

**Cultural Transitions: The Surviving and Thriving of Single Chinese International Female
Doctoral Students in the United States**

by

Shali Liu

Bachelor of Education, Harbin Normal University, 2010

Master of Education, South China Normal University, 2013

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This dissertation was presented

by

Shali Liu

It was defended on

April 3, 2023

and approved by

Dr. Maureen McClure, Associate Professor, Educational Foundations, Organizations, and Policy

Dr. Frayda Naomi Cohen, Teaching Professor and Associate Director, The Gender, Sexuality,
and Women's Studies Program

Dr. Hayley R. Weddle, Assistant Professor, Educational Foundations, Organizations, and Policy

Dissertation Director: Dr. Maureen K. Porter, Associate Professor, Educational Foundations,
Organizations, and Policy

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Shali Liu, PhD

University of Pittsburgh, 2023

This study explores single Chinese international female doctoral students' cultural transition experiences. Instead of only focusing on their academic lives, this study focuses on the completeness and integrity of these women's lives in aspects of academics, social relationships, marriage expectations, and religious environments. Nine participants were enrolled, and each received two interviews that were primarily conducted in Mandarin Chinese. The use of their native language was to facilitate communication and reduce language barriers. I identified these women's surviving stories in academia and interpersonal relationships, such as challenges and regrets, as well as thriving stories and their happiness, such as individual development and support from others. The result also uncovered the impact of gendered labels, including "leftover" women and "third gender", and marriage expectations from different socio-ecological systems. Their faith lives and experiences of transitioning from a predominantly atheist country to a country of diverse religions were also explored. Part of the research also involved sending the participants direct citations and paraphrases from their own interviews to check whether the descriptions accurately reflect their sharing (Rehman & Azam Roomi, 2012). The participants' engagement in this research contributes to making their voices heard.

The vivid stories of these women aim to break social stereotypes and misunderstandings and raise the awareness of the impact of gendered structure and cultural pattern on these women. It encourages the society to provide support for this minority group as international doctoral

students and as single women. Moreover, ecological system theory helps analyze the interactions between these women and both their host country and native country. The result reveals that the influence of persons and social media in China is far reaching, although physically located in a different environment. It also facilitates the recognition of individual independence and the impact of significant others and environmental factors in different aspects and stages of life. Additionally, transformative learning theory could make exploration and building up confidence of new role more visible under disorienting dilemmas (Mezirow, 2000, p. 22).

Table of Contents

Preface.....	xv
1.0 Background	1
1.1 Purpose of the Study	2
2.0 Literature Review	5
2.1 Cultural Transitions in Academics	5
2.2 Cultural Transitions in Social Relationships	8
2.3 Cultural Transitions in Marriage Expectations	10
2.4 Cultural Transitions in Religious Environments.....	17
2.5 Justification of the Study	19
2.5.1 Cultural Transitions in Academics.....	20
2.5.2 Cultural Transitions in Social Relationships.....	24
2.5.3 Cultural Transitions in Marriage Expectations.....	25
2.5.4 Cultural Transitions in Religious Environments	26
2.6 Significance of the Study.....	27
3.0 Theoretical Framework	30
3.1 Transformative Learning Theory	30
3.2 Ecological System Theory	36
3.3 Rationale.....	39
3.4 Revision of Theoretical Framework	42
4.0 Methodology	47
4.1 Phenomenological Research	47

4.2 Rationale.....	54
4.3 Research Questions	58
4.4 My Positionality as the Researcher	59
4.5 Sampling Procedure	63
4.6 Data Analysis	65
5.0 Results	69
5.1 Surviving and Thriving Experience in Academic Area	69
5.1.1 Introduction of Participants.....	70
5.1.2 Surviving Experience	72
5.1.2.1 Challenges.....	72
5.1.2.1.1 Funding Issue.....	73
5.1.2.1.2 Course Dilemma	76
5.1.2.1.3 Research Challenge	78
5.1.2.1.4 Interpersonal Relationship	79
5.1.2.1.5 Pandemic Influence	81
5.1.2.1.6 Life Balance.....	82
5.1.2.1.7 Self-doubt	83
5.1.2.2 Regrets	84
5.1.2.2.1 Regret in Choosing University or Major.....	84
5.1.2.2.2 Regret in Social Relationships, Health, and Studies	85
5.1.3 Happiness and Thriving Experience	86
5.1.3.1 Previous Experiences' Preparedness	86
5.1.3.1.1 Foundation for Work, Class and Research.....	86

