone and say, 'I got an internship!' You [might] make them feel like garbage" (Atkins & Gingras, 2009, p. 184).

Visible minorities tend to receive poorer grades in their academic study and often lack volunteer and work related experiences that are necessary to create a competitive internship application (Greenwald & Davis, 2000). Two multilingual students have resigned themselves to the idea that they would not become dietitians (Atkins & Gingras, 2009). Another student said:

“I hope to be a dietitian, but due to the competition, I might not get into the internship. You can’t know how hard it is for a second language student to finish the program. It’s really [a] challenge for them” (Atkins & Gingras, 2009, p. 184). An internship program director pointed out that failure to obtain an internship is perceived as demeaning by the applicant, which can discourage them from reapplying at a later date (Greenwald & Davis, 2000). The difficulty to get an internship and competition among peers may lead students to feel conflicted about their original ambition and the passion of becoming a dietitian.

Diversity in Dietetic Practice

The overall health of the Canadian population has gradually improved. Compared to non-visible minority populations, visible minority populations experience higher rates of morbidity and mortality. According to the 2006 census, visible minorities made up 16.2% of the total population in Canada. The growth in the visible minority population, driven largely by immigration from non-European countries, soared 27.2% between 2001 and 2006, which is five times faster than the 5.4% increase for the total population in Canada (Statistics Canada, 2006). Chinese is the largest Asian subgroup in Canada, with a total of 1,216, 570 Chinese Canadians, comprising 3.9% of the total Canadian population and 24% of the visible minority population (Statistics Canada, 2006). After immigrating to North America, Chinese living in North America experience cardiovascular disease, hypertension, some cancers, diabetes, and obesity at greater rates than those living in Asia (Whittemore et al., 1995; Whittemore et al., 1990). Research indicates that the differences in disease rates among people from different countries are largely attributed to environmental factors such as adoption of high fat, low fruits and vegetables in Western diets and sedentary lifestyles (Campbell, Parpia, & Chen, 1998; Yu, Harris, Gao, Gao, & Wynder, 1991). However, the risk and severity of these conditions is well known to be

modified by diet which is recommended by registered dietitians. Registered dietitians are allied health professionals qualified to recommend dietary approaches to prevent these conditions and, when these diseases manifest, to prescribe medical nutrition therapy for treatment (Dietitians of Canada, 1997). Statistics Canada's (2006) population projections state that we should expect more than one-fifth of the total population to be visible minority by 2017. Although the overall health care demand for dietitians is predicted to grow, the entire dietetics workforce may not be able to keep pace with the population they serve.

In North America, non-visible minorities receive better health care compared to visible minorities (Smedley, Stith, & Nelson, 2003), which indicates poor representation of visible minorities' nutritional needs. The National Institutes of Health (NIH) defined health disparities as differences in the incidence, prevalence, mortality, and burden of diseases and adverse health conditions that exists among specific population groups (Health Disparities Defined, para. 3). Underrepresentation of visible minorities in health professions has been cited as a contributing factor to health care disparities (Sarto, 2005). The reasons for health disparities are complex and poorly understood, but there are a few well-documented factors that may contribute to health disparities. The geographic location of available health care services and factors within the health care system, including cultural and linguistic barriers, health insurance status, and socioeconomic status also are potential factors for disparities (Sarto, 2005). Bias, stereotyping, prejudice, and clinical uncertainty on the part of the health care provider during client encounters may also contribute to disparities in health (Balsa & McGuire, 2003). Other factors contributing to health disparities are low health literacy level such as the ability to read, understand, interpret and act on health information (Kelly & Haidet, 2007). If clients cannot understand needed health information, attempts to improve the quality of health care and reduce health care costs and

disparities may be unsuccessful. Lastly, genetic and biological factors are also likely to play a role in health disparities (Sarto, 2005). The profile of dietetic professions is subject to many adaptations due to higher number of immigrants entering the country compared to the past, and these adaptations can be possible by employing more ethnically diverse professionals in the field. For instance, with a more diverse population of dietetic professionals in the field, the issue of health disparities can be resolved. Also, underserved populations might get better quality of health care because visible minority health professionals can handle language and culture related challenges of the patients easily (Chen, Fryer, Phillips, Wilson, & Pathman, 2005; Gary & Stoddard, 1997; Liu, So, & Quan, 2007; Xu et al., 1997).

Overall, diversity challenges a dietetic field built mainly on one set of cultural values. With Canada's population becoming more diverse, and particularly with visible minorities, nutritional knowledge across cultures becomes more important. Likewise, members of the dietetics profession, like other professionals and organizations, must realize the importance of ethnic and cultural diversity as its differences between health care professionals and patients can inhibit development of effective treatment plans (Fitz & Mitchell, 2002).

Career Selection Factors

Although visible minorities remain underrepresented in the dietetic field, limited research has been done to specifically address issues of recruitment, retention, and dietetics experiences of visible minorities (Greenwald & Davis, 2000; Suarez & Shanklin, 2002). Likewise, few studies have been conducted with dietetic students or dietetic professionals to address the career selection factors to better understand why visible minorities are not adequately represented in the profession (Greenwald & Davis, 2000; Kobel, 1997; Markley & Huyck, 1992).

These research studies do reveal some common trends in career selection factors among dietetic students (Kobel, 1997; Markley & Huyck, 1992; Suarez & Shanklin, 2002). However, these studies did not indicate possible differences in career selection factors for visible minority groups within the profession (Kobel, 1997; Markley & Huyck, 1992; Suarez & Shanklin, 2002). Therefore, dietetic professionals and educators may not have a clear understanding of factors which may be hindering visible minorities from pursuing careers in dietetics.

When Students Decide on a Major

Career development is a process that occurs throughout one's life. Rodenstein (1990) noted that the delivery of career information and career recruitment is most relevant when individuals are making a career choice therefore the identification of when career choice is made is important to the subsistence of the profession.

In a study reported in 1990, Keller, Piotrowski, & Rabold surveyed undergraduates at a medium-size university in the United States and found that 72% of these students had already decided on their career choices early in their academic training. Interestingly, not only had upperclassmen and more experienced students specified their career choice, but most freshmen and sophomores also had identified their chosen career (Keller, Piotrowski, & Rabold, 1990). This study, however, focused on a general student population and did not address differences related to race and ethnicity. The 409 students surveyed represented various academic majors across campus and not just one academic discipline. This was similar to the findings of 600 dietetic students; approximately half of these students had already made their career decision when they were in college or over 21 years of age (Rodenstein, 1990).

Some researchers have, however, focused their attention on when students from specific majors decide on their careers (Kobel, 1997; Markley & Huyck, 1992). Two studies in the

United States addressed the point at which dietetics students selected dietetics as their career. Kobel surveyed students from Plan IV/V² dietetic programs listed in the *Directory of Dietetic Programs*. Of the 1,695 students completing the questionnaire, 55% of these students had selected dietetics as a career during college (Kobel, 1997). Similarly, in an earlier study, 43.9% of dietetics students expressed that they became interested in dietetics while at college (Markley & Huyck, 1992). Approximately 25% of the students stated that they became interested in dietetics either during secondary school or earlier. Another 17.7% of the students surveyed noted an interest in dietetics only after having been in other careers (Markley & Huyck, 1992). Overall, these studies have rarely specifically focused on ethnic differences in the timing of career selection (Kobel, 1997; Markley & Huyck, 1992).

A study on exploring the decisions of African American dietetic and non-dietetic students about pursuing a specific major was more often made earlier in junior high or high school and freshman year of college (Felton, Nickols-Richardson, Serrano, & Hosig, 2008).

The literature indicated that the point at which students make their career selections may vary depending upon several factors, such as their academic major, year of study, race and ethnicity (Kobel, 1997; Leong, 1991; Markley & Huyck, 1992).

Who Influences Students' Career Choice

Research has shown that a number of individuals influence career choice (Keller et al., 1990; Kobel, 1997; Leong, 1991; Markley & Huyck, 1992). Some of these individuals include family members, friends, professionals, counselors, and role models.

² Plan IV/V is a term American Dietetic Association uses to describe the programs approved under the standards of education as meeting academic requirements (Kobel, 1997).

When studying career choices of Asian or Chinese populations, it is important to examine the information about family expectations, family support, and family background. Familial role in Asian Americans' academic achievement and career aspiration has been examined and the result showed that the family plays an important role in Asian Americans' academic success (Peng & Wright, 1994). Asian Americans are greatly influenced by their traditional cultures, they tend to choose a career that both satisfies their personal interests and is acceptable to their parents (Leong, 1993). It becomes the responsibility of the younger generation to carry on family tradition and accomplish the wishes of the older generation. These career choices may not be their real career preferences but rather may reflect their families' expectations. Tang, Fouad, and Smith, (1999) stated that Asian American parents want their children to pursue careers that are financially secure and rewarding. According to Leong and Serafica (1995):

Career choice and career advancement may be seen more as means of providing for one's own family, helping one's siblings, and fulfilling one's responsibility to care for parents in their old age than as ways of implementing self attributes such as gregariousness... They [Asian Americans] may value career success and advancement more for the honor bestowed upon the family than as expressions of their individuality. (p. 47)

In other words, American culture frames career choices as a way of self-actualization and fundamentally as an individual choice. Yet, Asian Americans view career choice as mutually beneficial for themselves and their families. The reason may be that most Asian cultures emphasize collectivism, where needs of the family unit come before personal wishes (Leong, Kao, & Lee, 2004). This suggested that parental influence and family involvement had a significant impact on career selection.

Keller et al. (1990) stated that being introduced to professions and professionals influence the career choices of some students. Keller et al. (1990) found this to be true among

undergraduates from various academic disciplines. Most of these students valued information about trends occurring in their fields and information about potential employers. Additionally, 40% of the students in this study had contact with professionals in their field of interest and considered meeting people in their profession as the most important preparation in selecting a career (Keller et al., 1990).

Markley and Huyck (1992) found that when dietetic students were asked to specify factors which influenced their career selection, taking a course in nutrition was ranked the most influential factor in career selection for 15.8% of the student surveyed. This was the highest ranked factor in students' selection of dietetics as a profession (Markley & Huyck, 1992). Approximately one-third of the students identified dietitians as one of these factors. Overall, 12.6% of the students in this study stated that a dietitian was the most influential factor in their selection of dietetics as a career. This factor was rated as the second most influential factor in their career selection (Markley & Huyck, 1992). Dietetic students also noted that relatives and friends were influential in the career selection process. Only 3.6% of the dietetic students surveyed stated that other health career professionals were important influences in their selection of dietetics as a career (Markley & Huyck, 1992). Although students of different ethnicity were included in this study, ethnic differences within the sample were not specifically analyzed (Markley & Huyck, 1992).

A study by Kobel (1997) examined factors that influence career selection. This study included males and females from both minority and majority groups. Eighty percent of the students surveyed stated that guidance counselors had a low or neutral impact on their selection of dietetics as a career. The result of this study showed that no one person had a clearly significant impact on students' career selection (Kobel, 1997). No significant differences were

found for ethnic differences in the influence of counselors and significant others on career determination (Kobel, 1997).

Asian American students, as compared to white American students, were seen to be more likely to pursue engineering, computer science, and mathematic (Leong, & Hayes, 1990). The occupational stereotyping leads people to believe that all Asian Americans are more likely to be qualified or successful in the fields of engineering and physics and less likely to be successful or qualified in verbal, persuasive, or social careers (Leong & Serafica, 1995). The career counselors or supervisors may encourage them to go into “Asian fields” (e.g., engineering, computer science, medicine), thinking they are more suited to these fields (Leong & Chou, 1994). Likewise, in one study, both African American dietetic and non-dietetic students revealed that their major was recommended to them by a high school guidance counselor or college advisor, faculty member, or recruiter (Felton et al., 2008). These suggestions were perceived to have both positive and negative influences. Students believed that they were told to avoid certain majors (i.e., political science, urban planning, etc.) because African Americans tend not to be successful in those majors or because of low grade point average (Felton et al., 2008). In contrast, African American students perceived that they were encouraged to pursue other majors (e.g., engineering, chemistry, physics, English, etc.) due to their abilities, skills, and interests (Felton et al., 2008).

In addition to individuals, specific sources of information also have been examined in terms of their contribution to students’ career selection. The most useful source of information indentified in two dietetics studies were college or university catalogues (Kobel, 1997; Markley & Huyck, 1992). The study by Kobel (1997) found that over 48% of the students surveyed valued this information and at least half the students indicated that computer-based career searches, career video, and literature from the high school guidance office were not useful in

selecting dietetics as a career (Kobel, 1997). However, no significant ethnic differences were observed for the usefulness of these informational resources because the questionnaire did not address whether these informational resources were available (Kobel, 1997). An earlier study by Markley & Huyck (1992) revealed that recruitment films, posters, career day fairs, career services, and pamphlets are among the other least influential sources of career selection information.

Role models were defined as the presence of influential individuals that shaped the decisions around career. Research has shown that lack of knowledge about the profession and absence of role models have significant impact on student's career selection (Felton et al., 2008; Greenwald & Davis, 2000; Suarez & Shanklin, 2002). Most of these students stated that people did not understand the type of work that dietitians perform and public perceived dietetics as a cooking profession (Suarez & Shanklin, 2002). Therefore, the absence of role models can contribute to the low visible minority representation in the dietetic field. Grossman et al. (1989) stated that students who had been influenced by nursing role models considered a nursing career more frequently than those who did not have nursing role models.

This section of the literature review suggested that there are certain individuals and sources of information that most students find valuable in their career decision making processes. Therefore, the individuals that influence students' career choices and the sources of information may vary depending upon student's culture, ethnicity and career goals.

Financial Rewards

Dietetic students in Kobel's (1997) study rated income as having limited influence on their career choice. Only 35% of the students regarded financial rewards as quite or very important in their selection of dietetics as a career. However, an earlier study of dietetic students

found that financial rewards were a positive influence in the choice of dietetics as a profession for 63% of the students (Markley & Huyck, 1992). These differences indicate that even within the same academic major, students place different emphasis on the value of financial rewards in their career selection. Researchers in these two studies used author generated questionnaires, which may account for some differences in student responses.

In addition, financial rewards are important for students particularly internships supporting their success in undergraduate programs. A 2008 study by Lordly and MacLellan indicated that dietetic students have increasing difficulty surviving in an unpaid internship program. After completing a four-year degree, dietetic students work for a ten months internship program without pay (Lordly & MacLellan, 2008), which is financially stressful. It not only delays dietetic students' ability to earn a salary and repay student loans but also prevents them from applying to the internship (Felton et al., 2008; Lordly & MacLellan, 2008). Overall, financial rewards could become one of the career selection factors for students.

Personal Interest and Satisfaction

Although financial rewards can influence one's career choice, personal interest has been identified as the most common motivator for choosing a career in dietetics (Felton et al., 2008; Markley & Huyck, 1992). In study of Keller et al., (1990), 45% of the student surveyed indicated that the primary factor influencing their career choice was the match between the career and their personality. However, only 8.1% of dietetic students specified that personal experience and interest was the most influential factor in their career selection (Markley & Huyck, 1992).

Similarly, African American dietetic students stated that an interest or fascination with "food," "nutrition," "fitness" was one of the reasons that led them to major in dietetics (Felton et al., 2008). Another aspect often considered by students is the personal satisfaction that they may

attain upon entrance into their chosen profession. Ninety-four percent of dietetic students rated job enjoyment as important in influencing their choice of dietetics as a career (Kobel, 1997).

Personal satisfaction and job enjoyment may, in part, be derived from the help that students will provide to others during their careers. This seemed particularly important for dietetic students and students in other health professions (Kobel, 1997; Markley & Huyck, 1992). Additionally, studies conducted with dietetic students in 1992 and 1997 showed similar results regarding the importance students placed on helping others. Approximately 95% of the students in the 1992 study and 95.2% of the students in 1997 study rated helping others as important (Kobel, 1997; Markley & Huyck, 1992).

Overall, dietetic students rated personal interest or satisfaction, job enjoyment and helping other as important in influencing their choice of dietetics as a career.

Job Security or Job Opportunities or Job Prestige

Researchers also have investigated the importance of advancement opportunities, prestige, and status of occupations in students' selection of careers (Kobel, 1997; Leong, 1991). Leong (1991) stated that Asian American students value prestige and status significantly more than American-born students (Leong, 1991). A survey of 1,695 dietetic students revealed that 47% of these students valued advancement opportunities in their career selection (Kobel, 1997). Similarly, in an earlier study by Rodenstein (1990), most dietetic students selected "special abilities" and "job challenges" as what attracted them to the dietetics. Rodenstein (1990) noted that "although high salary and prestige are still important , they are not as important as the need for an interesting job that is secure and at the same time offers a challenge and opportunities" (p. 1288).

Additionally, Leong and Serafica (1995) noted that Asian American parents know that discrimination is quite common in the working world and that their children will have an easier time if they are in a respected and prestigious profession. Discrimination can take the form of lower pay, poorer reviews, or fewer promotions of Asian Americans than would be expected on the basis of credentials and performance (Leong & Chou, 1994).

In general, Asian American students often placed a high value on job prestige in their career considerations. As well, job challenges and job opportunities for other students were identified as a very influential factor in career selection.

Cultural Differences

There are certain aspects of careers and occupations that students find important when making career decisions. Some of these aspects include cultural differences and communication barriers.

Abu-Saad, Kayser-Jones, & Tien (1982) stated that Asian students attending college in the United States often experience culture shock when exposed to the American culture. Cultural characteristics from traditional Asian societies, such as gentleness, the willingness to acquiesce, and good manners are not necessarily valued in Canada (Abu-Saad et al., 1982). Quietness and tolerance are often viewed as non-assertiveness, mutual dependence and cooperation are usually seen as overdependence, and humbleness and acquiescence are misinterpreted as incompetence (Abu-Saad et al., 1982).

These difficulties are essential parts of acculturation³ processes people experience in a new culture, visible minorities in particular. In general, higher acculturation indicates more

³ Acculturation is the process of cultural change resulting from contact with a different culture and the process of adapting to new culture environment at an individual or group level (Leong & Chou, 1994).

adaptation to the mainstream culture; Asian Americans who are comfortable in relationships with Americans and familiar with American popular culture are more likely to be more confident in communication with Americans. Leong and Chou (1994) suggested that highly acculturated Asian Americans are more comfortable with the new culture and thus more motivated to challenge the stereotype. For less acculturated Asian Americans, an easy and visible entry for them into the mainstream culture is through having a secure job. For example, seeing their counterparts succeed in science and technology related occupations may convince them that they should follow that path (Tang et al., 1999).

Other possible barriers may be Asian Americans' difficulties with the English language or understanding American norms of social interaction (Leong & Chou, 1994). Cultural differences and communication barriers may result in visible minorities entering the fields that require less mastery of the English language and less interpersonal interaction.

Having reviewed the literature, the next chapter discusses the theoretical framework of this study.

CHAPTER 3: THEORETICAL FRAMEWORK

The theoretical framework used for this study was based on Social Cognitive Career Theory (SCCT) and critical theory.

Social Cognitive Career Theory

The field of vocational psychology deals with people and their career choices throughout various stages of their lives. This includes preparing for an occupation, entering the work force, changing careers, and later leaving the work force (Walsh & Savickas, 2005). As a minority group, Asian Americans are assumed to experience discrimination and stereotyping because they suffer from low self-confidence and a sense of powerlessness and have had limited past work experiences (Walsh & Osipow, 1983).

To understand why Chinese dietetic students are not adequately represented in dietetics profession, it is vital to examine how individuals actually choose a career. Interventions then can be developed to contribute to this process. Over the years, although numerous theories on career choice have been developed to explain the career decision making process, many of these are incongruent with current and societal norms and populations under study (Stitt-Gohdes, 1997). While various different explanations have been offered to explain factors influencing visible minorities' career choices, no specific model exists. SCCT is applicable to this study because it seeks to explain why people become interested in different academic and vocational domains, why they experience success or failure, and why they eventually choose particular academic or career behaviors (Lent, Brown, & Hackett, 1994).

SCCT proposed by Lent et al. (1994, 1996) consolidates social cognitive theory. It explains how people can build their careers through activating cognitive mechanisms. These mechanisms include mediating between learning experiences and social action as well as the

selection and performance of career roles. SCCT incorporates assumptions and constructs from many theoretical sources, most notably Bandura's (1986) social cognitive theory, Krumboltz, Mitchell, and Jones' (1976) social learning theory of career selection, and Hackett and Bets' (1981) application of Bandura's (1977) self-efficacy construct to gender differences in career interests. Lent et al. (1994) organize the major theoretical constructs into three overlapping components or segmental models. The interest development model shows the different processes by which academic and career interests are formed. The choice model shows how interests and other mechanisms promote choices or goals, and the performance model shows how choices, in turn, influence individual differences in performances and persistence in career and educational pursuits. Interest development contributes to career choice, which is the area of inquiry within this research; therefore this study used the interest development and choice models.

Sociocognitive Mechanisms

Three social cognitive mechanisms form the core of this theory and the basis of its model: self-efficacy, outcome expectations and goals. Each will be defined individually below and further discussed in relation to the models of interest development and career choice in the following section. Although the three social cognitive mechanisms are important to the theory, they are not directly being investigated within this study. What impacts these mechanisms, directly and indirectly, will be discussed however.

