UNIVERSITY OF OKLAHOMA

GRADUATE COLLEGE

CHINESE INTERNATIONAL STUDENTS' MIGRATION EXPERIENCES: A BIOCULTURAL ANALYSIS OF HEALTH, FOOD, AND MIGRATION

A DISSERTATION

SUBMITTED TO THE GRADUATE FACULTY

in partial fulfillment of the requirements for the

Degree of

DOCTOR OF PHILOSOPHY

By

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Norman, Oklahoma
2019

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CHINESE INTERNATIONAL STUDENTS' MIGRATION EXPERIENCES: A BIOCULTURAL ANALYSIS OF HEALTH, FOOD, AND MIGRATION

A DISSERTATION APPROVED FOR THE
DEPARTMENT OF ANTHROPOLOGY

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谨以此文献给我的父亲母亲，感谢你们对我无尽无私和永恒的爱。.

Acknowledgements

There are many people I would like to thank for their contribution to the completion of my study. First of all, I want to express my gratitude to all Chinese international students who agreed to participate in the research. In particular the six students who allowed me to conduct participant observations. They gave up so much of their time during the most demanding period in their lives, and provided me with invaluable opportunities to understand their private world.

Secondly, I owe my thanks to colleagues, friends and family, who have given me support over the last eight years. Each member of my dissertation committee has been an important influence on my academic development, in particular, Dr. Paul Spicer, who has spent numerous hours on mentoring me; Dr. Paul Branscum, whose constant input and critique helped me to refine my thinking and writing; Dr. Lori Jervis, who has encouraged me throughout my Ph.D. program; Dr. Kermyt Anderson, who has provided me with critical suggstions for my dissertation; Dr. Cecil Lewis, whose teaching is vital for the statistical rigor of my dissertation; Dr. Sarah Maness, who has provided key feedback on my dissertaton writing. I also want to thank Dr. Diane Warren and Dr. Matthew Pailes for providing me with crucial social support.

Finally, I would like to acknowledge my friend Ding Cheng, Zhang Qimin, Wang Hua, Kang Dingyi, Cao Yue, Liu Yang, Taylor Jipp, and Wang Yaping, I am privileged to have received support from you.

Table of Contents

Acknowledgements v

List of Tables x

List of Figures xii

Abstract xiii

Chapter 1: Introduction 1

Research Purpose 3

Research Questions 4

Significance of the Study 5

Chapter 2: Literature Review 7

Medical Anthropology 7

Biocultural Framework 9

Life Course and Life History 12

Life Course Perspective in This Research 16

Chinese Immigrants and Their Dietary Behaviors 19

The Chinese Philosophy of Food and Medicine 21

Health Research about International Students 25

Research Methods and Data Analyses 28

In-depth Interview 28

Photovoice 30

Participant Observation 31

Data Analysis 34

Chapter Summary 36
Chapter 3: Methodology 38
Recruitment and Participants 38
Inclusion Criteria 39
Sample Size 39
Data Collection Methods and Procedures 40
In-depth Interview 41
Photovoice 43
Participant Observation 46
Data Coding and Analyses 47
Chapter Summary 48
Chapter 4: Results 49
Descriptive Statistics of the Participants 49
Gender and Cooking 49
Age and Cooking 51
Gender and Diet Change 52
Staying Length and Diet Change 54
Perception of Food Environment 54
In-Depth Interview Themes 57
Themes One: Cultural Identity and Emotions, the Life History of Food 57
Theme Two: Health Concerns, Traditional Chinese Medicine, and the Unwillingness to Change 61

Theme Three: Creating Social Network, Maintaining Social Support, and Sharing 64
Themes from Photovoice Session 68
Theme One: Rice and Vegetable, the Chinese Foodways 68
Theme Two: Food Environment and Health 72
Theme Three: Cooking as Adaptation 76
Themes and Results from Participant Observation 78
Theme One: Social Support, Food Sharing, and Cooking 81
Theme Two: Identities in the Foodways 88
Theme Three: Perception of Dietary Health and Food Environment 93
Additional Findings from Participants Observation 100
Chapter 5: Discussion 104
What Changes They Made and Why 104
Identity and Food 107
Nutritional Knowledge and Food Behavior 112
Social Support and Food Behavior 114
Chapter 6: Conclusion 119
Future Research 122
Suggestions for policy 124
References 125
Appendix A: University of Oklahoma IRB Approval Letter 163
Appendix B: Survey Questionnaire and In-depth Interview Guild Chinese version ... 164
Appendix C: Survey Questionnaire and In-depth Interview Guild English version 174

List of Tables

Table 1. Description of the Photovoice Program by Session. 45

Table 2. Number of Participants in Each Session 48

Table 3. Median Test for Gender Differences of Cooking Experiences 50

Table 4. Age When First Cooking. 50

Table 5. Mann-Whitney Test for Gender and Age When First Cooking 51

Table 6. Spearman's Rho test for the Correlation between Age and Cooking Experiences 51

Table 7. Language Preference for Nutritional Information. 52

Table 8. Self-Reported Diet Change by Gender. 53

Table 9. Chi-Square Goodness of Fit Test for Gender and Diet Change. 53

Table 10. Staying Length and Diet Change Crosstabulation. 54

Table 11. Chi-Square Goodness of Fit Test for Staying Length and Diet Change Crosstabulation. 54

Table 12. Perception of Food Environment. 55

Table 13. Chi-Square Goodness of Fit Test for Gender and Perception of Food Environment. 55

Table 14. Chi-Square test for Gender and Food Preferences. 56

Table 15. Grocery Shopping Locations, Frequencies, and Food Purchased. 79

Table 16. Participants' Food Expenditure, Preferences, and Cooking Experiences. 79

Table 17. Kitchen Setting, and Living Conditions, and Food Sharing Behaviors. 81

Table 18. Participants' Classification of Cold and Hot Foods. 95

Table 19. Consumption of Ultra-Processed Foods (UPFs). 96

List of Figures

Figure 1. Conceptual Model of Foodways Formation..... 3

Figure 2. Photo from Wang YT..... 69

Figure 3. Photo of Steam Rice and Side Dishes from Huang W..... 70

Figure 4. Zhao HF's Dinner: Rice, Red Roasted Meat and 2 Vegetable Side Dishes. .. 70

Figure 5. Zhang T's Dinner is Bok-Choy and Mushroom. 71

Figure 6. Zhang's Gift to Me are Two Vegetable Dishes. 72

Figure 7. He JM's Dinner is Tofu, Cabbage, Red Roasted Pork, and Sushi. 73

Figure 8. Zheng believes that His Salmon Dish has Omega-3 fatty-acid to Keep Him Healthy. 74

Figure 9. Wang suggested Vietnamese Cuisine is Good for Weight Management. 75

Figure 10. Jiang Learned How to Cook Stewed Pork Hock from His Mom..... 77

Figure 11. Li's Pancake is a Combination of Traditional Chinese Steaming Cooking Method and Western Ingredients..... 78

Figure 12. Huge Tofu Selection at Saigon Taipei 90

Figure 13. Large Instant Noodle Selection at Dong-A..... 91

Figure 14. Powdered Peanut Coat found at My Participant's Home. 93

Abstract

The main purpose of this dissertation is to use both biocultural framework and life course perspective to investigate the dynamic relationship among migration induced stress, health, and culture with a focus on the processual change of foodways among the Chinese international students at the University of Oklahoma, Norman Campus.

By using quantitative survey, qualitative in-depth interview, photovoice, and participant observation, this study showed that the most important factors in shaping Chinese international students' dietary behaviors are cultural factors such as healthy belief and gender roles, life events such as upbringing and critical events, as well as social support and social network. The results of this study also suggested that staying length has impacted the participants' dietary behaviors. In addition, this research showed that the local food environment did not have a strong impact on their dietary behaviors.

This research is to provide useful information for medical anthropologists who are working in the field of immigrant dietary health. Given the fact that there are increasing hostility toward immigrants, a rise of right-wing populism, and a resurgence of Sinophobia, the findings in this study could be used by anthropologist and activists to form policies to protect and help the community in this research and similar communities.

Chapter 1: Introduction

The study of foodways, which is the complex context of and relationships among culture, politics, economy, and health, is an exciting and relatively new interdisciplinary field of research (Almerico, 2014, p. 3). It uses theories and models from disciplines such as anthropology, agriculture, biology, economy, gastronomy, geology, health and medical sciences, psychology, health promotion, and sociology. Wiley et al. (2012) suggested that the study of food and dietary behavior can provide us with diverse perspectives and panoramic views of the human condition.

In recent years, along with the increasing migrant population in the United States and other developed countries, there is an increasing number of studies about this population. Based on earlier works from political science and communication, researchers proposed that there are four basic types of migrant-host dynamics (Faist, 2000; Bijwaard & Govert 2008). Theses migrant-host dynamics (labor-migrants, family reunion-migrants, family-formation migrants and students) often affect the outcome of adjustment. In the study of immigrant health behavior, previous studies have suggested that there is a relationship between different cultural factors and health (Allen et al., 2014).

Among all migrant-related studies, research on dietary behavior has drawn broad and current interest. These studies of immigrants' dietary behavior have provided crucial knowledge about how the change of geographic location (Yeum, Song, & Joo, 2016), political and economic status (for example visa status; Yeh, & et al., 2016), and cultural settings (Tarraf, Sanou, & Giroux, 2017) influence dietary behavior and overall health. Most of these studies have only focused on this topic among long-term

immigrants, while relatively few studies have been conducted among the short-term migrant sojourners such as guest workers (Anderson, 2015; also see Baumgartner, 2011, p. 11), or international students (Schwartz, & et al., 2010; also see Yan, 2017; Kashima & Loh, 2006; Oh, Butler, & Lee, 2014).

Jandt (2015) suggested that sojourners are a unique population. They can be defined as temporary residents in a foreign location with a specific purpose, such as working or education. He further suggested that staying length can be used to distinguish the differences between visitor (0-6 months), sojourner (6-60 months), and immigrants. Yang et al. (2006) pointed out that one unique feature of the sojourners is that although they spend significant time in the host country or country of destination, most of them are still more likely to keep their cultural identity and cultural practices. Woon (1983) observed that even though some sojourners spend significant time in the host countries, those sojourners often try not to be assimilated by the culture in their host societies. Wong-Rieger and Quintana (1987) noticed that staying length might affect health outcomes and choices in adjustment strategies. According to them, for visitors (B-1 and B-2 visa holders) and short-term sojourners (J-1, F-1, J-2, F-2, H1B visa holders), the main adjustment concerns are how to be familiar with the local language; these people do not pay as much attention to cultural differences, while migrants and long-term sojourners pay more attention to the cultural norms in their host societies. When compared to short-term sojourners and visitors, long-term sojourners and migrants are more like to be adaptive and appropriate in the eyes of the people in the new host society (also see Wilton & Constantine, 2003; Ryder, Alden, & Paulhus, 2000; Berry, 1997).

Research Purpose

The primary purpose of this dissertation is to use both a biocultural framework and a life course perspective to investigate the dynamic relationship among migration-induced stress, health, and culture with a focus on the change of foodways within the Chinese international student population in a southcentral city in the United States.

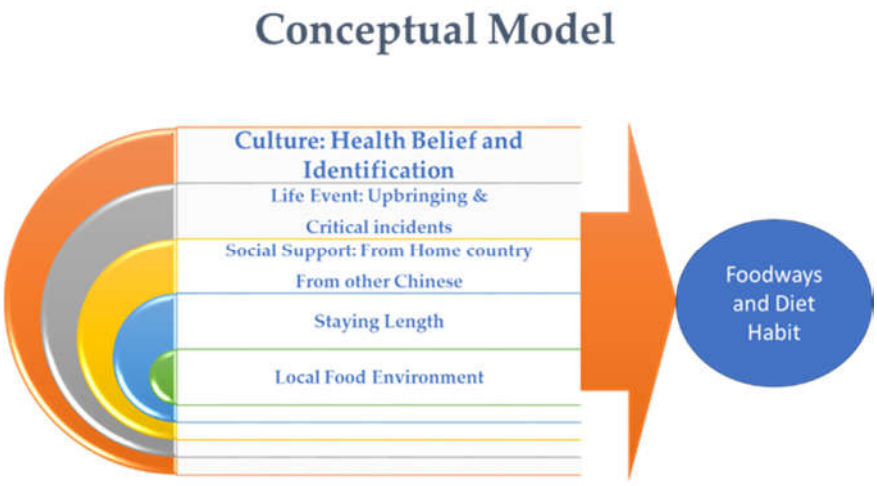


Figure 1. Conceptual Model of Foodways Formation

I propose that the impact of the local food environment on food-related behaviors is relatively minimal compared to other factors (see Figure 1). In fact, the heterogeneity of their foodways and food-related behavior were mainly caused by their staying length, social norms, self-perceived of cultural identity, and social interactions.

According to Downs and Bleibtreu (1969), biocultural framework viewed cultures as individuals' solutions to their problems in different ecological niches during the process of adaptation. As Heikkinen (2011) suggests that life course perspective studies how important events impact the relationships between exposures and health outcome for individuals (p. 8). By combining the two together, researchers can obtain

detailed information on how individual life course is embedded in the sociohistorical and biocultural context (Ben-Shlomo & Kuh, 2002, p. 290).

The life course perspective helped me to develop a theory to understand how life course events affect participants' dietary behaviors. The life course perspective can be used with both quantitative and qualitative data. In a qualitative study of life course trajectories of dietary change among international students, potential life course contributors to food choices include parental influence, personal and family health history, food availability, food affordability, dietary knowledge, dietary skills, social networking, family structure, and gender role. As suggested by Devine et al. (1998), when using the life course perspective approach, an important task is to let the participants reconstruct and narrate their life experiences. A multi-pathway study of foodways illustrates that individuals' dietary behaviors, food choices, food practices, nutritional knowledge, and health outcomes are determined by the complex and unique events that have happened in their lifetime and by their current food environment.

Research Questions

In this study, I considered the mechanism behind Chinese international students' change of foodways after they migrated from China into the United States. I A) investigated whether there was a change in their food-related behaviors, and if so, B) how those changes spoke to their reaction to the host environment and C) how they navigated the local food environment. I was also concerned with D) whether the participants perceived these shifts in behavior as health-related issues. Finally, I asked E) what is the relationship between social interactions and participants' food-related behavior.

In addition, I studied the function of gender, age, pre-existing socio-economic conditions (such as rural or urban household in China, the Chinese term is Hukou, which refers to the government assigned household types) on their food-related behaviors. I also tested the relationship between participants' perception of their cultural identities and their eating behaviors. In addition, I investigated how participants negotiate food value in their construction of their foodways.

Significance of the Study

The major contribution of this study to the anthropology is that it provides an emic knowledge about the dynamic relationship between culture, food, and social support among sojourners and non-permanent immigrants. To my knowledge, this study is the first anthropological research that investigate aforementioned relationship.

As it was suggested in The Diplomat, Stephen Miller, a senior adviser to U.S. President Donald Trump, wanted to impose a new Chinese exclusion act, which targets Chinese international students (Gao, 2018). In today's U.S. society, there are an increasing hostility toward immigrants, a rise of right-wing populism, and a resurgence of Sinophobia, the findings in this study could be used by anthropologist and activists to protect and help the community in this research and similar communities.

Given the number of Chinese international students in the United States and the tremendous cultural differences between the U.S. and China, research of this population is increasingly necessary.

Aforementioned paragraphs suggested there is a need for the study of Chinese international students. One meaningful way to explore the life experiences and the human conditions is to look at the foodways of Chinese international students. There are

several reasons to focus on foodways in this study: foodways are a signifier of culture; foodways have a direct relationship with both physical and emotional well-being; they provide rich knowledge of human adaptability in different contexts; the study of foodways is fundamentally a study about individual decision-making process in both daily life and over time; and Chinese culture has a particularly strong emphasis on foodways due to its long culinary traditions (Chen, 2017). By conceptualizing how people make food-related choices, nutrition educators and health researchers can also use the information from this study to further their understanding about dietary related health behavior as well as incorporate the findings into their practice when they are working in a multicultural environment.

The proposed location for the interviews was on University of Oklahoma Norman campus. Procedures for informed consent and confidentiality were applied throughout this study, and study procedures were approved by the University of Oklahoma Institutional Review Board (IRB number: 8781, see Appendix A).

Chapter 2: Literature Review

There are four components in this chapter. The first part focuses on the development of biocultural framework in medical anthropology and the life course and history perspective. The second part of the literature review turns to Chinese immigrants and traditional Chinese medicine (TCM). The third part focuses on the health studies of international students. The fourth part is about the research methods in this study.

Medical Anthropology

As a subfield of anthropology, medical anthropology provides insight into aspects of human health that are missed by the other main approaches, namely the evolutionary perspectives on health, biomedical perspectives on health and the body, cultural perspectives on the body, health and society, critical perspectives on power, inequality, and health, and even interpretive approaches to illness and suffering, among others (Willey & Allen, 2017). Townsend and McElroy (2014) suggested that the primary research focus and concern of medical anthropology is understanding the relationship between health/disease and human adaptation over different geographic ranges and time spans. One distinct feature of medical anthropology is that this subfield puts a human condition, e.g., morbidity and mortality, within a definable ecological and environmental context. Medical anthropology emphasizes that stress is often a result of constraints in both the natural and cultural environment. In medical anthropology, adaptation is not perfect or cost-free, and disease is often viewed as an inevitable by-product of adaptation (Joralemon, 2017, p. 41).

Weidman (1986) suggested medical anthropology has "a unique opportunity to bring physical and social anthropology into a much closer working relationship" (p. 117). Similar to Weidman, other anthropologists also view medical anthropology as a bridge that connects both biological anthropology and cultural anthropology (Hruschka, Lende, & Worthman, 2005). However, medical anthropology has been criticized for lacking theory (Baer, Singer, & Susser, 2013, p. 32). Good (2008) suggests that because of the lack of theory, medical anthropology was not viewed as a discipline, but as an application of health-related anthropological knowledge. He pointed out that "in the 1960s, it was something of an embarrassment to be identified as a medical anthropologist" (p. 4).

Developments in medical anthropology have opened a window for anthropologists to integrate both political-economic analysis and ethnographic analysis. The political-economic study is focused on the macro, global, continental, and state level, taking into consideration such factors as migration policy or developing world versus developed world.

One of the essential goals of critical medical anthropology is to investigate the social origins of different health conditions and health outcomes (Janes & Corbett, 2009). Critical medical anthropology-oriented research has prioritized the use of political-economic theory in its analysis.

Wiley (1992) pointed out that such neglect led to a false dichotomy of nature versus nurture. Wiley suggested evolutionary explanations of health are not only beneficial for the study of health, but also necessary and vital. Wiley also explained that by having evolutionary explanations, medical anthropologists (which include those who

use critical medical anthropology) could better understand both the prehistoric and historical context of health. With the help of evolutionary theory, medical anthropology can better understand how the "dynamic relationship between environment, individuals, and communities can be both broadly defined as well as precisely specified" (p. 216). Wiley further suggested that instead of viewing adaption as a passive process, the medical anthropologist should consider it as an active one. During this process, different individuals and groups regularly interact with others; their interactions will change the health outcomes not only for themselves but also for other parties.

Biocultural Framework

As McElroy (1990) explains, the biocultural framework was originally used in the study of earlier research of human adaptation. Since the early 1960s, there has been a growing body of literature on human adaptation. The study of human adaption often focuses on the subject of adapting to the surrounding environment and the health-related results of adaptation. As Little (2012) describes, this paradigm is focused on how humans adapt to their surrounding environment through both cultural and biological processes.

Downs and Bleibtreu (1969) suggested, culture could be interpreted as a driving force in the process of adaption, when using the biocultural framework. Based on the relationship between culture and environment, an old cultural solution for the environmental stressor may no longer work in a new environment. Thus, people have to create new culturally-based solutions to meet the challenges of a new environment. Peternel et al. (2014) proposed a slightly different model; they suggested that in the process of adaptation, culture is a dynamic solution to the problem of persistent

stressors. However, in some cases, culture itself could become a stressor. Dressler and Bindon (2000) found out that there is a complicated relationship between culture and health. In their research on health among the African American community in the United States, they found that when individuals failed to meet the cultural expectations of their community, individuals were more likely to develop health problems such as hypertension. They pointed out that even with additional independent variables added into the model, the associations of cultural consonance and health are significant. They concluded that there is an "independent association of cultural dimensions of behavior with health status" (p. 244).

According to a paper by Worthman et al. (2002), when using the cultural consensus approach, there is a relationship between an individual's attitude, their knowledge of shared cultural norms, and both their mental and their physical health. The authors examined how cultural models of middle-class status affect specific health-related practices and lifestyle choices and suggested that cultural phenomena such as social status and life achievement could become sources of stress for individual-level phenomena such as physiologic stress.

As Dufour (2005) suggested, one crucial mission of biocultural anthropology is to provide a clear map of the "dynamic interactions between humans as biological beings and the social, cultural, and physical environments they inhabit" (p. 1). A biocultural framework with political-economic analysis, also known as the new biocultural synthesis (Armelagos, et al., 1992), insists that environmental conditions should not be treated as given; instead, this framework suggests that "global contexts, history, and social relations" all "….shape local environments" (Goodman and

Leatherman, 1998, p. 19). Under this framework, the environment is a changing historical construct, and it often interacts with individuals.

The use of this biocultural framework can facilitate the understanding of the relationship between the environment, dietary practices, and health outcomes. As Pike (2004) suggested in her biosocial study, both physical and political contexts (in her study, armed conflicts) often have profound impacts on individuals' health outcomes. Pike's study also suggested that hostile social environments often cause psychosocial stress that can lead to higher morbidity and mortality. As importantly, though, Pike also found that individual factors such as age, gender, or social status often interacted with the environment. Thus, even within the same group, the impact of the environment was unevenly distributed, which may lead to health disparities.

Thomas (1998) suggested that in order to keep adaptability and/or adaptation in the study of health among living population with normal fertility rates, anthropologists need to reframe adaptability as an assessment of opportunity and constraint to human action and health. By reframing "adaptability," the relationships among health, adaptation, individual, and environment become dynamic, and adaptation is viewed as a process in which individuals not only interact with the environment, but also reshape the environment (Wutich & Brewis, 2014). Individuals can develop strategies to overcome obstacles in the environment, to increase their resource gains, and to improve health outcomes. Leatherman (2005) proposed that anthropologists could look at the contexts in which coping strategies were constructed and conditioned, rather than only focus on the "immediate efficacy of coping responses" (p. 49).

Goodman and Letterman (1998) suggested evolution and adaptation should be studied in a historically contingent context (p. 10). On the historical, societal, and global level, the variation of foodways and related health outcomes are the creation of different historical, socioeconomic, and sociopolitical contexts. On the individual level, the research participants in this study are the "architects of their biology" through their choice of food (Brewis & Gartin, 2006, p. 203). As Morris (2014) suggested, by making food-related decisions and strategies, research participants are not only trying to find a way to maintain their health in a foreign environment, but they are also creating some form of identity. This process of maintaining health as international students gives research participants an opportunity to reshape "their destiny" both socio-economically and biologically (p. 132).