5.1.3.1.2 Academic Community Building	88
5.1.3.1.3 Life Preparedness	88
5.1.3.2 Happiness.....	89
5.1.3.2.1 Academic and Teaching Ability Improved	89
5.1.3.2.2 Self-worth being Affirmed and Financial Support	90
5.1.3.2.3 No Happy or Proud Thing	91
5.1.3.3 Support in Challenges	92
5.1.3.3.1 People in Academic Environment.....	92
5.1.3.3.2 Faith.....	94
5.1.3.3.3 Friends and Family	94
5.1.3.3.4 Self.....	95
5.1.3.4 New Role Explored	95
5.1.3.4.1 Ability Improvement.....	95
5.1.3.4.2 Character being Shaped	97
5.1.3.4.3 Transformation in Academic and Career Plan	98
5.1.3.5 Conclusion	99
5.2 Surviving and Thriving Experience in Social Relationships	100
5.2.1 Surviving Experience	101
5.2.1.1 Challenges.....	101
5.2.1.1.1 Lack of Friend and Group with Belonging.....	101
5.2.1.1.2 Pandemic Influence	102
5.2.1.1.3 Barriers in Social Relationships.....	103
5.2.1.2 Distance from Family and Friends in China	105

5.2.1.3 Interpersonal Interaction’s Gap Between China and America	107
5.2.1.3.1 Social Norm	107
5.2.1.3.2 Recreational Activity	109
5.2.1.4 Attitude Toward Making Friends From Different Culture	109
5.2.1.4.1 Being Open and Building Friendship	110
5.2.1.4.2 Being Opening but Having Obstacles	111
5.2.1.4.3 Refusing Attitude.....	113
5.2.2 Thriving Experience	114
5.2.2.1 Social Network With Belonging	114
5.2.2.2 Happiness and Contentment.....	116
5.2.2.2.1 Social Support.....	116
5.2.2.2.2 Breaking Social Isolation	117
5.2.2.2.3 Improvement in Social Skills and Knowledge	118
5.2.2.3 Conclusion	119
5.3 Surviving and Thriving Experience in Marriage Expectations	121
5.3.1 Surviving Experience	121
5.3.1.1 Challenges of being Single.....	121
5.3.1.1.1 Lack of Social Support.....	121
5.3.1.1.2 Difference from Environment	122
5.3.1.1.3 Obstacles in Finding a Husband	123
5.3.1.2 Influence of Negative Labels or Misunderstanding.....	124
5.3.1.2.1 Limited Impact	125
5.3.1.2.2 Big Impact.....	127

5.3.1.2.3 Response to Negative Labels	128
5.3.1.3 Impact of High Educational Achievements on Finding a Husband	133
5.3.1.3.1 Less Choice of Potential Husband and Knowledge Discrepancy	133
5.3.1.3.2 Cultural Discrimination.....	134
5.3.1.3.3 No Influence	135
5.3.2 Thriving Experience	136
5.3.2.1 Support in Challenges	136
5.3.2.1.1 Individual Themselves and Others	137
5.3.2.1.2 Faith Support & Culture Support	137
5.3.2.1.3 No Support or No Challenge	139
5.3.2.2 Individuals' Changes under these Experience	140
5.3.2.2.1 Marriage Expectations being Changed or not.....	140
5.3.2.2.2 Reasons for Change in Marriage Expectations	144
5.3.2.2.3 Being Satisfied with being Single or not.....	147
5.3.2.3 Conclusion	149
5.4 Surviving and Thriving Experience in Religious and Faith Environment	152
5.4.1 Surviving Experience	152
5.4.1.1 Differences of Religious and Faith Environments	152
5.4.1.1.1 Access to Religion	152
5.4.1.1.2 Faith Life.....	154
5.4.1.1.3 Political Support.....	156
5.4.1.2 Similarity in Faith Life	157

5.4.1.3 Join Religious Activities or not	158
5.4.1.4 Adaption or Challenge in Different Religious Environments.....	159
5.4.2 Thriving Experience	162
5.4.2.1 Impact of Experience.....	162
5.4.2.2 Role of Faith in Christian Lives	164
5.4.2.2.1 Impact on Academic Life.....	164
5.4.2.2.2 Impact on Social Relationships	165
5.4.2.2.3 Impact on Marriage Expectations	167
5.4.2.3 Conclusion	169
6.0 Discussion and Conclusion.....	171
6.1 Uniqueness of Participants	171
6.2 Interaction with Ecological Systems	174
6.2.1 Individual’s Interaction with Ecological Systems	175
6.2.1.1 Leah’s Story	175
6.2.1.2 Lele’s Story.....	176
6.2.1.3 Hannah’s Story	178
6.2.1.4 Mary’s Story.....	179
6.2.1.5 Feng’s Story.....	181
6.2.1.6 Huang’s Story.....	182
6.2.1.7 Lydia’s Story	184
6.2.1.8 Abigail’s Story.....	185
6.2.1.9 Dahai’s Story	186
6.2.2 Characteristics of Individual’s Interaction.....	188