Self-efficacy. Bandura (1986) defines self-efficacy beliefs as "people's judgments of their capabilities to organize and execute courses of action required to attain designated types of performances" (p. 391). A study by Tang et al. (1999) examined factors that might influence Asian Americans' career choices. The result of this study found that self-efficacy has a significant impact on one's career choice. Self-efficacy beliefs are about what one can do with

the abilities they have, and are beliefs about specific tasks. For example, an individual may have high self-efficacy beliefs about his or her ability to solve a math question but have low self-efficacy beliefs about his or her ability to create a piece of art. However, one's beliefs about their efficacy in a particular realm may or may not be accurate (Bandura, 1986). According to Bandura theorized four major sources of self-efficacy: mastery, modeling, social persuasion, and anxiety (Bandura, 1986). The first three sources are listed in expected strength of influence; anxiety was theorized to be independent of the other sources.

Mastery is defined as a person's actual successes and failures, and is expected to have the strongest impact on a person's self-efficacy beliefs (Bandura, 1986). When a person is successful at a task, their confidence to perform another similar task is thought to increase. Conversely, if the person fails, their self-efficacy is thought to decrease. Failures are considered to be particularly influential if they are repeated, occur early in the individual's experience with a task, and cannot be attributed to external circumstances, because these all would decrease the likelihood of the individual trying the behavior again (Bandura, 1986). Once individuals have strong self-efficacy in doing a particular task, they will be influenced less by failure. When they think that they can overcome a challenging barrier, their additional effort can lead to success and strengthen their self-efficacy for a particular task. Once a strong self-efficacy is developed in a particular domain, self-efficacy beliefs in other similar domains may also increase (Bandura, 1986). For example, earning an A in a Human Biology class may lead to increased self-efficacy for success in a Clinical Nutrition class.

The second source of self-efficacy, modeling, is defined as an individual watching a peer succeed or fail. Bandura posits that when an individual watches a peer succeed, he is likely to believe that he can also accomplish the same task. On the contrary, if an individual watches a

peer fails, especially after investing a significant amount of effort, his beliefs about his self-efficacy tends to decrease (Bandura, 1986). For example, absence of role models in the dietetic field and failure to get into an internship program may decrease a dietetic student's self-efficacy. Students in the field expressed their concerns about the competitive nature of the internship selection process. A student said, "I'll probably apply next year again...The chance don't seem too great for most people" (Atkin & Gingras, 2009, p. 185). This indicates that opportunities given to dietetic students make a significant difference in their self-efficacy.

In addition to role-modeling, social persuasion also caters to self-efficacy. Social persuasion occurs when a peer or superior expresses an opinion about his ability to perform a specific task. Social persuasion has the greatest impact when it can encourage or discourage an individual from attempting a particular task (Bandura, 1986). While someone's self-efficacy is in an early stage of development, it can be easily influenced. Social persuasion can move someone towards attempting a task and obtaining personal mastery evidence for this efficacy. Moreover, when someone is unsure if he can perform a task successfully due to past failure experiences, verbal encouragement can serve as a motivator. For example, visible minority students desire for a teacher who gives them emotional support and understands their situation. These supportive acts make the students feel special, motivate them to try harder, and promoted their success (Gardner, 2005).

The final source of self-efficacy is physiological state. This is defined as the amount of anxiety an individual experiences while performing a specific task. People read their anxiety in difficult situations as signs of their ability or lack of ability to succeed (Bandura, 1986). People interpret their arousal in new or stressful situations as a sign that they are struggling. This agitation can lead to more anxiety and spiral upward in a distracting way. Dietetic students

expressed their frustration about not being able to perform to the best of their ability with the increasing amount of school assignments, projects and lack of time (Lordly & MacLellan, 2008). This anxiety caused by the individual's physical state can easily become a self-fulfilling prophecy, as their preoccupation with worry makes them unable to perform the task as successfully as if they had not been distracted.

Outcome expectations. Outcome expectations involve a person's imagined consequences of performing a certain behavior. Three types of outcome expectations may influence a person's vocational behavior: physical (e.g., money), societal (e.g., approval or acceptance), and self-evaluative (e.g., pride or a positive self-concept) (Bandura, 1986).

Outcome expectations refer to the consequences of succeeding or failing at a particular task. For example, if one studies hard for a test, the completion of the act is a good grade on the test. The potential outcome expectations are praise from the individual's parents and friends, individual pride, and a high likelihood of getting accepted at a prestigious college. People also have outcome expectations for failure at a specific task; in this example, the student's expectations may include punishment from parents and feelings of disappointment.

Outcome expectations are influenced by self-efficacy and, along with self-efficacy, are thought to predict behavior. The dependence of these constructs on one another is what functions to influence behavior. People make decisions about courses of action based on what they believe the consequences of these actions will be. If an individual has low self-efficacy and thus expects failure and negative consequences, he will not attempt the behavior. In contrast, if someone has high self-efficacy for a task he is likely to expect positive outcomes and will also be more willing to exert effort in order to assure success. On the other hand, if outcomes are loosely tied to the effort one puts into a task or if someone believes in their ability and the outcomes are valued but

it may lead to different undesired outcomes, such as work or family conflict, then outcome expectations will be more predictive of behavior. As an example, many factors influence one's acceptance or rejection from an internship program; grades are only one part. Other influences of outcome include letter of recommendation, work and volunteer experiences, "match" with the program. In this situation, self-efficacy may have a weaker effect on outcome expectations than in other situations due to the lack of control the individual may perceive.

Goals. Goals are defined as the determination to pursue a particular activity or to affect a particular future outcome (Bandura, 1986). Since "people are seen as more than just mechanical responders to deterministic forces" (Lent et al., 1994, p. 84), by setting goals which allow people to self-regulate their behavior and maintain it over time without external reinforcement. When making a career decisions or plans, an individual's aspirations and choices are all the aspects defining career goals. That is why career choices and goals are used interchangeably.

Model of Interest Development

SCCT places quite a bit of importance on interests. Lent et al. (1994) defined vocational interest as "patterns of like, dislike, and indifferences regarding career-relevant activities and occupations" (p. 88). Figure 1 illustrates the hypothesized sociocognitive determinants of basic career and academic interests and the manner in which interests promote career-related activity involvement and skill acquisition. Lent et al. (1994) state:

Through repeated activity engagement, modeling, and feedback from important other, children and adolescents refine their skills, develop personal performance standards, form a sense of their efficacy in particular tasks, and acquire certain expectations about the outcomes of their performance. (p. 89)

Thus, this model is built upon the knowledge that children and adolescents are exposed to a myriad of activities and experiences that shape their self-efficacy and expectations about their

task performance, which in turn impacts their career selection. Path 1 and 2 in Figure 1, individuals use self-efficacy and outcome expectations to form their interests. One is more likely to form an enduring interest in an activity where they have achieved success and rewarded than in an activity where they have experienced failure and punished. From here interests lead individuals to develop intentions and goals for future exposure to the tasks they are interested in (path 3). They engage in activities surrounding their interests in turn (path 4). By engaging in activity produces particular performance attainments, in the form of success or failure (path 5), resulting in effect self-efficacy and outcome expectancy estimates (path 6). This interest patterns continue throughout childhood and adolescence, but once a more stabilize concept of self-efficacy and outcome beliefs is formed it will take very compelling experiences to reevaluate them.

In the course of interest formation, self-efficacy has impact over outcome expectations, as one is more likely to engage in activities that they believe they can succeed at (path 7). Outcome expectations in turn affect goals, either directly or indirectly via interests (path 8), since engaging in these activities is due to an interest one has and rewards that may result. They may also contribute directly to activity selection (path 9). Self-efficacy, like outcome expectations, is assumed to exert direct effects on goals and activity selections (path 10 and 11). Additionally since self-efficacy is said to play a role in predicting one's behavior, it can also directly affect one's performance attainments (path 12).

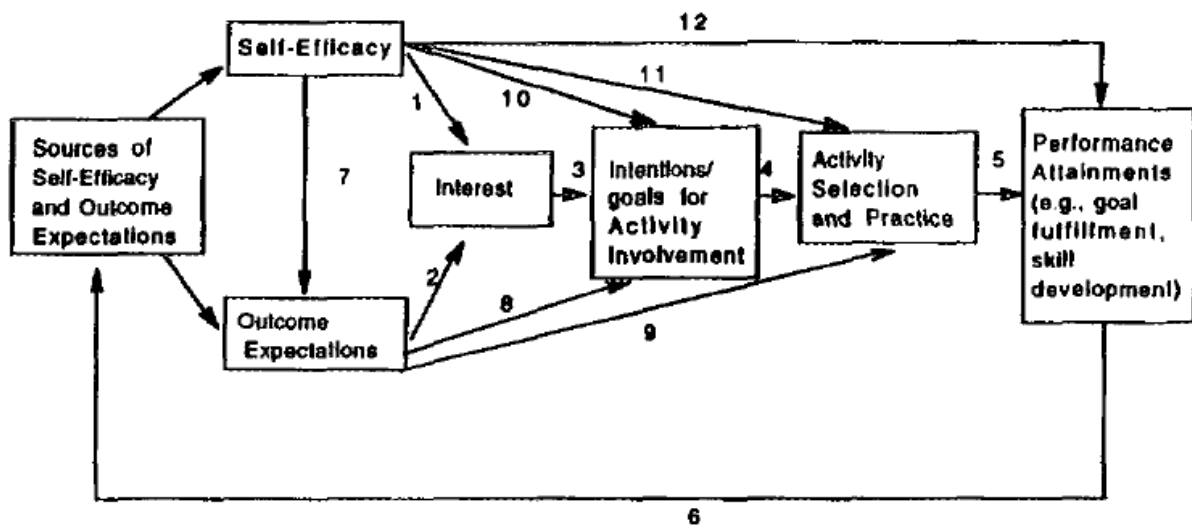


Figure 1. Model of how basic career interests develop over time.

In this model, outcome expectations are believed to incorporate the concept of value. Value can be defined as the “preference for reinforcers in the work or academic environment which are acquired by children and adolescents through basic social learning processes (e.g., vicarious learning, self-evaluative experiences)” (Lent et al., 1994, p. 91). They are impacted by a wide variety of external forces including significant persons (family members, peers, teachers, and others), cultural and religious institutions, and print and electronic media sources. The more valued the perceived outcomes, the more likely that people will be interested in particular academic or career-relevant activity.

Model of Career Choice

The model of career/academic choice process is illustrated in Figure 2. This figure actually incorporates the basic casual sequence suggested by Figure 1. It displays the primary difference regarding the activity goals and selection variables, which specifically represent career/academic choice goals and their enactment. This career choice process is an extension of

the process of basic interest information and is divided into three components which create a feedback loop: choice goals, choice actions, and performance attainments.

Choice goals defined as “the intention to engage in a particular action or series of actions” which “are not automatically implanted by the press of one’s environment or personal history” but rather they arise “from the interplay of self-efficacy, outcome beliefs, and interests” (Lent et al., 1994, p. 94).

In Figure 2, self-efficacy and outcome expectations jointly form interests (path 1 and 2), which in turn promote cognized career choice goals (e.g., career choice intentions) (path 3) and then increase the likelihood of choice actions (e.g., declaring a corresponding academic major) (path 4). Choice actions then lead to particular performance domains and achievement experiences (path 5), which may support or weaken self-efficacy and outcome expectations (path 6). Outcome expectations in turn affect choice goals and choice actions, indirectly via interests (path 8 and 9). The more valued the perceived outcomes, the more likely that people will adopt particular career goals and action courses. Again, self-efficacy is also seen as affecting the choice process through several paths: either indirectly via outcome expectations (path 7) and interests (path 1) and directly via career goals, actions, and performance attainments (path 10, 11 and 12).

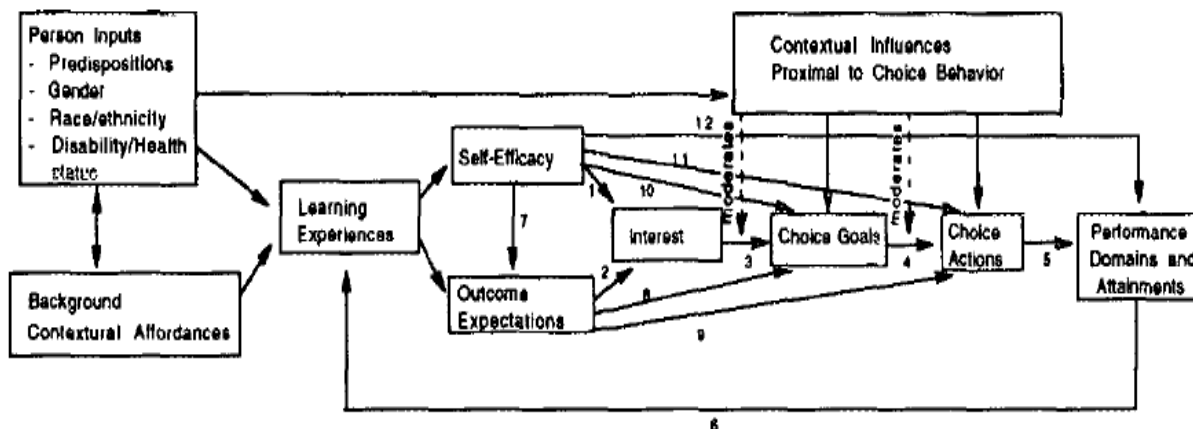


Figure 2. Model of person, contextual, and experiential factors affecting career-related choice behavior.

Gender, race or ethnicity and genetic factors are personal inputs, which can impact career interests and choices by evoking the differential learning experiences and consequences that give rise to self-efficacy and outcome expectations. Contextual determinants refer to the supports, opportunities, and barriers of an environment. These include things such as role model exposure, emotional and financial support, cultural and gender role socialization processes, personal career network contacts, discrimination in hiring process or promotion. For example, a person who has interests in chemistry is likely to plan to seek out chemistry related careers. However, confidence is shaped by the contextual factors of each individual, such as age, gender, ethnicity, support system, culture, family socioeconomic background, family involvement and past learning experiences.

Critical Theory

Critical theory is a social theory oriented toward critiquing and transforming society. Merriam et al. (2002) wrote, “In critical inquiry the goal is to critique and challenge, to transform and empower” (p. 327). Creswell (1998) explained that the research should focus on an active agenda for reform that attempts to change the lives of the participants and the institutions is

which they work and live. Creswell (1998) also explained that people need to address certain social issues of today, (e.g., empowerment, inequality, oppression, domination, suppression, alienation).

Critical theorists argue that all human affairs are socially constructed and interpreted, and subject to change through human means (Gibson, 1986). A primary focus of critical theory is to enable change toward a just and righteous world by identifying biases and distortions, which stymie healthy personal social growth. Critical theorists are aware of the frustration and powerlessness many feel as they see personal destinies out of their control and in the control of the unknown (Gibson, 1986). Therefore another goal of this theory is to make those factors visible, which prevent groups and individuals from taking control of factors critically affecting their lives. The aim of critical theory is to not only emancipate people from such constraints, but also provide enlightenment.

Historically, critical theory originated from the theories developed by a group of writers from the Frankfurt school and associated with the Institute of Social Research at the University of Frankfurt (Kincheloe & McLaren, 1994). Some of the early contributors to critical theory were Max Horkheimer, Theodor Adorno, and Herbert Marcuse (Kincheloe & McLaren, 1994). The writers were influenced by the aftermath of World War I. The unemployment rate, war devastation, failed strikes, inflation, and economic depression marked these influences (Kincheloe & McLaren, 1994). Initially, these men focused on the changing nature of the European labor movement and the evolution of Soviet communism and Western capitalism (Gibson, 1986). They later shifted their interest to address the psycho-social dynamics undergirding authoritarian, fascist tendencies, and the potentiality for totalitarianism in the mass production and consumption of culture (Gibson, 1986). At this time period, it was believed that

the world was in need of reinterpretation. These writers' concerns defied Marxist orthodoxy and deepened their own philosophies that injustices and subjugation shaped the world (Gibson, 1986; Kincheloe & McLaren, 1994).

A decade after the Frankfurt school was established, the Nazis took control of Germany, causing Horkheimer, Adorno, and Marcuse to leave because of their Jewish ethnicity and association with Marxism (Gibson, 1986; Kincheloe & McLaren, 1994). These critical theorists settled in California, where they were shocked by the American contradiction of equality and racial and class discrimination (Kincheloe, 2001; Kincheloe & McLaren, 1994; Kincheloe & McLaren, 2000). They produced their major work in the United States. In 1953, Horkheimer, and Adorno returned to Germany and resuscitated the Institute of Social Research, while Marcuse stayed in the States where he found a new audience for his work in social theory (Kincheloe, 2001; Kincheloe & McLaren, 1994; Kincheloe & McLaren, 2000).

Critical theories, as there is no unified critical theory (Kincheloe, 2001; Kincheloe & McLaren, 2000), repudiate the positivist approach, arguing it is irrelevant to the study of human phenomenon (Kincheloe, 2001). Instead, "critical theory argues that in human affairs all 'facts' are socially constructed, humanly determined and interpreted, and hence subject to change through human means" (Gibson, 1986, p. 4).

Critical theory represents an integration of diverse philosophical approaches. For example, critical theory is concerned with nature of truth, reason, and beauty, which was derived by the German idealistic thought. The theory's concern with social transformation was extrapolated from Marxism (Gibson, 1986). Furthermore, the notion of critique emanated from Kant's philosophical approach. Finally, the theory's idea of an emergence of spirit came from the Hegelian philosophy (Held, 1989). Fundamental to this theory, is the process of self-conscious

critique. Such a process provides a basis to interpret interactions among individuals, schools, and societies.

Culture is an interesting phenomenon to critical theory because it is the manifestation of human consciousness shaped by daily living (Gibson, 1986). Critical theorists posit that humans are responsible for their futures. Thus, critical theory aims to empower people to deal with real problems by addressing issues in their own lives, such as the biases and distortions, which may preclude healthy personal and social growth. In employing this framework, critical theory emphasizes transformation to promote new truth for individuals and society (Gibson, 1986; Kincheloe, 2001). Kincheloe and McLaren (2005) write:

Inquiry that aspires to the name “critical” must be connected to an attempt to confront the injustice of a particular society or public sphere within the society. Research thus becomes a transformative endeavor unembarrassed by the label “political” and unafraid to consummate a relationship with emancipatory consciousness. Whereas traditional researchers cling to the guardrail of neutrality, critical researchers frequently announce their partisanship in the struggle for a better world. (p. 305)

According to Kincheloe (2001), critical theory purports enlightenment, which is cognizant of the “sociocultural, political, and economic forces that shape our consciousness and identity” (p. 128) to conditions of the social world. Such enlightenment forms the disclosure of the interests of individuals and groups. Critical theory defines interest as partiality toward a particular group (Kincheloe, 2001; Kincheloe & McLaren, 2000). Gibson (1986) explained that the dominant group has an interest in maintaining the status quo to protect their advantages. He posited that “men thus have a vested interest in the continuing disadvantage of women. Subordinate groups have an interest in change in order to remove the disabilities their detrimental position involves” (p. 5). Merriam et al. (2002) state:

Those who engage in critical research frame their research questions in terms of power – who has it, how it’s negotiated, what structures in society reinforce the current

distribution of power, and so on. It is also assumed that people unconsciously accept things the way they are, and in so doing, reinforce the status quo... Power in combination with hegemonic social structures results in the marginalization and oppression of those without power. (p. 327)

According to Gibson (1986), critical theory provides enlightenment because it aims to emancipate and guide individuals from oppression. Enlightenment frees the world from the chains of superstition, ignorance, and suffering (Giroux, 1983). According to Kincheloe and McLaren (2000), enlightenment unveils the “winners” and “losers” in social arrangements “and the process by which such power play operate” (p. 218). Critical theory considers the status quo of the privileged and how their privileges are contained. It provides an analytical lens for discerning and exposing those groups that prevent others from establishing and shaping their lives autonomously. It addresses the idea that since the 1960s people in society have become accustomed to being dominated and lost their zeal for quality and independence (Kincheloe & McLaren, 1994).

Jurgen Habermas, another contributor to critical theory and the Frankfurt School’s most influential student, agreed that a critical theory is one that enables emancipation (Gibson, 1986).

Habermas indicated that critical theory conceives truth and goodness as necessarily linked, and which, through the process of self-reflection, challenges the instrumental rationality that treats men, women and nature as mere objects. Critical theory is a mode of thought which never loses sight of the question ‘what is it for?’, and which acknowledge values, moral problems and consequences, in every aspect of human conduct and its study. (Gibson, 1986, p. 35)

Rationality, for Habermas, infers extrication from hegemony, which indicates wealth and power of people in society. His view of critical theory posits rationality, truth, and method as desirable goals linked together. Not only does critical theory provide a way of understanding the social world, but also it is committed to the improvement of that world.

Habermas postulated that speech is instrumental to emancipation (Gibson, 1986). He suggested that language is vital partly because it is so fundamental to consciousness, “and partly because it provides both an analogy and an argument for critical theory. Thus, language is the vehicle of distortion (lies, ideology, misinformation) and the same time the promise of truth” (Gibson, 1986, p. 39).