Life Course and Life History

What distinguishes the study of food in anthropology is the unique relationship between foodways and culture. For example, Anderson (2005) suggested in order to examine the whole spectrum of foodways, researchers need to have different perspectives: "those interested in very broad, overall determinants will look to biology, while those interested in very specific foodways will look to local history" (p. 244). Sadella and Burroughs (1981) suggested that on an individual level, the formation and maintenance of specific foodways is shaped by ideology, values, and beliefs.

Wansink (2007) suggested that by using a holistic approach, anthropologists could both create unique observations and knowledge about foodways and apply their knowledge into practices. For example, during the Second World War, both Margaret Mead and Kurt Lewin provided policy suggestions to counter the protein shortage in

wartime America; they examined the reason why organ meat, such as liver, brain, and heart, was less acceptable to Americans (Wansink, 2007, p. 22). Mead and Lewin suggested that dietary behaviors have different degrees of importance and stability. Sullivan (2004) summarized how people's foodways were determined by the following factors: supplies or food gateways (such as grocery stores, restaurants); social norms and the existing foodways of their reference groups; and the perception of taste, odor, appearance, and texture of the food. Sullivan (2009) suggested dietary changes and changes in foodways were the results of changes in morality, social desirability, scientific knowledge, and supply (forced change). Sullivan suggested that external factors as social, cultural and economic norms also affect the dietary transition process.

Furst et al.'s (1996) model of food choice suggests that life course events and experiences are the primary determinants in the formation of one's dietary behavior and food choices. According to this model, there are three major components of life course events. The first component is the experiences and memories of an individual; the second component is a major life event such as change of residency, role, relationship; and the third is the individual's expectation about his or her future. Furst et al. suggested five factors that could also influence one's food choices. These include personal factors such as age, sex, identity, preferences, emotions; the philosophy of food, meaning beliefs about what food should be; resources such as finances, time, skill, and knowledge; social network; and food context such as the availability and accessibility of food. By placing more emphasis on the personal dimensions of food choices, this model complements the model of biocultural synthesis (which focuses on the political-economic dimensions). Another feature in this model is the concept of

value negotiation, which highlights how individuals prioritize or rank different aspects of food. The value negotiation process can help the individual to develop a specific strategy to exercise food choice.

The life history approach can be used to study practices and behaviors related to nutrition in a population. For example, Wells and Dumbrell (2006) studied the dietary habits of the aging population; Ellis (2004) investigated the eating behavior of the pubertal group; Horton (1988) studied the feeding practices of infants in Philippine; and Sear, Mace, and McGregor (2000) examined the food habits of the pregnant population in Gambia. According to these researchers, using this ethnographic life history approach allows anthropologists to obtain information about both environmental determinants and the underlying social and cultural beliefs within that society. Other researchers also found that social causes and cultural repercussions are just as important as physical environmental conditions (Ball, Timperio, & Crawford, 2006).

Other researchers who study urban food environments also have a similar take on dietary health. Witherly (2007) pointed out that the bright and attractive features of junk food (in many developed countries or regions) are engineered to trigger our "foraging" instinct and encourage overconsumption (p. 148). The distribution of obesity is often related to the geographic distributions of poverty in an urban setting (Morgenstern, Sargent, & Hanewinkel, 2009). But the study also suggested that BMI and body weight (both adjusted for age) were not directly associated with the socio-economic status of families. These authors argued that broad terms such as "adversity" and "poverty" should only be used carefully, after researchers provide detailed descriptions of the environments.

Cummins and Macintyre (2005) suggested that modern environmental influences on diet can be considered to involve two pathways: "access to foods for home consumption from supermarkets and grocery stores, and access to ready-made food for home and out-of-home consumption" (p. 100). Their research suggested that the spatial-temporal characteristics of the environment are integral parts of nutritional health outcomes. Brewis (2011) warned, however, that researchers should avoid focusing exclusively on environmental elements, arguing that this approach would fail to inform nutrition-related health campaigns.

Nutritional status provides a measure of public health due to the development of international height and weight standards and references to determine whether a population is excessively under- or over-nourished. Nutrition status can often reveal differences in public health (Eveleth & Tanner, 1990). Eveleth and Tanner pointed out that the food environment is a "mirror of the condition of society" (p. 377). They suggested by examining dietary health in a location; researchers can help policymakers to determine which populations need more "roads, better sanitation, better food distribution, and less discrimination" (p. 15).

In a survey of primate nutrition intake and growth, Bogin (1997) argued that due to the unique physiological and developmental features of humans, during the pubertal period, the development of the human body is related to nutritional status. He also suggested that by the study of the nutritional status and dietary behavior in the current society, scientists could often predict the development and growth of the younger population in the future (p. 75).

Bogin (2006) suggested that under the assumption of evolutionary hypotheses, malnutrition and undernutrition during a critical time could often leave long-term anthropological and physiological markers. As Schell and Magnus (2007) suggested, from the adaptationist point of view, compromised anthropometric characteristics such as body size could be viewed as relatively beneficial adjustments to environmental stress; however, from a biocultural aspect of health, the same components are often "considered as non-adaptive and a sign of dysfunction or pathology" (p. 606). Schell and Magnus suggested that an essential role of the anthropologist is to provide knowledge back to the community, that researchers should redesign their research hypothesis to collaborate with the needs of their research participants at the community level (p. 611).

Foster et al. (2004) suggested that nutrition-related status could be a powerful tool in the study of health; even a simple index such as BMI can often reveal useful information about whether a population has sufficient support to obtain optimal health. By investigating variations in foodways and dietary behaviors, researchers can unveil the pathways that shape health outcomes, even with a small sample (Beydoun & Wang, 2010).

Life Course Perspective in This Research

Individual's dietary behavior is not only influenced by macro-level factors such as geographic and political factors, but also micro-level factors such as individuals' social connections, their cultural environment, and their educational background. Both macro- and micro-level factors have influences on the development of an individual's food choices. Mela (1999) suggested that individuals' food behaviors are relatively

stable; however, when individuals experience a change, the stability of their dietary behaviors can be disrupted. Once the individuals overcome the disruptions in their life course, their dietary behaviors may become stable again, but potentially in new ways (Mela, 1999).

In Ro's review of Asian immigrants' dietary transition and acculturation studies, the author critiqued current research that tends to focus only on the negative impacts of dietary transition (Ro, 2014). Ro's research suggested that without conducting inductive qualitative studies with emic analyses from the participants' perspective, it is difficult for researchers to understand the group heterogeneity within Asian immigrant communities, the multiple dimensions of their assimilation, and the nonlinear process of their assimilation (p. 8053). While the deductive approach provides critical information on dietary research, it pays less attention to the agency of individuals and the resilience of immigrants' foodways. Ro points out that when using a deductive approach, it is difficult to explain why the same staying duration of Asian immigrants may lead to different health outcomes. This methodological problem could limit research and lead to "problematized classic acculturation theory [becoming] the primary interpretation of immigrant health patterns" (p. 8053).

Since the formation of dietary behavior has multiple relationships with other factors in one's life, such as gender and parental influences (Wethington & Johnson-Askew, 2009), a life course perspective and qualitative data collection seem especially warranted at this stage of the research.

The life course perspective is a commonly used research method in public health, nursing, and social work. Unlike the positivist quantitative approaches, the life

course perspective approach is a qualitative, interpretive approach. Solar and Irwin (2010) suggested that the life course perspective enables researchers to understand health-related behaviors by exploring the impacts of important events on the relationships between exposures and health outcomes. The life course perspective also considers generational and population-level events.

When using the life course perspective in dietary studies, researchers explore the multiple dimensions of one's life. The context of these dimensions is not only spatial and temporal, but also political, social, historical, and psychological. More specifically, participants will provide information regarding the duration of their previous dietary behavior, their current dietary patterns, and the frequency of their repeated food-related choice behaviors over their life course. For example, in the study of immigrants' dietary behavior, participants can be asked to provide information about why they started making new food choices; how long their newly acquired food patterns have lasted; and whether there is a link between their previous or current dietary behaviors with major life events or other societal, national, historical, and political events. When researchers study longitudinal dietary data, they can also look at overall societal change, economic change, and food affordability/availability around participants. One major goal of combining personal food-related life-course events with societal events is to be able to produce a dietary trajectory model for participants. As Sobal et al. (2011) suggested, the dietary trajectory model examines the direction and momentum of one's dietary behavior; the change in participants' thoughts, feelings, strategies, and actions; and the cumulative effects of these changes that develop over a lifetime. It also incorporates people's meaningful experiences with food, eating and places individual development

in the context of how social and historical changes shape what foods are available, nutrition information and guidance, and how and where people live their lives.

Chinese Immigrants and Their Dietary Behaviors

In their study, Ho, Nolan, and Dodds (1966) suggested that, when compared to their younger counterparts, older Chinese students were less likely to adapt to American foods. The length of time in the United States, language proficiency as well as social interaction were also associated with the degree of dietary acculturation. They also suggested that cooking skills were an essential determinant in the decision-making process of whether to adopt American food or not. According to this research, Chinese students who had excellent cooking skills were less likely to eat American food. Another critical finding in their research was that while both younger and older Chinese students had a similar structure of food groups, the particular food items and food preparation methods were significantly different between these two groups. The younger Chinese student group often replaced rice-based food with wheat-based food; they also ate more raw vegetables and processed fruit than their older counterparts did. Dairy and meat intakes increased for both groups. Ho et al. (1966) also found that previous exposure to western food affected change in dietary behavior.

Satia et al. (2002) conducted a detailed food group and food item focused study among the Chinese immigrants. In this research, they used conventional western foods such as spam, deli meats, dairy products, and butter to study how Chinese immigrants adopt Americanized food habits. They also noticed that gender and age differences affected food choice. Satia et al. suggested that when Chinese females were in charge of the meal preparation, they tended to use more energy-dense food than their male

counterparts did. Their study also suggested that older Chinese females were least likely to adopt American foodways. Another finding in their research is that stay-at-home Chinese women are much less likely to adapt to American foodways than their working counterparts. Other factors that affect the dietary acculturation process include education level, marital status, and length of time in the United States. Interestingly, they also found that when Chinese females adapted to the American foodways, their overall intake of fruit and vegetables remained relatively constant, but with reduced variety. Satia et al. pointed out that Chinese immigrants often moved to a healthier diet when they attained higher education and stable employment.

Liou and Contento (2001) developed the Chinese American Dietary Health Belief Model, by which dietary change was shown to be based mainly on a shift in diet-related attitude, self-efficacy, preferences, concerns, cues to action, and health beliefs. Lee et al. (2015) proposed a model of immigrant dietary transition, with nutritional transition determined by the degree of acculturation (measured by language, social interaction, and exposure to the media of the host society).

In a study about dietary change among Canadian Chinese migrants, Kwok et al. (2009) found that knowledge regarding nutrition and familiarity with non-traditional foods and cooking techniques were contributing factors, which may affect whether migrants would adopt western diets. They also suggested that living environment, availability of foods, and language barriers would affect whether Chinese women would maintain traditional food habits. Time for food preparation, affordability of traditional ingredients, and availability of traditional cooking ware are also factors for migrants when they decided whether to maintain a traditional diet.

The Chinese Philosophy of Food and Medicine

Herfel et al. (2007) suggested that Chinese foodways are formed based on the health philosophy of traditional Chinese medicine (TCM). They argue that the Yin-Yang cosmology has tremendous influence over the formation of TCM. Although Yin-Yang cosmology was often viewed as a creation of Taoism, the use of Yin-Yang balance as a guideline for maintaining health is dated even earlier than the birth of Taoism. The idea of dynamic equilibrium of opposing Yin-Yang dualism (a constant oscillating between the poles of yin versus yang, male versus female, masculine versus feminine, light versus shadow, hot versus cold) was recorded in both the Shi Yi and the Tao Te Ching (Xu, & et al., 2007). The health belief of TCM was systematically recorded and interpreted in the Inner Canon of the Yellow Emperor during the Han Dynasty (Curran, 2008; Hesketh & Zhu, 1997).

In Chinese culture, food has always been viewed as the center of people's daily life (Huang, 2014; Lu, 1997). In Shi Ji, Sima Qian (BC94) suggested that "To the ruler, the people are heaven; to the people, food is heaven (this is also a widely used Chinese proverb)." In fact, in traditional Chinese medical and health philosophy, diet, culture, medicine, and health are interconnected. In the Inner Canon of Emperor Huang Di, the author suggested that "Five Grains are for Nutrition (Wheat, millet, grain, rice, beans); Five Fruits are for Tonic (Plum, apricot, jujube, peach, chestnut); Five Types of meat are for Enhancements (dogs, sheep, cattle, chickens, pigs); Five Vegetables are for Supplements (Leek, shallot, sunflower, onions, beans); when Qi reaches harmonic balance and equilibrium with Flavor and Taste, the Spirit and Vital Essence will be Lifted" (Unschuld, 2003). The Inner Canon of Emperor Huang Di has had a significant

impact on the formation and development of Chinese health philosophy and Traditional Chinese Medicine. In 2010, the Inner Canon of Emperor Huang Di was registered in the Memory of the World Register by the United Nations Educational, Scientific and Cultural Organization. In addition, folk knowledge also plays an essential role in the formation of the Chinese understanding of the relationship between food and maintaining health.

According to the Shi Yi and the Tao Te Ching, the entire cosmos was formed from the abstract: “Tao gives birth to One. One gives birth to Two. Two gives birth to Three. Three gives birth to all things and all beings. All beings bear the negative physical form, which is represented by Yin, and embrace the true positive nature which is represented by Yang. With the union of these two, they arrive at a state of harmony. Harmony is the ultimate state of one’s health” (Svoboda & Lade, 1995; Reid, 1996); Chinese people believe that in order for their body to function correctly, they have to maintain the Yin-Yang balance through food (Ludman & Newman, 1984; Prout, 2000).

In TCM gastronomy, food groups are not only divided into common food groups such as grains, vegetables, fruits, meats, dairy products, and fats; more importantly, food groups are classified to the Cold (Yin) and Hot (Yang) groups. When people are sick or feel ill, it is often believed to be caused by the imbalance of yin and yang. Thus, to restore the body to a healthy state, people have to consume food with a different property.

Zou (2016) suggested that according to TCM, food is not only viewed as a source of energy and nutrition, but it is also considered as a way of maintaining good health and preventing illness. He also concluded that in Chinese foodways, everything

is categorized into either cold or hot. Zou's finding coincided with Wang, Rosenberg, and Lo's study (2008), which found that a proper diet should reflect a balance or equilibrium between the cold and hot. Flower (2011) pointed out that in the TCM framework, doctors often believe that illness can be cured by using the food with different attributes.

In a study of health behavior in California, researchers found that food-related health beliefs are widely practiced among Chinese immigrants (Leung, & et al., 2014) and Zhou et al. (2015) found that traditional Chinese health beliefs are extremely important for Chinese immigrant mothers when they are preparing food for their newborns. Yue et al. (2016) mentioned that the dietary practices (food selection, food preparing) of Chinese mothers were likely to be associated with the slow growth of their newborn children. Cultural beliefs have not only affected Chinese people's health-seeking behavior in their own country, but it also affects how Chinese immigrants treat themselves when they are living in other countries.

Lai and Chappell (2006) discovered that instead of going to the hospital to receive treatment or going to professional healthcare providers, many Chinese immigrants think that they can manage their health by taking traditional herb-based Chinese medicines that they bought from local Chinese grocery stores. Leng and Gany (2013) also suggested that Chinese immigrants believe that certain cancers can be cured through TCM food. Liu (2010) pointed out that for many Chinese immigrants, the root of illness can only be eradicated through a restoration of balances.

In a multi-location study about the dietary habits of elderly Chinese immigrants, Ludman and Newman (1984) pointed out that for this population, TCM affects how

they view the medical world, and influences the way they eat. When they compared the diet of Chinese (Chinese subjects in the People's Republic of China and Hong Kong) with Chinese Americans (located in an Eastern city in the U.S.), they found out that participants in all three groups believe that "the balance of yin and yang components in the diet is considered vital to good health" (p. 3). All three groups claimed that they used Yin ingredients for the over-Yang condition and use Yang ingredients for the over-Yin condition. In their study, seventy-nine percent of the Chinese American participants proposed that diet therapy should be used to treat fever (Yang) and sixty-four percent of them suggested that to build blood (Xue), people should eat more Yang food. Ludman and Newman found that dietary patterns were deeply related to understandings of the therapeutic function of the food/herbs.

According to Suzanne Ho's (1985) study of Hong Kongers' dietary behavior, most of the participants stated that they thought traditional Chinese nutritional practices were good for their health. The majority of the participants also indicated their diet practices were the most crucial determinant of their health. These participants firmly believed that food was the source of both illness and recovery. These participants also practiced diet therapy and self-care when they were not feeling well. Ho pointed out that TCM-based diet therapy was an integrated part of the community health care system for these Hong Kongers. Another significant finding in this study is that participants offered specific recommendations for both infectious diseases such as colds, sore throats, and measles, as well as noninfectious diseases such as anemia (lack of Xue).

Health Research about International Students

International students are the largest sojourner group in the United States. According to a 2014 report by the United States Department of Homeland Security, international students constituted about 40 percent of the entire non-immigrant aliens (immigrants who do not have permanent residence status) population (Department of Homeland Security, 2014). During the 2014/15 school year, 974,926 international students came to the U.S. for education purposes (Institute of International Education, 2015), and these students contributed 30.8 billion dollars into the U.S. economy. This report showed that among all international students, the number of Chinese international students was 328,547, making up 31 percent of all international students, the largest group by country of origin.

This research studied the relationship among migration-induced stress, health, and culture with a focus on the change of foodways within the Chinese international student population. In comparison to health studies that have been conducted in other migrant groups (such as lawful permanent resident (LPR) or undocumented immigrants), there are only limited health-related studies on the international student population. However, the lack of research does not imply that this population does not experience migration-related health problems. On the contrary, within the limited body of literature, researchers have found that this population is also a risk population. For example, Miller and Harwell (1983) suggested that compared to domestic students, international students often have higher rates of health problems such as fatigue, homesickness, headaches and colds; they also suggested that international students were less likely to use university-provided health services (p. 47). Ng and Omariba (2011)

suggested that the cultural differences between developed and developing countries could make international students from developing countries have greater adjustment-related health problems than their counterparts.

According to Lysgaard (1955) and Oberg (1960), one potential cause for health problems among international students is that when they migrate from one cultural environment to another, they undergo what is known as "culture shock." According to them, culture shock refers to international students' feeling of discomfort and disorientation that caused by the entirely new ways of life in the host countries (also see Ward, & et al., 1998; Presbitero, 2016; Buzoianu, & et al., 2015). Church (1982) suggested that when studying the adjustment experiences of international students, researchers should pay attention to these following variables: nationality, change of personal status, previous exposure to the culture in the host country, situational variables, social interaction, change of identity/membership, and personality. He also suggested that social interaction is the most crucial variable when we predict adjustment.

Experiences of cultural disruption (lost sense of cultural norms) can lead to both physical and mental problems such as overeating or loss of appetite, needing for excessive sleep, depression, headache, and upset stomach (Miller & El-Aidi, 2009). One of the significant adjustment problems that many international students have faced is the problem of dietary health. Stewart and Leggat (1998) found that for some international students, changes in cultural environment can cause dietary problems and negatively impact mental health. They pointed out that some international students would suddenly develop irritable bowel syndrome (IBS), loss of appetite, insomnia, depression, or

anxiety. Mori (2000) suggested another potential cause of health problem among international students. Compared to long-term resident aliens, he argued, international students usually have higher social mobility and lower feelings of security. He pointed out that a constantly changing environment requires them to adjust to new and stressful situations at a higher pace, which may lead to a higher risk of developing mental health issues among this population.

Russell et al. (2007) suggested that due to the low familiarity with the modern western medical and health system, international students who come from developing countries are less likely to use health services unless they are facing life-threatening problems (also see Liamputtong, 2011). Similar to their findings, Zheng and Berry (1991) found that language barriers, insufficient social support, poor communication skills, and suboptimal adaptation strategies are the primary causes of health disparities for sojourners who come from China. They also found that when compared to the international students from Hong Kong and Taiwan, Chinese students who come from mainland China have higher rates of adjustment problems. Fong (2008) discovered that some international students, instead of getting treatment in their host societies, even go back to their home country to get treatment for illness.

Currently, studies about international students' experiences are mainly conducted in disciplines such as psychology, education, health promotion, and communication. Studies from these disciplines suggest that during their stay in the U.S., individual international students often adjust very differently, even relative to other research subjects from the same ethnic group. While some international students successfully achieve their education goal and adapt to their new life, other international

students seem to have great difficulties in developing coping strategies or worse, develop physical and psychological problems (Servaty-Seib et al., 2015).

Research Methods and Data Analyses

In-depth Interview

An essential component of this research is to use both quantitative and qualitative methods to collect and analyze data. As was pointed out by Andrew, MacEvoy, and Pedersen (2011), a qualitative approach allows the researcher to ask open-ended questions, to obtain data from both texts and images, to consider participant-generated meanings, and to investigate the participants' settings; this approach also promotes collaboration between the participants and the researcher. By using a qualitative approach, the information and the data within the study are formed based on the participants' perspectives. During the interview process, I made minimum references to my own nutritional background in order to reduce the chances of creating "nutritionally influenced/biased" responses.

As Patton (2000) explained, "We cannot observe feelings, thoughts, and intentions. We cannot observe behaviors that took place at some previous point in time. We cannot observe situations that preclude the presence of an observer. We cannot observe how people have organized the world and the meanings they attach to what goes on in the world. We have to ask people questions about those things. The purpose of interviewing, then, is to allow us to enter into the other person's perspective" (p. 341). Thus, researchers can use interviews to reveal information that is unobtainable from direct observations. Oakley (1998) suggested that participant observation, life history, focus groups, and in-depth interview methods are foundational qualitative

research methods. The interview part is an invaluable complement to participant-observation

According to Jamshed (2014), “semi-structured interviews are those in-depth interviews where the respondents have to answer preset open-ended questions and thus are widely employed by different healthcare professionals in their research. Compared to structured interviews, in semi-structured interviews, only some questions are predetermined, other questions are developed spontaneously based on the interactions between the participants and me. Semi-structured, in-depth interviews are utilized extensively as interviewing format possibly with an individual or sometimes even with a group” (p. 87). Similar to the strategy mentioned above of participant observation, the use of in-depth interviews also requires the interviewer to establish a rapport with the participants (Mack & Woodsong, 2005, p 37).

The basic format of in-depth interviewing is to conduct intensive interviews with a small number of participants. Stuckey (2013) suggested that in behavioral health studies, researchers could use both unstructured and semi-structured questions to explore participants' perspectives on particular thought processes, ideologies, ideas, or situations. There are two ways to use in-depth interviews in mixed-method research. For example, researchers can use the data from in-depth interviews to design questions in a survey. By doing so, the researchers can develop a more targeted and more effective questionnaire for their research, and this approach is often used in the development phase of the study.

Another way to use the data from the in-depth interview is to complement the findings from other data-collecting tools. Cox (2012) suggested that when researchers

finish a survey, they often find that the questionnaire they used has not covered or addressed vital issues. He further suggested that the researchers could either redesign their questionnaire, redo the survey, or use the in-depth interview as a follow-up study to obtain extra detailed information to cover the previously ignored issues in their study.