6.2.2.1 Academic Life.....	188
6.2.2.2 Marriage Status	189
6.2.2.3 Religious and Faith Environment	192
6.2.3 Theory Contribution to Ecological System Theory	194
6.2.4 Parents' Role	197
6.3 Transformative Learning	199
6.3.1 Academic Life	199
6.3.2 Social relationships	201
6.3.3 Marriage Expectations	202
6.3.4 Religion and Faith.....	203
6.3.5 Theory Contribution to Transformative Learning Theory	203
6.4 Suggestions	205
6.4.1 Academic Area	206
6.4.1.1 Individual Level	206
6.4.1.2 School and University Level	212
6.4.2 Social Relationships	217
6.4.3 Marriage	220
6.4.3.1 Individual Attitude & Attempt to Change Single Status	221
6.4.3.2 Support from Environment	222
6.4.4 Religion	226
6.4.4.1 Attitude.....	226
6.4.4.2 Social Support	229
6.5 Conclusion.....	230

6.5.1 Importance of Theoretical Framework.....	231
6.5.2 Importance of Phenomenology	235
6.5.3 Insights from this Research.....	238
6.5.4 Suggestions for Women and Future Projects	243
Appendix A Interview Instrument	248
Bibliography	252

List of Figures

Figure 1 An Overview of Transformative Learning Theory and Ecological System Theory	41
Figure 2 Framework in this Study Based on Transformative Learning Theory and Ecological System Theory	45
Figure 3 Nodes in NVivo	67
Figure 4 Data Analysis in Excel	68
Figure 5 Academic Ecological Systems	189
Figure 6 Marriage Ecological Systems	191
Figure 7 Religion and Faith Ecological Systems	194

Preface

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1.0 Background

With the development of global education, almost one million international students were studying in the U.S. colleges and universities in 2021/22 that increased 3.8 percentage, compared with last year, according to the Open Doors Report (IIE, 2022b); there were 679,970 international students in the UK in 2021/22 (Study-in-the-UK.org, 2023) and 619,371 international students studying Australian courses from January 2022 to December 2022 (AGDE, 2023). The large number of international students has driven researchers to study how international students attempt to function effectively and adapt to cross-cultural transitions (Garza, 2015; Kim, 2001) ¹.

Previous studies found that the social distance between the cultures of the main countries where international students congregate, and the cultures of their original countries is great. United States, United Kingdom, France, Australia, and Germany were the essential study-abroad destinations (UNESCO, 2014). These countries manifest an individualistic culture that values independence, respect for individual boundaries, individual achievements, and impersonal social relations (Kartalova, 1996; Trice, 2007). In contrast, for international students who come from

¹ In this dissertation, some mistakes exist in the citations, including the page numbers of some direct quotations are missing, some page numbers for direct quotation may not be right and need verification, and citations with more than four words may not use quotation marks. My main part of literature review was done many years ago, and I was not familiar with some citation rules, such as indirect citation, and I had not been built respect for citation rules. Recently I have used iThenticate to reduce plagiarism and help me revise citations. I apologize for any mistake in the citation.

“highly collectivist cultures”, community cohesion is valued (Trice, 2007, p. 115). Individuals are interdependent in such societies, in contrast to being independent in individualist societies (Triandis, 1995). The gap between individualistic and collectivist cultures causes international students to be challenged. Ladum (2019) “confirmed that international students do experience worse psychological adaptation”, compared with local students. Indeed, it has been shown that studying in a cross-cultural environment brings about loneliness, because of “the absence of the preferred cultural and linguistic environment” (Sawir, Marginson, Deumert, Nyland, & Ramia, 2008). Individual’ repertoires of communication behaviors (Porter & Samovar, 1994) that have been learned and built up in native countries does not work well in the host culture.

1.1 Purpose of the Study

During 2021/22, 290, 086 Chinese students (30.6%) accounted for the largest number of international students in the United States. And from 2009/10 to 2021/22, China has been the first leading place of origin in the United States for 13 years, in terms of the number of international students (IIE, 2022c). The continuous influx of Chinese international students into universities renders them be an indispensable part of higher education in the United Sates. The large number of Chinese international students have their special cultural experiences and expectations.

“Culture is a complex, abstract, and pervasive matrix of social elements that functions as an all-encompassing form or pattern for” individual life styles (Porter & Samovar, 1994). Pai, Adler and Adler (2001) found that culture shapes people’s interpretations and value to things,

event and behavior, since it brings about the internalization and legitimation of sets of norms. While self-identity in collectivist cultures exists primarily that is defined by the relationship with members of the group, self-identity in the individualist cultures tends toward the individual self rather than towards social networks (Tan & Goh, 2006). Acculturation for Chinese students occurs through the interaction between American culture and Chinese culture when individuals' repertoires of communication behaviors (Porter & Samovar, 1994) may be not work well in host culture.

Chinese international students come from collectivist societies that provide considerable norms to instruct behaviors and reflections of personal agency. Study abroad, especially in the United States with individualistic cultures, is likely to result "in a vacuum of information" related to "behavior appropriate to the new culture". The greater the gap between native and host cultures, the greater the transition they experience (Yang & Clum, 1994).