As previously mentioned, in the perception of the member of Frankfurt School, power, and culture, and hegemony were significant philosophical issues (Gibson, 1986; Kincheloe & McLaren, 2000). These issues of struggle remain vital to critical theorists today. Gibson (1986) argued that hegemony is indicative of the way in which the dominant class influences the social paradigms of the subjugated groups. One of the conduits the dominant group uses to influence the social behavior and beliefs of other groups is the media, which supposedly prescribes appropriate cultural conformity. In turn, this process of social indoctrination circumvents the development of critical consciousness and emancipation in subjugated group members (Kincheloe & McLaren, 2000). In this way, the hegemonic classes do not forcibly dominate oppressed groups. Rather, they control subordinate groups through a passive consent (Gibson, 1986). In essence, the oppressed groups work to support the interest of the dominant groups. By doing so, they consent to their own oppression.

In summary, critical theory is particularly concerned with issues of power and injustice regarding race, class, gender, ideology, discourse, education, religion, culture and the economy in a social system (Kincheloe & McLaren, 1994).

Philosophical Underpinning

In order for the reader to have a clearer picture of the approach and philosophical underpinnings of this study, I explain my epistemological beliefs (How do I know what I claim

to know?), my ontological perspectives (What is the nature of existence?), and my thoughts about how my values influence this research (axiology). The paradigm from which this research flows is critical or ideological. According to the critical-ideological paradigm, “the researcher’s proactive values are central to the task, purpose, and methods of research” (Ponterotto, 2005, p. 129).

This research showed what factors influencing the career selection of Chinese dietetic students, their culture and experiences, can provide insight that may help organizations or school education programs to recruit more visible minorities that may ultimately result in increasing visible minorities in dietetics profession. If this work contributes to the change (transformation) of a sufficient number of individuals then the health of the visible minority population will improve, and this in turn this may provide a more accepting and supportive environment for visible minority students (emancipation).

My approach is consistent with that of a critical theorist, one who “acknowledges a reality shaped by ethnic, cultural, gender, social, and political values” and who focuses “on realities that are mediated by power relations that are socially and historically constituted” (Ponterotto, 2005, p. 130). The issue of ontology, a branch of metaphysics that examines the nature of being, is important to discuss since the focus of this study is an exploration of Chinese dietetic students’ reality: their lived experience, including the social difficulties they experience as a self-made minority. “Ontology concerns the nature of reality and being” and addresses the “form and nature of reality” and “what can be known about that reality” (Ponterotto, 2005, p. 130). What is nature of existence when one is a Chinese visible minority?

Epistemology, a branch of philosophy that explores the origin and nature of human knowledge, asks a question, “How do we know what we know?” Creswell (1998) emphasized

the importance of the participants and the researcher to work in tandem as to not further marginalize the participants. “Epistemology is concerned with the relationship between the ‘knower’ (the research participant) and the ‘would-be knower’ (the researcher)” – I play both roles; one as researcher and one as participant through autoethnography (Ponterotto, 2005, p. 131). I bring extensive my cross-cultural learning experiences and academic knowledge, as a Chinese researcher in the dietetic field to this study. This brings up the voice of Chinese students into this research, and raises their consciousness. Exploring participants’ perspectives promotes encouragement among the visible minority students’ before, during or after their university studies.

Axiology is a study of the nature of values and value judgments. “Axiology concerns the role of researcher values in the scientific process” (Ponterotto, 2005, p. 131). Does a researcher such as a positivist (one who focuses on observable facts to the exclusion of abstract speculation about origins or ultimate causes) believe subjective values should not enter into the research question? Or, if the researcher is a post-positivist (one who maintains a belief in observable facts, but may subscribe to schools of inquiry such as phenomenology or critical theory that came after positivism) do they “admittedly hope and expect their values biases to influence the research process and outcome”, as is the case in this present study? (Ponterotto, 2005, p. 131).

My extensive personal and professional knowledge of dietetics coupled with my Chinese background helps me to see the world differently. I believe my perspectives as a Chinese speaking dietetic student help explore and report details that others may overlook. These may benefit prospective Chinese dietetic students and help their decision making process in choosing a career. Having reviewed the theoretical framework, the next chapter discusses the methodology of this study.

CHAPTER 4: METHODOLOGY

This study employed a mixed methods research approach to explore the career choice of Chinese dietetic students. This chapter described the methods used in this research study. The research design and subject sampling are presented. The procedures used for data collection and data analysis are discussed. Last, the ethical considerations are addressed.

Research Design

This study merged qualitative and quantitative data by using mixed methodology. Mixed methods research is an approach which involves collecting and analyzing qualitative and quantitative data (Creswell, 2003). A mixed methods approach was selected for this research study due to its flexible approach allowing for more in-depth analysis and bringing more complexity of the research findings. It also enables the researcher to expand on the understanding from one method to another and to converge or confirm findings from different data sources (Creswell, 2003).

Original Study

The data set for this study were secondary data obtained from previously distributed surveys to dietetic students in seven universities across Canada (MSVU, UBC, Guelph, UPEI, Western Ontario, McGill and Ryerson). In 2008, the survey was distributed for research conducted by professor Daphne Lordly, Mount Saint Vincent University, under the research study “An Exploration of Values, Expectations, Influences and Motivations for Dietetics as a Career Choice”.

For the purposes of this study, both quantitative (numerical representations) and qualitative (open-ended questions) data were obtained from the original survey (Lordly, 2008).

The questions that were used from Lordly's (2008) survey were: 1-5, 7, 9-12 and 16 (Appendix A).

Autoethnography

In addition to extend an understanding of the experiences of being a Chinese dietetic student, I conducted an autoethnography in which I personally explored and reflected on those questions asked of participants. Autoethnography allowed me to use my cross-cultural learning experiences to provide connections to the survey data to analyze the dynamic and complex interdependence of cultural, familial and individual meaning systems as part of the mixed methods approach used in this study.

What attracted me to writing an autoethnography in the first place? Why did I choose this method over others? I chose autoethnographic inquiry because I wanted to further my journey of self-exploration. Self-exploration as a Chinese student experiencing dietetic education is relevant and provides a perspective that can both build and challenge the status quo. I do not want to feel limited in the questions that I could ask. I feel the need to embrace and nurture the many different aspects of myself from which questions about my diverse experiences with being a Chinese dietetic student arise. I believe writing this autoethnography will allow me to explore my ambivalent voices and feelings.

Definition of autoethnography. Autoethnography is a genre of writing and research that connects the personal to the cultural, placing the self within a social context (Reed-Danahay, 1997). The term autoethnography denotes *auto* as the self or the 'personal', *ethno* as the culture or social context, and *graphy* as the research process (Reed-Danahay, 1997). More than 60 different terms exist that have similar connotations to 'autoethnography' (Ellis, 2004). The texts are usually written in the first person and feature dialogue, emotion, and self-consciousness as

relational and institutional stories affected by history, social structure, and culture (Ellis & Bochner, 2000). Ellis (2004) describes autoethnography as a bridging zone where the personal and private realms are explored within their socio-cultural, historical, and political contexts. Using autoethnography in this study, for instance, encouraged me to explore my own academic and career perceptions by asking a wide range of questions, some that I had never considered before.

Choosing autoethnography as a method. Just as I can only know myself in relation to others, the same applies to knowing about the method of an autoethnography. Here I will offer more knowledge on my chosen method by situating it in the context of other methods and methodologies available to me. It is quite common in many forms of qualitative research to collect, analyze, and interpret data as it is designed to develop knowledge (Caelli, Ray, & Mill, 2003; Ellis, 2004). Specific coding systems are often used to identify relevant patterns and themes; therefore, knowledge is something to be discovered or found (Ellis, 2004). Throughout my life, I have realized that my journey is much more complex. Smith (2005) states, “Autoethnography allowed my personal experiences to become valid data...Autoethnography freed me to write reflectively, thoughtfully, and introspectively about a very personal subject close to my heart” (p. 6). Autoethnography is an exploration of the self and the social and a “look out beyond the everyday to discover how it came to happen as it does” (Smith, 2005, p. 3).

Qualitative research is defined as “an inquiry approach useful for exploring and understanding a central phenomenon... The final structure of the report is flexible, and it displays the researcher’s biases and thoughts” (Creswell, 2002, p. 648). Autoethnography fits well with my critical approach which enables me to think outside of the box and challenge the

status quo. That is why it is necessary to use autoethnography in this research to obtain rich reflective data on a dietetic student's perspectives and evaluate the career choices.

A reflexive or narrative approach to autoethnography. The process of autoethnographic writing can be performed through various approaches. These vary based on the emphasis of the researcher's life story. I will include my own cross-cultural learning experiences by answering the same questions asked to participants in the original study. Accordingly, I choose to write a reflexive autoethnography, also known as a narrative or personal autoethnography (Ellis, 2004; Ellis & Bochner, 2006). Clandinin and Connelly (2000) write, "Narrative is the best way of representing and understanding experience. Experience is what we study, and we study it narratively because narrative thinking is a key form of experience and a key way of writing and thinking about it" (p. 18).

Here I am drawing upon my own personal experiences as a way of exploring my culture and to see what was hidden when I chose dietetics as my career choice and in being a visible minority at a Canadian university. This will be reflected in my qualitative data analysis as I will connect my feelings and experiences to further exploring the factors that influence career decisions. Personal experiences allow for identification and normalization. For instance, as a result of reading Taber's (2007) work, I continue to feel empowered when I remind myself of Taber's life in the military and research experiences. As I connect to what Taber shares, I feel a sense of connection and normalization with respect to my own writing process. It allows my idiosyncratic emotions and thoughts to continue coming forth in my writing.

Pillow (2003) notes 'reflexivities of discomfort' which can help to explore experiences in much deeper and broader ways by revisiting several aspects of life that may have been forgotten.

Thus a reflexivity that pushes toward an unfamiliar, towards the uncomfortable, cannot be a simple story of subjects, subjectivity, and transcendence of self-indulgent telling. A tracing of the problematic of reflexivity calls for a positioning of reflexivity not as clarity, honesty, or humility, but as practices of confounding disruptions – at times even a failure of our language and practices. (p. 192)

Reflexivity will help me to locate myself at the center of the research and will require being unreservedly responsible for the knowledge that I create (Botochowits, 2005, p. 348).

Quality and trustworthiness. When I first researched autoethnography as a method, I was aware of questions arising around credibility (Ellis, 2004). Would readers perceive autoethnography as a credible type of research? Moreover, how would I argue that my collected ‘data’ (i.e., my narrative and qualitative data), was trustworthy? Medford (2006) discusses the difference between “truth” and “truthfulness.” She writes:

There is slippage between truth (our experience of reality) and truthfulness because sometimes it seems appropriate – even necessary – to abbreviate, edit, or otherwise modify our life stories in our writing. Maybe we do not remember the exact words that were spoken or the background details seem irrelevant, or maybe we are honoring someone’s request not to be included in our writing. The difference between what we know (or what we cannot remember) and what we write is mindful slippage. (p. 853)

“The credibility of qualitative inquiry is largely dependent on the credibility of the researcher as the researcher is the instrument of data collection and the centre of the analytic process” (Patton, 1990, p. 461). Being a new researcher, I took various steps to ensure the credibility of the method. This study was vetted by experienced qualitative researchers via my supervisor and members of my thesis committee. My supervisor and committee members were available to debrief and consult with me on an ongoing basis. Throughout the process I kept a reflective journal and tape recordings documenting my decisions to provide detailed data.

An autoethnography is one that comes alive and invites the reader, to identify or live vicariously through the multiple layers of stories being shared (Ellis, 1999). The multiple layers

of voices and stories shared within an autoethnography are worthy of being read when they can improve the lives of readers. No story can perfectly represent one's experiences. The stories I will be sharing are snapshots of experience that are located within a specific time and context. Fade (2003) discusses the importance of researchers exposing their biases and personal perspectives as a means of improving credibility.

It is unreasonable to assume that all participants including myself have the same experiences. "Good autoethnographers are ethnical, critical, reflexive, and thoughtful when making decisions in their writing... They don't throw around detail haphazardly" (Medford, 2006, p. 857). Although an autoethnography does not seek to make generalizations (Ellis, 1999), it does generate new questions that could be useful for future research.

One aim, however, is to share stories that allow others to identify parts of themselves in the stories. Thus, rather than trading a power-invoked, authoritative, or dominant discourse, an autoethnography and its stories can offer a sense of empowerment and therapeutic value to its readers. Throughout this autoethnography, as I share and reveal my genuine yet vulnerable self, readers might be empowered by gaining new insight and understandings of being a Chinese dietetic student at a Canadian university.

Subject Sampling

Purposeful sampling was used in secondary data analysis which allows the field of participants to be narrowed to include only the population that specifically meets the criteria that would enhance the study (Mertens, 1998). Purposeful sampling is a strategy that allows me to select information-rich cases for in-depth study.

The sample set in this study contained 37 female and 4 male dietetic students who self-identified themselves as Chinese in Lordly's (2008) survey. The participants' age ranged from 17 to 30 years.

Data Analysis

Quantitative data analysis. Quantitative data were analyzed to identify the factors that influence the selection of dietetics as a career of Chinese students. The following questions were used to help answer the main research questions of this study:

- (1) What do you [Chinese dietetic students] identify as important career values and opportunities? (see Q7 in the survey)
- (2) When and how do you [Chinese dietetic students] make the decision to pursue a career in dietetics? (see Q9-11 in the survey)
- (3) What do you [Chinese dietetic students] identify as important motivators for a career in dietetics? (see Q12 in the survey)

The answers for these questions and demographic information (see Q1-5 in the survey) on each Chinese dietetic student was coded and entered into worksheets in Microsoft Excel 2007 for statistical analyses. Data were analyzed in both descriptive (mean, median) and percentages.

Qualitative data analysis. Two open-ended questions were used from Lordly's (2008) survey:

- (1) What are your [Chinese dietetic students] thoughts on why people of visible minority groups are not choosing dietetics as a career? (see Q16(a) in the survey)
- (2) What impact do you [Chinese dietetic students] think an increase in visible minority groups would have on the dietetic profession? (see Q16(b) in the survey)

Likewise, my autoethnography allows me to explore these areas further using my own cross-cultural learning experiences as a data source. Coding and thematic analysis was employed for qualitative data analysis. I chose to approach thematic analysis for my narrative as it is a way of presenting my cross-cultural learning experiences and helps to interpret my experiences. Ellis

(2004) explained that thematic analysis treats stories as data and uses analysis to arrive at themes that illuminate the content and hold within or across stories.

Coding. The data in qualitative research are in the form of words which are relatively imprecise, diffuse, and context-based, and can have more than one meaning (Neuman, 2003, p.440). In this study, I chose to approach coding as recommended by Strauss (1987). Coding the raw data into conceptual categories creates themes or concepts which not only frees a researcher from entanglement in the details of the raw data but also encourages higher level thinking about them (Strauss, 1987). Coding is two simultaneous activities: mechanical data reduction and analytic categorization of data into themes (Neuman, 2003). Coding data is the hard work of reducing mountains of raw data into manageable piles. In addition to making a large amount of data manageable, coding will allow a quick retrieval of relevant parts of it. Strauss (1987) reported that data analysis is intentionally allowed to be creative and free-flowing. Strauss (1987) defined three types of qualitative data coding: (a) open coding, (b) axial coding, and (c) selective coding.

The processes together represent the breaking down of data into simple concepts, reassembling data into related categories, and integrating data to create themes (Strauss, 1987). Open coding was used during the first phase through collected data. The themes, initial codes or labels were assigned in a first attempt to condense the mass of data into categories. Open coding brought themes to the surface from deep inside the data. The themes were at a low level of abstraction and came from the initial research question, concepts in the literature, or new thoughts stimulated by immersion in the data. The data were coded line-by-line or paragraph-by-paragraph to fracture the raw data into topics of interest. Through the use of the computer software program MAX-Q-DA (2010), I established a systematic process for analyzing data.

Axial coding began to organize set of initial codes or preliminary concepts. Axial coding involved reassembling data that were fractured during the open coding process and makes connections between themes or concepts. During axial coding, causes and consequences, conditions and interactions, and strategies and process were used and compared for similarities and differences. Axial coding not only stimulated thinking about linkages between themes but it also created new questions.

The selective coding process involved scanning data and previous codes. After a few well-developed themes or concepts were formed, overall analysis around core themes or concepts was needed as it helped to elaborate more than one major theme.

Ethical Considerations

The secondary data from this study were obtained from Lordly's (2008) survey. To protect the confidentiality of the respondents, any identifying information was removed from the data sets. Only the research team, which included me and professor Daphne Lordly had access to the data for the duration of the study. When not in use by the researcher the data are stored on a password protected computer. Ethical approval of this study was obtained from Mount Saint Vincent University's Ethical Research Board (Appendix B).

As the researcher employing an autoethnographical methodology, I was aware that there are certain risks of a personal nature that potentially could emerge as a result of participating in autoethnography. I realized that I may unearth or revisit decisions, actions and experiences that at the time seemed inert, but which now may be interpreted differently as I critically analyzed my own experiences in the context of this research. I was mindful of this and discussed any such discomforts with my supervisor.

CHAPTER 5: FINDINGS

This chapter presents the findings of the qualitative and quantitative data of this study in relation to the research questions of this study. First, it presents the quantitative data findings on the factors influencing Chinese dietetic students' career choices. Next, it discusses the factors influencing visible minority students choosing dietetics as a career as well as the need for increasing the number of visible minority professionals through the qualitative data findings.

Results of the Quantitative Analysis

Data for the quantitative component of this study were analyzed using Microsoft Excel (2007). This section presents the results of the statistical analyses related to four major areas of the quantitative investigation. Thus, the findings of these data are presented in four sections. The first section is the description of the quantitative sample, and the remaining three sections are related to following questions:

- (1) What do you [Chinese dietetic students] identify as important career values and opportunities? (see Q7 in the survey)
- (2) When and how do you [Chinese dietetic students] make the decision to pursue a career in dietetics? (see Q9-11 in the survey)
- (3) What do you [Chinese dietetic students] identify as important motivators for a career in dietetics? (see Q12 in the survey)

Demographic Data

Description of participants. A total of 605 questionnaires were distributed to seven universities across Canada (MSVU, UBC, Guelph, UPEI, Western, McGill and Ryerson). Four hundred questionnaires were returned representing a 66% response rate. Of these, Forty-nine participants were self-identified as Chinese, a total of 8 participants were excluded from the

analysis due to incomplete responses. Thus, the final total number of participants included was 41 (37 female, 4 male). Demographic characteristics of participants are presented in Table 1.

The greatest proportion of Chinese students (34.1%) came from McGill University and none of the Chinese students were from UPEI. Participants ranged in age from 17 to 30 years (mean $\pm$ standard deviation = 21.9 ± 8.7 years). Of note, the majority of students (90%) were between the ages of 17 and 25 years while 10% were over the age of 26 years.

Lordly's (2008) survey attempted to obtain feedback from participants who were first year and last year students enrolled in dietetic education program. As the data revealed the majority of the participants were in their first and second year of university studies (61%), and 34.1% were in their third and fourth year of studies. Likewise, the most common education level was high school (61%) while approximately 31.7% of participants indicated they held a previous university degree. Accordingly, this may explain that the students became interested after leaving college or university and returned for a second degree. In addition, there were two transfer students within the sample. The transfer students had a previous general science class experiences that used simulation in its curriculum.

Table 1

Demographic Characteristics of Participants (n = 41)

Characteristics	<i>n</i>	%
University		
UPEI	0	0
Guelph	3	7.3
MSVU	3	7.3
Ryerson	5	12.2
UBC	7	17.1
Western	7	17.1
McGill	16	39.0
Age		
17 – 19	9	22.5
20 – 22	16	40.0
23 – 25	11	27.5
26 – 30	4	10.0
Year of Study		
1 & 2	25	61.0
3 & 4	14	34.1
Other	2	4.9
Education ^a		
High school	25	61.0
College Diploma	7	17.1
University Degree	13	31.7
Transfer from Another Discipline	2	4.9
Other	3	7.3

Note. UPEI = University of Princess Edward Island, Guelph = University of Guelph, MSVU = Mount Saint Vincent University, Ryerson = University Ryerson, UBC = University of British Columbia, Western = University of Western Ontario, McGill = University of McGill

^a Participants could choose multiple answers therefore percentages do not equal to 100.

Factors Influencing Career Decisions

The first question was, “What do you [Chinese dietetic students] identify as important career values and opportunities?” Participants were asked to rate the level of importance each career values and opportunities when considering career options on a 5-point Likert Scale (0 = not sure, 1 = not important to 5 = very important). Ratings for each value and opportunity were tabulated across all participants (Table 2 and 3). In order to understand what alternatives they considered and what influenced their career choice, questions were asked to prompt participants to fully explore how they approached making academic and career decisions included “When and how do you [Chinese dietetic students] make the decision to pursue a career in dietetics?” (Figure 5, 6 and 7). A follow-up question for each participant was, “What do you [Chinese dietetic students] identify as important motivators for a career in dietetics?” (Figure 8). Participants were asked to rank the strongest influential factors by number. From these calculations, I generated the most important factors, which were ranked the top three.

(1) What do you [Chinese dietetic students] identify as important career values and opportunities?