Boyce and Neale (2006) also suggested that when researchers use the in-depth interview method as a complementary component in a study, they will get more detailed information than by relying on surveys alone. Also, in-depth interviews can also be utilized as a replacement for the focus group study. In health-related research, participants sometimes feel uncomfortable talking about their issues in front of a group; thus, by using the individual (one-on-one) in-depth interview, researchers can create a comfortable environment for the participant to convey their thoughts and ideas (Milena, Dainora, & Alin, 2008).

As Jamshed suggests, when conducting a semi-structured in-depth interview, researchers benefit from having a guide which has a list of core questions and peripheral questions. This setup enables the researchers to maintain the flexibility needed to respond to unexpected answers during the interview process.

Photovoice

According to Wang and Burris "photovoice is a process by which people can identify, represent, and enhance their community through a specific photographic technique (1997, p. 369)." Photovoice was developed based on their pioneering works (1994). Initially, Wang and Burris named this method Photo Novella. Wang, Burris, and Ping (1996) developed this method for their anthropological study of Chinese women's reproductive health in Yunnan Province, and they found this method provided the

participants with an opportunity to “speak with a 'visual voice' (p. 1393)”, and granted unique access to difficult aspects of the participants’ life, which were often inaccessible to outsiders such as researchers or photographers.

This method “turns on the power of the visual image” (p. 1396) for future policy changes. For participants, photovoice can help them to achieve the following goals: first, they can record and reflect their community's strengths and concerns. Also, they can use this opportunity to promote critical dialogue and exchange knowledge about important issues during the group discussion of photographs; third, they can use the photos to reach policymakers (Wang & Burris, 1997). Wang and Burris conclude that the photovoice method was a powerful tool in participatory needs assessment in health promotion and public health research.

Unlike survey/questionnaire-based studies, photovoice provides a deeper and more emic understanding of what the participants’ states of mind are, and how events in their life courses affect their decision-making process.

Participant Observation

Participant observation is one of the classic research methods in anthropology. Frank Hamilton Cushing was regarded as the first user of this method (DeWalt & DeWalt, 2011). In his study of the Zuni people, he spent more than four years living among his research subjects. In the 1920s, the British anthropologist Malinowski also used the participant observation method to study indigenous communities in the Trobriands islands (Conley & O'barr, 2002). Beside Malinowski, Margaret Mead also used participant observation in her study of Samoan girls (Mead, 1963). Susan Drucker-Brown (1985) suggested that researchers in anthropology who used “participant

observation were discontented with the results of surveys and sophisticated statistical techniques" (p 48).

Jorgensen (1989) suggested there are seven fundamental components of participant observation studies. According to him, these components include: a particular interest in human meaning and interaction as viewed from the perspective of people who are insiders or members of particular situations and settings; a location in the here and now of everyday life situations and settings as the foundation of inquiry and method; a form of theory and theorizing stressing interpretation and understanding of human existence; a logic and process of inquiry that is open-ended, flexible, opportunistic, and requires constant redefinition of what is problematic, based on facts gathered in concrete settings of human existence; an in-depth, qualitative, case-study approach and design; the performance of a participant role or roles that involves establishing and maintaining relationships with people in the field; and the use of direct observation along with other methods of gathering. Jorgensen (2015) also pointed out that the purpose of using participant observation is to obtain both practical and theoretical knowledge about human beings from the realities of their daily lives.

DeWalt and DeWalt (2011) argued that when anthropologists are doing fieldwork, they should utilize the natural setting and learn about the communities' activities through active participation. It is important to point out here that unlike experiments in a laboratory, participant observation is a process of learning through involvement or activities in daily life (Schensul, Schensul, & LeCompte, 1999). As Bernard (2018) suggested, in anthropology, when doing participant observation, researchers need to establish a rapport, or a close relationship, within a community. This

rapport will enable the researchers to immerse themselves in the study. At the same time, Bernard suggested that researchers need to keep a certain distance between the community members and themselves when doing participant observation.

In nutritional and food anthropology, participant observation is a widely used research method. Since human dietary practices vary significantly from community to community, the participant observation method is often used by the researchers to gain familiarity with not only the community members but also the socio-cultural environment in which the participants live and eat. Bernard (2018) suggested that participant observation helps the researchers to get involved in research subjects' activities and obtain close observations. Also, participant observation can be utilized as a calibration tool for researchers to check the information that they obtain through interviews, and it can be used to fill the gap caused by data loss. In terms of the format of data collection, I took field notes during the participant observation stage, and documented observational data from the participants and the environment of the activities or events. In this study, observations were used to collect information about these aspects of the participants' daily life: their living environment, their shopping habits, and their food preparing activities.

For this study, the majority of observations were conducted in the supermarket and the households of the participants. Lorgensen (2015) suggested that by investigating the meanings of human existence (as they are constructed and enacted by people in everyday life situations and settings), researchers could understand the challenges that faced by human subjects. By participating in the food acquisition, food preparing, and food consuming process, I was able to interact with the participants in normal daily life

setting, but also to collect detailed, complex, conflictual information regarding the experiences, ideas, emotions, and activities of the participants as well as the meanings of their behaviors.

Data Analysis

Both quantitative and qualitative research were used in this research. Glaser and Strauss (1967) suggested that a major advantage of using mix-methods approach is that researchers can use their data to develop a conceptual framework to explain complex phenomena that were not explained or covered by previous theories. In anthropology, empirical data obtained through participant observation in were often interpreted through this method. According to Glaser and Strauss, before researchers start to collect data for comparative analysis, the first step is to set up theoretical sampling. In the theoretical sampling process, researchers recruit participants with different attributes and life experiences.

Cho and Lee (2014) suggested that when researchers are using constant comparative analysis (CCA), they need to conduct cross-level comparing, by which all incidents, concepts, and categories are compared to each other. They summarized the procedure from Corbin and Strauss into three steps: open coding, axial coding, and selective coding. During the axial coding phase, researchers provide links and draw connections among different categories in the data. The primary purpose of the axial coding is similar to principal component analysis in quantitative analysis, which means that through this process, researchers seek to reduce the data to clusters. After the researchers finish the axial coding, they move on to the final stage of the selective coding. During the selective coding process, researchers identify the most important

categories, and the main purpose of the selective coding is to provide a logical flow/storyline for the data.

Similar to Corbin and Strauss, Charmaz created procedures of coding with three steps: the initial coding, the focused coding, and the theoretical coding. Charmaz suggested that instead of clustering all similar concepts together (thereby reducing the overall dimension of the data), the researchers should choose the most significant or frequent initial codes to sort, synthesize, integrate, and organize large amounts of data (p. 46). One implication of this is that researchers should study the participants' behavior in a natural setting. Furthermore, he also proposed that researchers should go beyond interpreting the behavior of the participants; researchers should also study the formation of a set of behavior. One advantage of using Charmaz's focused coding is that large datasets are more easily coded than they are by the axial coding method, because the former allows the user to find and develop the most salient categories within large datasets (p. 46).

According to Glaser (1965), there are four stages in the constant comparative analysis: (1) comparing incidents applicable to each category, (2) integrating categories and their properties, (3) delimiting the theory, and (4) writing the theory. In other words, researchers will simultaneously collect, compare, incorporate, categorize, and interpret data during the CCA phase.

In the open coding phase, researchers examine the text and identify and assign codes to the observed phenomenon. In this stage, researchers are required to generate as many aspects of the phenomenon as possible. After the open coding process, researchers will then use axial coding to sort the data. By finding different types of

participants, researchers would be able to have as much variation as possible in their analysis. When using theoretical sampling with constant comparative analysis, the sampling will end when no additional dimension emerges (i.e., when all data dimensions are saturated).

After researchers finish the theoretical sampling process, they can move on to use the constant comparative analysis to code and analyze the data. Since this research is focused on dietary health and behavior among Chinese international students, I collected data based on the following participant attributes: male/female participants, undergraduate/graduate/post-doctoral participants, unmarried/married participants, participants with/without offspring, participants with/without parents, participants who have/have not experienced dietary change. In this study, every phase of the theoretical sampling was based on the feedback from previous data collection.

Chapter Summary

Studies of immigrants' foodways or dietary habits are often built upon public health related problems such as diabetes, obesity, other metabolic diseases, and/or cardiovascular diseases. However, the research participants themselves often have different priorities. Their food-related behaviors are often equally shaped by cultural background, personal history, socio-economic condition, education, belief systems, and globalization. The use of mix-methods and constant comparative analysis can help the researcher to code and analyze data in this research.

One advantage of using a combination of the biocultural framework and life course perspective is that this approach has a human-centric component as well as a focus on environmental limitations. This dialectical approach emphasizes structural

disadvantages, discriminations, and limitations in which many research participants are embedded; it also explores the creative capacity of the research participants in securing resources and overcoming environmental barriers or restrictions. By using both frameworks, I was able to fully investigate how Chinese international students develop their food-related adjusting strategies, determine which factors influence these strategies, and explore how participants mitigate negative influences and utilize resources from the environment.

In addition, as a Chinese, I understand the importance of TCM in food-related behavior. Through my years of fieldwork, volunteer works, and interactions with other Chinese people, I have found that almost every Chinese person has used ideas and concepts of TCM in their daily health maintenance practices. Thus, I consider it crucial to provide an overview of the TCM in the literature review section.

Chapter 3: Methodology

In this chapter, I will go through recruitment procedure and participants, as well as data collection and analysis instruments.

Recruitment and Participants

Purposive sampling was used in this study. Upon OU Institutional Review Board (IRB) approval (IRB 8781), an email invitation for in-person interviews was sent out to a total of 646 Chinese international students who were registered on the subscription mail service for Chinese students and scholars at the University of Oklahoma. An invitation to participate was also posted on QQ, a popular Chinese social media platform, in the OU Chinese students' chatroom (OU Family). Finally, posters were posted in the main dining areas on the University of Oklahoma campus. It is relevant to note that I am currently the primary administrator for the subscription mail service for Chinese students and scholars at the University of Oklahoma and the owner and creator of the online chatroom.

The participants' motivations for allowing me to observe them varied slightly, several participants told me that the only reason they were willing to participate in the study was that they viewed me as an unofficial Chinese international student community organizer. During the past five years, I have voluntarily created, maintained, and managed the Chinese international student and scholar email list and online chatroom (which provided housing, second-hand goods, safety information), and I have always provided adjustment tips for other new Chinese international students. Other participants told me that they viewed their participation in this study as "being a voice for Chinese international students."

Inclusion Criteria

Inclusion criteria included: undergraduate, graduate Chinese international students, and post-doctoral students at the University of Oklahoma. To protect the identities of the participants, all names in this dissertation are pseudonyms. In addition, to protect my participants, I did not ask participants' immigration status or their immigration tendency.

Participants who were willing to participate in the study replied to me in person, by email, by phone, or through QQ. Then I set up an interview time with the students. The interviews were conducted over four months with once-monthly email and QQ reminders sent through the interview period. All interviews were conducted in an in-person format and in an on-campus office setting. This setting provided a comfortable environment as well as privacy for the participants. All participants who participated in the interviews had received a $10 Amazon gift card. At the end of each interview, I offered the participants an opportunity to participate in the photovoice sessions and the participant observation sessions.

Sample Size

In terms of how to choose a suitable sample size for an ethnographic study, there is no definitive answer to the question. Baker and Edwards (2012) suggested in qualitative studies researchers generally have smaller samples than in quantitative studies. They found that the sample size for a qualitative study ranges from 12 to 60, with a mean of 30.

In my study, 35 participants (15 males, 20 females) were recruited in the interview session. Twelve (6 males, 6 females) of the 35 interviewed participants joined

the photovoice session. After the photovoice session, six (2 males, 4 females) of the 12 participants joined the participant observation session.

Data Collection Methods and Procedures

The literature review suggests that foodways and dietary behavior are often constructed by political, historical, and social factors. On an individual level, each person has unique dietary behaviors; on a community level, the shared political, socioeconomic, and cultural backgrounds, as well as similar upbringings, often homogenize a group's dietary behaviors. Because of the complexity of the research topics, I feel that it is best to use in-depth interview (see Appendix 1), photovoice, and participant observation as the primary data collecting tools.

In the in-depth interview session, participants were asked to complete a quantitative survey. These methods allowed me to not only examine the systematic and macro-level determinants of dietary behavior but also provide information to conduct in-depth analyses into the agency of each participant.

These methods were aimed to provide the following information:

1. Demographic information, such as age, gender, marital status.
2. Acculturation-related information, such as staying length, and preference of language.
3. Dietary and foodways related information: dietary change, nutrition-related cultural beliefs literacy, food acquisition, preparation, consumption, and avoidance.
4. Perception of the American food environment, and interaction with the local food environment.

5. Social support, social network, and their relationship with dietary behaviors and foodways of the participants.

In-depth Interview

Since foodways are related to both culture and participants' experiences (e.g., how they interact with their food, the meaning behind their foodways, and how they obtain their nutrition-related philosophy), by using an in-depth and interactive interview, I could obtain more details about the participants' everyday foodways, their concerns about food environments, the relationship between social support and foodways, and their emotions than could have been done using a quantitative method alone. I asked participants about their experiences and expectations related to their dietary environments, the concerns that they have regarding food accessibility and affordability and other aspects regarding the overall food environment in Oklahoma. In addition, as the literature review suggested, in previous studies of Chinese sojourners and immigrants, researchers often use a qualitative approach to facilitate their understanding of the unique experiences of their participants. Thus, a quantitative method and a qualitative method were excellent complements to each other.

The semi-structured interview was developed based on the biocultural framework, life course perspective, and previous literature. It studied following topics: previous and current foodways and reasons for any changes; the relationship between their dietary behaviors and local food environments; perception about the foodways; and attitude towards dietary health.

The reason for using a semi-structured interview is that this format can provide both guidelines and flexibility when probing emergent themes. During the first round of

the interviews, the researcher asked all participants the same questions from the semi-structured interview guide.

Several conceptual areas were investigated in this round: food preferences, shopping/preparing/consumption, life course and important/memorable events during life, ideals and ideologies behind foodways, tangible resources and intangible assets, social networks, food context, personal factors, and values that related to food and health. The second interview was developed after the researcher finished the transcription and preliminary analysis of the first interview. The first two sections of the interview provided data for quantitative analyses, and the third section provided information for qualitative analyses. All interviews took place and were recorded in my office. All interviews were transcribed verbatim in Chinese.

Following the recommendations of Merriam (2009), the semi-structured in-depth interviews in this study were developed based on a semi-structured interview guide, which has schematic topics that need to be explored during the process. The use of interview guides serves two purposes. First, it provides a good model of time management for the research, with the help of the interview guide, I was able to make the interviews focused on a desired timeline; second, it helped me to engage with the participants' answers both systematically and comprehensively. In this study, I used both written notes and audio recordings with the approval of the IRB. The audio recording of the interview likewise serves two purposes. First, it makes me focus on the interview content and verbal cues such as pauses and changes in voice. Second, it enables me to produce a verbatim transcript of the interview for constant comparative analysis.

Each interview lasted between 60 and 180 min. All interviews were transcribed by XunFei YuJi (XunFei, 2018), and were translated by Google translate and Baidu translate; the translated transcripts were then manually checked by me, as I am fluent in both Chinese and English. The calibrated quantitative parts of the transcripts were coded and analyzed in SPSS 24.0 (IBM Corp., 2016), and the qualitative data (e.g., recurrent words, phrases, and incidents) were coded and analyzed in NVivo 11 (QSR International Pty Ltd., 2016). Data analysis was conducted at the end of each interview, and field notes were taken simultaneously during the interview sessions to record insights regarding body language, tone, or general atmosphere. The rationale for doing simultaneous data analysis is that this technique would help the researcher to identify blind spots during the interview and generate new questions that would pursue emerging themes and patterns (Braun & Clarke, 2006; Glaser, 2009; Altheide, 1987).

Photovoice

In this study, I asked the participants to record and share photos that reflect their food related concerns, to promote conversations about their important issues in small group discussion of their photos.

For the 12 participants (6 males and 6 females) who enrolled in the photovoice session, each meeting began with small talk to promote rapport. In the first session, I provided a basic photovoice training, a short instruction on the basic techniques of photography, as well as a guided discussion between the participants and me. During this session, I learned that all participants had iPhones and other smartphones, and the participants informed me that they would use the cameras on their phones. Before each photovoice session, I received photos from the participants through emails and QQ, and

photos were analyzed by theme, and discussion happened between the participants and me.

In the second and third sessions, participants were asked to bring 4-5 of their favorite pictures to be discussed with me. In her paper, Wang (1999) suggested that the SHOWeD approach could help the researchers to identify "What do you See here?", "What is really happening here?", "How does this relate to our lives?", "Why does this situation, concern, or strength exist?", moreover, "What can we Do about it?" (p. 188); I utilized Wang's SHOWeD approach and developed semi-structured and guided questions to facilitate the discussions with the participants.

In addition, based on the participants' previous response in the interview sessions, I also inquired about the meaning of their photos regarding the availability (including grocery stores, on- and off-campus restaurants) and affordability of food, their diet and nutrition literacy (naming the ingredients and nutritional benefits of the food in their photos), and their perception of international students' overall dietary health. Audio recordings were used in all sessions, which were later translated and transcribed.

I encouraged them to narrate the story behind their photos. This approach allowed additional commentary on the relationships between their foodways and cultural identity, their foodways and upbringing, their foodways and migration experiences, and their foodways and nutrition stress. A key strength in the photovoice is that it can use visual presentations to generate stories, content, and discussions.

Table 1 shows the content focuses, activities, and photo hunt assignment of the three sub-sessions.

Table 1. Description of the Photovoice Program by Session.

Session	Content focus	Activities	Photo hunt assignment
1	Introduction to photovoice and basics of photography; Establishing rules for the sessions; Reinforce rapport between participants and me.	Become familiar with the photovoice Provide a short manuscript about how to take photo to the participants	Photographing "My food today" (personal dietary behavior snapshot)
2	Discussion of photos taken in session 1; Elicitation perspectives of the participants; Expansion of photography techniques.	Creation and discussion of the tableaus from Session 1	Photographing "My food environment" (grocery shopping, kitchens settings, and frequent dining locations)
3	Discussion of photos taken after Sessions 1 and 2. Elicit specific questions regarding the perspectives of participants.	Creation and discussion of storyboards	Photographing "My food journey" (habits, avoidance, preferences, social setting of food)

The discussions between the participants and me, as well as the participants' narration of their photo stories, were transcribed verbatim, translated, and coded for themes using NVivo 11 analysis software (NVivo qualitative data analysis Software; QSR International Pty Ltd. Version 11, 2016).

The qualitative analysis used prior codes from the interview session. It began with a new round of structural and in-depth coding, and the constant-comparison approach to identify themes related to foodways and dietary behaviors. Both a

biocultural framework and a life-course-perspective provided an analytical and theoretical guide for me to investigate the dynamic interactions and repetitive routines regarding participants' dietary behaviors, cultural backgrounds, socioeconomic statuses, personal histories, education levels, social networks, and environmental factors.

Participant Observation

Six participants (four females, two males) agreed to let me conduct participant observation with them. This segment not only helped me to further understand the foodways of Chinese international students and their dietary behavior (food acquisition, preparation, and consumption) but also provided rich and real information regarding their attitudes towards their food environment and their social relationships with food. More importantly, this approach allowed me to carefully examine the daily and mundane activities of these six Chinese international students, permitting me to observe them in their everyday settings.

Participant Observations were conducted at two local grocery stores (Sprouts Farmers Market and Crest Foods), two national supermarkets (Walmart Neighborhood Market, Target), four local Asian grocery shops (Saigon Taipei Asian Market, Dong-A Korean Market, Chinatown Supermarket, and Super Cao Nguyen Market), and in four participants' homes. To keep track of how the time was spent, I maintained a log of each trip. As Bernard (2018) suggested, such a log can help to focus on the data collection related to research questions. In addition, I used a brief observation guide to remind me how to interact with participants, how to examine participants' behavior, and how to record location, time, environment, and other details.

In the participant observation during the grocery shopping session, I provided the driving service for the participants. For each participant, I conducted 3 grocery shopping and 1 in-house participant observation. In total, I conducted 24 participant observation sessions (18 grocery trips and 6 in-house observations) over the 8-month span (January 2018 - May 2018, July 2018 – October 2018). On average, I spent three to five hours per participant observation.

Data Coding and Analyses

During the analyses of the qualitative section in the in-depth interview transcripts, photo and discussion recordings in the photovoice section, and the field notes in the participant observation section, data coding was conducted for each section in NVivo 11 analysis software (NVivo qualitative data analysis Software; QSR International Pty Ltd. Version 11, 2016). This helped me to develop and group themes that are related to the research questions of this study. Also, this step-by-step data analyses model helps me to not only engage with the collected data, but it also helps me to develop relevant questions for the next section.

In the interview section, codes and themes from the first interview were compared to the codes and themes in the second interview, then the codes and themes from the first two interviews were compared to the third interviews. This process was repeated until the last interview. The themes from the interviews were used as a guide for the data analysis of the photovoice section. Data saturation was determined when no new data emerged. In the photovoice section and participant observation sections, a similar analytical approach was used. The themes from the interviews and photovoice

were used as a guide for the data collection and analysis of the participant observation component.

Chapter Summary

This research investigates how cultural factors, food environment, and social network and support affect the formation of dietary habits and foodways among Chinese international students at the University of Oklahoma, Norman campus. Table 2 provides a summary of the sample size and demographic information.

Table 2. Number of Participants in Each Session

Session	Number of participants
In-depth interview	n = 35 (20 females, 15 males)
Photovoice	n = 12 (6 females, 6 males)
Participant observation	n = 6 (4 females, 2 males)

In-depth interviews, photovoice, and participant observation were used to collect information about participants' previous and current foodways and their reasons for the changes; the relationships between their dietary behaviors and the local food environments; their perceptions of their foodways; and their attitudes towards dietary health.

This study uses constant comparative analysis and life course perspective to analyze data related to foodways and dietary behaviors. Compared to previous quantitative studies that have focused on post-migration dietary behavior, this qualitative research provides more detailed information about and analysis of the mechanisms of dietary changes, the interactions between the participants and their food environment, and life history about how they developed their dietary behaviors.

Chapter 4: Results

Descriptive Statistics of the Participants

There were thirty-five participants in the interview (male = 15, female =20). Twenty-seven of them were from developed urban China, and eight of them were from rural China. Six participants were married, and the other twenty-nine of them were not married. Nearly 90 percent of the participants were graduate students (1 in undergraduate program, 6 in masters programs, 25 in doctoral programs, and 3 Postdoc), one participant was in a bachelor program, and three participants were post-doctoral students. The mean of participants' age was 26.7 (with a standard deviation of 2.8), and on average, they had spent 3.6 years in the United States at the time of the interview (with a standard deviation of 1.5).

Gender and Cooking

In terms of cooking experiences, only five participants had cooked for less than one year. On average, the participants had known how to cook food for 6.2 years (with a standard deviation of 5.5). However, there was a difference between males' and females' cooking experiences. The average years of cooking among female participants was 8.6 (with a standard deviation of 5.7); whereas the average years of cooking among male participants was 3.1 (with a standard deviation of 3.2).

Because the sample size of this study is relatively small, I used nonparametric Median Test to test the null hypothesis that the medians of years of cooking from both males and females were identical, which suggested that females do indeed have more cooking experiences than males (see Table 3).