Thus, it is possible for Chinese international students to experience isolation, culture shock, and alienation (Erichsen & Bolliger, 2011). The challenges these students face during cultural transitions are not only from academic pandemic, but also cover different and diverse aspects in daily life. It is not easy to achieve a balance between personal pursuits and expectations, group norms, and institutional requirements that are influenced by different cultural patterns. I try to explore single Chinese international students' transformations in academic areas, social relationships, marriage expectations and religious environments, in order to comprehensively understand their lived experience and wellbeing during cultural transitions.

Although Chinese international students' cultural transition has attracted attention, few sources are available to identify single Chinese international female doctoral students'

experiences. In fact, “the number of international graduate students” in 2021/22 “surpassed undergraduate students for the first time in a decade” (IIE, 2022a). Gao (2019) revealed that doctoral students’ “study status and overall well-being” have not been paid “enough attention from both the scholarly research and in real practice”, although doctoral students “make contributions to the host countries in various ways”.

In fact, compare with college students and master students, doctoral students have a long-time study in the United States, and face the different challenges from academic tasks, including classroom practice, research, cooperation with colleagues, dissertation and the like. These women face cultural transitions not only in academic situations, but also in their interaction with people from diverse cultural backgrounds, interaction with marriage expectations and different religious environments, in terms of their age, gender and cultural patterns. They are under the pressure from the gendered norm to fulfill the obligation of marriage. Given the unique characteristics of single Chinese international female doctoral students, this study explores these women’s cultural transitions in academics, social relationships, marriage expectations, religious environments in the United States.

2.0 Literature Review

2.1 Cultural Transitions in Academics

Previous studies have mainly evaluated academic challenges for international students. First, language and cultural difference bring about obstacles in obtaining academic opportunities and building social network. Language barrier become the essential reason for international students' loneliness and isolation, and "inadequate language training" was one of the important factors for language challenges (Yan & Berliner, 2011). Zhang and Goodson (2011) revealed that the inability to speak English fluently blocks international students from social cultural adjustment. Huang (2012) found that many American instructors denote frustration in engaging Chinese students in classroom activities. Trice (2003) found that language barriers requiring professors to spend extra time instructing international students in the laboratory affect students' academic performance, especially at the beginning of graduate study. Griffiths et al. (2005) uncovered that problems in communication can bring about isolation and following "scapegoating within a syndicate group, resulting in stereotyping and" unfriendliness, as well as overtiredness, performance apprehensions and failure.

Studies revealed that social interaction and support from people in host countries facilitate international students' academic adjustment. Perrucci and Hu (1995) found that the "frequency of social interactions with people from the host culture" is associated with international students' academic transformation. Students who participate "in a peer-pairing program with" host national

students “show a higher level of academic achievement and a lower level of drop-out rates” (Westwood & Barker, 1990). Interactions with local individuals in the host culture give them more opportunities to practice English in order to break language barriers and understand academic expectations in the host countries. However, international students have scanty social connections with host nationals because of cultural differences and lack of time (Trice, 2007; Yang, Teraoka, Eichenfield, & Audas, 1994).

Second, many students have experiences of frustration and confusion due to the unfamiliarity of teaching and learning styles (Griffiths et al., 2005). Cultural differences in classroom interactions bring about misunderstandings during students’ academic transformation. In terms of teaching styles, Parris-Kidd and Barnett (2011) revealed that originality and creativity are valued, so instructors pay more attention to student-centered pedagogies, task-based problem solving, and classroom interaction in more individualistic societies. In contrast, collectivist cultures in Asia emphasize the transfer of knowledge and the authority of the instructors. Thus international students would be likely to encounter academic challenges if “their previous educational experience was in a system that was much more controlled and directed” (Channell, 1990; McClure, 2007). Huang (2012) found that the content taught in classrooms is more acquainted with domestic students’ experiences and less connected with international students’ knowledge.

In terms of learning style, the relative “passivity” of most international students brings about misinterpretations in classroom practices. For instance, Durkin (2011) revealed that Chinese students’ learning experiences render them reject aspects of Western argumentation and be unwilling to leaving aside the traditional and encultured ways. Cultural gaps related to academic

expectations let Chinese students be seen “as quiet, passive rote-learners”, “uncritical thinkers”, students who are “reluctant to express opinions or to question their teachers (Atkinson, 1997; Ballard & Clanchy, 1991; Bodycott & Walker, 2000”; Stanley, 2011). The abrasive, polarize style of Western debate and critique is in great conflict with Chinese culture concerning preserving the “face” of others. It is impolite in China to argue with instructors and classmates because questioning people in public is seen as likely to cause people to feel embarrassed (Durkin, 2011). Chinese students must contend with Western classroom practices of volunteering answers that is regarded as immodest behaviors in China (P. Holmes, 2004). Therefore, international students’ patterns about how to succeed in the classroom do not work well. They struggle to put aside their original patterns and adapt to new requirements as soon as possible, since there is no buffer period.