Table 2

Frequency distribution of ranked scores on career values and opportunities in terms of importance when considering career options

	Frequency					
	1	2	3	4	5	0
Ability to Specialize	13	10	13	2	3	0
A Professional Career	18	17	2	3	1	0
A Respected Profession	15	11	12	1	2	0
Authority	6	12	15	6	2	0
Career Advancement	14	11	6	8	0	0
Diverse Practice Areas	16	8	12	3	1	0
Economic Rewards	16	13	11	1	0	0
Interacted with Others	12	18	8	2	1	0
Job Flexibility	9	7	16	8	1	0
Job Security	24	10	4	0	2	1
Lifestyle	20	10	5	4	2	0
Personal Satisfaction	29	9	2	1	0	0
Prestige	7	13	12	6	2	1
Viable Profession	11	12	11	2	0	3

Note. 1 = very important, 2 = important, 3 = somewhat important, 4 = slightly important, 5 = not important, 0 = not sure.

Figure 3 illustrates the most highly ranked career values or opportunities for pursuing a career. The majority of participants (92.7%) indicated that personal satisfaction was “important” or “very important” when considering career options. With respect to a professional career and job security, 85.4% and 82.9% of participants indicated this career values were “important” or “very important” when considering career options.

Ability to interact with others and lifestyle were also rated highly; 73.2% of participants indicated that it was “important” or “very important” when they consider a career. With respect to economic rewards, 70.7% of participants indicated that this value was “important” or “very important” to their career selection.

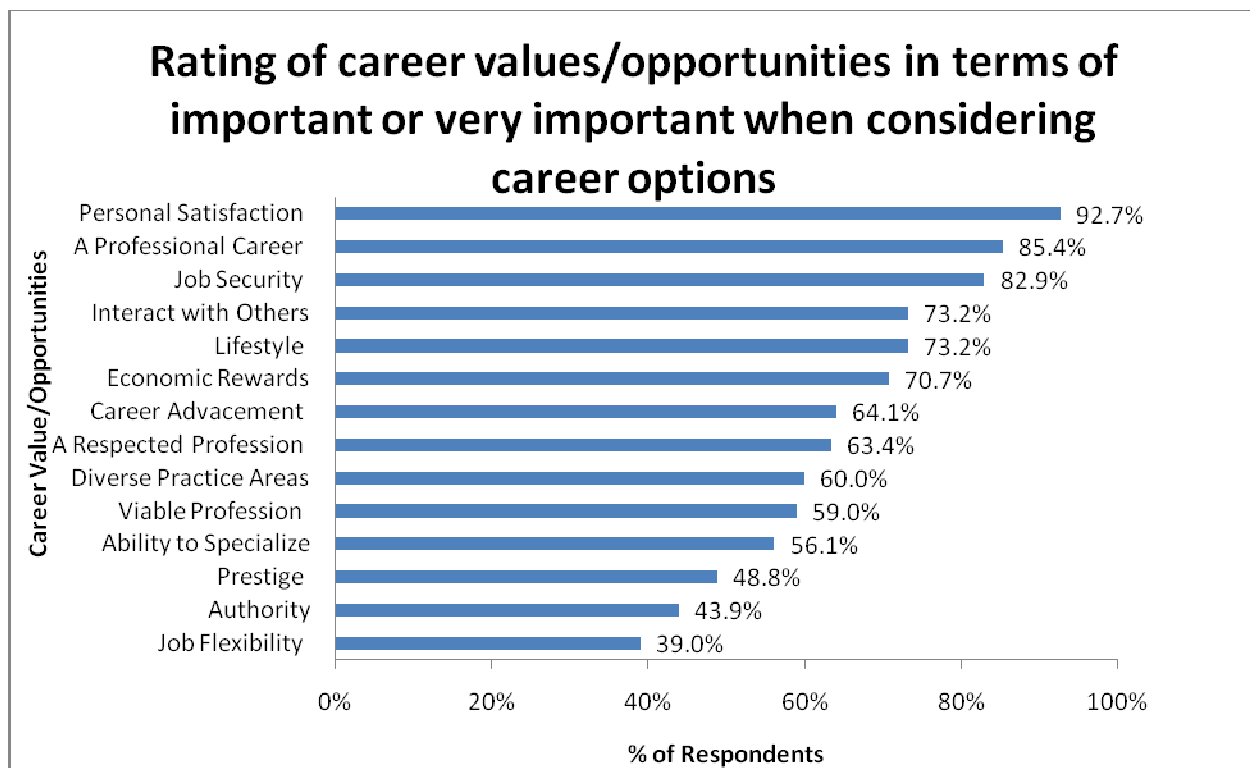


Figure 3. Rating of career values and opportunities as “important” to “very important” when considering career options.

Frequency distribution of ranked score on career values and opportunities in terms of importance in career choice if a career in dietetics is believed to offer these values and opportunities

	Frequency					
	1	2	3	4	5	0
Ability to Specialize	21	16	4	0	0	0
A Professional Career	27	14	0	0	0	0
A Respected Profession	5	26	5	0	5	0
Authority	6	20	9	0	5	0
Career Advancement	4	28	7	0	1	0
Diverse Practice Areas	19	15	5	0	2	0
Economic Rewards	3	29	7	0	2	0
Interacted with Others	27	13	1	0	0	0
Job Flexibility	10	25	3	1	2	0
Job Security	9	24	2	1	5	0
Lifestyle	11	26	3	0	0	0
Personal Satisfaction	18	19	2	0	2	0
Prestige	6	24	6	1	4	0
Viable Profession	10	18	4	0	8	0

Note. 1 = very important, 2 = important, 3 = somewhat important, 4 = slightly important, 5 = not important, 0 = not sure.

Figure 4 illustrates the most highly ranked career values or opportunities that attracted participants to the field of dietetics. Participants rated a professional career (100%), ability to interact with others (97.6%) and lifestyle (92.5%) as “important” or “very important” to them.

Personal satisfaction and special abilities that they have were “important” or “very important” to 90.2% of the participants. In addition, 85.4% of participants indicated that job flexibility were either “important” or “very important” to them when they choose to become a dietetic professional.

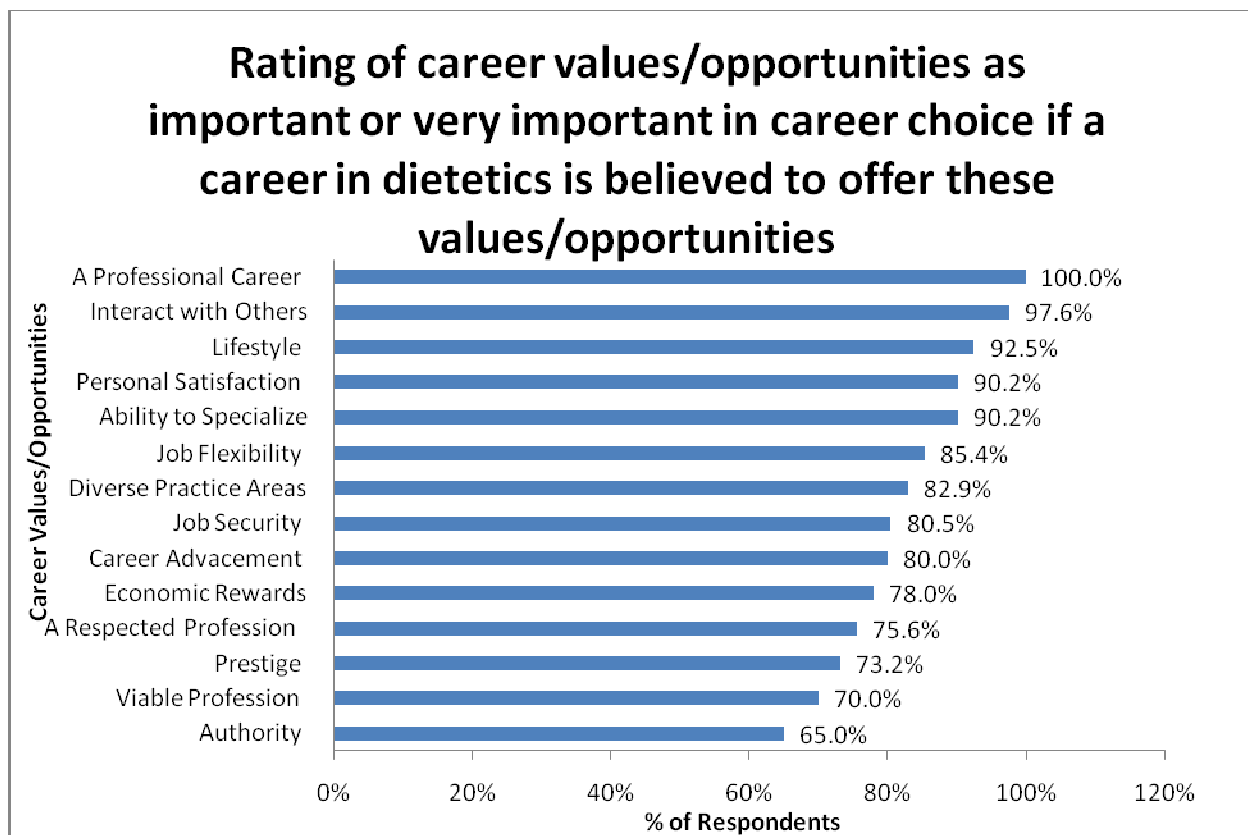


Figure 4. Rating of career values and opportunities as “important” to “very important” in career choice if a career in dietetics is believed to offer these values and opportunities.

(2) When and how do you [Chinese dietetic students] make the decision to pursue a career in dietetics?

When participants were asked to identify when their career decision was made (Figure 5), the majority of participants (46.5%) indicated college or university. Another 27.9% of participants responded that their career decision was made during the 12th grade of high school. Past work experience also served to offer participants career direction, 9.3% of participants indicated their previous work experiences within the dietetic field were influential in their career choice. Two participants (4.7%) realized from their past experience that they did not want to remain in the same field and decided to switch.

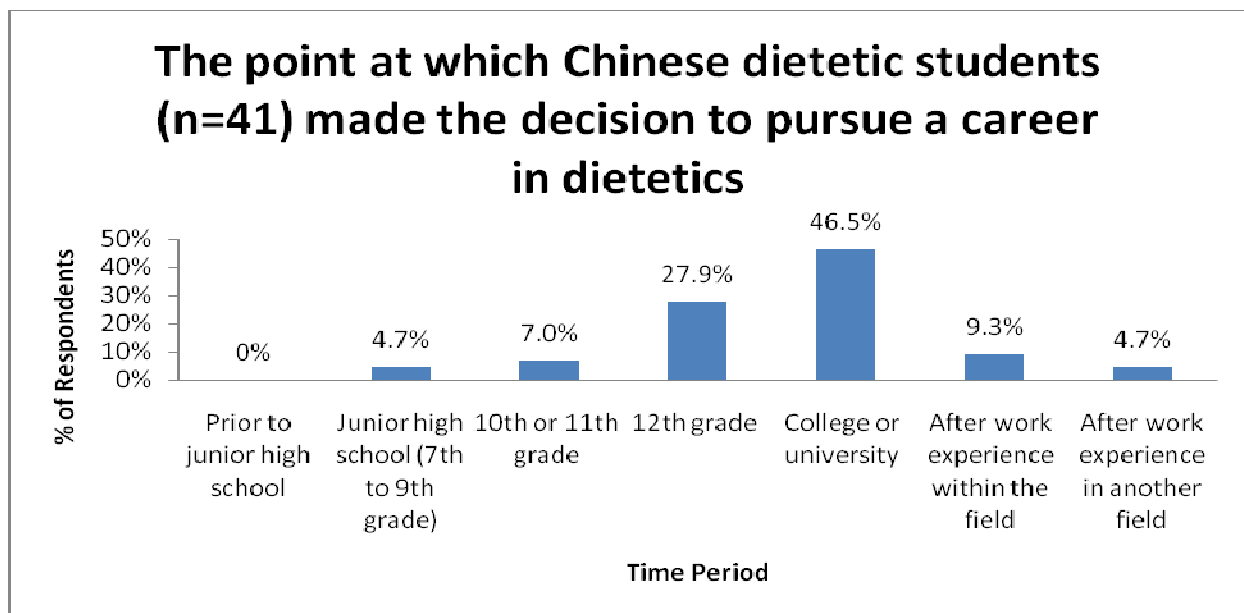


Figure 5. When Chinese dietetic students ($n=41$) decide to pursue a career in dietetics.

Figure 6 illustrates the participants were asked to rank the most influential initial source of information in making their career choice in dietetics: media (56.1%), university/college catalogues (41.5%), personal exposure through work experience (29.3%), personal experience with a dietitian (24.4%), family studies teacher (24.4%) and high school guidance counselor (14.6%). In addition, family (14.6%), a course in nutrition (7.3%), and personal interest (4.9%) were indicated as being useful informational sources in helping participants make their career choices in the additional comments section of the questionnaire.

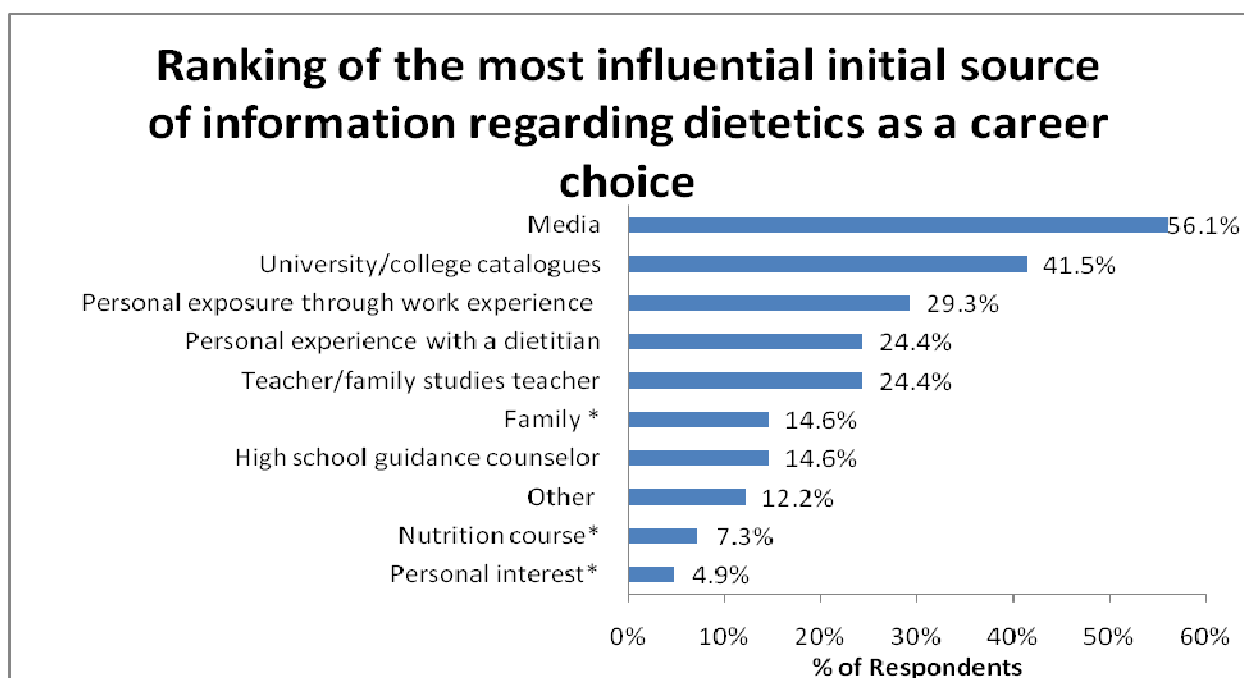


Figure 6. The ranking of the most influential initial source of information regarding dietetics as a career choice.

* Category created from written responses.

Participants were asked to rank which factor had the most influence on their choice of dietetics as an area of study (Figure 7). Data analysis revealed that career interest was considered by all participants as the most important factor in order to decide their education and career fields.

Unique to Chinese dietetic students, an interest or fascination with “nutrition”, “health”, “food” and “science” were rated highly by students as the strongest factor influencing their decision to study dietetics. Nearly half of the participants (56.1%) selected dietetics as their major for altruistic reasons, including “a desire to help people”. Career interests drove them to pursue relevant education, so that they became qualified to work in their field of interest.

Family members with diet-related health problems and participants’ own health problems stimulated 7.3% of participants’ interests in a career in dietetics. Only 2.4% of participants indicated that the most influential factor on their career choice was closely associated with their

previous degree. None of Chinese students indicated that they knew a dietitian who influenced their decision to pursue dietetics.

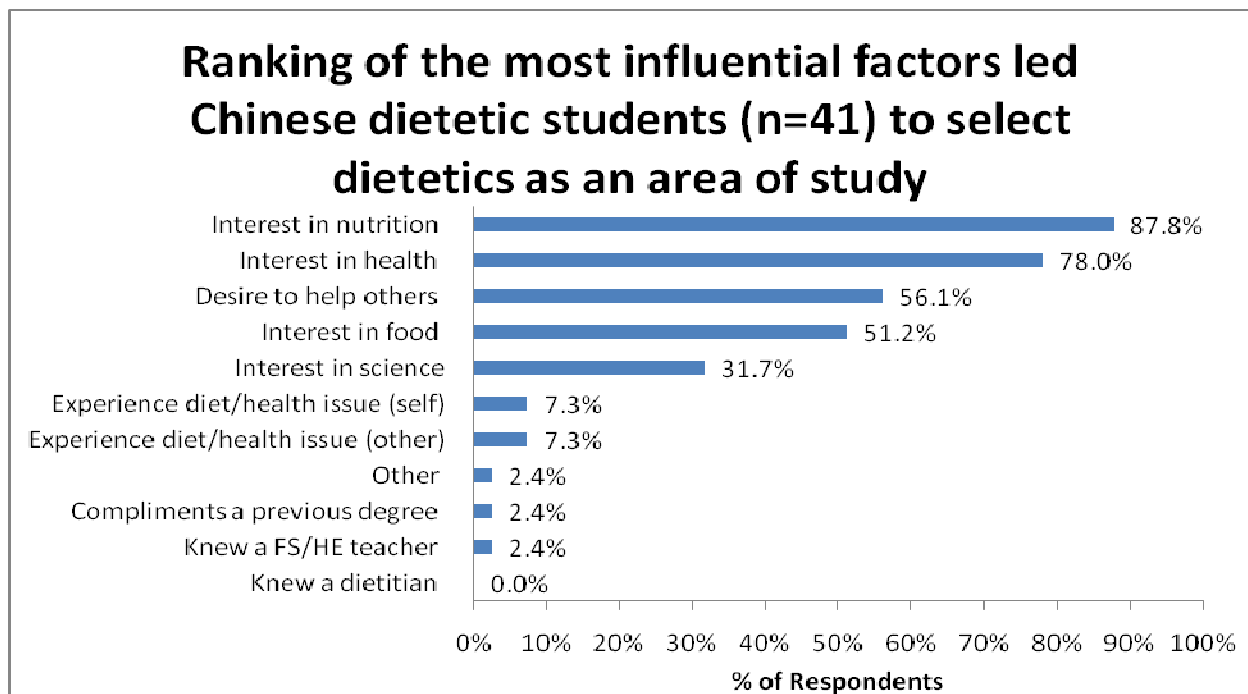


Figure 7. The ranking of the most influential factors led Chinese dietetic students (n=41) to select dietetics as an area of study.

Note. FS = Family studies, HE = Home economics

(3) What do you [Chinese dietetic students] identify as important motivators for a career in dietetics?

Another question sought to determine how a person's career choice might be influenced by others. Figure 8 shows a clear difference in terms of who influenced students' career choice. The majority of participants indicated that their family members (68.3%) had a significantly high influence on their career decision than a teacher (29.3%) and a dietitian (26.8%). Personal interest (19.5%), a category not on the original list was the other top choices. Additionally, 17.1% of participants commented on the other factors that led them to consider a dietetics career including computer-based career searches, health awareness, a career counselor, a professor, a friend and a course in nutrition.