Table 3. Median Test for Gender Differences of Cooking Experiences

Statistics	Cooking Experiences (measured in year)
N	35
Median	5.0000
Chi-Square	6.994
df	1
Asymp. Sig.	.008
a. Grouping Variable: Gender	

To further investigate the relationship between gender and cooking experiences among participants, I conducted another set of statistical analyses. Based on the data of age (Variable 1) and how many years the participants have cooked (Variable 2), I derived Variable 3, which is the age when they started cooking (Variable 3). The mathematical expression is Variable 3 = Variable 1 – Variable 2.

Table 4 shows that on average, the male participants learned how to cook at the age of 23.6 (with a standard deviation of 4), while the female participants learned how to cook at the age of 18.2 (with a standard deviation of 4.25).

Table 4. Age When First Cooking.

Gender	N	Minimum	Maximum	Mean	Std. Deviation
Male	15	16.00	31.00	23.6000	4.03201
Female	20	11.00	27.00	18.2000	4.25008

Due to the data size and non-normal distribution of the data (skewness for both groups > 0.02), I used the Mann-Whitney method to test whether the age of learning to cook was independent of gender. Since the Asymptotic Significance value is 0.001 < 0.05, it was concluded that female participants start cooking at a significantly younger age when compared to male participants (see Table 5).

Table 5. Mann-Whitney Test for Gender and Age When First Cooking

Null Hypothesis	Test	Significance	Decision
The distribution of Age when first cooking is same across categories of Gender	Independent-Samples Mann-Whitney U Test	Exact significance: 0.001	Reject the null Hypothesis
Asymptotic significance is displayed. The significant level is 0.5			

Age and Cooking

As was suggested by Smith, Ng, and Popkin (2013), when young people start to cook (with foods prepared from scratch), they will not only reduce their food-related time and cost, but they will also develop healthy dietary habits. In order to investigate the relationship between age and cooking experiences in both male and female participants, I conducted a nonparametric Spearman's Rho test (see Table 6).

Table 6. Spearman's Rho test for the Correlation between Age and Cooking Experiences

Age/Cooking Experiences (measured in years)		
Male	Correlation Coefficient	-.174
	Sig. (2-tailed)	.535
	N	15
Female	Correlation Coefficient	.641**
	Sig. (2-tailed)	.002
	N	20
	N	20
Correlation is significant at the 0.01 level (2-tailed).		

The results suggested that for the male participants, there was no significant relationship ($p = 0.535$) between their age and how many years they have known how to cook, while for the female participants, there was a strong (effect size = 0.641) and significant correlation ($p = 0.002$) between their age and how many years they have known how to cook.

As suggested by Lanca et al. (1994), an immigrant's choices of language not only indicate the immigrant's degree of acculturation in the "dominant" society but also reflect the immigrant's attitudes toward acculturation. In this study, I measured participants' language usage and preferences on a 1 to 5 scale (1 as only using Chinese, 2 as using Chinese more than English, 3 as using both languages equally, 4 as using English more than Chinese, 5 as only using English). Furthermore, I measured language usage in the following six categories: general language preference, language preference in a research setting, language preference in communication, language preference in searching for nutritional information, language preference in the texting, language preference in social media. Results suggested that besides research settings, in most cases participants prefer either to use Chinese exclusively or to use Chinese more than English. It is noticeable that 88.6% of participants (31 out of 35) chose to use only Chinese when they were looking for nutritional information (see Table 7).

Table 7. Language Preference for Nutritional Information.

Valid	Only use Chinese	31	88.6
	Use Chinese more than English	4	11.4
	Total	35	100.0

It is important to point out that all interviewees asked me to conduct interviews in Chinese, as they suggested to me that it was uncomfortable for two Chinese to communicate in English.

Gender and Diet Change

In terms of self-perceived dietary change after they arrived at the U.S., participants were asked to categorize their dietary change in one of these three

categories: category 1) their diets haven't changed at all, category 2) their diets have somewhat changed, and category 3) their diets have changed a lot.

As we can see from Table 8, these three categories are almost evenly distributed among the participants: twelve participants (5 males, 7 females) felt that their diets had not changed at all, twelve participants felt that their diets had somewhat changed (6 males, 6 females), eleven participants felt that their diets had changed a lot (4 males, 7 females).

Table 8. Self-Reported Diet Change by Gender.

Diet Change	Male	Female	Total
Hasn't changed at all	5	7	12
Somewhat changed	6	6	12
Changed a lot	4	7	11
Total	15	20	35

To further investigate the relationship between dietary change and gender, I conducted a nonparametric Chi-Square Goodness of Fit Test to see whether the dietary change was independent of gender. When setting the alpha value as 0.05, the significance value of the Likelihood Ratio was 0.800, which is larger than the alpha level (see Table 9). This result suggested that I failed to reject the null hypothesis of dietary change as independent of gender.

Table 9. Chi-Square Goodness of Fit Test for Gender and Diet Change.

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	.446[a]	2	.800
Likelihood Ratio	.447	2	.800
Linear-by-Linear Association	.056	1	.812
N of Valid Cases	35		
a. 1 cells (16.7%) have expected count less than 5. The minimum expected count is 4.71.			

Staying Length and Diet Change

To test whether staying length in the U.S. has an effect on dietary change, I divided the participants into two groups, with the first group's staying length being from 1 to 3 years (n=18), and the second group's staying length being longer than 3 years (n=17) (see Table 10).

Table 10. Staying Length and Diet Change Crosstabulation.

	Hasn't changed at all	**Somewhat changed**	**Changed a lot**	**Total**
Short 1-3 years	8	5	5	18
Long > 3 years	4	7	6	17
Total	12	12	11	35

To further analyze the relationship between staying length and dietary change, I conducted another nonparametric Chi-Square Goodness of Fit Test (see Table 11), the significance value of the Likelihood Ratio is 0.415. This result suggested dietary change is not dependent on staying length.

Table 11. Chi-Square Goodness of Fit Test for Staying Length and Diet Change Crosstabulation.

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	1.730[a]	2	.421
Likelihood Ratio	1.757	2	.415
Linear-by-Linear Association	1.046	1	.306
N of Valid Cases	35		
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 5.34.			

Perception of Food Environment

In this study, participants were asked to categorize their perceptions of the food environment in the United States into one of these three categories: the first one is "bad

(in Chinese term: 不好，坏，糟糕，差劲)," the second is "okay (in Chinese term: 还行，凑活，一般)," and the third is "good (in Chinese term: 不错，很好)." As we can see from the Table 12, all male participants (n=15) thought the food environment was less than ideal; for female participants, 80% of them (n=16) also thought the food environment was less than desired, whereas four of them thought the food environment was okay.

Table 12. Perception of Food Environment.

Gender			**Frequency**	**Percent**	**Valid Percent**	**Cumulative Percent**
Male	Valid	It's bad	15	100.0	100.0	100.0
Female	Valid	It's bad	16	80.0	80.0	80.0
		It's okay	4	20.0	20.0	100.0
		Total	20	100.0	100.0	

As shown in Table 13, when using the Chi-Square Goodness of Fit Test to investigate whether the participants' perception of the food environment was independent of gender, the significance value of the Likelihood Ratio was 0.027, which is smaller than 0.05. This result suggested that there is a statistically significant difference between females' and males' perception of the food environment.

Table 13. Chi-Square Goodness of Fit Test for Gender and Perception of Food Environment.

	Value	df	Asymptotic Significance (2-sided)
Likelihood Ratio	4.861	1	.027

To determine participants' food preferences, I asked them to choose their food preferences from the following categories: Chinese foods, Pan-Asian foods (e.g., Chinese, Korean, Japanese, Vietnamese, and Thai), western foods, or it doesn't matter

to them what cuisine they eat. A quick analysis showed that all of the participants (n=35) chose to eat either Chinese food (n=22), or Pan-Asian food (n=13), and none of them choose to eat non-Asian food. Among the fifteen male participants, nine of them chose Chinese food, and six of them chose Pan-Asian food.

Among the twenty female participants, thirteen of them chose Chinese food, and seven of them chose Pan-Asian food. To investigate whether gender plays a role in food preferences, I conducted a Chi-Square test. As Table 14 shows, when using the Person Chi-Square test, the significant value is 0.762. When using Fisher's Exact Test, the significant level is 1.00 (this 1.00 significance level implies that the probability of observing the sample results are least extreme). The significant values of both tests are larger than the alpha level of 0.05. The results indicated that food preferences are independent of gender.

Table 14. Chi-Square test for Gender and Food Preferences.

	Value	**df**	**Asymptotic Significance (2-sided)**	**Exact Sig. (2-sided)**	**Exact Sig. (1-sided)**
Pearson Chi-Square	.092[a]	1	.762		
Fisher's Exact Test				1.000	.518

The quantitative analyses provided an overview of the dietary structure of Chinese international student participants. There are several interesting observations from these analyses. First, in terms of cooking experiences, only five participants had been cooking for less than one year; on average, participants had been cooking for 6.23 years. In terms of weekly cooking frequency, only five participants cooked less than three days per week; on average, the participants' cooking frequency was 4.6 days per

week. It was also discovered that none of the participants liked their current food environment, and all of the participants preferred either Chinese or Pan-Asian foods.

To further investigate the dietary patterns and foodways of Chinese international students, I used a qualitative approach to analyze the data from the interviews. After further coding and using constant comparative analyses, three themes emerged from the interviews: 1) cultural identity and emotions, the life history of food (i.e. the emotional influences on the formation of foodways); 2) health concerns, traditional Chinese medicine, and unwillingness to change (i.e. the influence of rationality on the formation of foodways); and 3) creating social network, maintaining social support, and sharing foodways with each other (i.e. the social influences on the formation of foodways).

In-Depth Interview Themes

Themes One: Cultural Identity and Emotions, the Life History of Food

As was suggested by the participants, having familiar foods (Chinese and Pan-Asian) provided them some comforts of home and reassurances of being who they are. Chen YF is a 25-year-old female graduate student majoring in a STEM field; her story provided a powerful example of how food related to her identity and her memory:

*My hometown is close to the border between China and Korea, and my mom is half Korean. I grew up with Korean and Chinese food. Whenever I am eating them, I am thinking about my hometown, thinking about my parents, and my friends. I cannot go back every week, but the foods make me feel I am very close to home. I am the only one here, my parents and friends are all in China; you know, when I eat those foods, I sometimes cry, but it is not all sad, it is mixed with happiness and sadness. I am home but not home; through food, my heart goes home. You know, actually, it's not even the foods, the old couples who own the restaurant just look like old couples in my hometown, and the waitress, (she) is like my sister (*jamae is the Korean pronunciation of sister; interestingly, jiemei is the Chinese pronunciation of sister), I feel safe there.*

As suggested in the literature review, one of the most significant stressors of studying abroad is related to cultural shock. Cultural shock is a mix of perceived

loneliness, otherness, strangeness, and distance between sojourners and their host society. Oberg (1960) suggested that cultural shock is often caused by the loss of a familiar environment, the severance of social ties, and disorientation caused by unfamiliar social norms.

From Chen's words, I learned that by preparing and consuming Chinese and Korean food, Chen was able to shorten the distance between herself and her home country. Eating Korean and Chinese foods reminded her of who she was and where she belonged; food had become a steady anchor in her sojourning years. Her spirit and heart have flown back to her hometown through the taste of food. Food changes her from being with "others" to being with "hometown people." Food, the restaurant, the owners, and the waitress have become her symbolic home, both a metaphorical and a physically safe place for her. To overcome the emotional stress of adapting to a new environment, eating familiar foods (traditional Chinese and Korean dishes) and being surrounded by co-ethnics have become emotional support mechanisms for Chen and other participants.

Here is another example from Nan S, a 27-year-old male Ph.D. student from Hubei, China:

First of all, I grew up in China, my stomach is a Chinese one, because of this I am more used to eating Chinese food than any other foods. Second of all, I think maybe Chinese food reminds me of home, I guess. I like the food that my mom cooked, basic stuff. I already told you I come from Hubei, and in case you don't know, Hubei cuisine is famous for its steamed fish, it's simple, delicious, and healthy. Whenever I make steamed fish, I feel I can smell my home instantly. No place is better than home; no dish is better than steamed fish. If I am dining out, well, I always choose Asian restaurants operated by Asians first. And, you know, I feel many Americans discriminate against Chinese, I have been to those American restaurants, sometimes the waitresses are making fun of my accent, and in many occasions, I saw very unfriendly stares from other (white) customers. One time, I was dining with a white female classmate of mine in a restaurant, a customer from another table even came to my classmate and asked her why she was willing to eat food with a Chinese dude. I feel angry, I have never done anything wrong here, I am a doctoral student, I don't want to be treated in this way,

and I don't want to be discriminated against. I feel much more comfortable when I am eating at Chinese restaurants, Japanese restaurants, or Korean ones. Probably you know this, the owner of Asian Buffet, Aunty Zhao, she is very kind to us, she always asks how I am doing, and sometimes when I forget my wallet, she will let me go without any problem. I feel she really cares about me. It's not only that, most Chinese restaurants are very friendly to us, right? I feel comfortable either cooking my own food or going to other Asian-owned restaurants.

Nan has a similar emotional attachment toward his hometown food to Chen's. While he humorously joked that his Chinese stomach makes him eat Chinese food, we can feel that he is very proud of his hometown steamed fish dish. As suggested by Liu and Dong (2019), the feeling toward home country or home town may act as a mental buffer zone for migrating individuals, such as international students, during the acculturation process.

Another unexpected finding from Nan's story is that racial discrimination has played an essential role in his food-related decisions. In their study, Brewster and Rusche (2012) suggested that racialized discourse and anti-black discriminatory behaviors were commonly displayed in restaurant settings, and as a result of this racism in American society, African Americans are less likely to eat at full-service restaurants. Nan's experiences coincided with the results from Brewster and Rusche's study. Nan's experience of facing racial discrimination in American restaurants, while being taken care of in a Chinese restaurant, highlights the differences between being white and being non-white. These differences are embodied in individuals' food choices and have become a constant reminder for Nan of his "otherness" in contemporary America. For Nan and other Chinese students, dining in Asian restaurants not only provides them with familiar food, but also with social support (both emotional and instrumental supports), and more importantly, eating in a familiar environment provided him a safe place to be Chinese.

While most of the participants reportedly chose to eat Chinese or other Pan-Asian foods, some participants expressed that they viewed eating American food as a necessary step in their acculturation process. As suggested by Ma, a 27-year-old male Ph.D. student:

I like Chinese food; Korean, Japanese Thai food is similar to Chinese food, and they all use green onion, ginger, and rice. Do you know why we eat these foods? They are home food or at least taste like food from China. You can't abandon who you are, and to be honest, they taste better, and healthier (than non-Asian food). When you are stressed out, you want to eat something from your hometown. The reason why I sometimes eat American food is that I do not want to be looked like a foreigner, I know if I say I want to go to Chinese restaurants, my American lab mates and classmates will think I am not one of them, and they will isolate me and not socialize with me after work. I also think eating burgers, pizzas, and salads is a way to show that I am accepting the American lifestyle, no junk food or fast food though. If I was going to eat at American restaurants, I would make sure that I go to the right one like Applebee's or Red Robin. You know, put down my chopsticks and pick up the knife and fork; I will try to act as I can behave like other white people. And If I was at a conference, I would definitely eat American food; it makes me look professional like the others.

There are multiple meanings in Ma's words, as he suggested that the main ingredient (rice) and spices (green onions and ginger) in Chinese and Pan-Asian dishes not only fit with his tastes but also provide comfort to him during his stressful time. Chinese foods provide Ma a reaffirmation of his cultural identity. As suggested by Mintz and Bois (2002), cultural identities have strong influences over one's food choices and eating behaviors. While immigrants might leave their non-dominant cultural group and join into the dominant culture, their attitudes towards food and their food-related cultural identity could not be easily changed (Bhugra & Becke, 2005). Ma's struggle between being who he is (Chinese) and trying to act like Americans highlighted the inherent dilemma of being an immigrant.

For some sojourners, to achieve successful assimilation in a dominant culture, individuals have to acculturate to the mainstream culture and deculturate from their

home culture (Liu & Dong, 2019). In terms of eating habits, sojourners have to maximize their chances of interacting with individuals from the host societies, which can be done through such behaviors as eating American food and dining at American restaurants. Another way to examine Ma's dualistic food behavior is from the social network building perspective.

In a white-dominated society, Chinese food is often viewed as a critical signifier of difference that marks respondents out as 'deviating' from the dominant white 'norm' (Tan, 2003). Chinese immigrants were worried that their diet could lead to various societal comments, which were often fused with subtle and covert racism. Although it's difficult to tell whether Ma's classmates have implicit racism or not, Ma clearly thought that without eating American food, he would lose the opportunity of creating new social networks and might be subjected to social exclusion.

Theme Two: Health Concerns, Traditional Chinese Medicine, and the Unwillingness to Change

While participants' overwhelming preferences for Chinese and Pan-Asian food are associated with their cultural identity and their life history, another major reason for them to not change their diet is that they were concerned about western food, and they believed that Chinese and Pan-Asian diets could help them to maintain nutritional health. One of the ways participants avoided diet change was to eat less food, as it was suggested by Wang YT, a 27-year-old female Ph.D. student:

> *I eat very little; I mainly eat some rice with some vegetable, and I prepare my own food so that my diet has not changed. In general, I believe there should be a delicate balance of cold and hot. In our food, rice, meat, and eggs present the hot, while green-leaf vegetable presents the yin, you can put fruit, seafood as the fillings for the void. That's a balance, and balance leads to good health.*

As evidenced by Wang's account of maintaining her diet, I learned that besides wanting to preserve her cultural identity through food, one of the main reasons for her to not change their traditional diet was related to her concerns about health consequences.

When I asked the questions about their feeling about the food environment in Oklahoma, participants replied to me with the following concerns regarding their current food environment: foods served in American restaurants have too much meat, fat, oil, and sugar; too much-processed food and junk food; and a lack of affordability and availability of fresh fruits and vegetables. According to the participants, changing their diet from a Chinese one to an American one would lead to unwanted weight gain, skin problems, insomnia, and bloated gut. As a counter-measure, participants in this study used their understanding of Traditional Chinese Medicine to preserve their health (both physical and mental). Here is the story from Zhang CX, a 26-year-old female from Shandong, China:

I think I try to eat healthily; I gained some weight after I change my diet; now I am back to my Chinese diet, and I think I am beginning to lose weight. I think diet is related to weight. According to Chinese medicine teaching, there should be a balance between the cold and hot, yin and yang. When I was in China, my mom always cooked me angelica, Scutellaria, red dates, and silkie chicken stew soup. In the future, if your wife has a similar problem, you should cook this for her. It will promote and nourish her blood circulation, as well as reduce the phlegm and regulate her Qi. I feel Americans overeat yang and hot food, not enough cold food. I feel maybe Asians have different internal body type than Caucasian, one of my female friends is on her period, but she is eating burgers, ice creams, salads; I cannot do that, if I do that, the pain of dysmenorrhea will make me very uncomfortable.

Zhang demonstrated strong cultural beliefs about the nutritional and medicinal function of her diet. From her perspective, the American diet provided Yang and Hot, which are suitable for the Caucasians' lifestyle. In comparison, the Chinese diet has more Yin and Cold, and she found it best for her to maintain Chinese eating habits. In

general, western nutrition practices also emphasize the importance of a balanced diet; however, Chen's dietary practice is mainly influenced by her understanding of Traditional Chinese Medicinal philosophy. Chen et al. (2013) suggest that angelica drink, ginger, Ziziphus jujube, brown sugar tea, and analgesics can be indicated for dysmenorrhea, which are very similar to the ingredients in Zhang's angelica, Scutellaria, red dates, and silkie chicken stew soup.

To a certain degree, Zhang is not alone: her words resonated with results from other studies about Chinese immigrant's diet and with findings in the Traditional Chinese Medicine literature. For example, Ma (1999) suggested that Chinese immigrants in Houston and Los Angeles often utilized balanced diets and other alternative medicines as self-treatment for illnesses and diseases. In their study of Canadian Chinese immigrants' health practices, Lai and Chappell (2006) also noticed that their participants often used over-the-counter Chinese herbs (50.7%) and over-the-counter Chinese herbal formulas (49.1%) to treat illnesses and diseases. Under the framework of Traditional Chinese Medicine (TCM), the relationship between food/diet and medicine is very close. As summarized by Wu and Liang (2018), in TCM, the physiological condition and pathological mechanism of the five internal organs are inseparable from the five flavors of food.

Another finding from this study is that the participants expressed that because they were separated from their original food environment and were not able to obtain Chinese food as they used to, they developed their cooking skills on their own. When the participants were not able to cook, they often felt frustrated. From example, as Chen Y, a 20-year-old female student suggested:

The university asks us to buy meal points, and the dining hall mainly serves American food. Sometimes I use my meal points to buy sushi at an on-campus food bar. I think I am forced, and my choice is limited, and (the food) from the bar is disgusting.

In Chen's eyes, the mandatory meal point policy had become not only a detriment to her agency and independence but also a threat to her dietary health. This finding coincided with the finding in Brown's (2009) study, as the participants suggested that cooking was one of the essential methods for them to keep track of their emotional wellbeing and physical health. In addition, cooking traditional food played an important role for them in maintaining their self-efficacy.

Theme Three: Creating Social Network, Maintaining Social Support, and Sharing

Sobal et al. (2002) found that, for married couples, eating commensal meals is an integral part of establishing intrapersonal relationships. Their study suggested that in a commensal eating circle, friends, coworkers, and neighbors often function as eating partners; commensality is a critical component in establishing relationships. Hamburg et al. (2014) further argued that from an intrapersonal perspective, food consumption often plays a vital role in emotional regulation.

Food offering, sharing, and eating also act as a non-verbal signal of relationship. For people who are in relationships, sharing meals with the families of significant others signals the seriousness of the relationship, and it is one of the most frequently used techniques for one to become acquainted with the other one's family. Food sharing is a facilitator for creating, promoting, and maintaining intimacy, kinship, and social network.

My study also found that cooking and eating together served as an integral part of daily life among the participants. Among the 35 participants, more than 72.1% (n=27) of them have regularly shared food with other people. Besides the ones who do not have roommates (n=6), only two participants do not share food. In their study, Pritchard and Skinner (2002) suggested that in the United States, commensal mealtimes were often reserved as the privileged time for family communication; as a result, family meals generally last more than one or two hours and often have different dishes. In this study, most of the participants did not have family members with them in the United States, and in most cases, they did not know the person with whom they shared food preparation and consumption before they became roommates. However, since most of the participants had Chinese roommates, they used this as a tool to promote and forge a social connection between them.

I always think because we cook in turns, we can save a lot of time. If we eat at restaurants, not only do we waste money, it is a waste of time. Li GY

Eating together, it also saves us a lot of time. Huang W

It's a shared burden. Jin L

As we can see from these quotes, a major reason for these participants to cook and eat together is related to instrumental supports such as saving time, reducing waste, and saving money. It is also important to point out here that among the participants who cook with their roommates, both parties almost always share the same amount of the cooking-related burden, and participants and their roommates cook in turns. Another point from the interviews is that the practice of cooking together could also be explained by the collectivist tradition of Chinese culture. As it was suggested by

Triandis et al. (1988), Chinese culture is marked by extreme collectivism. While contemporary Chinese culture has allowed a certain degree of individualism, it still emphasizes harmony within in-group social interactions. By cooking together, both parties signal their willingness to form a mutual support system, which in return reduces both acculturative stresses as well as intrapersonal tensions.