Students from non-European culture in a high-pressure university also face a similar situation, because they expect cooperative learning practices, while American students are more individualistic and competitive (Selby & Woods, 1966). Thompson & Klopf (1995) found that the score indicates that American university students are significantly more assertive than the participants from Finnish, Japanese, and Korean college students. Poyrazli et al. (2002) found that students with higher levels of assertiveness initiate more academic interactions or ask for academic help when needed. And high scores on assertiveness are associated with better adjustment and more-efficacy academically. International students get lost trying to decide how to respond in a relatively more assertive culture, due to different cultural expectations (Charles & Stewart, 1991; Poyrazli, Arbona, Nora, Mcpherson, & Pisecco, 2002).

Third, the relationship with supervisor is an essential component of doctoral study in academic settings (Gao, 2019), but “the complexities of working with a supervisor” in a new

culture are a big challenge for international students' transformation. "Students' expectations of the student/supervisory relationship were based on previous cultural and educational experiences". The relationship between students and supervisors from different academic cultural backgrounds is, namely: "a high power-distance" in China and "a low power-distance" in Britain. Chinese international students regard the student/supervisor relationship "to be closer and to" be a hierarchical relationship in comparison to British academic practices. Chinese international students expect "a high level of guidance and closeness with their supervisor", while the latter expects academic independence and egalitarian roles (McClure, 2007; Spencer-Oatey, 1997, as cited in McClure, 2007). Elsey (1990) found that a lack of understanding in different and unfamiliar academic cultures for international students tends to diminish the student/supervisor relationship from the beginning. In the contrast, the supervisors who could empathize with students' needs and provide support without creating dependency plays an essential and positive role in student/supervisor relationship. In short, different expectations about student/supervisor relationship are likely to bring challenges in academic transformation.

2.2 Cultural Transitions in Social Relationships

The "nature of successful change" and intercultural adaptation "can be restricted by the availability of support and the conditions of contact within the environments in which they are engaged" (Gu, Schweisfurth, & Day, 2010. p. 7). International students experience social

marginalization deriving from the loss of and distance from home, family, friends, and culture (McClure, 2007). It is hard for them to maintain close relationships under the physical distance, “although Internet and other technologies are heavily used to bridge the gap of time differences and geological distance” (Zhang, 2016, p. 184).

Some studies revealed that international students with a higher proportion of host nationals in their network have higher levels of satisfaction, less homesickness and improved communication competence (Hendrickson, Rosen, & Aune, 2011; Ward & Kennedy, 1993). In fact, it is hard to initiate new friendships in the host countries (Zhang, 2016). Pedersen (1991, p. 24) found that international students “experience more problems than students in general and have access to fewer resources to help them”. Interaction with local students is related to students’ sensation of communication competency and adaptation to local life (Zimmermann, 1995). Students from Africa and the Middle East are always isolated from American student. Many international students tend not to have intimate connections with host nationals due to cultural differences and the lack of opportunities (Trice, 2004; Yang et al., 1994). Yan and Berliner (2011) found that international students feel it is hard to decipher the norms in discourse.

Moreover, some students break the isolation from the host nationals. Hendrickson et al. (2011) found that international students have a higher ratio of host nationals as their friends than co-nationals. And Trice (2004) disclosed that the students (Canadians, Oceanians, Western Europeans) who share similar cultural backgrounds with the United States, for instance, tend to interact with American friends frequently. Because the social distance between American culture and European culture is smaller than that between Western culture and Asian culture (Yan & Berliner, 2011), considering language, religion, economics, and family and community life. The

similarity of cultural backgrounds facilitates building meaningful social relationships in the United States for European students.

Second, previous studies found that many international students prefer to have co-national friendships. Culturally similar friends provide emotional support, and are companions to go shopping, cinema and party as students adjust to an unfamiliar culture (Furnham & Alibhai, 1985). Alreshoud and Koeske (1997) noted that the level of interaction with Americans for Saudi Arabian international students may be less than that of many other ethnic groups. They choose to live in the same community, create their own clubs, and establish their own religious places. Zhang (2016) founded that Chinese doctoral students seek social support from long-lasting relationships in China or other Chinese students on campus. Kuttig (2012, p. v) found female Chinese international students' "social integration" with American students is influenced by "the large number of Mainland Chinese students on campus, the lack of efforts from the students and perceived lack of interest from the American students". Thus, many international students face the physically separation from their previous friends in native country, and they are likely to encounter the challenges to make friends who are from different cultural backgrounds.