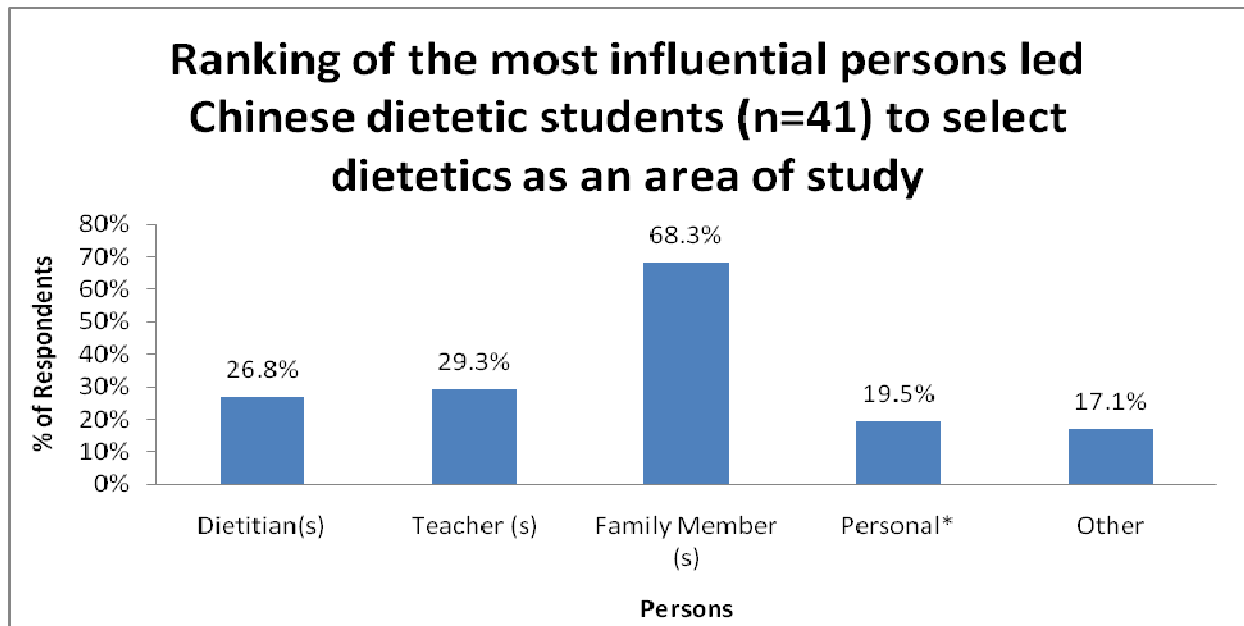


Figure 8. The ranking of the most influential persons led Chinese dietetic students ($n=41$) to consider a dietetics career.

* Category created from written responses.

Results of the Qualitative Analysis

The Data Sets

Before a discussion of the results of the qualitative themes is presented, it is first necessary to enumerate the data sets and then clarify how the data were organized and analyzed from the two open-ended questions [Q16(a) and 16(b)]. Participants were given the opportunity to openly discuss their thoughts and feelings about why visible minority students are not choosing dietetics as a career and the impacts of increasing the number of visible minorities in the dietetic profession.

In discussing the findings from the two open-ended questions, excerpts from the participants' responses are presented verbatim to paint the picture of the participants' voices and to corroborate themes from the findings. Data were loaded into MAX-Q-DA software for qualitative data analysis. This software is a text-base manager, which helps in organizing, sorting

and making subsets of text. The MAX-Q-DA software helps in the search and retrieval of relevant data. I only used it for the purposes of sorting data. Using the MAX-Q-DA software helped to highlight words, phrases, and sentences as patterns and concepts emerged from the data that are related to answering the research questions. I used open coding to identify recurring patterns. According to Strauss and Corbin (1998), “during open coding, data are broken down into discrete parts, closely examined, and compared for similarities and differences” (p. 102). While there are several variations of open coding, I employed line-by-line analysis, which entails close examination of the data. While the latter analysis is the most time-consuming form of coding, I was able to formulate categories quickly. Twenty-six codes surfaced from Question 16(a) and twenty-eight codes surfaced from Question 16(b) (Appendix C). Next, I used axial coding to rearrange the coded data by categories. This is followed by reviewing the emerging trends for additional categories and connections. As the codes were rearranged into further defined categories, the selective coding process helped to integrate the categories into themes (Strauss & Corbin, 1998). Data analysis revealed two major themes with seven subthemes in Question 16(a) and two major themes with six subthemes in Question 16(b) (Appendix D).

Thematic Findings

The following section reports the themes that emerged from the data for each respective question.

Question 16(a): What are your [Chinese dietetic students] thoughts on why people of visible minority groups are not choosing dietetics as a career?

Theme 1: Influence of Family and Chinese Cultural Values

The roles of career, family, and culture are interrelated in the process of career choice (Rotter & Evans, 2002). Rotter and Evans (2002) state: “Regardless of the family configuration

or cultural influences on family life, issues regarding work and career enter into the picture at some point” (p. 5).

Most of the participants in this study indicated that the Chinese values and parental influence played an important role in their fundamental decisions about choosing an academic major and a career. This section discusses the role of Chinese cultural characteristics in the participants’ career decision-making. First, it presents the key Chinese values that emerged from the data analysis. Second, the nature of parental influence is reported, followed by the participants’ response to parental influence.

Key Chinese characteristics and values. Chinese characteristics and values had influenced prospective dietetic students’ career decisions in three ways: need for recognition, keeping stability and striving for success.

Need for recognition. The need for recognition was exemplified mainly in parental expectations. Participants expressed that their parents may hold certain expectations for them regarding career choice, or interfere with their decision-making. One of the participants mentioned:

They [visible minorities or Chinese] are encouraged by their parents to pursue more prestigious professions such as doctors, dentists that are more well-known and sure to pay well.

In collective-oriented cultures, professional status reflects the values and ability of the entire family, not just the individual. Therefore, participants of the study stated that their parents are concerned with their job type and income, and they want them to pursue recognized and prestigious careers. Two of the participants noted the significance of occupational roles in Chinese culture:

Immigrant families do not look at dietitians as a career that has a high prestige and status in society.

They [visible minorities or Chinese] like to pursue more prestigious and respectful occupations, such as dentistry, medicine, or law.

Keeping stability. Stability was another influential Chinese value in the participants' career decision-making, which included the reservation to look for career changes or advancement and the tendency to seek for or remain in a secure and financially stable job.

Participants shared a similar perspective on the limited job opportunity for dietetic professionals and were worried about the difficulty in finding a satisfying professional job in Canadian workplaces.

Visible minority groups from other countries are trying to come to Canada to work as a dietitian but their skills are not recognized.

Two participants reported that they were less aware of career opportunities available for visible minorities in the field of dietetics in Canada.

They [visible minorities or Chinese] feel that it is an area where there are not a lot of career opportunities.

It is hard to find a job at local hospitals.

A participant expressed concern about competing with the mainstream society as she might experience difficulty in job-searching.

The stereotype view of visible minority people that non-visible minority practitioners will likely want to hire or work with non-visible minority practitioners more than visible minority ones, which discourage us [visible minorities or Chinese] from entering the 'competition'.

Striving for success. Chinese culture emphasizes success in a very specific way. Success means “having a professional career” and “how much money the person makes”. To avoid competing with mainstream society, Chinese parents encourage their children to excel in science

subjects so as to take up professions in engineering and other technical fields (Li, 2001). In general, Chinese parents discourage their children from pursuing careers in arts, politics, or law.

In Chinese culture, parents expect their children to get a job that would pay well so they would live a comfortable life. A participant indicated the association between a professional career and financial success.

Many cultures really emphasize or pressure their children to go into high paying professions. Dietetics is not one of the highest ones. It might be an assumption, but parents might think why be a dietitian when you can be a doctor and make more money.

Again, the job type and income were two aspects Chinese highly emphasized in making their career choice.

Parental influence. As the job type and salary were closely related with attaining recognition, maintaining stability and achieving success, the participants' parents might actively interfere with their career choices when they were unsatisfied with these aspects.

A participant's parents were aware of their minority disadvantages, and discouraged her from choosing dietetics as a career.

I am Chinese, my parents feel that it will be hard for me to become a dietitian because I am Chinese.

Another participant stated that her parents were 'quiet' about her career choice, and they usually gave suggestions if she asked them.

My parents didn't know about it [dietetics], rather have their kids go into medicine (doctors).

Theme 2: Influence of Issues Unique to Visible Minority Students

Many Chinese students have academic, career, and nonacademic concerns (e.g., social, cultural, financial) that are similar to American students (Lin & Yi, 1997). However, the nature and degree of their concerns are distinctive by virtue of being from an overseas country. The

study revealed that visible minority students had diverse career choices influenced by language skills, awareness on career information, self-efficacy, perceptions about diet and health, and gender bias.

Language skill. Speaking English as a secondary language in Canada can either strengthen or weaken participants' employability. Language barrier and the lack of proof of language proficiency had impacted participants' experience. Two of the participants in this study specifically acknowledged that the ability to speak English and other languages is paramount to academic and career success. However, another participant knew her language skills would be an asset in her future career. She personally thinks that she could bring a lot of assets to the table because she is bilingual.

Even though visible minority cannot speak completely fluent English with perfect pronunciation (this might be a big reason why they don't pass the interview for internship) however that's because they can speak another 1 or 2 other languages (i.e. their 1st language).

Although language barrier did not directly influence participants' career choice, it did obstruct participants original career path (e.g., dietetic internship), and it may motivate them to pursue a career that would not be limited by English proficiency.

Awareness on career information. The most common barriers were many students and parents expressed a lack of awareness about the existence of a specific career structure within dietetics or for opportunities to specialize within this field. Also, participants did not think that they could become a dietitian because they did not know the process of becoming one. These misconceptions reduce the likelihood that students will choose dietetics as a major or career.

The majority of participants perceived that visible minorities did not know enough about the dietetics profession due to lack of exposure and familiarity with the major.

They [visible minorities] might not know there is this career path because dietetics is an uncommon career for those born in other countries where nutrition is not their primary concern.

They [visible minorities] might not know of the profession - it's not one that is as "famous" like physicians.

They [visible minorities] might not be aware of this career choice or this career might not be as 'prestigious' compared to other career choices in their culture.

Not a well known health profession compared to a doctor or dentist.

Because they [visible minorities] believe that nutrition is not as important as physicians.

At the same time, a participant stated that a poor advertising and poor recruitment efforts were preventing visible minority groups from pursuing careers in dietetics. Thus, lack of knowledge about the profession could restrict one's career direction.

Self-efficacy. In general, most of the visible minority students saw themselves as being quite "different" from their Canadian peers. Differentness expressed itself in several ways. Visible minority students feel that low self-efficacy expectations may be a major factor in the restriction of career choice. Two of the participants indicated their viewpoints as follows:

They [visible minorities] feel that because they are a minority and have less authority and, therefore, will not be listened to.

They [visible minorities] may feel low confidence and they won't be given a fair chance or accepted by clients.

Although participants could not give specific examples of overt racism, it was apparent that they believed that they were treated differently. Two of the participants expressed their feelings of public favoritism towards Canadian dietitians.

The public may trust visible minority dietitians less as a professional because of biases.

Patients tend to go to the dietitians who belong to the 'majority' group and have good reputation.

In addition, Chinese students internalize many feelings related to adjusting to a new culture and educational system. They have invested a lot both physically and emotionally to study in Canada. They appreciate this opportunity, but feel pressured to be successful because they want their families to be proud of them. A participant commented about the importance of believing in himself:

I am a visible minority and I don't see significant obstacles.

Another participant had high self-efficacy, which enhanced decision-making.

The percentage of visible minorities in the field should be correlated with the percent of visible minorities in Canada in general. I find that over 50% of my class is comprised of visible minorities.

Role models are especially important for visible minority individuals' career development because a history of discrimination and limited career options may have decreased their self-efficacy and outcome expectations. This leads some visible minorities to have lower career aspirations. A participant raised this issue and revealed the difficulties with building self-confidence in visible minorities' academic and career decisions.

It is a profession [dietetics] and they [visible minorities] usually will choose a simple job as long as it satisfies their needs. They [visible minorities] have lower education level.

Perceptions about diet and health. The Chinese believe that certain foods have a role in preventing and treating disease (Koo, 1984). Chinese dietary therapy helps alleviate minor symptoms of sicknesses and discomfort by establishing balanced energy and cure the root of the problem (Koo, 1984). Two of the participants described the Chinese food culture as follows:

A lot of Chinese people already have the tradition of Chinese medicine and herbal medicine therefore might think that this is the knowledge they rely on and do not need dietitians.

The Chinese are unfamiliar with the knowledge of nutrition [e.g., the nutrients of certain foods], which is probably not the case in certain cultures.

Two of the participants mentioned that being Chinese they are not familiar with the food in Canada and this caused lack of motivation to select dietetics as a career.

I don't know much about Canadian food and what Canadians eat at breakfast, lunch and dinner.

Chinese and Canadian diets are totally different from each other. Transferring what I learnt in Canada about nutrition to my own culture is impossible after completing my degree. I don't know what to do!

Gender bias. One possible factor for the shortage of visible minority dietetic students is the public perception of dietetics. The stereotype dietitian is usually female and this may deter male applicants from applying to dietetics programs. Gender bias, therefore, influence visible minorities in their decision to pursue a career in dietetics.

There is more women enrolled in the program than men, and one of the possibilities is probably due to the stereotype dietitian image in the past. People think that working in the kitchen and cooking are jobs done by females. Lots of people may misunderstand dietetics as a cooking field.

It was assumed that dietetics was essentially 'women's work' and therefore it was not seen as an appropriate career choice for males.

Dietetics is perceived as a female career. It is thought the females are more qualified in this profession.

Having a poor representation of visible minorities in the dietetics profession poses many problems. Even though Canada is a multicultural country, visible minorities do not receive the same level of health care as their Canadian-born counterparts. Research suggests that there are differences in treatment and health care outcomes based on race and ethnicity (Sarto, 2005). These disparities are caused by many factors, such as differences in socioeconomic status (education level and income), differences in the health behaviors of those seeking care and adhering to treatments, the lack of multicultural tools and sensitivity in part of the health care

provider, language barriers, payment and coverage, outright discrimination and stereotyping by health care practitioners, and the lack of diversity in the health care workforce. With a more diverse population of health care providers, many issues of health care disparity might be resolved.

Next, the second open-ended question was asked to prompt participants to describe their thoughts about increasing visible minority groups in the dietetics profession. The presentation of data for the second open-ended question is organized according to two themes with six subthemes.

Question 16(b): What impact do you [Chinese dietetic students] think an increase in visible minority groups would have on the dietetic profession?

Theme 1: Increased Workforce Diversity

Multiculturalism and dietetics profession. Canada is a multicultural country. By creating a more culturally diverse health care team, better patient communication and treatment will occur along with the bonus that non-visible minority health professionals will become more aware and sensitive to ethnically diverse patients. One of the participants highlighted an assumption about the benefits of having a multicultural health care team:

Being with other cultures help better understand diversity, and serve clients effectively.

A culturally diverse health care workforce can more effectively care for a diverse population, as many people prefer to discuss their health care concerns with someone who is familiar with their background. Two of the participants indicated some benefits of their minority status in dietetic field.

I believe that an increase in visible minority groups [in the dietetic field] would allow for better understanding of different cultural foods and beliefs surrounding it.

Because dietitians from visible minority groups understand the culture and ethnical foods better, it could help to improve the service offered to visible minorities.

In fact, dietetic professionals from diverse backgrounds bring individual talents and experiences in suggesting ideas that are flexible in adapting to this field and patient demands. Two of the participants stated that a more culturally diverse dietetic population would benefit health care team. These visible minority dietetic professionals share different backgrounds, perspectives, and abilities which could help other team members look at their culture from the perspective of a visible minority and contributed to their understanding of different cultures.

Being able to serve different cultures enrich the profession by bringing in various views because culturally diverse work settings produce more culturally rich nutrition ideas.

Having the knowledge of another diet, visible minority dietitians can help develop a multicultural diet tracking database. This will help solving diet related health problems of visible minorities and provide better nutrition service for multicultural Canadian society.

Overall, increased workforce diversity would improve the quality of interpersonal care that visible minority patients receive, which would in turn lead to improved health.

Outreach. As dietetics represents an unknown or unfamiliar field for many potential professionals, increasing visibility of dietetics through outreach to different visible minority groups is important. A participant noted:

I also think an increase in visible minority groups would act as a form of promotion towards different minority groups.

Increasing the presence of visible minority dietitians may help to promote the profession and increase diversity within the profession. Also, dietitians' position as nutrition experts and their important role as members of the health care team will be emphasized.

Visible minority groups might realize the importance of the profession and appreciate it by seeing a dietitian coming from a similar background.

Participants believed that enhancing awareness of the profession and having more active recruitment efforts could assist with increasing the number of visible minority individuals in the dietetic field.

Promoting this field through the media will help more audiences notice it. This will increase the number of dietitian candidates who will join the field and increase enrollment in the nutrition program.

Theme 2: Improved Health Care Quality

Visible minority patients are more likely to select health care professionals of their own racial and ethnic background, and are more satisfied with the care they receive from visible minority professionals. Likewise, visible minority patients rate their health care generally higher when cared for in “racially concordant settings” compared to “discordant settings” (LaVeist & Nuru-Jeter, 2002).

The following section will report the need, importance, and value of increasing visible minorities in the health care professions. A participant stated:

We need better nutrition care for minority groups.

Accessibility. Inadequate access to health care services constitutes a major problem within visible minority populations. By increasing the representation of visible minorities in the health care workforce, more underserved populations could receive health care.

They [visible minority dietetic professionals] will be able to reach out to those in their group and promote health.

Visible minority groups can find their own practitioners who understand their culture.

Communication. Language is naturally a key component of health care professional-patient communication. Many visible minority patients experience difficulties in communicating with their health care providers. Many health care organizations lack effective access to

interpreters with an understanding of medical concepts and terminology. When patients speak some English and the need for an interpreter is not readily apparent, misunderstandings often go unrecognized.

Increasing the presence of visible minority health professionals might help reach patients with limited English proficiency as they can speak with the dietitian in their native language.

If language barrier for people who seek nutritional advice is eliminated, they can benefit from the nutrition services more easily.

Visible minority patients are more open and comfortable with a health care professional who can speak their language or understand their culture.

Being able to speak my first language with a dietitian makes me feel safe and comfortable. I know that all my problems will be solved easily.

There might be visible minorities who have never met a dietitian before. Speaking the same language may help promote the importance of the field to these groups. In this way, they may feel easy to discuss their diet problems if they need to see a dietitian.

Comfortable and understanding. Most people feel more comfortable discussing issues like food, body image, and weight with people of a similar ethnic background (Liu, So, & Quan, 2007). Therefore, dietetic professionals can draw from that pool to meet nutrition therapy needs and the needs of patients more effectively.

People of various ethnic backgrounds may feel more comfortable speaking to dietitians from a similar background - can understand each other better from a food perspective.

More people would be comfortable in seeing a dietitian of their own ethnicity because of the common understanding of cultural foods or custom. On that note, dietitians of visible minority groups can also educate their own ethnic group based on what they learned.

Participants also mentioned that increasing diversity in the dietetics profession would enable visible minority patients, who are underrepresented in the health care system, to feel more connected with dietetic professionals of their own racial or ethnic background.

This would give the hospital/facility a more encompassing feeling to their community. More visible minority people will be willing to seek help from their near-by hospital, knowing that there will be practitioners who understanding their language and cultural background.

It gives the influx of immigrants into Canada and their adaption to the western diet they may be more willing to see a dietitian who can relate with their culture.

Overall, increasing representation among dietetic professionals should increase to provide health care for underserved groups and thereby improve population health.

We need visible minority dietitians because they can communicate more effectively with minority groups. Thus, they can prevent nutrient related diseases.

Nutrition Knowledge. Food is an important part of daily life for many Chinese people. Cultural beliefs significantly influence food choices among the Chinese, and many Chinese believe that it is essential to have culturally congruent foods in order to keep health. Due to the increasing Chinese population in Canada, an increased understanding of the specific dietary needs of Chinese will help to implement and plan future culturally sensitive nutrition health services. A participant stated the need of increasing visible minority groups on dietetics profession:

Dietitians will be able to know more about the food habits and food eaten by these ethnic groups [visible minorities or Chinese] - can make diet recommendations that are more suitable for these groups.

Another participant mentioned her concerns about Canadian-born dietetic professionals' lack of knowledge of Chinese herbs used for supplementing the Chinese diet.

Not many dietitians know about traditional Chinese herbs which are used for supplementing daily nutrition. If we had more Chinese dietitians, our [Chinese visible minorities'] health concerns could be addressed.

Dietitians must realize that nutrition education programs can be effective only if they convey information that is relevant to their patients' needs. Participants pointed out that it is

important in providing effective health information and raising health awareness if dietetic professionals are able to understand visible minorities' health concerns. They also stated that this would in return create more cultural sensitivity in the profession.

More people would become more aware of the role food plays on our daily lives. Thus, both minority groups and Canadians would be more open up to changes and increase healthy choices.

Summary

In this chapter findings from this quantitative and qualitative study were presented. First, participant demographic data were provided. Second, the quantitative findings revealed the factors affecting a Chinese student's choice of dietetics as a career. Third, Chinese students' responses to the first open-ended question and two emerging themes related to influences on the career decisions of visible minority students was described. They were: (a) influence of family and Chinese culture and (b) influence of issues unique to visible minority students. Finally, the second open-ended question was analyzed and two major themes which indicated the impact of increasing in visible minority groups on dietetics profession were cited. They were: (a) increased workforce diversity and (b) improved health care quality. Next chapter focuses on my cross-cultural learning experiences as a Chinese dietetic student and visible minority in Canada.

CHAPTER 6: AUTOENOGRAPHY

For you the reader to gain an understanding of the importance of my dual role as participant and researcher in this study, I believe it is important to give background information about myself.

In early 2003, I left my home to pursue a Bachelor's degree in Nutrition in Canada. Although I knew that this process would be challenging, I did not know the extent of the learning and change that I would undergo as a result. Ultimately, what I learned about nutrition or dietetic education through the explicit content of my classes was overshadowed by what I learned from reflecting on my experiences as a mature Chinese student pursuing a graduate degree in Canada.