Another reason for participants to cook and eat together is related to emotional regulation and social support. Hsieh (2011) has summarized that eating together was considered an essential aspect of forming close relationships with other Chinese people. Skinner (2008) suggested that in contrast to international students who come from western countries, it was rare to see an Asian student asking for emotional advice and support from a co-ethnic student. However, the findings in this study suggested that while the Chinese international students may not be good at seeking emotional support from their university's counseling services or from their American classmates or friends, they often create and maintain their social support via cooking and eating with other Chinese international students.

We are friends; she also comes from Liao Ning. We are home girls. Zhao ZH

It makes me feel it's like a home. Ma Y

My roommates are two Chinese girls; I think the main reason is that we eat similar food, and by eating together, we can find comfort. Zhang CX

I feel he is my brother, let's put it that way. I think in a lot of times; international students are very lonely; I don't like to eat alone. Li XS

As we can see from these examples, cooking and eating together provided emotional support, such as providing care and comfort for each other and creating a

familial environment (sisterhood and brotherhood). In some regards, sharing food and the process of making food have become a vehicle for the participants to recreate the social support that they had in China. Unlike their American counterparts, the participants in this study did not have family members and friends to provide them with sufficient social support, and as Snider (2001) suggested, Chinese international students are often unwilling to use official counseling services due to mistrust. As a Chinese international student, I also have same feeling. Thus, the process of cooking and eating together has become a fundamental way for the participants not only to find but also to provide emotional support to and for each other.

Another reason for eating and cooking together is related to a cultural tradition in China. As it was suggested by Ma (2015), in a traditional Chinese dining setting, dishes are placed in the middle of a round table for people to share. Ma pointed out that compared to the western culture where separate dining is commonly accepted, in China, no matter whether a person is dining at home or in a restaurant, Chinese people prefer to use a group-dining system. In this study, I also found similar patterns:

I don't know; it's a tradition? Ma JF

I think it just comes natural, since we are living under the same roof, we should treat each other like friends or family members, and it will be weird to see the other person without food when you are eating, I usually come home at a different time than my roommates, but if we arrive home around the same time, we will definitely prepare and eat food together. Zheng L

Isn't it weird to not eat with your roommates? Wang WH

In the interviews, while no participant said that traditional Chinese group-dining practice is the main reason for them to cook and eat together, the preceding quotes reflect that they had internalized the cultural practices without even thinking about it. Another finding particular to this study is that local Chinese churches also play a role in

organizing group dining. For example, the International Minister and Director at the local Wesleyan church (who is Chinese) organized Chinese dinners for Chinese international students to eat and meet with each other (every Tuesday and Thursday).

Another example is that a Taiwanese professor organizes Chinese international students to attend food sharing events at a local Westside congregation church. These church-related activities often function as the nexus of creating new social networks for Chinese international students. Most of the students that I interviewed had gone to the Wesleyan church before. The findings in this study reaffirm the conclusion in the study by Brown et al. (2013): eating is both a personal and a social act; although the sensual pleasure of eating is subjectively experienced, it is often undertaken in groups (p. 202).

Themes from Photovoice Session

Theme One: Rice and Vegetable, the Chinese Foodways

In the discussion and narration session, I asked the participants to explain how the subjects of the photos are related to their understanding of the Chinese foodways. Nearly all participants agree that only after they migrated to the United States, did they realize their traditional Chinese everyday home dishes (家常菜) are symbols of their Chinese identity.

Chinese food provides them with a taste of home. The smell, look, structure, and ingredients of Chinese food are infused with the memory of home. According to participants, Chinese meals have different structures and use different main ingredients than American meals. Most participants agreed that Chinese meals are vegetable-heavy, and should be cooked with steaming, water-boiling, and stir-frying techniques.

As we can see from the photo, Wang YT eats very little, and she mainly eats vegetables. This photo shows what her daily meal looks like, one spring roll, some stir-fried Bok Choy, and some steamed rice.



Figure 2. Photo from Wang YT.

Huang W, a male graduate student, stated that rice provides the foundation for all Chinese meals. Huang explained that that rice is more than an ingredient, it also symbolizes the character of Chinese people:

Rice is the grain that was domesticated by our forefathers and foremothers in the ancient time. Without rice, there would not be Chinese civilization. When you look at a bowl of cooked rice, each rice grain may be small and unnoticeable; yet, when (there are enough rice grains), they become a strong source of energy.

To reinforce his point, he shared a photo of his dinner plate (he embedded a poem by Teli Jiang in his photo). As we can see from the photo in Figure 4, besides streamed rice, his dining plate only has three simple side dishes: pickled vegetables, green garlic (Laba garlic, , Laba is the day when Chinese people celebrate the enlightenment of the Buddha), and three slices of fish cake. Huang suggested that as a Chinese international student, eating rice reminds him about his cultural root during his sojourning years.

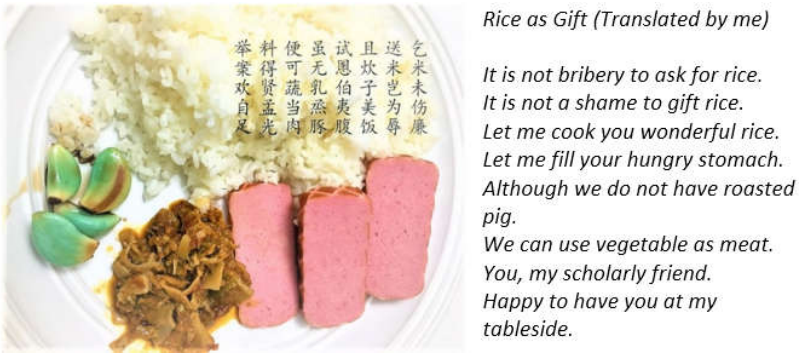


Figure 3. Photo of Steam Rice and Side Dishes from Huang W.

Zhao HF agreed with Huang, Zhao jokingly suggested that Chinese food culture has a very different attitude toward meat and vegetable than American food culture. He pointed out that in Chinese food culture, fruits and vegetables have a much higher status than meat. He shared a picture of his everyday dishes, which also had rice as the main dish. As we can see from the picture, beside the red roasted meat, his other side dishes are stir-fried vegetables.



Figure 4. Zhao HF's Dinner: Rice, Red Roasted Meat and 2 Vegetable Side Dishes.

To further justify his point, Zhao quoted "the meat eater is to be shamed, they are not good at making long term plans (肉食者鄙，未能远谋)" from Zuo Zhuan (BC 300). Zhao stated that the most significant dietary challenges he and his Chinese friends

experienced are the shift from a vegetable-heavy diet to a meat-heavy diet, and he suspected that his newly developed bowel irritation and oily skin problems were directly related to the dietary change.

Other participants facilitated the discussion on the cultural significance of eating vegetables. Zhang T showed a picture of her dinner, which is noodle covered by bok-choy and mushroom. She analyzed that the media and TV advertisements have played an essential role in shaping people's diet habits. Zhang told other participants:

In China, when you see the food and restaurant advertisements, (the advertiser) always shows the balance between vegetables and meats, there are five grains, vegetables, and some meat dishes; while in the American food advertisements, there are always meat and meat. When you are going to eat, you think about what you saw on TV. Americans think eating meat is manly and masculine, while in (Buddhist) Chinese culture, eating vegetable are regarded as showing benevolence and self-discipline.



Figure 5. Zhang T's Dinner is Bok-Choy and Mushroom.

Participants said their desired Chinese meals were high in vegetable and carbohydrate content, and low in meat. Zhang brought me a homemade lunch as a gift. (Figure 6), and this lunch was mainly made from vegetables, the package on the left was black wood ears (Auricularia auricula-judae), onion, and bamboo shoots; the one the right was stir-fried potato with pork. Several participants mentioned the linkage

between eating vegetables and their Chinese identity. In his study of Chinese foodways, Reinders (2004) suggested that vegetable-heavy Chinese dietary tradition is related to the widespread of Buddhism in China, and he points out that "discourse on the choice of meat or no meat was mingled with a wide range of other binary oppositions such as modern/outdated, West/East (p. 168)." The findings in the photovoice discussion support his analysis. According to the participants, they also perceived eating a high quantity of meat as eating like Americans, while regarding their vegetable-heavy diet as being Chinese or being Asian.



Figure 6. Zhang's Gift to Me are Two Vegetable Dishes.

Theme Two: Food Environment and Health

Another theme that emerged from the photovoice discussion session is related to the food environment and health. According to the participants, the most visible change in food environments is the availability of ultra-processed food (UPFs).

He JM, a female graduate student, brought up the discussion of UPFs. She pointed out:

American meals are often prepackaged in plastic wraps and have certain 'industrialized' appearances. Things like hotdog sausages and chicken nuggets, you cannot tell what the ingredients inside of them are. In comparison, Chinese foods often resemble the rawness of agriculture society and are closer to nature; you can easily tell the ingredients by eating them or by looking at them.

According to her, the major differences between the Chinese food environment and American food environment is the affordability and availability of UPFs. He JM's dinner consisted tofu, Chinese cabbage, red roasted pork, and homemade sushi (Figure 7). She suggested dinner should have more vegetable dishes and less meat dishes.



Figure 7. He JM's Dinner is Tofu, Cabbage, Red Roasted Pork, and Sushi.

In the United States, UPFs are often cheaper than non-UPFs; while in China, the most affordable and available foods are street foods that are made from scratch with real "ingredients." She suggested that when she was a college student in China, whenever she was hungry, she would purchase Chinese crepe as her grab-and-go snack food (Chinese crepe, which is made from wheat flour, green bean flour, green onion, egg, lettuce leaf, sesame seed, sweet soy paste, and chili paste) at the price of 2.5 Chinese

Yuan (approximate 40 cents). However, the only grab-and-go food she could afford here were packaged UPFs. He's words resonated with everyone in the discussion group.

Zheng L described the transition of their foodways as changing from a healthy diet to an unhealthy diet and then returning to a healthy diet. Although none of the participants majored in food and nutrition sciences; they had a clear understanding of what kinds of diet one should consume to maintain health.



Figure 8. Zheng believes that His Salmon Dish has Omega-3 fatty-acid to Keep Him Healthy.

In particular, participants expressed that in order to become a healthy eater, they should reduce their ultra-processed food intake, limit their fat and meat intake, and increase their whole grain, vegetable, and fruit intake. They also provided a quick ethnicity-based method to distinguish healthy or unhealthy foods. They suggested that healthy foods mainly include Pan-Asian food, such as Chinese, Japanese, Korean, Thai, and Vietnamese foods, whereas foods perceived to be unhealthy included fried, baked, and—in their words—American food.

When asked why the participants associated ethnic foods with health, Wang replied:

As you see female in those countries (China, Japan, Korea, and Vietnam) are smaller than the females in the United States, and I think the only way for me to return to normal weight is to go back to my Asian diet.



Figure 9. Wang suggested Vietnamese Cuisine is Good for Weight Management.

Yang similarly expressed, "*I think diet is related to a certain type of built-in digestive capability, as Asians, we are adapted to thrive on vegetables and rice and small portion; in contrast, Americans are more adapted to eat meat and high energy food (calories), and they can eat more than us; I think I am following the natural flow*." Yang then used a metaphor to explain his point further: "*Eating American diet is like driving over the speed limit, once there is no emergency, we have to go back to our traditional diet to get our body back to normal*." The participants' switching from the discussion of cuisine to the discussion of body image was instantaneous, yet surprisingly natural.

All participants described their new dietary environments as less ideal than the food environment in China. More specifically, they pointed out that eating a healthy diet was very challenging, especially during the weekdays. Several of the participants showed me pictures of the food options available on campus, which were fried chicken and burgers. Zhao said to me, "*I have shown the picture of the dining environment to my parents, who are both professors in a Chinese university. They are concerned about the quality of the food here.*" Many participants said they strongly agreed that in order for them to get healthier food at an affordable price, they had to prepare their meals. Chen described this by saying: "*if I can eat like in Chinese universities, why should I cook my own meal?*"

Theme Three: Cooking as Adaptation

Adverse health outcomes are often the result of poor dietary habits. The short-term and immediate result of eating an unfamiliar or unhealthy diet was upset stomach as well as skin problems. Participants suspected that the diet here had caused inflammation (上火) in their system. Several participants also mentioned irregular bowel movements during their first semester, which contributed to their insomnia problem. Another noticeable result of changing diet is the medium-term problem of unwanted weight gain during the first years in the United States.

Participants described cooking as an essential survival skill. Based on the discussion, there are two significant benefits of cooking for themselves. Cooking allows them to enjoy healthy foods at an affordable price. As it was suggested by Zhang, after she got her car and driver's license, she was able to purchase familiar vegetables to make the food she was used to eating, and by doing so, reduced the frequency of dining

on campus, and she successfully reduced her weight from 102 lbs. to 91 lbs. in one semester. Also, my participants utilize the time that they spend on cooking to maintain their relationship with their parents. For example, Jiang showed me a picture of his "jointly created dish," he happily described to me that he often makes video-calls to his parents during his cooking.



Figure 10. Jiang Learned How to Cook Stewed Pork Hock from His Mom.

His mother often provided useful tips on how to pair different ingredients together. Although his parents were farmers in China and do not understand his academic research, cooking provides him an opportunity to fortify his bond with his parents.

From the discussion of the photos, I learned that all participants had learned their cooking skills from their parents, and all of them indicated that the topic of cooking had increased the frequency of contacting their parents. Moreover, Wang suggested that cooking provided her with an opportunity to connect with her roommate (who is also a Chinese international student; she described the relationship as

"sisterhood"), and they now go grocery shopping and prepare food together, and they cook for each other in turns.

Furthermore, cooking also provided the participants an opportunity to establish social networks with non-Chinese people. Li suggested that due to cultural differences, she always found it difficult to create conversations with her American lab mates. However, she now shares her fusion dish (such as the yogurt nut pancake, pictured below) with them, and uses it as a way to start small talk. In her own words, "*Food is the universal language and cooking is the perfect topic for me to use."*



Figure 11. Li's Pancake is a Combination of Traditional Chinese Steaming Cooking Method and Western Ingredients.

Themes and Results from Participant Observation

None of the participant in the participant observation session has cars, they expressed to me that they need other people's help to go to grocery stores. Their grocery shopping frequencies were random. Table 15 showed how frequently of my participants asked me to take them to do grocery shopping and the types of food my participants purchased at each location.

It is also important to point out here, as the owner and organizer of Chinese student and scholar mail list, whenever I have time, I always provide voluntary driving services to other Chinese students. Thus, my behavior may have changed my participants' estimations of their grocery shopping frequencies.

Table 15. Grocery Shopping Locations, Frequencies, and Food Purchased.

Location	**Estimated Frequency of Visit per month**	**Food purchased**
Sprouts Farmers Market	1-2 (Low)	Discount Meat, Fresh Vegetables, and Fruit
Crest Foods	1-2 (Low)	Nuts, American Cookies, and Cakes
Walmart Neighborhood Market	1-2 (Low)	Meat, Cooking Oil, Milk, Yogurt, Bread
Target	1-2 (Low)	Milk, Yogurt, Bread, Soft Drinks, American Snacks
Saigon Taipei Asian Market	3-4 (Medium)	Fish, Meat, Fresh Vegetables and Fruit, Rice, Noodles, Seasoning, Tofu and Gluten products, Cooked Dishes
Dong-A Korean Market	3-4 (Medium)	Instant Noodles, Kimchi and Pickles, Vegetables, Asian Snacks
Chinatown Supermarket	3-4 (Medium)	Fresh Vegetables, Rice, Noodles, Meat, Seasoning
Super Cao Nguyen Market	3-4 (Medium)	Fresh Vegetables, Rice, Noodles, Tofu and Gluten products, Fish, Ducks, Mutton, Frozen Steam Buns & Dumplings

In addition, during the participant observation session, I also collected how participants spent their money, their food preferences, and their cooking experiences (Table 16).

Table 16. Participants' Food Expenditure, Preferences, and Cooking Experiences.

Name/Gender	Average food-related expenditure per month (USD).	Most cooked food by cuisine type and cooking methods.	Years of cooking; who taught them; miscellaneous.

Zhang T. Female.	300-350 per person; 600-750 per household (all costs related to homemade lunches and dinners are shared with roommates)	Chinese, stir-fry meat and vegetables; Chinese medicinal food for health reasons.	4 years; this participant's parents taught her; she cooks all the time since her boyfriend does not know how.
Hao B. Male.	300-350 per person; 650-800 per household (all costs related to homemade lunches and dinners are shared with roommates)	Chinese, stir-fry meat and vegetables; cereal and bread for breakfast; Occasional all-meat meals.	3 years; this participant learned to cook mostly from his parents, and secondarily from his roommates; he learned to cook after migrating to the United States.
Jiang S. Male.	300-350 per person; 650-800 per household (all costs related to homemade lunches and dinners are shared with roommates)	Chinese, water-boiled and stir-fry meat and vegetables; fruit and yogurt for breakfast.	3 years; this participant learned mostly from his parents and some techniques from online video clips; he learned to cook after migrating to the United States.
Yang C. Female.	450-500 household (her son is a dependent)	Chinese; American style breakfast such as oatmeal (PB&J sandwiches for son's breakfast).	15 years; this participant learned how to cook from her mother; she learned before coming to the U.S.; she cooks for her parents, husband, and son.
Chen I. Female.	150-200 per person; 350-400 per household (all costs related to homemade lunches and dinners are shared with roommates)	Chinese, Korean, mainly water-boiled and stir-fry meat and vegetables; bread and yogurt for breakfast; instant noodles as a fallback food.	2 years; this participant learned to cook from her parents; she learned after she migrated into the United States.

Li L. Female.	150-200 per person; 350-450 per household (all costs related to homemade lunches and dinners are shared with roommates)	Chinese, water-boiled and stir-fry meat and vegetables; fruit and yogurt for breakfast; instant noodles as a fallback food.	3 years; this participant learned how to cook mostly from her parents, and also from the restaurants where she worked; she learned after she migrated into the United States.

Three themes emerged from the participant observation: (1) Social support, food sharing and cooking, (2) Cultural identity of foodways, and (3) Perception of dietary health and food environment.

Theme One: Social Support, Food Sharing, and Cooking

Through participant observation, I learned that foodways have provided strong social support and social networks to bind Chinese international students together as an ethnic group. The most obvious thing is that among the six participants who enrolled in the participant observation session, five of them shared foods with their roommates (Table 17).

Table 17. Kitchen Setting, and Living Conditions, and Food Sharing Behaviors.

Participant	Kitchen Appliances	Number of persons in the household; their relationship	Observed Time spent on cooking	Food sharing (Y/N)	Cost Sharing (Y/N)
Zhang T. Female.	Stove, Microwave, Refrigerator	2; the participant lives with her boyfriend.	1.5 hours	Yes, all three meals. Participants cook 5-7 times per week.	Yes: all food-related costs.
Hao B. Male.	Stove, Microwave, Refrigerator	2; the participant lives with his friend, another male Chinese international student.	1 hour	Yes, lunch and dinner, cooking in turns and 3-4 times per week.	Yes: the cost of meat, vegetable, rice, noodle, oil, and seasoning.

Jiang S. Male.	Stove, Microwave, Refrigerator	2; the participant lives with her friend, another female Chinese international student.	1 hour	Yes, lunch and dinner, cooking in turns and 3-4 times per week.	Yes: the cost of meat, vegetable, rice, noodle, oil, and seasoning.
Yang C. Female.	Stove, Microwave, Refrigerator	2; The participant lives with her son.	1.5 hour	Yes, breakfast and dinner, cooking 5-7 times per week.	Yes: her son is her dependent.
Chen I. Female.	Stove, Microwave, Refrigerator	2; The participant lives with her friend, another female Chinese international student.	1 hour	Yes, lunch and dinner, cooking in turns and 3-4 times per week.	Yes: the cost of meat, vegetable, rice, noodle, oil, and seasoning.
Li L. Female.	Stove, Microwave, Refrigerator	2; The participant lives with her friend, another female Chinese international student.	1 hour	Yes, lunch and dinner, cooking in turns and 3-4 times per week.	Yes: the cost of meat, vegetable, rice, noodle, oil, and seasoning.

The first observed phenomenon is the usage of fictive address and familial appellation. As was suggested by other anthropologists and social scientists, in qualitative research, it is crucial for researchers to establish rapport with the participants (Heald, 2009, p. 16; Silverman, 2011, p. 430; Chrzan & Brett, 2017, p. 60). In the participant observation session, to my surprise, there was almost a natural and instant rapport between the observer and the observed. All participants have referred me as "Yue Ge (岳哥), which literally translates as Big Brother Yue" (Yue is my given name), and they suggested to me that I can call them as "Xiao (小)," which literally means

little, and their family name. I think the rapport between my participants and me is mainly established by my five years of voluntary work for the Chinese international student community.

The change of address created a rapport instantaneously; more importantly, as it was suggested by He and Ren (2016), by omitting the family name of mine Dong (董), the addition of honorific addressing Yue Ge (岳哥), and the using of self-abasing addressing Little (小), participants have proactively created a fictive kinship which included me (also see Cheung, 1990; Geng, 2015). The creation of fictive kinship and developing social support and social networks were also observed during the in-house participant observation.

For example, when I was conducting research at one female participants' home at around 3:30 PM, the girl frequently referred to her roommate as her lost sister even though they had just met each other four months ago. In one instance, the participant asked me to take her to Saigon Taipei to purchase jujube, longan, and Silkie chicken, and the participant made soup for her roommate who was experiencing pain from dysmenorrhea. Through the conversation and participant observation, I learned that one of the essential daily interactions between her and her roommate is to cook for each other. According to the social support perspective of Schwarz (2014), through cooking, Chinese international students have created instrumental supports for each other as they share the burden of food preparation (on average, the observed cooking duration is 1.16 hours per day). Moreover, for immigrants who do not have any family members or friends in the host country, the act of cooking together provides natural social encounters, providing emotional support and creating a sense of togetherness for them.

Another way to look at the relationship within foodways, social supports, and dietary health is to look at how people are consuming food. Instead of making individually portioned food, all participants have eaten and shared their food with their roommates (I was offered food as well).

One participant stated, "*Unless they were labeled with my name, (all the food in the) refrigerator and cupboard are shared; it would be (culturally) awkward for me not to let my roommate eat the food in shared spaces, that's an American thing (keeping food for oneself), not the Chinese way*." This statement suggested that the concept of sharing food is deeply embedded in Chinese culture and language.

In Chinese, the word for meal is Huo Shi (伙食), the word for a partner is Huo Ban (伙伴), the word for eating and cooking together is Da Huo (搭伙), and the term for collaborating is He Huo (合伙). The common denominator among these three words is Huo (伙), which is made up from people (人) and make fire (火) to cook. The practice of Da Huo includes buying groceries, cooking, and eating together, and this habit reflects Chinese dietary culture which is widely accepted among the Chinese international student population. As one male student suggested, "*Without eating together, there will be no brother/sisterhood*." The ancient poem "The Merchant's Joy" by Yuan Zheng (Tang Dynasty, AD 779-831) depicts this sentiment as well: "After saying farewell to father and brothers at home, a person should rely on his/her cooking partner when he/she is traveling (出门求火伴，入门辞父兄)."