2.3 Cultural Transitions in Marriage Expectations

Although international students' acculturation has attracted attention, dating or marriage for international students has been paid limited attention (Yan, 2017). And few studies are available to identify specifically female international doctoral students' cultural transitions in

terms of marriage norms. The few relevant studies have shown that there is a huge gap in marriage expectations among different countries for women with high educational achievements. The relationship between an educational achievement and the likelihood of marriage for women is insignificant or positively in societies with the least “traditional” marriage structure (“Sweden, West Germany, Hungary, and the United States”), but negative in the least gender-egalitarian countries, including Italy (Raymo, 2003). Raymo and Iwasawa (2005, p. 817) found “ changes in marriage market composition account for one-fourth to one-third of the decline in the synthetic cohort proportion ever married among Japanese women with post-secondary education”.

In China, females with high educational achievements are in a disadvantageous situation to find a husband. Female doctoral students who remain single are criticized as individuals who deviate from the norms about marriage. Female PhD students in China are regarded as a “third gender” in addition to men and women. As Mary, a participant in this research, stated, “in culturally available binary gender structure back in China, female Ph.Ds. are considered excluded from both genders”². Female doctoral students are stereotyped as asexual, aloof, unattractive, self-centered, and not feminine enough. In an online poll on Weibo, “30% of over 7,000” participants expressed that “they would not marry a woman with a PhD” (Kuo, 2014). The Chinese Ministry of Education has released an official definition of “urban professional women who are single and over 27 years old who have high educational level, high salary, high intelligence, and attractive appearance, but also overly high expectations for marriage partners, and hence are ‘left behind’”

² Repetitive words are deleted from direct citation from Mary's interview as she suggested.

as *leftover women* (*Shengnu*); this term has been promulgated by the government-run All-China Women's Federation (To, 2015, p. 1). And "China's Ministry of Education added the term to its official lexicon" in 2007. After that, "state media" have insistently disseminated "the term through articles, surveys, cartoons and editorials" defaming "educated, urban women who are single" (Fincher, 2014). The government has normalized and framed the negative labels on these women.

Under this cultural background, women are discouraged from pursuing a PhD degree, in order to avoid the stigma of being termed leftover women. Even before aspiring female scholars decide to pursue a doctoral program, they are likely to encounter the dilemma about how to balance academic pursuits and the prospect of having a family (Zhou & Fang, 2014). The social structure as the take-for-granted information creates action indirectly by modeling individuals' perceptions of their interests and directly by restricting choice (Risman, 2004). This may bring about results that even female doctoral students may be unaware of why they have avoided enrollment in PhD programs before they have found their husband, why they have weighed the pros and cons before they have applied to PhD programs or why they hesitated to introduce their identity as female doctoral students to other people.

Gender, as a powerful social structure (Risman, 2004), influences female doctoral students' freedom related to marriage. Four agencies, including family, social media, government and cultural pattern, are interweaved as a net over these women. In terms of family, China has long-standing and intergenerational family connections, unlike Western cultures. "Parents remain actively involved in their children's choice of" partner (Pimentel, 2000; Qian & Qian, 2014; Riley, 1994; Xiaohe & Whyte, 1990). Concerned and apprehensive parents gather in the public parks, display photographs and provide brief introduction of their children, in order to help their children

to find a partner (Ji, 2015). Zhou and Fang (2014) found that many parents discourage their daughters from joining doctoral student programs, in order to prevent them from being leftover woman and a third gender. Triandis (1995) posited that in individualistic cultures, individuals are independent agencies and can marry someone regardless of parental disapproval. On the contrary, in collectivist cultures individuals who regard themselves as portions of one or many groups (such as family), are largely driven by the rules and responsibilities. Thus, individuals in China are likely to be under pressure to do what is appropriate from the group's perspective. The social network, including parents, relatives, and friends, helps reinforce the norm that leftover women as doctoral students negatively influence the gender responsibility to marry.

Information in different media legitimates “normative conceptions of attitudes and activities appropriate for one's sex category” (West & Zimmerman, 1987, p. 127). For instance, single educated women in their mid- to late twenties are labeled as old women, like “yellowed pearls,” as stated in a column on the Women's Federation website *Do leftover women really deserve our sympathy?* (Fincher, 2014). Information legitimates “normative assumption” and place these women in a disadvantageous and vulnerable situation.

The governing mode in Chinese society propagates the concepts and symbols of “leftover women.” The authorities, including the Chinese Ministry of Education, contribute to the dissemination of the trope about leftover women. Single women are subject to discrimination for being unable to find husbands because of “overly high expectations for marriage partners” or overly focus on their careers (To, 2015). The propagation of the concept of “leftover women” by Chinese government is influenced by the aim to solve the problem in population structure. Previous studies show that the rapid declining fertility rate, the aging population and high ratios of men to

women challenge in China (Cai, 2013; Feng, 2011; Feng, Gu, & Cai, 2016; To, 2015). Ebenstein (2010) found that high ratios of males to females are causally associated with the one child policy's implementation. "The prevalence of sex selection among first and second births" leads to the "missing girls" phenomenon. Strong son preference is made obvious by constrained "low fertility", and "sex-selective abortion" make it possible (Cai, 2013). "According to the National Bureau of Statistics", "Chinese men of marriageable age will outnumber women by" at least "24 million" by 2020, if one-child policy remains unchanged (Boehler, 2013; Kuo, 2014). In order to solve these problems, Chinese government has gradually revised one child policy to encourage couples to have more children from 2013, and persuades the unmarried to get married. And highly educated single women become the essential targets, because it is believed that they would be likely to raise high quality children. So Chinese government actively promotes the concept of "leftover woman" and persuades these single women to get married (Feng et al., 2016; To, 2015).