I questioned how a person coming from a similar background could research an interesting, unique, yet meaningful topic that would contribute to the existing literature. I delved into topics regarding the achievement gap between underrepresented minorities and their experiences. I began to think about why there was an achievement gap, refusing to believe that underrepresented minorities could not achieve. I also searched myself, questioning why I struggled so much in the dietetics major. Throughout this process, keeping a journal helped me to reflect on my self-exploration. The quotes in this section are taken from this journal.

Early Experiences in Malaysia

Family Life

I was born into a self-sufficient middle-class family from the small town of Johor, in South Malaysia. I have two brothers, and I am the eldest among my siblings and the first member from our extended family to complete an undergraduate degree. My parents were proud of the fact that I, a Chinese international student, was able to overcome many personal, cultural, and

academic challenges in studying abroad (including loneliness, health issues, language difficulties and financial problems) to pursue a career that I always wanted.

There is a good reason why my parents were so proud of me. My mother was from an old feudal family, and girls from rural, traditional families, usually had no access to education because of family beliefs and financial considerations. Although my mother's brothers all had basic schooling, my mother received only elementary school education. She was an illiterate household woman in a real sense. Likewise, my father, being the eldest son in his family, had specific obligations toward his family and was expected to respect and care for his parents. My grandparents became sick when my father was 14 years old. He decided to quit school and became the breadwinner of the family. For this reason, my parents expected me and my siblings to be educated.

The expectation of success from my parents, especially from my father, was high. I remember that when I reported to my father that I was "number 1" in grade one, he expressed a kind of victorious and gratified smile. I felt happy when I could make him feel proud. Although my father did not have higher education, I always regarded my father as having the greatest influence on my life. I was inspired that he completed the study of traditional Chinese medicine through self-directed learning which he always wanted. Today, he is a volunteer acupuncturist.

I wish I could be as intelligent and wise as he is. He taught me genuine love and affection for family members, especially for parents, and how this feeling could be extended to others. When I was still a child, he was the first one to lead me to ponder the meaning of life as a human being. He was kind, honest, knowledgeable, and good tempered. I remember there were always people visiting our home, seeking help or advice from my father because he was reliable and always ready to help. I used to seek help from him whenever I could not solve math or language

problems and enjoyed the times when he could teach me. He always taught me the methods of solving the problem rather than the answer itself. He seemed to always have more to teach me, even though I just wanted one question to be solved. Whenever I was anxious to know what the answer was, he remained at ease and in an unhurried manner explained why we chose this method rather than the other, always focusing on why. I could not quite understand his special way of educating us, but undoubtedly he had a major influence on my life.

Student Life

Being a Malaysian Chinese, I basically speak three languages – Bahasa Malaysia, Mandarin and English. That is one issue that I consistently struggled to explain to my Canadian friends and other international students alike. Born of Chinese descent in multicultural and multilingual Malaysia, I grew up being exposed to different languages and dialects.

As a child, my parents spoke to me in Mandarin. My parents communicated with my grandmother in Hakka. I spoke to my high school teachers in Bahasa Malaysia and English. When I ordered foods I spoke Cantonese. This situation is typical of an average Malaysian Chinese. My high school English teacher, Miss Li, helped me excel at learning English and motivated me in every possible way. She inspired me to believe in myself, dared me to excel in English, and directed me to realize my potential. Her hard work, patience, and understanding guided me in a positive direction and molded me into the person I became. From that time on, I was fascinated by learning English and dreamed of the opportunity to go to an English-speaking country to experience and learn it better. This eventually became possible even though I studied English for five hours a week from elementary to high school thanks to our efforts.

While growing up, I studied fairly hard and participated in a number of tutorials, such as mathematics, physics, and English. I was always a high achiever at school; I continuously stayed

on the honor roll. My parents' efforts and high expectations motivated me to study hard and become successful. They were willing to invest in their children's education to their best because being educated defines your social class and how much you are respected in Malaysia. Therefore, they desired their children to get a university education and lead a better life.

I remembered when I first graduated from High School in 2002; it was the year the nutrition and health topic had been very popular throughout the whole world. I grew up in a family that has always been active and health conscious. I believe that my interest in nutrition stemmed from experiences with my mother. Despite having basic education, she was enthusiastic about learning health related information and collecting recipes from magazines and newspapers. She also taught me what she learned while we were cooking together. This triggered my interest in nutrition and impacted my career choice in dietetics.

Being interested in nutrition and wanting to study abroad, I attended a career fair in Kuala Lumpur, Malaysia. I met a career counselor who gave me a list of universities in Canada offering nutrition major matching my requirements. After showing my list of favorite universities in Canada and discussing them with my parents, they were extremely supportive and encouraged me to apply for studying abroad, so I immediately decided to apply for a nutrition major in my selected list of universities in Canada. However, I was terrified by the thought of being away from my family for so long. Likewise, my family was also concerned but they desired me to have a successful career.

It took me nearly two months to complete the admission requirements to study in Canada, including taking TOEFL (Test of English as a Foreign Language) and applying for a student visa. On the day I got my visa, I felt a mixed sense of joy and worry. Like many other international students, I was not sure what this studying experience would mean to me. The fact that I just

graduated from high school, barely knew what life was, and at the same time had to leave my beloved family behind, made me sad and frightened.

Being an International Student in Canada

Differentness

I see myself as different in a lot of ways. I see most of them as having a lot more advantages than I do. Most of them do not need to work as they have a student loan and families that are supporting them. Or they know someone that has already been through the dietetic program, like their mother is already a dietitian. They have somebody to talk to. They have a support system. I do not have anything like that. They have advantages in learning. They went to school here and they understand the whole process. I do not understand any of this stuff. I have to work as a part time teaching assistant to reduce the financial burden on my parents. It is really hard. [November, 2004]

I began attending university in the fall of 2003 as a nutrition major at Acadia University on a partial bursary. Acadia University is a moderately sized university in Wolfville, Nova Scotia with a student population of roughly 3,500. Although the population of Acadia University is predominantly Canadian, it still attracts a wide variety of international students.

Sitting in that classroom is scary with all those people. I felt all of them were smarter than I was and usually I was the only Asian in the classroom. So I felt inferior... [September, 2003]

When I arrived at the university and I discovered that I was the only international student in the first year nutrition class. In my first months of the program, I became apprehensive of not being able to integrate with my social environment. I started to experience feelings of exclusion and isolation. People were standing around talking with each other and I stood by myself. This influenced my motivation and academic performance. I started to fear being seen as the dumb Asian girl. This was an enormous burden for me: a burden about not being able to fit in, a burden about my English language foundation, and a burden about not being able to make my dreams come true.

Being a minority student means being different from the others. I always wish that I could speak English fluently and be more a part of the Canadian culture so that I can be similar to everybody and fit in. [February, 2005]

Fortunately, I did not experience any deliberately remark or act (that I know of) meant to estrange me from my immediate social environment. For the most part, I received a lot of support by some of my wonderful professors to which I will always be in gratitude. Yet, I still experienced in some cases that international students were underrated in their academic performance. Some professors grade differently if they think that the student is less talkative, less assertive, and will not complain about the grade, which is not fair. I believe it would be very helpful if the professors understood and acknowledged that international students often have a difficult time while adjusting. I wish I did not feel that being an international student put me at a disadvantage when it came to professors assigning grades.

Why can't my professors see the difficulties I am going through? They are never mindful of international students! I did an assignment and because of my mistakes in citation, the professor deducted 15% of my total grade even though she could not explain why exactly. Nobody helped and guided me to learn how to cite properly in Malaysia or in Canada. Would it be possible to achieve a full grade as an international student who did not know what citation was at all until being graded for it?[October, 2003]

When I look back, I studied hard and long in order to achieve high grades and not waste my parents' investment. However, I believe the pressures of pushing myself to overcome the challenges I faced helped me to pursue academic excellence. Being decisive to excel, I gradually gained my confidence back.

Psychological Frustration

I spend almost all my time in the library or computer lab, searching for references, reading assigned materials, preparing for presentations, getting ready for class discussion, and working on writing assignments! This is very stressful. I have no time for extracurricular activities, such as doing yoga or partying with friends. [November, 2003]

As an international student, I faced a number of acute obstacles, problems, and difficulties. From my perspective, in addition to a sense of academic alienation (not fitting in the classroom, curriculum, and system), I had a feeling of being undervalued and confused of having lost my individuality and identity. Similar to the experiences of other international students, I suffered the pain of separation from my aged parents and my beloved brothers. Emotions such as loneliness, homesickness, anxiety, and especially a sense of guilt added difficulty to my cross-cultural transition.

Maybe my parents are right. I felt so relieved talking to them on Skype today. I shouldn't, MUSTN'T think that I'm not competent enough to get through my studies. How come I was clever in Malaysia but not in Canada? I will surprise you people and make you believe in me! [January, 2004]

Several months after coming to Canada, I experienced a period of frustration, depression, and confusion. I could not express my feelings during this difficult time. I wept and buried myself in my apartment for a few days and did not want to see anyone. At that time, I was overwhelmed by a strong sense of self-blame and guilt. I felt guilty for failing to perform my filial responsibility to my parents, especially my mother, who has been in poor physical health for a couple of years. It is part of our traditional culture for children to take care of parents when they are old and in special need. Similarly, I felt culpable for taking the only opportunity to study abroad but not my brothers, although they are both completing their university degree in Malaysia.

I work because I feel like I need to work. For financial first and experience. [September, 2004]

In order to relieve my financial stress, I tried many kinds of part-time jobs, including working as a teaching assistant, babysitter, kitchen helper, and a waitress. Because the law in

Canada does not allow international students to work off campus, I had a very limited choice of low-paid casual jobs as well as getting my work experiences at the same time.

Encountering Difficulty in Academia

I hate the feeling that I know very little about what is going on around me! I don't know the Canadian food brands! I don't know the TV shows! I don't what people cook here! I wish I had software to download all these into my brain and felt like one of them!
[October, 2004]

The educational system in Malaysia is much different than in Canada. In my first class in Canada, I was shocked by the atmosphere. Each class included discussion, which was totally different from my high school experience in Malaysia. In Canada, I was assigned a lot of handouts, reading materials, and designated textbooks. In class, when the professor started a topic, the students were expected to respond and participate in the discussion period. It was common for one student to cut in or to pick up the thread and lead the discussion the way he or she liked. Most of my classmates had basic knowledge of nutrition and working experiences within this field. In Malaysia, I had never been taught about healthy eating lifestyle at school. All nutrition concepts and vocabulary was very new to me when I started my major. When my classmates discussed a certain topic, they related the content to what they knew about. The professor rarely drew conclusions about the discussion; instead, they offered a few words in response to it, which did not help my understanding of the issues.

Why can't I be so comfortable like my classmates? Am I expected to speak up? I had many things to say in my mind but I did not dare speak in front of everyone. They talked to the professors as if they are friends. But they are not! Are they? [September, 2007]

In the first term, my culture and beliefs did not allow me to ask questions directly to my professor because it was considered both impolite and shameful. This difference in belief and teaching philosophy made me feel confused and troubled. I was used to the Chinese way of

teaching and learning. In Malaysia, education and training traditionally involve learning from teachers, and the teacher is to be respected like a father who can order his children to do anything he thinks is right. The role of the teacher is to give knowledge to people who do not have the knowledge; the teacher talks in front of the class and the students listen and write down what the “master” says. I was used to this pedagogical model and did not know what to do at the beginning. Another cultural difference that caused me to inwardly struggle is eye contact with my professors. In Malaysia, it is disrespectful to look directly into the teacher’s eyes. In Canada, I tried so hard to make eye contact to conform to the societal expectations and conventions, but then when doing so, I could not help worrying about being disrespectful.

When is this war going to stop in my head? To speak up or not to speak up! That is my worry! I don’t want to be penalized because of my culture! How can I improve my class participation? [November, 2007]

I was not accustomed to presentation and group discussion methods in class. Sharing and discussing subject matter in a second language was demanding. I found it difficult to read, understand, analyze, and share topics with my classmates. However, everyone was expected to make a contribution to the discussion. I felt nervous about speaking, not only because I could not express myself very well, but also because I was worried that others would either not be interested in what I said or not understand me since they had little knowledge of Chinese culture or came from different social backgrounds. Many concerns hindered me from asking questions, actively participating in the class discussion, and giving speeches.

Writing is the most challenging and intimidating skill for most international Chinese students. It is not simply about choosing the correct and appropriate word to use; it is more about how to convey ideas clearly in a coherent and organized way. The Asian literature accommodates more indirect and implied expression of ideas in whereas in western modes of

literature there is more sense of direct expression of thought. For this reason Chinese students feel challenged to express their thought clearly.

Language Deficiency

I can't understand why it is so difficult for people to understand my English! I feel like an alien sometimes. Oh, English! [March, 2004]

The language problem is another barrier influencing my academic experience. I had tried to convince myself that I had a good understanding of English but the truth is that it was a problem. At times I felt I could not express myself adequately because of my limited vocabulary, and poor grammar. Yet, it was more than that. To learn a language, one needs to learn its culture. Without embracing the culture, it is impossible to get a full sense of the language.

Although I had been well prepared for the linguistic and cultural differences by living in a multicultural country (Malaysia), I still could not avoid culture shock when I first came to Canada. Sometimes I found myself stuttering while communicating with my fellow Canadian friends. It was not because I had inadequate proficiency, but because most of the time I could not understand their jokes, and I would sit there unmoved while they were all dying of laughter. Other times, lack of vocabulary and inadequate language skills deterred my full participation in debates or my ability to keep up with the flow of discussion. I found that the English I spoke is very formal and reflected the books I used for learning English in Malaysia, but there is a difference between the English learned in Malaysia and the English actually used and spoken in daily life in Canada.

How many more words do I need to look up in the dictionary to understand course articles? I am not happy about going to bed after midnight everyday! Ugh... [January, 2005]

In addition, I encountered difficulty in keeping up with course readings. I often felt overwhelmed by intensive reading assignments, which were very time consuming and challenging for me. It usually took me much longer to read, understand, and digest the materials compared to my Canadian classmates due to the high number of unknown vocabulary I needed to learn.

Academic and Social Adjustment

As I now understand it, Canadian universities aim to promote an exchange of ideas and information between students. The ideas of participatory and collaborative learning dominate classes. Although I like democracy in the classroom and professors' not imposing their ideas on their students, my strong traditional cultural background and beliefs made it so hard for me to fit in. I found it hard to switch to a new student role in a new institution. It was not easy to discontinue relying on my previous high school experiences as a student, where attending class meant professors lectured and students listened, and rote memorization and repetition were the norm.

In order to adjust to the western education system, I started to become involved in class discussions as much as possible, and gradually I came to accept the western philosophy of teaching and learning. It took me some time to get used to the instructional pattern in Canada, which is more learner-centered, self-directed and collaborative than more authoritarian and disciplined Chinese education. In time, I started to appreciate the professors' focus on individual learners' ability, their creativity, and their critical thinking skills, rather than just their provision of information and knowledge because I felt more fulfilled and gained enriched perspectives in life.

Like most international students, my academic stress came mainly from problems with the English language, so I devoted myself to conscious language learning. By reading extensively, I enlarged my vocabulary and although it continued to take me much longer to complete assigned readings than my Canadian classmates, gradually I was able to catch up with the professor and better understand the lectures. I also learned to ask for help, either from a Canadian friend or directly from my instructors, in proofreading my papers, which was a particularly good learning experience for me. I was fortunate to have a tutor, Peter Smale, who I have considered my academic parent. He held my hand in times of need, encouraged me, and provided greatly needed insight to understanding this complex yet beautiful language.

My friends within dietetic programs are always very encouraging and supportive. I think they help a lot just because we are all going through the same things. We know each other's frustrations and are experiencing this horrible stressor (school works and internship) all at the same time. I know I am not alone. [March, 2006]

In my second year at Acadia University, I began to take every opportunity to expose myself to the English environment rather than just sitting in front of a computer or burying myself in books. I made several Canadian friends after becoming members of the nutrition society in Acadia University. By frequent contact with native speakers and through casual communication, my oral English improved. Watching television was very helpful for improving my listening and speaking skills. I also learned the names of the food products and brands watching commercials. This helped me in my nutrition related discussions and assignments. In addition, to practice what I learned in my classes and gain real-life experience, I started to volunteer at a nursing home. I found that actively interacting with people outside the university community was also beneficial to improve my language proficiency and getting to learn the culture.

Career Choice and Experiences

Becoming a Graduate Student

I am passionate about studying nutrition. [July, 2006]

With prayer and help from my academic, social, and family support group, I graduated in May of 2007 with a Bachelor of Science in Nutrition. It is one of my most cherished accomplishments. I felt I can help people in different parts of the world and have a positive contribution to the lives of others. This was also a step to start a career and be self-sufficient. In this way I could also help my family financially.

In my fourth year, I applied to the post-degree dietetic internship programs. I knew that the entire process was extremely competitive but I had no idea exactly how competitive it was. I had heard the “horror” stories about students who applied to several different programs and did not get matched to any. As an international student, it was difficult for me to have work and volunteer experiences which were necessary to create a competitive internship application. I was unsuccessful in obtaining an internship placement. I was really frustrated and disappointed. I worked so hard and maintained good grades but was not accepted in an internship. I questioned: “Am I discriminated because I am not Canadian?” However, the failure of obtaining an internship did not make me give up my dream of becoming a dietitian. I told myself: “There is life after the dietetic internship application process and there are many alternatives”. I felt a strong desire to update my knowledge of nutrition and further my education in order to gain more work experiences and enhance my competencies for entering the dietetic field.

How is this possible? I don't know why I couldn't get in. Does this mean that all those years of study was a waste of time? [March, 2007]

Making the decision to apply to graduate school was a big step. It took quite a bit of research to learn about the different schools that offer the programs I was looking for. I was afraid that I would not be accepted. So I spoke to my undergraduate professor, Dr. Lisa Houghton, who was very helpful and encouraging. Shortly afterwards, I picked the Master of Science in Applied Human Nutrition for my accreditation, because I considered Mount Saint Vincent University to be a prestigious university. The degree offered coursework that emphasized what I had learnt in my undergraduate degree and taught me more. It also offered a dietetics internship as a part of the course and a research component to give me a better insight into the dietetic field in Canada. Now I think it was a good decision because I found my ability and my potential.

My degree in Applied Human Nutrition has provided me with the skills, knowledge and credibility to live my passion. [June, 2009]

My Dietetic Internship

I study hard, very hard, try to get a part-time job in my field of study, and volunteer for gaining experience in all aspects of the food system. [April, 2008]

It goes without saying that obtaining a dietetic internship was admired by many people due to the competition. When asked to recall my favorite memory from the dietetic internship experiences, I always have a hard time narrowing it down to just one. I was involved with so many amazing assignments and met a lot of great people. However, I feel that one of the most beneficial parts of interning was realizing how much I want to become a dietitian.

I read the chart, I read the diagnosis, I read the nutritional plan...I kind of put everything together. Looking at charts, reading doctors' notes and nurses' notes, putting what I learned from books and watching what dietitians do, it just "clicks in" because I am in it (dietetic internship). [January, 2009]

I have been fortunate to have many enriching cross-cultural learning experiences. One of my most challenging yet enlightening cross-cultural encounters was providing nutrition information to multicultural groups. There were many differences in expectations and practices between cultures, and many frustrations and joys as we worked together. During my placement year, I was worried that my language limitations would interfere with establishing good relationships with my patients or clients. I was worried that my self-esteem would suffer from not knowing enough about the Canadian culture and dealing with belief systems, which are different from my own. I expected myself to act like one of the majority people and think less about where I came from. If I had acted like an Asian, I might have had a setback. It was hard to be in that position when I was talking to patients or someone who did not understand my cultural background. I did not feel comfortable because I was trying to be something other than what I am, but at the same time I had to get through the process (dietetic internship).

Will I be Canadian? Will I be a dietitian? Will I be Asian? Where am I? What is happening to me? Am I losing myself for What? [October, 2008]

At the start of the dietetic internship, I had no experience in effective counseling. Fortunately, during my community internship at the Canadian Diabetes Association in London, Ontario, I had an opportunity to complete a week long rotation at the diabetes center, but it was a very limited amount of time to develop confidence in this area. Being inexperienced and different, I was worried about how patients would perceive me at work. A good story was shared by an outpatient dietitian who was from Saudi Arabia. She shared her practice experiences of being a visible minority dietitian in Canada. As a newcomer to Canada, she faced many challenges as she did not know very much about Canadian culture. Even though she had a good understanding of English, she believed at times that she could not express herself adequately

because of her limited knowledge of Canadian culture. She said to me: “Sometimes you may notice that the food they [patients/clients] are telling you about is not familiar to you. Don’t worry. You can ask or search through the internet for the ingredients and recipes”. I felt more confident and started to believe that I could practice nutrition in Canada. My self-belief and efficacy increase after getting to know another international dietitian during my internship. Thus, I embraced every opportunity possible to immerse myself in other cultures. I believe cultural competence is an ongoing process that is developed through familiarization of oneself with other diverse cultural backgrounds.