In contemporary Chinese culture, the term Xiao Huo Ban (小伙伴), a little friend who shares food/eats with me" has become one of the most frequently used phrases [with about 129,000,000 results on Google]. To a certain degree, in order to be

a Chinese and to have Chinese friends, it is essential for one to find another Chinese person with whom to cook, eat, and share food together.

A recent study by Boatemaa et al. (2018) suggested that a healthy diet should include meals that have varieties, and that food boredom (a continuous consumption of the same meal for breakfast, lunch, and supper) would not only lead to emotional dissatisfaction but also to unhealthy dietary behavior. From a functionalist perspective, one often overlooked benefit of cooking and sharing food together is that these practices could reduce both the long term "food boredom" and short term "food insecurity." As Weijzen et al. (2008) suggested, food boredom is caused by repeated exposure of familiar foods, which could lead to a reduction in the motivation to eat the food, reduced appetite for the food, and a general loss of interest in the food.

All participants in this research were international students who were facing both acculturative and academic stresses, so in order to save time, they often cooked a large quantity of the same dishes. Through observation, I noticed that the participants usually cooked a whole wok (3 Qt. to 5 Qt.) of the same dish in one cooking setting. As they suggested to me, without their cooking partners, they would have been doomed to eat the same dish (usually with steamed rice or water-boiled noodles) for 4-6 meals consecutively. While the dishes may be nutritionally balanced, repetitive eating of the same dishes often leads them to severe food boredom.

In addition, based on the observation, I also noticed that each participant often used the same set of seasonings and cooking techniques during cooking, which led to the same overall taste of their food. One participant suggested that since his roommate

comes from another province in China, their choices of seasoning and cooking techniques are entirely different. He said:

My hometown is in the northeast. The main way of cooking is stewing. I use large leafy vegetables, such as Chinese cabbage, and I like to put diced pork and beef in my stew. This is my style. I focus on the use of soy sauce, and not so much on the use of green onion, ginger, and garlic. In comparison, my brother (his roommate) is a Sichuanese, he likes to stir-fry with high temperature, and he likes to cook horse bean, cowpea beans, and various kinds of peppers. He also likes to cut the meat in thin slices, his style of cooking is less salt, but spicier. As we take turns in cooking, both of us can have different tastes every day. I don't feel bored (from my own cooked food), and I have a good appetite every day.

In terms of avoiding "food insecurity," I learned that most participants cooked food for their roommates when the other one did not have time to prepare food or was experiencing temporary financial difficulties. In addition, all participants suggested that when compared to eating alone, having a cooking and eating partner enabled them to establish a more regular eating schedule so that they would be far less likely to skip meals.

The function of shared cooking and eating provides the participants with not only immediate social support but also with a way to maintain social ties and cultural values with their family members in China. Nothing summarizes this effect better than the following quotation from one participant:

I am very busy with my classes and research, I can hardly squeeze any extra time to call my parents (every day), and my parents are ordinary workers. They are not interested in my current research, nor could they understand my research. Even when I call them, I don't know what to say to them. If I was at home (in China), I could at least help my mom and dad to do housework, or watch TV with them, at least I could find something to talk to them about. Now, as I am in the United States, these opportunities are not here, and I often feel I am a total failure (as a daughter). Fortunately, cooking provides me something to talk to my mom and dad about; I am always chatting with my mom and dad when I am cooking. Cooking time is the only free time I have on a consistent basis, as I have to eat and cook. So, whenever I am cooking, I am video chatting with my parents, it feels like I am with them in real life, even sometimes when I

concentrate on cooking and not talking, they are watching over me, and they are happy. Moreover, when I was in China, I didn't actually cook at all. Now as my parents are watching me cooking, my mother often provides some tips to me to improve my skills, she always tells me that cooking could make me a good daughter, a good wife, and a good mom just like her. In fact, you just saw me watching the iPad, I am not watching video clips, but I was actually chatting with my parents. My mother told me that because you are a Shanghai native, my mom used to work in Shanghai, so my mom said to me, 'Put more sugar, Shanghainese love sweet dishes.' I now find that cooking serves many things for me, as I not only learn how to cook, but also I have enough time to communicate with my parents with real-life topics.

According to Dion & Dion (1993), Chinese culture emphasizes the importance of cross-generation relationships as well as the individual's emotional dependency on and lifelong devotion to the family; these attributes are known as filial piety (Xiao Shun 孝顺). Their findings coincide with the teachings of the Classic of Filial Piety (Xiao Jing 孝经, Confucius, BC475 - BC221), the book in which Confucius stated that sons and daughters, even after they get married and have their own families, should maintain close, intimate ties with their parents and family members of older generations (Xiao 孝), siblings, with their cousins and family members of same generations (Ti 悌), as well as with their family members of younger generations (Ci 慈). As Lan (2002) suggested, in order to fulfill the requirements of filial piety, one of the most important things that the children can do is to cook for their parents. Yeung and Chang (2006) noticed that Chinese cultural norms have substantial effects on emigrants' mental health and that one of the significant causes of adjustment disorder is the self-perceived failure of filial duties and selfishness.

Due to the One Child Policy in China, all of the participants in the participant observation session are the only children in their families, and none of them could perform standard filial practices. Thus, the unique Chinese family structure and

traditional cultural values can inhibit Chinese international students from maintaining their mental well-being. As several participants told me, they felt they had failed their parents as they couldn't find time to communicate with them due to both academic and acculturative stresses, as well as different time zones. However, they suggested that with the help of internet communication technologies such as QQ and WeChat, cooking has provided them a unique opportunity to communicate with their family members in China as well as to preserve their traditional Chinese cultural values and familial support networks.

Theme Two: Identities in the Foodways

The concept of foodways is often associated with ethnic-identified foods and is often symbolized by certain dishes: Italian pizza, Korean bibimbap, Japanese sushi, Chinese Kung Pao, etc.; however, with the increase of globalization, traditional foodways have entered a phase of continuous reformation and change. Keil and Beardsworth (1997) suggested that from a functionalist perspective, foodways represent the overall geographical and climatic environments of people and their societies. These studies demonstrated that the study of foodways does not equal the study of nutrition science. For this study of foodways, I focused on the social, historical, and cultural meanings behind foodways.

As it was suggested by Brown and Mussell (1984), foodways, which are the coded, symbolized set of food-related behaviors, are one of the most common practices that indicate one's identity. For this study, in addition to food sharing practices, cooking and grocery shopping practices also indicated that Chinese international students actively maintain their cultural identities through their foodways. As immigrants, the

participants were often exposed to new ingredients and new cooking methods. While the globalization of food has reduced the differences among some cuisines (Kearney, 2010), this research suggested that specific fundamental characteristics of ethnic identities are preserved through everyday practices.

In terms of cooking methods, it is observed that all participants prefer to cook by steam (rice, buns, and dumplings), stir-fry (meats, eggs, and fishes), and water-boiling (vegetables). Most of the complaints about the living environment were directly related to the stir-fry cooking methods, as the participants suggested that in order to make a proper stir-fry dishes, the stove has to provide high heat in a short period of time; however, the electric stove coil cannot do this, and the quality of their dishes often suffered from this shortcoming.

Another problem that was identified by the participants is that none of their kitchens have high-power ventilation, which makes it difficult for them to stir-fry their food. For example, in one observation, when the participant was preparing the food for himself and me using the Qiang Wok (炝锅, similar to the Japanese shabu-shabu, which refers to putting green onion (葱, cong) ginger (姜, jiang), garlic (蒜, suan), and other seasonings in hot oil pan to promote the scent and smell), the fire alarm was triggered due to the smoking from the ingredients.

The participant jokingly said to me that the sound of stir-fry and the fire alarm is always reminding him that he is Chinese in a foreign land. As this participant and another female participant suggested, another major drawback of maintaining Chinese cooking styles in an American apartment is that their clothing is often soaked in the smell of stir-fry, which often causes them to be laughed at by their American lab mates.

Although Crest Foods has the lowest price for fresh fruit and vegetable, meat, and dairy products among all places, all participants suggested that buying groceries at Chinese (Asian) grocery stores is essential for them to maintain their Chinese cultural identity. Their statement is supported by their grocery shopping behaviors. As the tables show, these participants prefer Asian grocery stores over closer American grocery stores (e.g., The Sprouts Farmers Market, which is located within walking distance of the university campus).



Figure 12. Huge Tofu Selection at Saigon Taipei

According to the participants, these are the reasons for their preference for Asian grocery stores. Chinatown Supermarket and Super Cao Nguyen Market were chosen by the participants due to their lower prices on Asian vegetables and more extensive selections of fresh living fishes and frozen sea fishes, meat parts (elbow, tails, ears, organs), and seasonings. Saigon Taipei Asian Market is preferred due to its substantial Tofu, Asian fruit and vegetable selections (e.g., Buddha Hand, Jujube, Logan, etc.) and

its large tofu and gluten products selections; in addition, the hot food bar at this market provided a wide variety of cooked meat and seafood dishes (about 20 different fresh-cooked dishes, sold by weight) which allows the participants to save cooking time.

The Dong-A Korean restaurant has a large selection of instant noodles (Ramen, Shin Ramyun, Udon, and Naengmyeon/Korean cold noodles) and more high-end snack selections than the other Asian grocery stores.

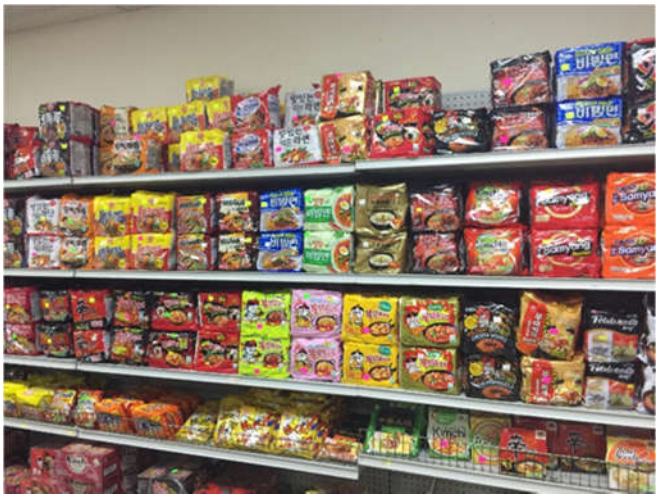


Figure 13. Large Instant Noodle Selection at Dong-A.

During another two grocery trips, two different participants suggested that the decoration of the grocery stores are very Chinese (besides Dong-A, all other Asian grocery stores have Chinese styled items such as red lanterns, words, papercutting, etc.), and both of these participants said they felt their Chinese identities were replenished, recharged, and secured through their routine weekly Asian grocery shopping trip. While spending extra time on longer grocery trips seems counterintuitive as all participants are always tremendously busy, these students were willing to sacrifice their time for a more home-like shopping environment, and Zhang T stated, "*whenever I go to Super Cao, the stone lion (石狮, Shi Shi) and the mask of dancing lion (舞狮头, Wu Shi Tou) makes me*

feel I am safe and at home." Her statement coincided with Sutton's observation (2010) on the relationship between identity and food, which suggested that food could help individuals to create and maintain facets of their identities, such as nationality or ethnicity. Participants spent a significantly longer time in Super Cao, Chinatown, and Saigon Taipei than in American grocery shopping destinations.

During trips to the American grocery stores, the shopping processes were organized, premeditated, and rushed in almost all cases; the participants just went to the stores, got what was on their shopping list, and left without spending extra time; in contrast, during trips to the Asian stores, participants often lacked any detailed planning and tended to wander and walk in circles inside of the stores. In one trip, I observed the participant spend 45 minutes looking at, examining, and choosing Asian snacks (this participant also spent 25 minutes explaining the reason why she bought these snacks to me on the drive back).

In all cases, the participants were significantly more relaxed when they were purchasing groceries at Asian stores. Another telling sign that occurred multiple times was that upon arriving at American grocery stores or supermarkets (6 times in total), the participants only said *"arrived, get out of the car*" without any emotions; in contrast, during the trips to Asian grocery stores (12 times in total), the participants often said, "*finally arrived, let's go grocery shopping*" with excited and happy tones. When I asked the participants why they had such dramatic emotional differences between buying groceries in Asian stores and in American stores, the most cited reason was that they could find their childhood snacks and comfort foods, and one participant admitted that

"*in American stores, I am just buying food, for my (physical) survival; in Asian stores, I feel I am buying food for my spiritual self.*"

Theme Three: Perception of Dietary Health and Food Environment

In their ethnographic food study, Tann and Wheeler (1980) noticed that Chinese immigrants want to preserve their traditional diet and that they also maintain similar food-related health beliefs as their counterparts in China after migration. In one home visit, my participant showed me that he was using peanut coating to promote his promote blood circulation and spleen functions. He explained to me that he had strong faith in the efficacy of TCM (Figure 14). Another notable example of this is that the participants have not only applied the Yin-Yang property to Chinese/Asian food but also developed a Yin-Yang labeling system for the foods that were not usually found in China. As for this study, it is evident to me that the participants have developed unique strategies to label their food choices using their traditional Chinese medicine (TCM) knowledge, and they use TCM to handle the challenges they encounter in their new food environment.



Figure 14. Powdered Peanut Coat found at My Participant's Home.

For example, during one trip to Saigon Taipei, a female participant purchased several cans of Guilinggao (A Jell-O like food made from Tortoise Smilax glabra Jelly), which is viewed as both a medicine and a dessert. The manufacturer states that it does not use turtle plastron; the main ingredients are water, Chinese Root Smilax glabra, and honey).

The participant told me that she was attending a conference the previous week, and had consumed more meat, dairy products, and fried foods than she usually did. In order to cancel out the residual adverse "hot" effect (e.g. dried skin, acne, and internal hot rushes) from her last week's diet, she had to use the "cold" food such as Guilinggao, with a mainly vegetarian basic diet (high consumption of fruit and vegetables, minimal grains, no meat and dairy) to balance and restore the equilibrium in her system.

Rosenmöller et al. (2011) suggested that TCM plays a crucial role in the decision-making process of Chinese immigrants' dietary practices. For this study, it was noticed in the grocery trips that participants often used their TCM knowledge to evaluate the health costs and benefits of each food that they purchased; the participants had categorized the foods and ingredients they purchased according to their hot and cold properties, regardless of whether they were Asian or non-Asian foods.

As shown in the Table 18, based on my participants' suggestions, fruits and vegetables are usually viewed as cold, while meat, UPF, and oily foods are usually viewed as hot. The cold-versus-hot dichotomy of food also permeates the participants' perceptions of the food environment. On multiple occasions, the participants told me that the reason they had to cook almost every day was that that the university dining halls and the restaurants close to the campus were only selling food that would lead to

excessive hotness. In addition, although the participants agreed that the fast food sold on campus was both more available and affordable, they were unwilling to eat them due to their health beliefs. The concern of the participants was that their new food environment is hot, as the price of vegetables and fruits are significantly higher here in the United States than in China. For example, on several occasions, participants complained that the price of Napa cabbage and Bok choy were five to six times higher than in China.

Table 18. Participants' Classification of Cold and Hot Foods.

Cold Food	Neutral food	Hot food	Unsure
Vegetables (except peppers) and fruits (except longan), seafood	Rice, eggs, non-instant noodles, chickens, Asian sweet snacks.	Pork, beef, dairy products, instant noodles, western sugar-sweetened beverages (SSB), western snacks (chips and fries), western baked foods, any oily products, Asian salty snacks, alcoholic beverages	Asian SSB, Snacks labeled organic or all-natural or packaged in green, Asian frozen food

Another significant finding regarding the Chinese international students' major changes in foodways is that they have dramatically increased their consumption of ultra-processed food when compared to their foodways in their home country, both in terms of quantity and money spent. This phenomena is caused by the availability of UPFs, and their busy schedule. Kittler et al. (2017) suggested that a complete system of foodways includes how food is obtained, selected, distributed, prepared, served, and eaten. With the rise of globalization, home-prepared foodways are disappearing, and instead, there is a massive increase of ultra-processed food in global food systems.

As shown in the following table, during the grocery shopping trips, the following UPFs were purchased at Asian grocery shops: processed packaged snacks such as Asian sweet cookies (e.g. Meiji Hello Panda, Lotte Koala's March; 3 female participants, each one purchasing once), salty snacks (e.g. Weilong Latiao; 2 male participants, purchasing every trip); instant noodles (e.g. Nongshim, Kang- Shi-Fu, or Tong-Yi; all participants purchasing at least once); frozen convenience foods (e.g. frozen dumplings, steam buns, microwavable Japanese bento box;); processed meat (e.g. Meilin luncheon meat, 2 male participants each purchasing one can); sugar-sweetened beverages (e.g. aloe juice, Liang Cha/Chinese herbal cold tea).

Table 19. Consumption of Ultra-Processed Foods (UPFs).

Name & Gender.	Non-UPFs purchased in Asian grocery stores	UPFs purchased in Asian grocery stores	Non-UPFs purchased in American grocery stores	UPFs purchased in American grocery stores	UPFs in the house
Zhang T. Female.	Vegetables, fruits, meats, eggs, fish, non-instant noodles, rice.	Asian snacks, instant noodles, Asian frozen convenience foods, SSB.	Vegetables, fruits, meats, dairy products, eggs, tree nuts.	SSB.	Cookies, sugar sweeten beverages (SSB), instant noodles.
Hao B. Male.	Meats, eggs, fish, vegetables, fruits, non-instant noodles, rice.	Asian snacks, instant noodles, Asian frozen convenience foods, Processed meat.	Vegetables, fruits, meats, dairy products, eggs.	Frozen pizza, snacks, SSB.	4 large frozen pizzas; more than 10 small packs of Cheetos and Doritos, at least 24 cans of soda.

Jiang S. Male.	Vegetables, fruits, dairy products, meats, eggs, fish, rice.	Asian snacks, instant noodles, Asian frozen convenience foods, Processed meat.	Vegetables, fruits, meats, dairy products, eggs.	Snacks, SSB.	Small packages of Korean and Chinese snacks, instant noodles, SSB.
Yang C. Female.	Vegetables, fruits, meats, eggs, fishes, rice.	Instant noodles.	Vegetables, fruits, meats, dairy products, eggs, tree nuts.	None.	Instant noodles.
Chen I. Female.	Vegetables, fruits, grains, meats, eggs, fish.	Instant noodles, Asian snacks, Asian frozen convenience foods.	Vegetables, fruits, meats, eggs.	SSB.	Small packages of Korean and Chinese snacks, instant noodles, SSB.
Li L. Female.	Vegetables, fruits, grains, meats, eggs, fish.	Asian snacks, instant noodles, SSB	Vegetables, fruits, meats, dairy products, eggs, tree nuts.	SSB.	Small packages of Korean and Chinese snacks, instant noodles, SSB.

In addition to buying UPFs in Asian grocery stores, the participants purchased large amounts of sugar-sweeten beverages (SSB) in American grocery stores (on average, female participants purchased one 6-pack of bottled soda or a large bottle of fruit juice, while male participants purchased twice that amount of soda and sweet tea per trip).

Admittedly, it can be difficult to determine whether a specific organic food (e.g., organic gummy bears, which resembles the Chinese candy QQ Tang) should be

perceived as healthy food or not. On the one hand, several participants suggested that they felt the organic certification (and its Chinese equivalents) provided them with a degree of food safety reassurance and made it easier for them to buy the food; on the other hand, they recognized that the ingredients in organic food could still be harmful to their health.

There are two potential explanations for this phenomena: first, as it was suggested in an fMRI study by Linder et al. (2010), the organic labeling of foods is associated with an increased activity in the ventral striatum which could lead to a higher willingness to pay; second, as it was explained by two female participants, they were often under both time and financial pressure, even though they realized that organic UPFs are not the healthiest diet options for them, they considered it better than the other options, which include eating fast food on campus or skipping meals.

For my participants, the high sugar, high fat, and high seasoning content in the UPF make them tastier than some NUPF items. Calvo and Egan (2015) suggested that the physiological mechanisms of humans and other primates are engineered to obtain paramount satisfaction, such that foods containing fat, sugar and a little salt are likely to be eaten to excess (See also Kessler, 2010). Fourth, related to the third point, UPF is often viewed as stress-relief food during mental breakdowns. As it was suggested by Tseng and Fang (2011), for Chinese immigrants, their acculturation-related stresses often correlated with an increase in fat- and calorie-dense food intake such as UPF. Fifth, when compared to NUPF, UPF are cheap alternative sources for calories.

Monteiro et al. (2013) suggested that globally, UPF created attractive, hyper-palatable, cheap, ready-to-eat (RTE) dietary options. As mentioned by the participants,

due to the extremely high advertisement exposures of UPF, consuming UPF is often perceived as a way to acculturate into American foodways. Interestingly, most of my participants did not consider Asian UPF as UPF. Similar dietary behaviors were also observed in another study by Higgs and Thomas (2016). According to their study, when Chinese international students migrate into the United States, they are likely to lose their social networks, and thus their newly formed eating patterns are partially constructed upon their perception of the norm in their new food environment.

When these Chinese international students observe their American counterparts eating unhealthily or eating UPF on a regular basis, they often perceive unhealthy eating behavior as normative. Thus, they might eat UPF as an acculturation strategy to follow local norms. In addition, for Chinese international students who could not find influential role models in their new host countries, they are more likely to buy UPF based on the endorsement of American celebrities.

Interestingly, the participants who migrated from the less-developed Chinese regions suggested that UPF were considered a status food during their childhood and adolescent period. This perception of UPF persisted even after they migrated to the United States. As suggested by Zhou et al. (2015), with the development of free-market and open-and-reform policies, western UPF industries have expanded their territories rapidly in China, and UPF has been associated with urbanicity (a desired cultural trait among young people), with the result of UPF being perceived as higher status foods to purchase and eat.

Some Chinese international students ate lower quantities of UPF and maintained predominantly NUPF food consumption behavior. These Chinese international students

provided the following reasons for their preference of NUPF. First, nutrition literacy. As it was suggested in the result sections, these NUPF consumers all recognized the potential risks of eating UPF. Second, as pointed out by several participants when compared NUPF, UPF's high salt content tends to make the consumer's mouth feel dry, which leads to an increase in water consumption.

For these Chinese international students, drinking a high volume of water would increase the frequencies of restroom trips, which disrupt their research or studies. Related to this point, several Chinese international students also reported that for the same reason, UPF would cause them to use the bathroom more frequently at night, which disturbs their sleep. Third, as suggested in several interviews, for this group of Chinese international students (who come from developed regions such as Shanghai, Zhejiang, Jiangsu), unlike those Chinese international students who viewed UPF as high-status foods, the NUPF-eating Chinese international students viewed UPF as a low-status food. These NUPF-eating Chinese international students have also mentioned that their new eating behaviors were influenced by their American professors who often shop and eat whole foods.

Additional Findings from Participants Observation

Gender-related identity also influenced participants' foodways. Female participants have significantly more cooking experience than male participants. During participant observation, one of the most repeated sentiments from the female participants was, "if I could not make edible dishes, how could I get married?" In contrast, male participants expressed to me that once they got married, they expected that they would be freed from the burden of cooking. Gender roles are fundamentally

embedded in Chinese culture. The Chinese character for marriage (嫁) is made from two radicals 女 (female) and 家 (house), which implies that females should stay in the house. In Taoism, although maleness (Yang) and femaleness (Yin) are almost equally valued, Yin is generally viewed as more passive than Yang.