In cultural pattern, expectations about appropriate behaviors constrain women's choices. China is affected by the centuries-old Confucian culture that values the significance and stability of the family and the importance of propriety in the group. Although individuals have had more freedom to live their own lives after the policy of opening up the economy was implemented, there are few signs of the traditional conventions abating (To, 2015). Females are still "valued in terms of their roles as wives and mothers" (Ji, 2015). "Marriage remains nearly universal" in China today (Ji & Yeung, 2014, as cited in Ji, 2015; Jones & Gubhaju, 2009, as cited in Ji, 2015; Yeung & Hu, 2013, as cited in Ji, 2015). It is all the more a compulsory and indispensable component in women's lives.(To, 2015). Gender structure legitimizes the normative attitude regarding when women should get married. Giving priority to education "ahead of marriage and family, women who delay

marriage challenge normative ideas of femininity and gender role” and patriarchal constraints; as a result, their marital status receives social opprobrium (Gaetano, 2014). Single women are labeled with “a ‘deficit’ or ‘deviant’ identity” (Allen & Pickett, 1987, as cited in Gaetano, 2014, p. 126; Reynolds, Wetherell, & Taylor, 2007, as cited in Gaetano, 2014, p. 126). In conclusion, the improvement of women’s education receives negative judgments when it is in conflict with traditional gender roles.

For female international doctoral students, it generally takes 7.1 “years to complete a PhD degree in the United States” (de Valero, 2001). Another web page reported that it “takes 8.2 years to get a Ph.D.” in average; “in education, that figure surpasses 13 years. Fifty percent of students drop out along the way” (Berger, 2007). This may lead many Chinese women to miss the “appropriate” time for marriage, which based on the viewpoint of the All-China Federation of Women, the government-supported women’s rights organization, is 27 (Zhou & Fang, 2014).

Moreover, the double and gendered standards related to aging lead to the deteriorating position of women in the marriage market, because women are devalued as they age more than men are, and an emphasis on youthful beauty and physical attractiveness devalues women (England & McClintock, 2009; Ji, 2015). Women in China are inclined to seeking a slightly older, intelligent, financially capable, a better educated and romantic men; men prefer to marry someone slightly younger, similar or less education, attractive and has a good personality. Women characterized by so-called “three highs” (high levels of education, high income, and advancing age) are particularly disadvantaged, because of these gender-asymmetrical criteria for spouse selection (Davin, 2007; Gaetano, 2014; Higgins et al., 2002; Yan, 2002). Thus, the cultural and political consequence of promoting negative labels infiltrates the lives of these women. For single

women, it is often hard both to further their education and get married, as these women often suffer from the stigma of being a third gender and a leftover woman. They face the transition from “normal” women to “abnormal” women.

The pressures are even greater in dating and marriage for international Chinese graduate students because of the long-time separation, the long distance, a limited number of candidates, and their being overly academic-oriented and less socially involved (Yan, 2017; Yan & Berliner, 2011), as well as the long time spent in PhD study and the pressure from aging and education. Single students abroad face more dating difficulties and undergo more psychological distress about their future marriage probabilities than married students did. Female students feel more stress from dating and marriage than male students (Yan, 2017). It is possible that these women are under the pressure of social norms and expectations to fulfill the obligation of marriage, since they challenge gendered assumption in their native countries.

And single Chinese international female doctoral students also face the transitions in marriage culture. And the cultural differences in marriage expectations add more variables to these women’s experience. In the United States, the rise of women’s education has not diminished the likelihood of marriage. The increasing resemblance of spouses concerning educational attainment is widespread (Schwartz & Mare, 2005). Study in the United States may reduce the exposure of normative information from family and social media in native countries, and provide the opportunities of exposure to American culture about marriage. It maybe offers more space for these women to choose their path in marriage, or bring about struggles because of cultural differences. Thus, single female doctoral students’ attitude and voice are submerged by the

society's attitude and label. And single international female doctoral students' voices are not paid attention to. It is indispensable to let these women's experience to be heard and understood.