Culture SHOCK! ... I did not realize what it was really like in Canada until I came in person. [March, 2004]

Getting Through

When will my worries of this language (English) stop? I need to make sure I understand everything correctly. (As if I have enough time!) I became dependent on this medical dictionary! There are so many medical terminologies to learn! Why aren’t these medical words the same as the ones in Chinese? [May, 2010]

Being a Chinese dietetic student was an ever-changing process of self-understanding. Adjusting to a new culture, language, and understanding of life was a contradictory and challenging learning experience for me. In Canada, I not only need to learn how to cope with the western life style but also to become open to encounters with other cultural groups. I started to enjoy learning new recipes and meeting a lot of great people who come from different cultural backgrounds and hold different health beliefs. As I began to understand and accept the strangeness and differences of other cultures, I found that I tended to value and appreciate my culture more. However, I also learned to be tolerant of those who are different from me and not to judge others through my (Chinese) values. Although I experienced cultural marginality in the host culture, I also gained knowledge through intellectual pursuits. Meanwhile, dietetic

internship experiences expanded my vision of myself and the outer world. I experienced greater self-understanding and self-awareness through these processes.

Yay! I feel great! I could speak to a huge crowd of people and they did understand me! Nothing could feel better! [November, 2008]

Due to my limited English-proficiency, I have always feared doing oral presentations and worried about people watching me with a critical eye. Public speaking and oral presentations are compulsory for being a dietitian. I knew I had to conquer my fears. I remembered the first time when I delivered my speech at a community meeting, I was blanking out a little bit and kept recovering. Once I started talking, I forgot about everything else but the speech. People were nodding like they understood and then I began to feel happier. I was looking at everybody in the eye and talking to them. I was not afraid. After that day, I could face people and say whatever I wanted into the microphone without feeling the pressure of crowd that I always felt.

I need to earn money. The cost of life and studying as an international student is so expensive here. The process of getting a RD job after completing my internship will take another year. I need to wait to get a job until I complete my Master's degree. Plus, I have to pay for the RD exam, car insurance, rent, and credit card bills. That can be a financial burden on me! [July, 2009]

In addition, the incredible financial strain of studying the Master program and interning for a year without pay were financially stressful. Scholarships and bursaries have rarely applied to international students. Likewise, tuition fees for international students typically double the amount that local students pay. I am deeply inspired by what my parents had to go through in order to provide a better future for their children. My father bought me a second-hand car for my internship travelling, although I have two brothers who still need financial support for their education in Malaysia. My parents taught me that one can succeed as a result of enormously hard work and dedication coupled with a positive outlook on life. Thus, I started to believe that I can

indeed fulfill my dreams and nothing can stop me except myself. I told myself: “I am getting used to a lot of things that I am taking for granted. I will eventually complete my Master degree, and my parents are going to be proud of me”.

From the beginning of my internship to the end, I improved my knowledge and capabilities as an entry-level dietitian. I feel fortunate that my loss of self-esteem due to my differentness did not destroy my self-confidence to become an entry-level dietitian.

Final Thoughts on Career Choice and Change

Although events and experiences do not wholly make up a person, they are precursors and effectors of many choices we make throughout our lives. The more I write about my past, the more I understand why I am who I am and who I want to be! Even if I am an international student, I'll get there! [August, 2010]

When I reflect upon my cross-cultural learning experiences, I can see that I go through a process of continuing growth and maturation. Wang (2004) described pursuing graduate education in Canada as an experience of “grappling with a series of challenges to overcome language deficiency and adjust culturally and socially to a different educational system” (p. 69). After coming to Canada, I experienced major life changes and challenges: I, firstly, shifted from being a Chinese high school student to an international university student. Secondly, my everyday and academic language that I communicate through has changed from Mandarin and Malay to English, which was the major challenge in this process for me. Next, I started to lead an independent life rather than being dependent on my family. Finally, my ways of learning changed from teacher-centered to learner-centered. It seemed that this change would involve a loss of social status and increased hardship in the learning process. However, I believed that studying for an advanced degree in a western country would give me long-term benefits. Yet, it is not about the respect and personal status this experience will bring me in my future career or

about certain knowledge or content that I learned; it is more about the challenge to my personal capability.

In addition to these external changes, I believe that something changed inside of me, something subtle yet significant because I went through a “transformative learning⁴” process, which took place through understanding myself and my evolution through my journal reflections. Indeed, I believe that my cross-cultural learning experiences changed me in several ways and seeing the growth through these changes in my ‘self’ talks in my journal entries has been rewarding.

I have more confidence than before. Living alone, facing and overcoming difficulties in an overseas setting, and solving problems without the help of my friends and family made me stronger. Moreover, I gained not only confidence but also an increased independence during my cross-cultural learning experiences in Canada. As I developed the ability to speak freely in class, participate confidently in discussions, I received the same grades as Canadians. Therefore, I could see my potential and growth. I believe that consciously encountering and struggling with challenges and difficulties is a necessary part of the process of personal growth and it is good for building a strong character and personality. Although I once found it extremely hard to accept having to go through so many changes, my learning experiences in Canada helped me to understand my life and self more fully and deeply.

⁴ Transformative learning is a term used in educational theory to describe a process which leads the learner to re-evaluate past beliefs and experiences which had previously become critically aware of his own tacit assumptions and expectation and those of others and assessing their relevance for making an interpretation. (Mezirow, 2000, p. 4) ‘Transformative learning’ occurs when one can critically reflect and engage in communicating with self through reflection.

Summary

*After learning what autoethnography is, dear diary you also transformed with me. I started to spend more quality time with you! How wonderful it has been to think back on the decisions I made so far and pull all the pieces together to understand 'myself'!
[December, 2010]*

Through this study, I became one of the voices who want to promote improved study and work conditions for visible minority dietetics students and professionals. I am someone who wants dietetic educators to have more “differentiated”⁵ ways of teaching visible minorities. Lastly, I am “obligated” to help others like me in ways that others have not. I wanted to give an “authentic” voice, since “giving voice to ourselves is a process of identity development itself” and this “voicing of self ... may develop as we become increasingly responsive to change, to new understanding of ourselves, to overcoming the limitations of our previous identities, and to creating new means of self-expression” (Hayes et al., 2000, p. 99). As expressed by Ellis & Bochner (2000), this research represents me as much as it represents the participants whose data I analyzed.

By using autoethnographic narrative as a research method, this study aims to give a more comprehensive and in-depth understanding of being a visible minority student in Canada. I have narrated my experiences in both Malaysia and Canada in an autoethnographic style. I started by giving an account of my early experiences with my family and schooling, my initial interest in health, and how I became a dietetic student in Canada. I also focused on my cross-cultural learning experiences in Canada, experiences that included difficulties in academics, culture, and language. I described my feelings of confusion and alienation in non-academic situations, the

⁵ According to Tomlinson (2001), differentiated learning and teaching require understanding the needs of different learners with different needs. Teachers are responsible for creating democratic learning environments.

psychological frustrations of being a visible minority dietetic student, and my gradual process of adjustment to life and education system in Canada.

The journey of writing down my cross-cultural learning experiences has come to an end, but my inner self journey is ongoing. Sometimes I still question the meaningfulness of my cross-cultural learning experiences and career choice, but for the most part I see it as experiential and transformative learning. My cultural heritage, my strong belief in hard work, and my education gave me the courage to seek a dream in another culture. As a female Chinese student in an overseas country, I became more self-aware.

I now recognize that I have changed by being more self-reflective about what I have experienced. I believe this experience has and will have an impact on my professional and personal life. I hope other students and educators read my personal accounts and are able to identify with my experiences. By facing and recognizing difficulties and challenges, fears and doubts, we become confident and self-fulfilled.

CHAPTER 7: CONCLUSION

This chapter will conclude the factors influencing Chinese dietetic students' career choices and how increasing number of visible minorities change the profile of dietetics profession by referring to their implications, and will describe the limitations and with recommendations for future research.

Conclusions and Implications

This section summarizes a variety of factors influencing Chinese or visible minority students' career decisions. Increasing the level of enrollment, retention and ethnic diversity in the dietetic field can be possible through understanding the factors and needs affecting the success of dietetic students which are presented in the following section.

Career Values and Financial Opportunities

Professional career and personal satisfaction are the most important career values that influence the career choice of Chinese dietetic students. Job security, interacting with others and ability to specialize in the field of dietetics also attract them to the profession. However, financial rewards and prestige are not perceived as important to the students, but the actual work that can be accomplished within this career is a strong attraction, such as continuous challenges, flexibility and diverse practice areas are considered very important in their career decisions. Although financial rewards and prestige might have appeared relatively unimportant to Chinese dietetic students when making career decisions, they place a priority on choosing a "caring" profession that personally interests them. Therefore, these values should be considered when recruiting individuals into the profession because although recruitment is important retention is what sustains the profession.

Even though not all students are motivated financially to study dietetics, it is unavoidable that all international dietetic students are financially challenged during their studies. Since student visa has limited work permits, it greatly limits opportunities for acquiring job skills and easing financial strain. Also, the expenses of dietetic internship sometimes increase, such as housing and travelling. Being ineligible for student loans or federally funded grants, can affect the choices these dietetic students make about their education and ultimately their career path, such as not applying for an internship. In order to represent visible minority students in dietetic field more equally, financial opportunities given to international dietetic students should be considered.

Chinese Value

Family and Chinese culture are the most salient influences on the Chinese dietetic students' career decisions in this study which supported the Rotter and Evans' (2002) study: "Some would argue that career implies culture and family" (p. 3). In other words, the roles of work, family, and culture are amalgamated in the process of career choice. In addition to Rotter and Evans' study, findings of this research support other studies that identify family as an important influence on career decisions for ethnically diverse students (Fisher & Padmawidjaja, 1999; Jourdan, 2006; Singaravelu, White, & Bringaze, 2005).

Chinese parents hold a specific career expectation for their children's career, which is to obtain a professional job. According to these expectations, Chinese students should have a prestigious job which requires specialized training and offers substantial income as well as being in high and stable demand. These findings resonate with what Gordon (2000), Leong & Serafica (1995), Li (2004), Tang et al., (1999), Young, et al., (2003) revealed in their research.

The need for recognition as a key Chinese value is consistent with findings from a previous study (Lam, 2005). Chinese dietetic students perceived that their families tend to consider career and academic achievement as representations of family achievement and recognition. Hence, parents might interfere with their children's career choices concerning the salary and job type, to maintain their family recognition – to *save face* in Chinese terms. Family recognition is attained through academic and career achievement, which introduces another key Chinese value – striving for success.

Chinese dietetic students defined success as attaining a professional job and considerable income. Their understanding of success as a key Chinese value is consistent with the results from a previous study conducted by Gordon (2000), which states that Chinese students achieve success academically, professionally and financially to save face and bring honor to their parents and family. This once again reveals that the Chinese parents motivate their children for getting a prestigious job and high income and thus interfere with their children's career choices.

Chinese parents' expectation of their children's maintaining stability in their career life supports the findings of previous studies (Gordon, 2000; Li, 2004; Young et al., 2003). Chinese tend to seek stability in their career, meaning safety, comfort and predictability, which indicate the Chinese value job security and steady income. Chinese may prefer remaining in the same position rather than looking for risk-taking, or considering different opportunities. Whether because of family recognition, the need for success, or children's well being, Chinese parents desire their children to pursue a career path that would minimize their worries for sustaining a living. Thus, the role of family and culture may dominate the effect of students' career choices. For these reasons, career counselors should be aware of these factors while implementing recruitment strategies for visible minority students.

Parental Influence

Previous studies have examined how Chinese or Asian children responded to their parents' pressure or influence in their career decision making. For instance, several studies elucidated how the children felt pressured to correspond to their parents' career expectation, and how some have adopted their parents' values and carried them out in their education and career pursuit (Leong, & Chou, 1994; Li, 2001; Li, 2004). Unlike the illustration offered by existing literature, according to the Chinese dietetic students in the current study, the nature of parental influence is not always strong and overt. Most Chinese students find their families open and respectful of their career decisions. Moreover, even if Chinese parents offer their opinion or concerns when their children make career decisions, the parents ultimately leave them with making final decision. Overall, Chinese dietetic students' perspectives in this study shows that parental influence is not as definite, restrictive and stringent as how the existing literature may have portrayed. According to Chinese dietetic students, personal interest is the primary factor in making career decisions.

Knowledge about the Dietetics Profession

Dietetics is not a popular career choice because it is not a well-known profession among Chinese students. Accordingly, Chinese dietetic students decide to pursue dietetics when they are around 20 to 25. This may also result from the fact that career counselors or teachers may not be familiar with the roles of dietitians and lack of knowledge about the profession in their home countries as well as dietetics being a not well-known profession. Moreover, Chinese dietetic students are unaware of the job availability in the profession in their home countries or in Canada. Perceived health related beliefs and cultural differences may discourage qualified visible minorities from entering the dietetic field.

When considering these, promoting the dietetics profession should possibly start as early as high school. If students are more aware of career opportunities in the dietetics profession at earlier ages, the number of visible minority dietetics students may increase in Canada. Nutrition department of Canadian universities can start partnership with universities which are located in other countries. This would inform career counselors or teachers about the dietetics program. Starting an exchange student program can increase ethnic and cultural diversity in the field of dietetics. This would also enable visible minority students to make more informed decisions before choosing dietetics as a career. Since Chinese dietetic students benefit from the information on the internet and catalogues distributed in universities, these should be promoted more.

Canada is a multicultural country. Ethnic and cultural diversity in the dietetics profession is one of the ways to positively impact health disparities. In order to improve the health care quality and provide culturally sensitivity and competent care to all members of society, dietetic professionals and educators need to recruit more qualified visible minority students into the profession. Visible minority dietetic professionals need to step forward as mentors and role models for visible minority students by supporting their progress at school. These leaders can help unnoticed and unaddressed needs of visible minority students.

Language Skill

Speaking English as a second language is another barrier influencing visible minority students' career choice. However, being a non-native speaker of English is a temporary barrier to reach academic and career aspirations for Chinese dietetic students. Feeling powerless due to inability to easily express themselves or perform routine tasks in their new educational environment is experienced by Chinese dietetic students during their acculturation period. As

their English proficiency gradually improves, they experience academic success and expand their academic interests. These make it possible for them to adapt and accept the new educational environment.

As a health care professional, one must be capable of taking multiple perspectives when dealing with patients from varied backgrounds. Learning a second language (English) is an investment for the future that can produce many benefits whether it is for one's career, or personal growth. Chinese dietetic students benefit from being bilingual as there are more employment opportunities in the dietetic field according to the results of the current study.

As the cultural, racial, and ethnic profile of the dietetics profession evolves due to multiculturalism, the opportunity for interaction among groups will allow for the sharing of ideas and will foster a better understanding of the differences and similarities. Increased cultural knowledge (i.e. traditional Chinese culture) of majority dietetic professionals may have the added benefit of increasing their competence and sensitivity when working with culturally diverse patients. In addition, patients who see a dietetic professional who shares a similar background or speak the same language may feel more comfortable seeking nutrition guidance. As a result, this study suggests that minorities in the dietetics profession need to be more visible as role models for underrepresented groups. Overall, to provide optimal care to an increasingly diverse population, all dietetic professionals must become culturally competent practitioners. Moreover, expanding the number of minority dietetics professions in the health care workforce will likely improve the health of minority populations and reduce health disparities.

Self-Efficacy

People with strong self-efficacy beliefs are more likely to persist longer and expend more effort on a challenging task than people who believe they are inefficacious (Bandura, 1986).

Being less competent and familiar with the English language and Canadian culture, and lacking access to career information will endanger visible minorities' self-esteem and self-efficacy.

Majoring in dietetics require more efforts to put in than a visible minority student might perceive before taking the degree by coming to Canada. Accordingly, getting a dietetic internship is intense and the standards are highly competitive for an international student who is not familiar with the education system in Canada. Successfully getting an internship offer may affect one's self-efficacy level. Visible minority students may find themselves incapable of being eligible for dietetics internships. Therefore, visible minority dietetic students are indirectly discouraged from applying for internships and bursaries when their needs are not taken into consideration. Being a minority student may, therefore, cause low self-efficacy and alienation unless their arising needs are provided when studying dietetics.

Considering the implications for dietetics education, recruitment and retention of visible minority students into dietetic are a challenge faced by academic personnel. It is important to understand visible minority students' experiences once they decide to major in dietetics and what factors influence their success in the major. Following application and admission to dietetics education program, supportive strategies specific to the needs of visible minority students need to be implemented to augment the retention of minorities throughout their academic experience. To reduce visible minority students' feelings of alienation and low self-efficacy visible minority students can be placed in mentoring programs with individuals from similar cultural background. Faculties from diverse cultural backgrounds can play critical roles mentoring and role modeling for these students. Partnering visible minority students with majority students in classroom setting can be also beneficial. The majority students can in this way assist the visible minority student with language skills as well as cultural exchange.

In addition, dietetic educators can schedule activities that are reported to enhance the self-efficacy of students and provide positive shifts in their beliefs about themselves as members of the dietetics profession. Faculty can schedule clinical conferences and seminars where visible minority students can share unique aspects of their culture with majority students and professional staff. This enhances self-efficacy of the visible minority students while providing cultural sensitivity and enrichment for the majority students and professionals.

Limitations of the Study and Recommendations for Future Research

Despite providing invaluable insights of Chinese dietetic students' on choosing dietetic as a career choice and how dietetic professionals can gain more multicultural competence by understanding these factors, the current study has some limitations to be considered.

First, a purposeful, small sample was used and the participants attended universities located in various geographic regions in Canada. Voluntary participation may bias the sample towards a group that is more open and willing to share their experiences. Also because of the small sample size with the focus on Chinese participants who resided in different cities of Canada, the generalizability of the study is limited. Identifying international or Chinese-Canadian students in this study would help generalize the data and therefore represent all Chinese students' experiences. The themes of cultural differences and self-efficacy in Chinese students were important in this study. It will also be worthwhile to replicate this study with other groups of dietetic students from other nations. Future study focusing on the perceptions and needs of each minority group regarding dietetics program could be considered.

In addition, a mixed method research, a subset of critical theory guided this study. This theoretical is purported to discourage marginalization, promote empowerment, and engender emancipation from the constraints of oppression. I identify myself as both "insider and outsider".

As an “insider”, when I wrote my autoethnography, I felt I was in many ways inside this group of participants that I focus on in my study. I shared some of the same experiences and views as my participants. I expressed the importance of feeling as if I had a voice and were able to share my experiences with everyone. However, because I also organized and analyzed data from the surveys, I was an “outsider”.

Nevertheless, the quality of data collected may vary due to various factors, such as data entry error, self-reporting error, non-response bias, student drop out, and lack of English language competence. Likewise, in this study, I was the only person who organized, analyzed and interpreted the data, which relied heavily on my understanding and interpretation. Thus, these processes could be influenced by my personal beliefs, assumptions and biases, which could be alleviated by arranging more focus group interviews on the underlying factors and their implications in relation to choosing dietetic as a career.

Having explored the factors influencing Chinese dietetic students’ career choices and how this can impact the prospect of dietetics profession from a visible minority’s perspective, this study has established a basis for future research. Considering globalization and multiculturalism, more and more dietetic professionals will need to look into the perceptions of visible minority dietetic students or patients. Therefore, dietetics profession, its current and future practitioners will benefit from this study greatly. As a result, exploring reasons for choosing dietetics and needs to improve the profile of the dietetics profession in a multicultural world is more than a necessity.

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APPENDIX A

Questionnaire

Questionnaire: *An exploration of values, expectations, influences and motivations for dietetics as a career choice.* **Researcher:** Professor D. Lordly, Mount Saint Vincent University, Halifax

Thank you for agreeing to assist me with my research that is looking at why some students choose a dietetics career and why others do not. *Completion of this questionnaire implies informed consent.*

1. Year of study in current program:

☐ 1st year ☐ 3rd year
☐ 2nd year ☐ 4th year
☐ Other: _____

2. Gender:

☐ Female
☐ Male

3. Age in years:

☐ < 17 ☐ 23-25
☐ 17-19 ☐ 26-30
☐ 20-22 ☐ >31

4. Ethnicity:

☐ Black	☐ South Asian	☐ Arab/West Asian
☐ Chinese	☐ Korean	☐ Latin American
☐ Japanese	☐ Southeast Asian	☐ Multiple visible minority
☐ Filipino	☐ Aboriginal	☐ Caucasian
☐ Other _____		

5. Previous academic experience: Please check all that apply.

- ☐ High School
- ☐ College Diploma. Please specify _____
- ☐ University degree. Please specify _____
- ☐ Transfer from another discipline; if so please identify the discipline _____
- ☐ Other _____

6. When you think of the dietetics profession what comes to mind?

a) The positive qualities about the dietetic profession?

b) The negative qualities about the dietetic profession?

7. a) Please rate the following career values and opportunities in terms of their importance *as you were considering your career options* by circling the appropriate numerical descriptor. Use the blank lines to fill in any additional values or opportunities important to you.