For participants who lived off campus, they reported that there were improvements in their culinary skills. These participants also expressed that the improvement of living conditions, such as having kitchens and refrigerators, empowered them to explore potential options for improving their dietary health. In their study, Alaofè et al. (2017) suggested that by using empowerment initiatives such as promoting self-confidence and decision-making, improved nutrition status. Similarly, Sukovic et al. (2001), found that for immigrants whose lives were filled with social isolation and uncertainties, communal empowerment activities, such as providing them with the necessary food preparation knowledge, education, and appliances, could improve their lives and well-being.

Another finding in this study is that most of the graduate Chinese international students seemed to have a clear understanding of the basics of macronutrient groups and could explain the value of eating food groups, and all of them prepared their foods regularly. Over half of the participants expressed that they paid extra attention to avoid excessive intake of fat and carbs. Also, more than one-third of the participants in this subgroup took micronutrient and trace nutrient supplements to maintain dietary health.

Graduate students who came from less developed Chinese regions tended to have better culinary skills in preparing vegetables and starchy foods; their wealthier Chinese counterparts, on the other hand, tended to have more interests in improving

their existing nutritional knowledge. Interestingly, participants who majored in the humanities and social science fields were more aware of the different cultural implications regarding food, and they were concerned about food waste, environmental impacts, and animal welfare.

Nutrition knowledge makes participants acutely aware of differences in the food environment. Participants said that one significant difference in the overall foodways between the United States and China is the availability of ultra-processed food (UPF). Mueller et al. (2018) found that academic stress decreases colleges students' time for food preparation and increases their dining-out frequencies and overall UPF consumption. Also, acculturation and academic stresses were reported as reducing the mental capacity for making healthy food choices and the ability to prepare food. Chinese international students who consume higher quantities of ultra-processed foods indicate that one reason is that it is well-packaged in plastic wraps, which makes these items easier to put in bags and pockets; this convenience factor of the UPF plays an important role in the decision to eat these foods. Poti et al. (2015) argue that UPF often require no preparation before quick, easy consumption. For Chinese international students who often consume food during typing, reading, or studying sessions, the convenience factor facilitates mindless eating behavior. Second, compared to NUPF, UPF can be purchased via vending machines in all campus buildings; the availability makes them an easy choice for both breakfast and late-night snacks. Shi, Grech, and Allman-Farinelli (2018) suggested that while unhealthy snacking could be a preventable behavior, unhealthy options in the vending machines create an obesogenic environment that values the profits of UPF over students' health.

Female students showed significantly higher nutrition literacy, knowledge, and skills than males. Throughout the study, female Chinese international students reported preferring nutritional benefits over convenience, cost, and flavors of the food, while male students are more willing to sacrifice dietary health for academic progress. Also, female participants were more likely to read food labels and adjust their grocery shopping, food preparation, and eating behavior than males. Female participants were more likely to use the internet to research the health impacts of food than males. Female participants were more willing to incorporate unfamiliar ingredients and foods (e.g., avocado, yogurt, chia seed, and quinoa) into their regular diets than males.

In comparison, male graduate Chinese international students have more knowledge regarding different global culinary traditions, the function of each food group under the Traditional Chinese Medicinal framework, the use of new kitchen gadgets, and specific biochemical functions of macro and micronutrients than female participants. However, these male Chinese international graduate students are more likely to express their nutrition knowledge in conversations than to apply their nutrition knowledge in daily life. One example is that two male participants lectured me about how different digestive enzymes break down food molecules in the human body, and how cortisol facilitates gluconeogenesis and decreases protein synthesis; however, they were too embarrassed to tell me what they had eaten during the past week.

Chapter 5: Discussion

This research studied a variety of aspects of Chinese international students' foodways: 1, what changes they made and why; 2, the relationship between identity and food; 3, the relationship between nutritional knowledge and food behavior; 4, the relationship between social support/network and food behavior.

What Changes They Made and Why

On a global scale, the development of food producing, storing and processing technologies, and global trade have caused the nutrition transition (Nummer, 2002). Popkin (2015) suggested that the nutrition transition could be defined as an increase in of fats, added sugar, and refined carbohydrates intake. The global nutrition transition started in developed countries and spread to developing nations. During the past two centuries, new inventions such as canning techniques and freezing technology (curing and drying were old techniques), have made it easier for people to store and transport food. By combining new preserving technology with developments in transportation, humans now have access to large amounts of different types of meat, vegetables, and dairy products from other countries (Moss, 2002).

In terms of food groups, the result showed that participants increased their meat, fat, and sugar consumptions, and they decreased their vegetable and fruit consumptions after their migrating to the United States. Also, there was an increase of ultra-processed food (UPF) intake. However, there was no significant change in participants' cuisines; the result showed that most of the participants either ate Chinese or other Pan-Asian cuisines.

In previous studies of diet transitions, it has been reported that limited availability of ethnic grocery stores, low quality of ethnic ingredients and semi-premade ethnic food, low affordability of ethnic ingredients and semi-premade foods, and high required cooking skill were motivations for immigrants to abandon their original foodways. For example, Wilhelmina et al. (2010) pointed out that these changes have caused a gradual shift in food culture on both the global and local levels. They suggested that diverse foodways are moving to a shared universal foodways. However, these problems were not major concerns of the participants in this study. On the contrary, many participants reported that they had maintained their consumption of Chinese cuisines.

Overall, reasons for maintaining Chinese or Pan-Asian foodways were related to their cultural identities, their aversions toward western food's taste and concerns about its nutritional health, the affordability and availability of ingredients for Chinese foods, and the values placed on social networking and relationships. These factors are often intertwined and could not be easily separated from one and other. Also, participants suggested that their unwillingness to change their traditional diets was related to the anticipations of their future, as most of the participants have expressed that they would return to China after they graduate from their current program. For this reason, they do not have the motivation to learn how to prepare or how to get used to western food.

From a food environment perspective, the location of this research makes it feasible for the participant to maintain their traditional diet. Oklahoma is a predominantly Caucasian state (74.3% of the total population), and Asians make only up 2.3% of the total population in Oklahoma (U.S. Census Bureau, 2018). However,

there are several Asian communities in this state, and there is an Asian district in Oklahoma City (located 17 miles from the research site). This enclave provides ethnic groceries and foods to Asian migrants in the surrounding areas. Also, with the increase of Asian migrants in Norman (where 4.8% of the population is Asian), there are more than 20 Chinese restaurants within a 5-mile radius (U.S. Census Bureau, 2018). Participants also expressed that they were not entirely concerned about the subtle differences between Chinese cuisines and cuisines from other Eastern or Southeastern Asian countries, which allowed them to continuously eat similar cuisines (both culturally and sensationally similar).

A similar pattern was also observed by Amos and Lordly (2014) and Brown (2009). These ethnographic studies suggested that the unique combination usages of starchy ingredients (e.g. rice), vegetables (e.g. Chinese Cabbage, Bok Choy, Daikon, Yard-long bean), seasoning (e.g. soy sauce, scallions, ginger, sesame seeds), and food preparation techniques (e.g., steam, water boil, stir fry) in Eastern and Southeastern Asian cuisine makes Chinese sojourners and migrants feel comfortable considering them as Chinese food. The preferences for these ingredients coincide with the findings in recent genetic research. According to those studies, rice (Callaway, 2014), Chinese cabbage and Bok Choy (Bird et al., 2017), Daikon (Lewis-Jones, Thorpe, & Wallis, 1982), Yard-long bean (Chinese asparagus bean, Xu et al., 2012), scallion (Fritsch & Friesen, 2002), ginger (Kizhakkayil & Sasikumar, 2011), and soy sauce (Feng et al., 2014) were first domesticated and widely used in China. The long history partially explains why Chinese international students consider foods with these ingredients to have Chinese origins.

From a cross-cultural perspective (Kubey, 1996), participants have expressed in interviews that they were already exposed to western foods before their migration, such as McDonald's, KFC, and Pizza Hut. For them, the main ingredients, seasoning, and flavors in western food such as cheese, thyme, basil, sage, and butter all are an acquired taste. Also, none of the participants have used ovens, blenders, or fryers before their migration, and thus were not familiar with the cooking techniques. Participants expressed that they don't like the texture of typical budget western foods (e.g., bread and pizza are too dry and coarse; pasta and lasagna are too slippery and mushy), as well as the lack of culinary complexity (for example both hamburger, sandwich, and pizza lack of the distinct separation between the bread, meat, and vegetable). Thus, preparing their Chinese food has become a priority and "survival" skill for some participants.

Identity and Food

In an earlier study, Liu and Dong (2019) found that many Chinese international students consider preparing Chinese food as a way to preserve and maintain their cultural heritage. In this study, the results suggested that participants used Chinese cuisines (both preparing their Chinese food as well as eating Chinese food in restaurants) as a way to ensure their cultural identities and pride were maintained and reinforced. One interesting finding from this study is the formation of "pan-Asian identity" among the participants. Several factors contribute to this identity: the close cultural relationships among some East and Southeast Asian countries (Hofstede & Bond, 1988), the shared usages of ingredients (Trang, 2003), and the similar tastes of their cuisines (Mabbott, 2015).

As suggested by Hamlett et al. (2008), grocery shopping is often viewed as an individual lifestyle choice. However, it is deeply related to broader structures of social interaction such as competing constructions of race, place, and nation. They noticed that when Asian immigrants were doing grocery shopping, they often chose to go to shops that were owned or frequented by other Asians to avoid being viewed as unwelcomed or being racially targeted. Similar situations were observed in this study.

Due to the increasingly unfriendly political environment, some participants reported feeling uncomfortable and intimidated when they were grocery shopping or dining at non-Asian establishments. For example, several female participants told me that they had experienced unwelcome sexual advances in the parking lots at Walmart. Similar concerns of personal safety also affect dining-out behavior, as female participants were worried that they would be sexually harassed (especially during dinner time at night). Male participants have reported that they were called racial slurs by non-Asian shoppers. These incidents have promoted Chinese international students to exchange their concerns in online chat platforms, and as a result, participants chose to go to Asian grocery stores for safety reasons.

Another factor related to both identity and food is the availability of Asian cuisine ingredients and premade foods. All participants in this study reported that crucial ingredients for Chinese food could only be found at local Asian grocery shops; in addition, as the participants suggested, all Asian grocery stores sell their favorite frozen Asian food such as dumplings, steam buns, skillet pie, compared to westernized frozen food. These Asian frozen foods were perceived as healthier and more

nutritionally balanced, as well as cheaper and easier to prepare by the Chinese international students.

In her study of Slow Food Movement, Nässén (2017) suggested that food belief is shaped by aspects of life, of which culture is a major constituent. One reason for the participants to maintain their traditional diet is that the participant's cultural, medical, and nutritional beliefs have made them feel that Chinese food has more benefits for their Chinese body than western food. According to the participants, they believe that acculturation (such as adapting to the dry climate in the Midwest United States) and academic stresses (such as studying until midnight), as well as overconsumption of fatty, sweet, or spicy food, could cause internal heat or inflammation (Shang Huo).

To a certain degree, Shang Huo could be described as an absence of homeostasis, caused by an overwhelming presence of Yang in human bodies. The internal heat has several symptoms which include overproductions of sebum from sebaceous glands, inflamed acne pimples, repeated oral ulcers, swollen gums, upset and irritable moods, as well as irregular bowel movements. Shang Huo is associated with abnormal levels of salivary immunoglobulin, as well as ulcers, oral dryness, a bitter taste, halitosis, swollen gums with pain or bleeding, throat dryness, sore throat, acne, vexing heat, low fever, insomnia, yellow urine, constipation, yellow tongue coating, thin rapid pulse, rapid flooding pulse, reddened tongue, vertigo, and nosebleed (Liu, & et al., 2014).

To overcome the negative consequences of internal heat, Chinese international students used folk knowledge from the traditional Chinese medicine, such as drinking large quantities of water, consuming fruit, green-leaf vegetables, and reducing their

overall consumption of meat, dairy, and starchy foods. They also tried to avoid eating western foods, which were perceived as unhealthy.

This is not to say that the participants in this study do not believe the scientific findings from western nutrition studies; on the contrary, they have developed a hybrid nutrition belief system which combines both Traditional Chinese Medicine and western medical beliefs. This finding coincided with the findings in Wu's study of Chinese dietary transition (1995): that young Chinese often examine values in both Chinese and western medical systems to adjust their diet for healthy bodies. Similar to Wu's participants, Chinese international students in this study often simultaneously used concepts from both sides to make rational food choices for them. One of my favorite quotes from this study is, "if you eat food with high sodium and cholesterol contents, you will get Shang Huo (as it was suggest in the literature review, Shang Huo is a traditional Chinese medical term for inflammation in the body)".

Previous literature observed that there was increased consumption of western salads among Asian international students (Brown et al., 2005) due to the moderate availability, perceived nutritional health benefits, and less unappealing tastes (Alakaam et al., 2015). However, the Chinese international students in this study did not report an increase in salad consumption due to the potentially high-fat content in salads (from dressings and toppings such as cheese) and the perceived danger of consuming uncooked vegetables. Several participants felt that eating raw vegetables could cause food poisoning from both parasites and pesticides. Although their low confidence in salads may sound ridiculous to their American classmates, recent studies by Grace (2015), Zhou and Jin (2009, focused on pesticide residue on vegetables in China) and

Dorny et al. (2009, on parasites in vegetables) have shown that these Chinese international students' concerns were not unfounded. Combining the concerns of food poisoning, culinary history and style, and the availability and affordability of vegetables, most of the Chinese international students decided to maintain their traditional food preparation process.

In traditional Confucianism, the Three Obedience and Four Virtues suggested that females should try to be a good housewife first, which means that females must learn how to prepare food for their husband. Chan (2002) suggested that Chinese culture (Taoism and Confucianism) has context-specific expectations for females and males, and that females' primary role is to nurture family obediently. There are also differences in dining-out patterns between males and females. In this study, female participants were less likely or willing to dine out than male participants.

There are several reasons for this gender-related food difference. Female Chinese international students eat less food than male students, which makes it easier for them to prepare and store food than male students. This finding is similar to the results of the study by Kolodinsky et al. (2007), who found that female students ate significantly less recommended amount of protein than male students (sex-adjusted, $\chi 2=38.3$; $P<0.01$). Female participants were more likely to associate dining out with weight gain, while male participants were less concerned about weight-related issues. Also, female participants found the portion size at local restaurants often to be too large for them to eat, while male participants often consider the larger portion size a bonus. Rozin and Fallon (1988) also noticed similar patterns and concluded that this gender difference in diet restriction is caused by some females' perception of men's

overwhelming preference for thinner women. Besides, female Chinese international students consider eating alone at restaurants not to be socially acceptable according to their understanding of Chinese foodways, while their male counterparts were less likely to be bothered by it.

Nutritional Knowledge and Food Behavior

An interesting finding from this study is that participants found out after migration that they have gained nutritional literacy and knowledge. Through this study, participants expressed that they have improved their attitude towards, awareness of, and skills in dietary health. Almost all participants mentioned that whenever they talked to their parents, their parents are always very concerned about their nutritional health and food environment.

While this may sound confusing to American readers, it was suggested by Wang in Dervin and Liddicoat's book (p. 120, 2013) that Chinese often use food-related small talk such as "have you eaten yet" and "what have you eaten" in informal conversations. Daily nutrition-related conversations between children and parents appear to result in increased awareness of dietary health.

Empowerment and agency also appear to play an essential role in the development of nutrition knowledge and skill. Participants who lived on campus, due to university housing policies, were required to purchase the university's meal plan, and they were forced to eat on campus, and they did not have the infrastructure to prepare their food. These participants told me that there was a reduction in whole/real food accessibility, an increase of processed food intake, and limited accessibility of food variety. They were concerned about overwhelming portion sizes and buffet-style

restaurants, the unhealthy processed food, and limited availability of fresh fruit and vegetables in university cafés. They also expressed that they wanted to improve their dietary health by consuming more fresh fruits and vegetables and limiting fat intake.

The findings in this study are similar to the findings from other college students. For example, Kim et al. (2012) suggested that among Korean college students, females have higher nutrition knowledge score higher than male students. There are several reasons for the gender differences regarding nutrition literacy, knowledge, and skill.

In the interviews, the most frequently mentioned reason for improving nutritional health for females is that they want to maintain or reduce weight, or keep healthy hair, skin, and nails through a balanced diet, which led them to pay extra attention to the intake of calories, micronutrients, and trace nutrients. This observation coincides with the finding in a study by Xu et al. (2010) who found that in contemporary China, young females were constantly pressured by their family members and friends to achieve an ideal thin body (BMI<18.56) through diet. Misra (2007) found that a higher percentage of female students had prior exposure to nutrition education, a positive attitude, and more excellent knowledge of food labels than their male peers.

In this study, male participants often viewed making a balanced diet as a job for females regardless of whether they had partners or not. In comparison, most of the female participants have internalized this culture-based gender expectation and suggested that they should improve their nutrition literacy, knowledge, and skill to take care of their (future) partners and family members.

The cultural expectation of gender increased prior exposure to food-related knowledge and cooking skill, which then created the differences in nutrition literacy,

knowledge, and skill. While both females and males agreed that nutrition literacy and knowledge are essential for overall health, there were significant differences in the experiences of cooking. In this study, most males learned how to cook after they migrated to the United States; in comparison, many female participants learned how to cook at a young age.

Social Support and Food Behavior

Social support in the host country from the same ethnic group is another factor that affects immigrants' diet and health. According to McDonald and Kennedy (2005), when immigrants live near close-knit ethnic communities in their local area, they will have less pressure to go through dietary acculturation. For these immigrants, ethnic community becomes a protective factor to prevent them from unwanted dietary-related health problems, such as obesity.

A close-knit ethnic community can also help to cope with other stressful events from migration. Sanou et al. (2013) suggested that when migrants go through dietary changes, factors including learned cooking skills, taste preferences and health knowledge all exert influence. They also proposed that time constraints, the influence of new interpersonal relationships, familiarity with grocery procurement and nutrition discourse could also affect migrants' dietary health.

A recent study showed that with the election of Donald Trump as President of the United States, right-wing and authoritarian nationalism have spread xenophobic rhetoric on a large scale, and democratic inclusiveness and international pluralism are under direct attack (Rose-Redwood & Rose-Redwood, 2017). The recent change in the

political environment has made many non-Caucasian international students in the U.S. feel that they are the unwelcome ones.

Historically, America has a long anti-Chinese immigrant tradition (Lee, 2002), and Trump has expressed consistently anti-Chinese views. Jointly, the xenophobic anti-immigrant right-wing political environment and anti-Chinese sentiments made the participants in this study concerned about themselves. Several participants expressed to me that they were frequently discriminated against and looked down upon by their American counterparts, and often found themselves in a state of involuntary social isolation, experiencing self-doubt about their skill, intelligence, and value. As a coping mechanism, participants told me that they had joined the within-community social network to obtain and promote social support for each other.

Bhochhibhoya, Dong, and Branscum (2017) found four types of distinct sources of social support from family and/or friends that are available to international students that were: (a) living in their home country, (b) residing in the United States but originally from their home country, (c) residing in the United States but originally from other countries (other than the home country and the United States), and (d) living in the local community and born in the United States. In this study, I found that Chinese international students only received social supports from their families and friends in China and fellow Chinese international students.

In terms of types of social supports, there are two types of social support that were observed in this study: The first one is instrumental support such as carpool and giving food. This support directly affects my participants' grocery shopping behavior, and its importance should not be overlooked. Unlike most American graduate students,

none of the participants in this study had driving experiences before they migrated into the United States, and more than half of them still rely on other Chinese to drive them to grocery stores. During the interviews, I learned that the participants who have newly acquired local Chinese friends are more likely to go grocery shopping than ones who only have non-Chinese friends or only have friends in China or other U.S. states.

There are three sources of this grocery-shopping related social support. The first source is from the participants' roommates. Two-thirds of the participants have Chinese roommates. From the interviews, I learned that my participants and their roommates often help each other doing grocery shopping. Another major source of this instrumental support is informal internet-based organizations for Chinese international students, such as the Chinese international students' mail list and Chinese international students' chat rooms; these internet-based organizations provide grocery shopping-related information and volunteer services such as carpool.

Several participants said that the Chinese-American female priest (who was in China until her 30s) of the Chinese ministry at the Wesley Foundation of Central Oklahoma often organizes group grocery shopping trips to the aforementioned Asian grocery stores, which makes it easier for them to obtain food ingredients. Another form of instrumental support is food sharing. Instrumental food-sharing related support is different from emotional food-related sharing. In my participants' words, they described that there were different goals for each support. For the former one, the goal is to make the receivers free from temporary hunger/empty stomachs; whereas the goal of the second one is to communicate and build social bonds with others.

Food-related emotional support was also crucial for the well-being of my participants. Bloom (1990) suggested that there is a consistent relationship between emotional support and psychological well-being, and some evidence of such a relationship between emotional support and physical well-being. In this study, my participants also told me that food-related supports are essential for their maintenance of mental well-being.

Emotional support often comes from other Chinese international students and the parents of the participants. International students often face involuntary social isolation and self-doubt, and my participants told me that by preparing Chinese foods for other students (both Chinese and non-Chinese), they often received positive feedback on their cooking skills, and felt less worried about their abilities to make a positive impact on themselves and other people.

In the participant observation session, several participants suggested to me that their food-sharing behavior provided both instrumental as well as intangible emotional support. My participants avoided dining out alone; instead, they often invited other Chinese students to join them and utilized that time to connect with each other. Participants told me that during major Chinese holidays, they often used food preparation as an event to create and reinforce social bonds and networks.

Besides roommates and other Chinese students, the parents of my participants were another significant source of emotional support. Yılmaz and Yi (2016) suggested that under the Confucian doctrine, filial piety is the central pillar of cultural ideals and moral norms for Chinese. Kwan (2000) noted that Chinese parents have strong emotional closeness and bonding with their adult children. A law in China (NPC, 2018)

orders that sons and daughters should contact and comfort their parents on a regular basis. Because of this cultural tradition, Chinese children are often very close to their parents.

In their study, Md-Yunus et al. (2017) suggested that for Asian students, there is a positive correlation between filial piety and social-emotional behaviors. As several participants suggested, one of the most significant emotional stressors that they had was that they were not close enough to their parents (both geographically and emotionally). They felt that the physical distances, different time zones, and the busy academic schedules have reduced the emotional closeness and support between them and their parents. To overcome these problems, many participants utilized their food preparation time to video chat with their parents. Through this practice, they not only learn valuable lessons about cooking skills and useful nutrition knowledge (which could also be interpreted as informational support), but they also maintain and improve emotional closeness with their parents.

Chapter 6: Conclusion

To the author's knowledge, this study is the first ethnographic research to systematically study the formation and changes of foodways relating to the consumptions of ultra-processed food (UPF), the development of nutritional knowledge and skill, and social support among international students. Previous studies on dietary health and foodways of international students, sojourners, and immigrants mainly focused on the relationship between nutritional intake and dietary health. These studies mainly focused on Hispanic migrants, using survey-based methods. While some research has studied the international students and Asian immigrants' dietary health perceptions of their food environments, they often focused on the aging population (Lai & Chappell, 2006) or women (Satia & et al., 2002, Liu, Berhane, & Tseng, 2010). This study is the first that systematically examined the relationship among the socially constructed barriers to healthy eating, health literacy, nutrition education, cultural influence, and social network and support within the research population.

This study has several strengths. First, by focusing on a single cultural community (Chinese), I was able to dive deeply into the topic. In comparison, previous literature on international students' foodways and dietary health often lumped all Asian international students or international students into the same category (Nelson et al., 2008; also see Racette et al., 2008). Chinese international students are the largest ethnic group in the United States higher education system. Although their history and culinary traditions share some similarities with other Asian student populations, several sociocultural factors result in significant differences in the actual foodways within this

group. An in-depth approach enabled the research to discuss how life-event, gender, age, and other factors lead to different food practices within the same group.

Second, this research used methods from anthropology, nutrition and food science, communication, and health promotion. This interdisciplinary approach enables the research not only to investigate the process of nutrition transition but also to find the complex relationship among acculturation processes, cultural traditions and norms, social networks, socioeconomic status, and both formal and informal nutrition education, which all affect participants' foodways.

More specifically, this research used health promotion frameworks to discover the different attitudes, perceptions, and norms that the Chinese international students have toward the food environment. Also, by combining participant observation, interviews, and photovoice methods, I was able to render a holistic picture of the participants' struggles and perseverance within the U.S. food environment. Based on their perceptions toward the American food environment, and using existing and building new social support networks, participants have changed their dietary behavior, learned new culinary skills, increased their nutrition literacy, and mitigated perceived unwanted nutrition health outcomes. Suggestions for how U.S. education systems could improve their current food services and practices also emerged.

The participants were recruited through a convenience sampling method from the University of Oklahoma, Norman campus. They were mainly recruited through the mass email system, Chinese students' mailing list services, Chinese students' chatroom, and student associations at my institution. The total number of 35 interviews may be perceived as a potential limitation. However, this sample size is consistent with those of

previous studies on similar topics which used similar research methodologies. Similar studies show that the sample size in life-course food choices projects is considerably smaller than the sample size in the survey-questionnaire based studies (Devine, 2005; Missinne, 2015; Devine, & et al., 1998).

One limitation was the low participation of undergraduate students, who were likely to be more concerned about weight-related issues and were more likely to develop dietary problems such as anorexia nervosa and bulimia nervosa. According to a recent study by Wang et al. (2018), among young Chinese (in mainland China), there is a gender-specific pattern of attitudes toward body image, with more than seventy percent of the female participants wanting to reduce their body weight. An earlier survey (Zheng et al., 1992) showed that forty percent of Chinese female college students were at risk of developing unhealthy eating behaviors such as binge eating. Lian et al. (2017) suggested that having anorexia nervosa could not only increase the risk of developing depression but could only lead to suicidal thoughts among young Chinese females. Including more female Chinese international students in the research might have generated useful information and knowledge regarding the relationship among building social support, improving dietary health, and reducing mental health problems for both Chinese female students and students in general.

Lastly, this study could be improved by adding a comparison group. Many of the dietary changes might be shared with international students, students in their home countries, and domestic American students. While it is commonly assumed that acculturation could change dietary behaviors, the results in this study suggested that cultural factors, dietary beliefs, health literacy, and social networks could revert

migration-related dietary changes. Thus, additional cautions are needed when researchers are interpreting the findings in this research.

Findings from this research should not be viewed as a source of conclusive knowledge or a solution to existing research or practical problems; instead, this study provides both exploratory and descriptive information which could be used as groundwork for future research in similar areas. Because of this, regardless of the limitations in the sample size, the findings from this research are highly valuable to the field of nutrition health.

Future Research

Although a thorough pioneering qualitative elicitation phase was implemented to support the development of questions in the semi-structured interviews, the actual interview question set, though long, could not exhaust all the potential explanations of why participants change their food acquisition and preparations. Also, while I had asked the participants to take photos demonstrating their foodways, due to the lack of training and other reasons such as self-esteem and forgetfulness, many of the photos taken by the participants in this study were more likely to be a showcase of their cooking skills rather than a realistic reflection of their daily diet. Similar to the problems in the photovoice session, the participant-observation session also has similar problems. Especially, when I went grocery shopping with the female participants, the participants tend to only purchase healthy whole food, organic, low-fat, all-natural food ingredients at high-end grocery stores. This problem can be corrected by collaborating with female researchers in further similar studies.

Future research would be benefited by using a multi-loci approach to recruit a more diverse groups of international students. Another direction for future studies is to compare the international student groups with other immigrant groups. Comparative studies can help public health professionals to understand shared challenges and barriers as well as key differences between groups regarding legal immigrant status (F1, F2, J1, J2, H1B, and undocumented), availability of nutrition assistance program such as WIC and SNAP, educational attainment, and social support networks, all of which could affect change of foodways and nutrition status. Lastly, research about foodways, diets, and nutrition could benefit from using anthropometric and biochemical measurements at both baseline and endpoint.

The findings in this research suggested that in terms of the formation of foodways, social support plays a crucial role. Intergenerational relationships, peer relationships, and religious affiliations could help the participants to acquire, develop, and maintain nutrition literacy and culinary skills. This research also suggests that nutrition education programs are needed for this population and college students in general. With access to nutritional education programs, the students (both international and domestic) would be better able to adjust to their new college food environment. Also, given the severity of global climate change, food education could help college students to understand the deeply intertwined relationship between the industrialized food industry and the deterioration of the environment, which could help the students to be aware of the effects of their dietary choices on the environment. Also, by learning about diverse culinary histories, traditions, and skills, students would not only be able to

develop necessary cooking skills and nutrition literacy, but also could become more interested in different cultures and be more culturally competent in the future.

Suggestions for policy

The findings in this research suggested that in terms of the formation of foodways, social support plays a crucial role. Both intergenerational relationship, peer relationship, and religion could help the participants to acquire, develop, and maintain nutrition literacy and culinary skills. This research also suggests that nutrition educational program is needed for this population and college students in general.

By providing nutritional education programs, the students (both international and domestic students) will adjust to their new college food environment better. In addition, given the severity of global climate change, food education could help college students to understand the deep intertwined relationship between industrialized food industry and the deterioration of the environment, which could help the students to be aware of their dietary choices on the environment.

Also, by teaching students about the diverse culinary history, tradition, and skills, they will not only be able to develop necessary cooking skills and nutrition literacy, they could also be more interested in different cultures and be more culturally competent in the future.

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Appendix A: University of Oklahoma IRB Approval Letter

The UNIVERSITY of OKLAHOMA

Institutional Review Board for the Protection of Human Subjects

Approval of Continuing Review – Expedited Review – AP0

Date: October 02, 2018 **IRB#:** 8781

Principal Investigator: Yue Dong **Approval Date:** 10/02/2018 **Expiration Date:** 09/30/2019

Expedited Category: 6 & 7

Study Title: An Anthropological Inquiry of Chinese International Students' Migration Experiences: A Biocultural Study of Culture, Health, Food, and Migration

Based on the information submitted, your study is currently: Active, open to enrollment. On behalf the Institutional Review Board (IRB), I have reviewed and approved your continuing review application. To view the documents approved for this submission, open this study from the *My Studies* option, go to *Submission History*, go to *Completed Submissions* tab and then click the *Details* icon.

As principal investigator of this research study, you are responsible to:

- Conduct the research study in a manner consistent with the requirements of the IRB and federal regulations 45 CFR 46.
- Obtain informed consent and research privacy authorization using the currently approved, stamped forms and retain all original, signed forms, if applicable.
- Request approval from the IRB prior to implementing any/all modifications.
- Promptly report to the IRB any harm experienced by a participant that is both unanticipated and related per IRB policy.
- Maintain accurate and complete study records for evaluation by the HRPP Quality Improvement Program and, if applicable, inspection by regulatory agencies and/or the study sponsor.
- Promptly submit continuing review documents to the IRB upon notification approximately 60 days prior to the expiration date indicated above.
- Submit a final closure report at the completion of the project.

You will receive notification approximately 60 days prior to the expiration date noted above. You are responsible for submitting continuing review documents in a timely fashion in order to maintain continued IRB approval.

If you have questions about this notification or using iRIS, contact the IRB @ 405-325-8110 or irb@ou.edu.

Cordially,

Ioana Cionea, Ph.D.
Vice Chair, Institutional Review Board

Appendix B: Survey Questionnaire and In-depth Interview Guild

Chinese version

问卷调查

背景信息

1. 你的出生地点是中国哪里？例如您的户籍所在地是哪儿？您是农村户口还是城市户

口？

2. 您当前的学历是什么？

a. 在您来美国之前，您在中国哪儿读书？

3. 您在美国生活了多少时间了？

4. 您在来俄克拉荷马之前，还在美国别的州待过么？

5. 您多大了？

6. 您是什么专业的？

7. 您现在是在读本科，硕士，博士？还是博后，访问学者？

8. 您结婚了嘛

9. 您有孩子么？

简短归化测量

简短归化测量表（本表基于马琳与马琳 1991 年简短归化测量表）

• 总体而言，您最喜欢使用那种语言来读说？

1. 中文

2. 中文超过英文

3. 中英文差不多

4. 英文超过中文

5. 只说英文

• 如果你不在教学环境下，您最习惯使用什么语言？

1. 中文

2. 中文超过英文

3. 中英文差不多

4. 英文超过中文

5. 只说英文

• 当你思考问题的时候，你脑子里是什么语言？

1. 中文

2. 中文超过英文

3. 中英文差不多

4. 英文超过中文

5. 只说英文

• 你和你朋友沟通的时候，你一般说什么语言？

• 如果你查询和营养有关的资料，你希望信息是中文还是英文？

• 你发短信的时候用哪种语言？

1. 中文

2. 英文

IRB NUMBER: 8781

IRB APPROVAL DATE: 12/20/2017

2

3. 中英文混合

• 你在社交媒体上一般用哪个语言沟通（例如微信， QQ，新浪微博）？

1. 中文

2. 英文

3. 中英文混合

饮食与食物

谢谢您，我现在有一些关于你饮食习惯和饮食偏好方面的问题

1．问题 1

• 您能告诉我在俄克拉荷马的时候最经常吃点啥么？［比如说，你最经常吃中餐？还

是韩国菜？日本菜？泰餐？还是只要是亚洲的都行？还是你吃很多西餐？还是混着

吃的？］

2．问题 2

• 你为啥选着这些东西吃啊 （逐个问过去）

3．问题 3

1. 好的，谢谢了，你平时想得起来想不起来膳食营养这类的东西？ 比如说什么营养

搭配？膳食均衡？这一类的概念？

2. 你咋看待营养健康的？

3. 你觉得美国人和中国有一样的营养观念么？您能具体说说么？

1) 您能谈谈什么样的饭菜对您来说是典型的搭配么？比如你米饭面食，蔬菜，和肉的搭配比例大概是什么样子的？

2) 你记得你每天吃多少水果蔬菜么？

3) 你对每天大概吃了多少卡路里的东西有印象么？能多说说么？

4) 您平时注意食物里的营养么？比如什么维生素啊，矿物质啊，油脂啊？

5) 您每天喝水多嘛？含糖饮料之类的您喝不喝？

6) 您平时爱吃糖，巧克力，甜点之类的东西么？每个星期大概吃多少有印象么？

7) 您平时爱吃零食么？大概吃多少？

8) 关于饮食健康，您还有更多的东西打算和我聊聊嘛？

4．问题 4

• 总体而言，你觉得俄克拉荷马的饮食大环境如何？比如您觉得您能比较轻松地找到

你想吃的东西嘛？你觉得价格咋样？

5．问题 5

• 您来了美国之后，您的饮食习惯有没有改变？

[如果参与人回答“是”对问题 5，则进入问题 6a 至 9a]

IRB NUMBER: 8781

IRB APPROVAL DATE: 12/20/2017

3

6a-9a 问题 6a 至 9a

1. 谢谢您，您能谈一下具体是怎么样改变的么？

2. 例如，你是不是吃了更多的肉制品摄取了更多的乳制品？还是您食用蒸煮食品的量

减少了？如果您能和我多谈一些关于您饮食改变方面的东西，我将不胜感激

3. 好的，您能谈一下您饮食改变的原因么？

4. 真有意思，那么您能和我分享一下你的饮食哲学或者饮食理念么？

[如果参与人回答“否”对问题 5，则进入问题 6b 至 9b]

6b-9b 问题 6b 至 9b

• 谢谢你, 你能告诉我你说 ' 它没有改变 ' 是什么意思吗？

• 很好, 你能和我分享你的故事吗？你不改变饮食的原因是什么？

1) 你多久去一次杂货店购物？ (探针问题)

a) 你在哪里购物？

b) 你多久做一次饭？

c) 你做的菜是传统食品吗?

• 有意思, 您有什么关于饮食的理念，理论，或者思维嘛？你能和我分享吗？

10．问题 10

• 你如何看待饮食与身份的关系？

• 例如, 你认为中秋期间吃月饼对你来说很重要吗？

11-13．问题 11-13

• 你喜欢吃什么舒服的食物吗？你能告诉我它们是什么吗？你能告诉我更多关于

你选

择它们的原因吗？

14. 问题 14

• 你有厨房吗？

[如果回答是 ' 是 ' 对问题 14]

15a. 问题 15a

• 你能描述一下你的厨房设置吗？例如, 那个厨房有炉子吗？你有微波炉吗？冰

箱?

磁感应炉 (在中国非常流行)。

[如果参与者对问题 14 的回答是 "否"]

15b. 问题 15b

• 你有微波炉吗？迷你冰箱？磁感应炉 (在中国非常流行)。

16. 问题 16

IRB NUMBER: 8781

IRB APPROVAL DATE: 12/20/2017

4

• 你是一个人住在这里吗？

17a-21a. 问题 17a-21a (如果参与者与室友住在一起)

• 你和你的室友一起吃饭吗？

[如果参与者的响应是 "是"]

1. 你能和我谈谈你们一起吃饭方面的事嘛？

2. 你为什么一起吃东西？

3. 谁准备的食物最多？

4. 你和别人一起做饭吗？ [这个问题反映了“搭伙”的概念。这是在中国人中

一种常见的现象]

[如果参与者的是 "否", 或者参与者没有室友, 则跳过]

22. 问题 22

[如果参与者与他们的家庭成员一起生活。例如, 他们与父母、孩子和/或他们的伴侣住在

一起]

• 你能告诉我你的家庭成员喜欢在这里吃什么食物吗？

23. 问题 23

• 你会做饭吗？

[如果参与者的回答是 ' 是 ' 问题 23]

24. 问题 24a

• 你多久做一次饭？另外, 你每周要吃多少顿饭？

25a. 问题 25a

• 哪些菜你最经常做？

[如果参与者对问题 23 的回答是 "否"]

24b. 问题 24b

• 你怎么得到你的食物, 你能告诉我吗？

26a. 问题 26a [对于与其合作伙伴一起生活的参与者]

• 你的丈夫/妻子/男朋友/女朋友做饭吗？

27a. 问题 27a

• 他/她最吃什么菜？

IRB NUMBER: 8781

IRB APPROVAL DATE: 12/20/2017

5

26b. 问题 26b [对于与来访父母一起生活的参与者]

• 你的父母会做饭吗？

27b. 问题 27b

• 你爸爸/妈妈最熟的是哪种食物？

28. 问题 28 [对于与子女一起生活的参与者]

• 你的孩子和你吃的食物一样吗？

29. 问题 29

• 你的孩子会影响你的饮食方式吗？

30. 问题 30

• 你有从 OU 租地种菜的经历嘛？

[如果参与者的回答是 ' 是 ' 问题 30]

• 有趣, 你为什么想种菜？你种什么蔬菜？

31．问题 31

• 在你来美国之前, 你做饭/准备食物了吗？

[如果参与者的回答是 ' 是 ' 问题 31]

32a. 问题 32a

• 你能告诉我是谁教你做饭的吗？你来美国之前已经煮了多久了？

[如果参与者对问题 32 的回答是 "否"]

32b. 问题 32b

• 你能告诉我你是什么时候学会做饭的吗？你能告诉我更多关于你烹饪的故事

吗？

33. 问题 33

• 你喜欢尝试新的食物吗？

[如果参与者的回答是 ' 是 ' 问题 33]

34a. 问题 34a

• 你最经常尝试新食物的地点、时间和场合？例如, 你尝试新的食物大多在聚会上

与

其他朋友？还是在美国参加会议时尝试新的食物？

[如果参与者对问题 33 的回答是 "否"]

IRB NUMBER: 8781

IRB APPROVAL DATE: 12/20/2017

6

34b. 问题 34b

• 有趣, 你能告诉我为什么你不想尝试新的食物的原因/理由吗？

35. 问题 35

• 你的家庭成员/小伙伴们, 他们喜欢尝试新的食物吗？

36. 问题 36

• 当你去杂货店购物时, 你对某些食物有偏好吗？或者, 你是否避免购买某些食物？

[如果参与者的回答是 ' 是对问题 36]

37. 问题 37

• 你能告诉我为什么吗？

38. 问题 38

• 谢谢你, 在我们完成我们的采访之前, 是否有任何你想和我分享的关于你在美国的

饮食和食物的故事？

IRB NUMBER: 8781

IRB APPROVAL DATE: 12/20/2017

Appendix C: Survey Questionnaire and In-depth Interview Guild

English version

Interview Question Set

Demographic and Background Information：

1. Where were you born in China?

2. Where did you went to college?

3. How many years have you lived in the USA?

4. Have you lived in any other states before come to Oklahoma?

5. How old are you?

6. What is your major?

7. What is the highest degree you have obtained?

8. Are you married?

9. Do you have kid(s)?

Quick measurement of acculturation:

Short Acculturation Scale (adapted from the Short Acculturation Scale for Hispanics (SASH),

Marín & Marín 1991)

In general, what language do you prefer to read and speak?

1. Only Chinese

2. Chinese over English

3. Both equally

4. English over Chinese

5. Only English

What language do you usually speak while you are not in classroom?

In which language do you usually use when you are thinking about a problem?

What language do you usually speak with your friends?

When you are looking for nutrition-related information, in what language (or languages) do you prefer the information to be?

What do you think about messages?

1. Only in English

2. Only in Chinese

3. Mixed Chinese and English

What language do you usually use when you are on social media (eg. Wechat, QQ, Sina Weibo)?

1. Only in English

2. Only in Chinese

3. Mixed Chinese and English

IRB NUMBER: 8781

IRB APPROVAL DATE: 12/20/2017

Diet and Food:

Question 1:

Can you tell me how would you describe the food preferences that you have here in Oklahoma?

[For example, do you mostly eat Chinese food? or mostly eat Korean? or mostly eat Japanese? or mostly eat Thai? or mostly eat Pan-Asian? or mostly eat western food? Or

sometimes American, sometimes Chinese?]

Question 2:

Can you tell me why you eat _____ these food?

Question 3:

Cool, thank you, what do you think about the idea of dietary health (Shan Shi Ying Yang,

popular concept in Chinese gastronomy)?

Question 4:

After you come to the United States of America, do you think or feel that your eating habit has been changed?

[if participant's response is 'yes']

Question 5a-8a:

- Thank you, can you further explain how has it changed?
- For example, do you mean you eat more meat or you have more dairy products? Or do you mean you eat less steamed food? Please share your story of food change with me, thank you.
- Great, can you share your story with me that what are the reasons that behind your dietary change or what make(s) you change your diet?
- Interesting, do you have any philosophy or rationale about eating behind your food choices? Can you share that with me?

[if participant's response is 'no']

Question 5b-8b:

- Thank you, can you tell me what do you mean by 'it has not changed'?

- Great, can you share your story with me that what are the reasons you don't change your dietary or what make(s) you not to change your diet?
- Interesting, do you have philosophy, or rationale, or ***The Way*** of eating behind your food choices? Can you share that with me?

Question 9:

What do you think about the relationship between eating and identity?

IRB NUMBER: 8781

IRB APPROVAL DATE: 12/20/2017

For example, do you think eating Moon Cake during the Mid-Autumn festive or eating Dumpling during the Spring Festival are important for you?

Question 10-12:

Is there any comfort food you have? Can you tell me what are they? Can you tell me more about why you choose them?

Question 13:

Do you have a kitchen?

Question 14a: [if the response is 'yes']

Can you describe your kitchen setting? For example, does that kitchen have stove? do you have microwave? Refrigerator? Magnetic induction stove (which is very popular in China).

Question 14b: [if the participant's response is 'no']

Do you have microwave? Mini refrigerator? Magnetic induction stove (which is very popular in China).

Question 15

Are you living alone here?

Question 16a-20a [if the participants are living with roommate(s)]

Do you and your roommate(s) eat together?

[if the participant's response is 'yes']

Can you tell me more about how often do you eat together?

Why do you eat food together?

Who prepare the food the most?

Do you prepare/cook [Da Huo, a common dietary practice among Chinese, I and my Chinese neighbors have done that for over four years] food with other people?

[if the participant's is 'no', or the participant does not have a roommate, then skip]

Question 16

[if the participants are living with their family members (for example, their parent(s),

child(ren), and /or partners)]

Can you tell me what kind of food do your family member prefer to eat here?

Question 17

Do you cook?

IRB NUMBER: 8781

IRB APPROVAL DATE: 12/20/2017

Question 18a [if the participant's response is 'yes']

How often do you cook? Or how many meals per week are cooked by yourself?

Question 19a What kind of food do you cook the most?

Question 18b [if the participant's response is 'no']

Where do you get your food?

Question 20a [for participants who live with their partner]

Does your husband/wife/boyfriend/girlfriend cook?

Question 21a

What kind of food does he/she cook the most?

Question 20b [for participants who live with their visiting parent(s)]

Does your parent(s) cook?

Question 21b

What kind of food does your dad/mom cook the most?

Question 22 [for the participant who is living with their child(ren)]

Does your child(ren) eat(s) the same type of food as you do?

Question 23

Does your child(ren) influence your foodways?

Question 24

Do you rent land from OU to grow vegetable?

[if participant's response is 'yes']

Interesting, why do you want to grow vegetable? What kind of vegetable do you grow?

Question 25

Do you cook/prepare food before you come to the United States?

Question 26a [if the participant's response is 'yes']

Can you tell me who taught you how to cook? How long have you cooked before you come to the United States?

Question 26b [if the participant's response is 'no']

Can you when do you learn how to cook? Can you tell me more about the story about your cooking?

IRB NUMBER: 8781

IRB APPROVAL DATE: 12/20/2017

Question 27

Do you like to try new food?

Question 28a [if the participant's response is 'yes']

Where, when, or what occasions do you have the most chances to try new food?

For example, do you try new food mostly at parties with other friend? Or do you try new

food while you are attending conferences in the United States?

Question 28b [if the participant's response is 'no']

Interesting, can you share me the reason/rationale of why you do not want to try new food?

Question 29

How about your family members/partners, do they like to try new food?

Question 30

When you go grocery shopping, do you have preference over certain foods? or do you avoid to buy certain food?

Question 31

Thank you, is there anything that you want to share with me regarding your eating story here in the United States?

IRB NUMBER: 8781

IRB APPROVAL DATE: 12/20/2017