Value	Very important		Somewhat important		Not important	Not Sure
	1	2	3	4	5	0
Job security	1	2	3	4	5	0
Ability to specialize	1	2	3	4	5	0
Career advancement	1	2	3	4	5	0
Lifestyle (regular work week vs. shift work)	1	2	3	4	5	0
Economic rewards	1	2	3	4	5	0
Personal satisfaction	1	2	3	4	5	0
A profession respected by your culture	1	2	3	4	5	0
Opportunity to interact with others	1	2	3	4	5	0
A professional career	1	2	3	4	5	0
Prestige within society	1	2	3	4	5	0
Job flexibility (i.e. part time)	1	2	3	4	5	0
Diverse practice areas	1	2	3	4	5	0
Ability to hold position of authority	1	2	3	4	5	0
Viable profession	1	2	3	4	5	0
	1	2	3	4	5	0
	1	2	3	4	5	0
	1	2	3	4	5	0
	1	2	3	4	5	0

b) Reflecting on your answers to the previous question, which career values and opportunities do you think *a career in dietetics* would offer you? Please use the blanks provided to fill in any additional values or opportunities you believe a dietetic career would offer.

Value	Excellent 1	Good 2	Poor 3	No 4	Don't know 5
Job security	1	2	3	4	5
Ability to specialize	1	2	3	4	5
Career advancement	1	2	3	4	5
Lifestyle (regular work week vs. shift work)	1	2	3	4	5
Economic rewards	1	2	3	4	5
Personal satisfaction	1	2	3	4	5
A profession respected by your culture	1	2	3	4	5
Opportunity to interact with others	1	2	3	4	5
A professional career	1	2	3	4	5
Prestige within society	1	2	3	4	5
Job flexibility (i.e. part time)	1	2	3	4	5
Diverse practice areas	1	2	3	4	5
Ability to hold position of authority	1	2	3	4	5
Viable profession	1	2	3	4	5
	1	2	3	4	5
	1	2	3	4	5
	1	2	3	4	5
	1	2	3	4	5

8 a) Please note which program stream you are currently enrolled or intend to enroll in?

- ☐ Dietetic internship stream (If so, go to question 9)
- ☐ Non dietetic internship stream (If so, go to question 8 b)

8 b) Why have you decided **not to pursue** a dietetic internship? Proceed to question 18.

9. When did you decide to pursue dietetics as a career choice?

- | | |
|---|---|
| ☐ Prior to junior high school | ☐ 12 th grade |
| ☐ Junior high school (grade 7-9) | ☐ College or university |
| ☐ 10 th or 11 th grade | ☐ After work experience within the field |
| ☐ Other, please specify _____ | |

10. What was your initial source of information regarding dietetics as a career choice? **Please rank all that apply** with number one (1) being your strongest influence.

- ☐ Personal exposure through work experience
- ☐ High school guidance counselor
- ☐ Teacher or school administrators, i.e. principal, family studies teacher
- ☐ Personal experience with a dietitian
- ☐ Media, including print, television, radio and internet
- ☐ University/College recruitment strategy, i.e. college catalogs
- ☐ Other, please specify _____
- ☐ Other, please specify _____

Additional comments:

11. What influenced your selection of dietetics as an area of study? **Please rank all that apply** with number one (1) being your strongest influence.

- ☐ Desire to help others
- ☐ Interest in health
- ☐ Interest in nutrition
- ☐ Interest in food
- ☐ Interest in science
- ☐ Knew a dietitian
- ☐ Knew a family studies or home economics teacher
- ☐ Compliments a previous degree
- ☐ Personal experience with a diet/health related issue [other], i.e. family member with a prescribed therapeutic diet
- ☐ Personal experience with a diet/health related issue [self], i.e. personal eating disorder or prescribed therapeutic diet
- ☐ Other, please specify _____
- ☐ Other, please specify _____

Additional comments:

12. Who influenced your selection of dietetics as an area of study? **Please rank all that apply** with number one (1) being your strongest influence.

___ Dietitian (s)

___ Teacher (s)

___ Family member (s)

___ Other, please specify _____

___ Other, please specify _____

Additional comments:

13 a) Upon entrance to the dietetics/food and/or nutrition program, how did you envision the role of the dietitian?

13 b) Has this vision changed during the course of your program?

☐ No

☐ Yes

Please elaborate

14. Do you have any reservations about dietetics as a career choice?

☐ No

☐ Yes,

Please elaborate

15. What strategies do you believe can be used to increase the number of applicants to the dietetic profession?

16. Currently, in Canada, there are no statistics indicating the number of dietitians from visible minorities, but we know that the percentage, compared to non-visible minority practitioners is low. Based on this knowledge:

a) What are your thoughts on why people of visible minority groups are not choosing dietetics as a career?

b) What impact do you think an increase in visible minority groups would have on the dietetic profession?

17. Currently, in Canada less than 1% of the Dietitians of Canada membership is male. Based on this knowledge:

a) What are your thoughts on why there aren't more males choosing dietetics as a career?

b) What impact do you think an increase in males would have on the dietetic profession?

18. Any other comments, you wish to share?

APPENDIX B:
MSVU Ethics Review Application Form

MSVU Ethics Review Application Form

Directions: All proposals submitted for review must have this cover sheet. You must include all relevant supporting documentation in final form (e.g. surveys, interview questions, informed consent forms). To facilitate the referencing of reviewers' comments on the submission, please ensure that the pages are appropriately numbered and that changes made to the proposal are clearly indicated when re-submission is required. Please forward the required number of copies to the Chair, University Review Ethics Board, located in the Research and International Office (RIO).

Note: If you are not sure that your research project requires ethics review, please consult with the Research Office before submitting an application.

The Number of Copies required:

Two copies – if the proposal is an Honours Thesis, Directed/Independent Study, or Class Project that has received departmental REB approval and does not exceed minimum risk.
Three copies – for all other proposals that do not exceed minimum risk.
Eight copies – for all proposals that exceed minimum risk.

Note – to complete this form click on the shaded box once to begin data entry

General Information

Date: March 15th 2010
Name of person(s) submitting application: Ye Ting Tan
Title of project: Understanding the Factors Influencing Career Decisions of Chinese Dietetic Students
Department(s): Applied Human Nutrition
E-mail addresses: Daphne.Lordly@msvu.ca, Ye.Tan@msvu.ca
Student: Ye Ting Tan Supervisor: Daphne Lordly

Category of Researcher:

☐ Faculty
☒ Graduate Student - Program of Study/Degree Master of Science Applied Human Nutrition
Please specify: Graduate Project, Thesis or Independent Study? Thesis
☐ Honours Student
☐ Other (please specify):

Category of Research:

☒ Minimal Risk - Expedited Review
☐ Exceeds Minimal Risk
☐ Re-review

This project is currently under review by:

Or

This project has already been reviewed by (**attach relevant documentation**):

☐ External agency / specify:

☐ MSVU Committee on Research and Publications

☒ Thesis Committee (**NOTE:** A copy of the thesis proposal acceptance must be attached to your ethics application prior to review)

☐ Departmental Research Ethics Board

☐ Third party: (e.g., school board, hospital, etc.)

Specify and attach a copy of the approval (s)

Funding/Sponsorship

Has this project received funding (internal or external): ☐ Yes or ☒ No

If yes, please indicate the source of funding:

Agreement: I/we have read the MSVU University Research Ethics Board (UREB) Instructions for Completion and Submission of Ethics Protocol Review, the MSVU Senate Policy on Ethical Conduct for Research Involving Humans, and the Tri-Council Policy Statement on the Conduct of Research Involving Humans and agree to comply with the policies and procedures outlined therein. In the case of student research, as Faculty Supervisor, my signature indicates that I have read and approved the application and proposal, deem the project valid and worthwhile, and agree to provide continuing and thorough supervision of the student(s). I/we have read and will make every effort to meet the requirements of the Tri-Council Policy Statement on Ethical Conduct for Research Involving Humans.

Signatures:

For Faculty/Staff Research Projects:

Signature(s) of investigator(s):

Date:

For Students or Thesis Research Projects:

Signature(s) of student investigator(s):

Date:

Signature(s) of Faculty Supervisor(s)

Date:

A. Summary of Proposed Research

Describe the purpose of the research (maximum 500 words). Include enough background information to enable the UREB to understand the rationale for the study. This should be an overview of the proposed research and the purpose of the research: what are you doing and why?

Overview of the Proposed Research

In the last two decades, the dietetic profession has experienced a remarkable transformation. This is largely in response to a changing health care system struggling to meet the health care demands of an aging population whilst the available workforce is in decline (Bates, McKay, Mackenzie, & Zuberbuhler, 2005; Jarratt & Mahaffie, 2002). In 2007, the Nova Scotia Dietetic Association (NSDA) distributed the Atlantic Canada Workforce Analysis Survey to its membership. Results of the survey point to a shortage of dietitians to meet workforce needs.

Over the past several decades the Canadian population has become more ethnically and culturally diverse (Statistics Canada, 2006), posing a unique challenge for all health care professions. Multicultural competence and sensitivity are required within the health care professions to improve patient outcomes since visible minority groups have been experiencing poorer health outcomes (Curry, 2000). Accordingly, there is an increased need for all health care professionals to better respond to the population health and health care necessities of visible minorities. Allied health professions, such as dietetics, provide a source of stable employment, social mobility and opportunities for public service. Yet, despite a growth of opportunity in the dietetic field, the profession is marked by low representation of visible minorities (Greenwald & Davis, 2000). There is no information available indicating the membership diversity characteristics in Dietitians of Canada, the professional association that represents Canadian dietitians. The need for diversity within the dietetics profession is paramount to improve practice.

In general, there are few studies which focus on the needs of today's visible minority dietetic students (Kobel, 1997; Markely & Huyck, 1992; Suarez & Shanklin, 2002). More specifically, there exists no research that explores the academic experiences of Chinese dietetic students in Canada. The lack of literature, coupled with increasing diverse population of this country, provides the rationale for this study. More research is needed to gain a greater understanding of the unique experience of Chinese dietetic students and to provide insight into their academic experiences and the career selection factors that lead them in a direction of becoming a dietetic professional.

Purpose of Research

The purpose of this research is to explore the career selection factors and experiences of Chinese dietetic students and examine the impact of these factors and experiences.

This research study will provide a better understanding of Chinese students' experiences and provide a basis upon which barriers and challenges to entry into the profession of dietetics for this group can be addressed.

References

- Bates, H., McKay, M., Mackenzie, S., & Zuberbuhler, L. (2005). Meeting the growing need for dietitians: The University of Alberta internship experience. *Dietetics Canadian Practice Newsletter*, 32, 4.
- Curry, K.R. (2000). Multicultural competence in dietetics and nutrition. *Journal of the American Dietetic Association*, 100, 1142-1143.
- Greenwald, H.P. & Davis, R.A. (2000). Minority recruitment and retention in dietetics: Issues and interventions. *Journal of the American Dietetic Association*, 100, 961-966.
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- Suarez, V.V. & Shanklin, C.W. (2002). Minority interns' experiences during their dietetics education and their recommendations for increasing diversity in dietetics: Findings from structured interviews. *Journal of the American Dietetic Association*, 102, 1674-1677.

B. Special Considerations

1. If the context of the research is "non-traditional" or specialized in any way (e.g., research in another culture, research with hard-to-access groups, research with mature minors, research with persons with special needs), describe the information that the UREB needs to keep in mind when reviewing this application.
2. Research with vulnerable persons
 - a. One of the guiding ethical principles of The Tri-Council Policy on Conducting Research Involving Humans is respect for *vulnerable persons* who are "those whose diminished competence and/or decision making

capacity make them vulnerable". Competence refers to "the ability of prospective subjects to give informed consent in accord with their own fundamental values".

- b. The Tri-Council Policy specifies that in regard to competence, researchers "must comply with all applicable legislative requirements". In Nova Scotia, the age of majority is nineteen. If research is undertaken with *mature minors* (i.e., adolescents under the age of majority but otherwise deemed competent to give informed consent), the researcher(s) must provide a detailed rationale explaining why parental/guardian consent is not needed.
 - c. The researcher(s) should pay scrupulous attention to the possibility that a subject may be vulnerable as a result of a special need (e.g., difficulty reading print text). The researcher(s) should make all reasonable efforts to insure that subjects with special needs are respected and, to the extent possible, accommodated.
3. If the research project is but one component of a larger non-research study (e.g., international development project), describe briefly the larger context of the project.

N/A

C. Research Approach or Method

1. Describe your research method. How will you collect the data?
2. Describe/identify your participants.
3. Describe the procedure(s) for recruiting participants.
4. Outline any particular incentives you are using for participation (e.g., payment).

Overview of Research Method

This mixed method research study will use secondary data obtained from "An exploration of values, expectations, influences and motivations for dietetics as a career choice" data set (Lordly, 2008). Lordly's (2008) survey was conducted in November 2007 to March 2008 and was distributed to first and last year dietetic students at seven universities across Canada (MSVU, UBC, Guelph, UPEI, Western, McGill, and Ryerson). Ethics approval was sought and received from all participating universities including MSVU.

The questions that will be used from Lordly's (2008) survey are: 1-5, 7, 9-12 and 16 (Appendix A). These questions are quantitative (numerical representations) as well as qualitative (open-ended questions).

Subjects

The sample will focus on 37 female and 4 male Chinese dietetic students who participated in the Lordly's (2008) survey.

Autoethnography

As a Chinese born individual participating in a dietetic education program, I am a willing subject of the autoethnographical portion of the current study.

Recruitment and Incentive to Participate

Since this study will involve secondary data analyses there will be no recruitment of additional participants. There are no incentives to participate.

D. Debriefing (if applicable) - Describe debriefing procedures

Debriefing occurs at the end of a study when the researcher provides participants with additional information. Debriefing is usually thought of in the context where the researcher uses deception in a study and therefore at the end of the procedure discloses to participants the nature of the deception and explains the rationale for its necessity. Participants at this point should be given the opportunity to withdraw their data from the study if possible. However, debriefing is also necessary to alleviate any potential negative effects of a procedure. For example, if the researcher believes that answering a certain type of question may cause distress in some participants, the researcher needs to help the participant deal with the distress. If the researcher is not qualified to deal with the negative consequences, is concerned the participants will not disclose the negative consequences, or that the negative consequences may occur at a later time after the procedure, the researcher needs to provide *all* participants with contact information for sources that can aid the participants in dealing with negative consequences.

N/A

E. Third Party Permission

1. If you are using data provided by outside agencies, explain how you will establish agency consent.
2. If data will be collected offsite (e.g., school boards, community agencies, etc.), describe how you will establish consent of third parties. Final approval is contingent upon the researcher's formal confirmation that third party permission has been granted.

Daphne Lordly is my Masters thesis supervisor and has given me permission to use the data indicated for my research.

F. Research Surveys, Questionnaires, Instruments, Etc.

1. Append of all documents in final form.
2. Indicate the sources of questions (e.g. public domain; developed by the researcher; etc.) and the relationship to the purpose of the study.
3. For instruments under copyright, the onus is on researcher(s) to obtain permission for use.

Refer to Appendix A. The data used for the proposed study has previously been collected with the use of this instrument.

G. Risks

Minimal risk is defined as: "if potential subjects can reasonably be expected to regard the probability and magnitude of possible harms implied by participation to be no greater than those encountered in everyday life."

1. Specify and describe any potential risks to participants, making special note of situations that exceed minimal risk.

2. If there is the potential to incur risk, outline the safeguards that you will put in place to protect participants.
3. Please pay special attention to situations in which the researcher may have dual relationships with participants (e.g., professors using their own students as participants; counsellors whose clients may also be their research participants).

The distribution and completion of questionnaire has previously been conducted with the ethical approval of all seven universities (MSVU, UBC, Guelph, UPEI, Western, McGill, and Ryerson).

There are no risks to the 41 Chinese dietetic students whose data will be re-analyzed for the proposed study. There are no personal identifiers in the data set that violates the confidentiality of these students.

I do not expect that I will personally experience any risk by participating in an autoethnography. However, as I write and potentially uncover experiences or think about past experiences differently I may open myself up to a certain vulnerability. I will discuss these feelings or any discomforts with my supervisor and if needed or advised, seek further counselling.

H. Free and Informed Consent

1. Informed Consent Forms must be placed on departmental letterhead and must address the points below.
2. Written informed consent is normally expected. If you believe written consent is impossible or unwarranted, explain why.
3. These items need to be explicit in the Informed Consent Form. These are:
 - a. The identity of the researcher(s) and contact information, and supervisor information (if applicable);
 - b. An invitation to participate;
 - c. A statement of the research purpose;
 - d. A description of the tasks to be performed and the expected time commitment;
 - e. A description of foreseeable harm and benefits, including limitations to confidentiality
 - f. Confirmation that prospective participants may decline participation or withdraw at any time without penalty;
 - g. *An arm's length* contact in case of questions about the conduct of the research: "If you have questions about how this study is being conducted and wish to speak with someone who is not directly involved in the study, you may contact the Chair of the University Research Ethics Board (UREB) c/o MSVU Research and International Office, at 457-6350 or via e-mail at research@msvu.ca."
4. Please note that the consent of the participants shall not be conditional upon or include any statement to the effect that, by consenting, participants waive any legal rights.
5. If participants are a captive/vulnerable population, participants must be assured that non-participation will not affect their primary care in any way. For example, students must be assured that refusing to respond to a survey will not affect them

academically. When it is not clear that potential participants have the capacity to provide informed consent, or if the research participants are from a population recognized as having diminished capacity to provide informed consent (e.g. children, adults with mental disabilities), informed consent must be obtained from an individual who bears responsibility for decisions concerning the well-being of the participant (e.g. parent, guardian, care-giver). When the participant is able to provide assent for the research (i.e. express their willingness to participate at the time of conducting the research), this should also be sought.

6. If participants are being photographed; videotaped and/or voice recorded, separate letters of consent must be attached to the Informed Consent Form.
7. Researcher(s) should provide a description of the criteria that they will use to judge assent/dissent of a participant in the protocol that they submit for review.
8. Parental consent is required for persons under the age of majority.
 - a. Consent of both the child and the parent(s) are required in research studies where children are minors but are 7 years or older.
 - b. With children under 7, consent of the parent(s) only is necessary for the child's participation in research.
9. Attach the Informed Consent Form(s) to the application.

Please note that if you provide the above information in a *separate* information letter or introduction letter, it must be repeated exactly the same in the Informed Consent Form.

Describe how you will obtain Informed Consent:

N/A

Checklist for Informed Consent (On Letterhead)

✓ Introduction
✓ Invitation
✓ Research Purpose
✓ Researcher Identity
✓ Tasks Outlined
✓ Time Commitment
✓ Harms/Benefits
✓ Decline Participation
✓ Withdrawal Anytime
✓ Arm's Length Contact (UREB Chair)
✓ Special Population
✓ Obtaining Consent
✓ Signature area
✓ Special Consent for Audio
✓ Separate Consent for Photographs, Vid

I. Privacy, Confidentiality, Anonymity

1. How will anonymity and/or confidentiality be maintained?
 - while collecting data (please identify situations in which confidentiality cannot be guaranteed (e.g. abuse; self-harm; etc);
 - after data collection (i.e. storage, disposal of raw data);
 - on resulting publications.
2. If you are utilizing secondary data, state its original source and confirm that the data does not allow for identification of participants.

As previously stated, the proposed study involves secondary data analyses of 41 Chinese dietetic students from the Lordly's (2008) survey. The participants did not give any identifying information when filling out questionnaires, therefore all individuals remain anonymous. The collected data will be stored on my personal password protected computer which when not in use is stored in a locked room that only I have access to.

J. Dissemination of Results

Describe how participants will be informed of the results of the study.

Participants will not be informed of the results of the study. Results from analyses will be used for the thesis and submitted in the form of a journal article to the Canadian Journal of Dietetic Research and Practice which is accessible to all university students.

APPENDIX C:
Codes

Question16(a)

Authority
Biases
Career opportunities
Competition
Confidence / self-efficacy
Culture differences
Education
Financial strain
Gender
Immigrant status
Language
Needs
Nutrition concerns / health / diet
Parents
Pay well
Prestigious professions
Promotion
Respect
Rewarding
Satisfy
Simple job
Skill recognition
Time consuming / job flexibility
Trust
Uncertain
Unknown career

Question 16(b)

Awareness
Chinese herbs
Comfortable / understanding
Communication
Culture
Custom
Diet tracking program
Diversity
Diverse food
Easy to access
Eating habit
Education
Enrich profession
Enrollment
Ethnically
Food perspectives
Gender biases
Health
Interest
Knowledge
Nutrition
Promote health
Recommendation
Role of dietitian
Respect
Similar background
Uncertain
Values

APPENDIX D:
Themes and Subthemes

Question 16(a): What are your [Chinese dietetic students] thoughts on why people of visible minority groups are not choosing dietetics as a career?

Theme 1: Influence of Family and Chinese Cultural Values

1A: Key Chinese Characteristics and Values

Need for Recognition

Keeping Stability

Striving for Success

1B: Parental Influence

Themes 2: Influence of Issues Unique to Visible Minority Students

2A: Language Skill

2B: Awareness on Career Information

2C: Self-Efficacy

2D: Perceptions about Diet and Health

2E: Gender Bias

Question 16(b): What impact do you [Chinese dietetic students] think an increase in visible minority groups would have on the dietetic profession?

Theme 1: Increased Workforce Diversity

1A: Multiculturalism and Dietetics Profession

1B: Outreach

Theme 2: Improved Health Care Quality

2A: Accessibility

2B: Communication

2C: Comfortable and Understanding

2D: Nutrition Knowledge