2.4 Cultural Transitions in Religious Environments

One important part of culture is about “beliefs or value systems as right or wrong, God and man, ethics, and the general meaning of life” (Porter & Samovar, 1994, p. 11). However, few sources are available to identify cultural transitions in different religious environments. Many international students face the difference of religion and faith environments about the standard of truth, “God and man”, as well as “the general meaning of life”. For Chinese international students, the cultural difference related to religious backgrounds between the United States and China is great. American society is characteristic with the diversity of religions. It consists of Christianity, Catholicity, Mormonism and so on (Newport, 2016). In contrast, Chinese students grow up in unique and complex religious settings, involving the influence of centuries-old Confucian culture, Taoism, and Buddhism (Yang, 1999), as well as the promotion of atheism in public education system and other systems in the society for many years. Therefore, it is hard to overlook the great gap related to religious environments faced by Chinese international students.

The few studies revealed that the gaps in religious environments may bring about different results, including cultural shock, confusion, transformation, or resistance. For instance, “Christianity is not a traditional Eastern religion” (Yang, 1999, as cited in Wei et al., 2012). Previous studies has shown “that Christianity has become the single most practiced religion among

Chinese people” and “there are more than 1,000 Chinese churches in the United States” (Roof, Carroll, & Roozen, 1995, as cited in Wei et al., 2012; Yang, 1999, as cited in Wei et al., 2012). Chinese international students are invited to weekly Bible study, evangelistic lectures, and social activities organized by Christian-related groups (Mumper, 1987; Neff, 1998; Wang, 2004; Wang & Yang, 2006; Wei et al., 2012). Many Chinese students have the chance of getting access to different religions that do not accord with their own faith. Furthermore, Hsien-Chuan Hsu (2009) revealed that religion or spirituality is significantly associated with the quality of international students’ lives. The result revealed that religion/ spirituality is significantly related to social quality of life for international students. And it “might function as a coping mechanism” “in response to the stressors of acculturation”. Chai et al. (2012, p. 265) found that Asian students have been shown to be “more likely to use religious coping strategies than European students”. Religious coping mode is “effective in improving” Asian students’ “psychological and social quality of life”. And Nahidi et al. (2018) found that higher-level distress is associated with being women, poorer physical health, less social support, adverse attitudes towards looking for psychological help, and less religious involvement and spirituality for Iranian international students. In addition, religion is also one of methods to promote and augment social networks (Sawir et al., 2008).

On the contrary, some previous studies have revealed the limited influence of different religions environment. Porter and Samovar (1994) revealed that components concerning the deep structure such as values, ethics, religious practices, and attitudes toward gender and age are so very deep in the structure of a culture. The deep structure repels major changes. Yao (1979) found that Chinese intellectuals who emigrate to the United States show a higher level of absorption for their extrinsic cultural characteristics than for their intrinsic cultural characteristics including religious

beliefs. And Yan (2017) found that going to church for religious comfort is one of the least frequently cited resources for Chinese students. Thus, people react differently towards religious transition.

2.5 Justification of the Study

Many previous studies have been constructed on the presumption that all international students of the same gender, across classes and cultures, were socially constituted as a homogeneous group (Gu, 2011; Mohanty, 1988). It overlooks the uniqueness of the characteristics and experience of many groups. And many studies focus on international students' cultural transitions in academics, social support and relationship. Kuttig (2012) found that the majority of the literature concerning mainland Chinese student's international education focuses on academic challenges, socio-cultural adjustment, and psychological and financial issues.

In fact, the meaning and content of culture is diverse and miscellaneous. International students' lives during cultural transitions are not constrained in academic area and social relationships. Porter and Samovar (1994) attempted to classify cultures into three categories: artifacts; concepts (which include such beliefs or value systems as right or wrong, God and man, ethics, and the general meaning of life); and behaviors (p. 11). Thus, international students may face multiple challenges, including artifacts, the value system, faith about God and man, the meaning of life, behaviors and the like. The completeness and integrity of international students'

lives in the host country need to be reviewed from multiple aspects. I attempt to comprehensively explore single Chinese female doctoral international students' experience in academics, social relationships, marriage expectations and religious environments during cultural transitions. This study is based on the results of previous studies, and I attempt to break through the limitations of previous research in four aspects.

2.5.1 Cultural Transitions in Academics

First, studies show that analysis of international students' cultural background is fundamental to understanding international students' transformation experience. Clearly, a lack of understanding of international students' cultural backgrounds brings about their being vulnerable to receiving negative labels. Students are judged by host countries' criteria regarding their performance in academics. Special academic challenges derive from cultural differences, including language, communication, teaching and learning patterns, and expectations about student/supervisor relationships. Thus, little attention to cultural backgrounds causes difficulties to uncover the complexity of international student identity challenges and negotiations during study abroad (Gu, 2011; Ward, Bochner, & Furnham, 2001). This study pays attention to the impact of cultural background on students' academic transitions.

And being labeled as quiet, passive rote-learners, uncritical thinkers (Atkinson, 1997; Ballard & Clanchy, 1991; Bodycott & Walker, 2000; Stanley, 2011) reflects the unfriendly judgment from the dominant culture, and international student's difficulties in adaptation to the new academic environment. The labels highlight these students' need to accommodate to the new

expectations from the host culture, and reflect the failure “to acknowledge the weaknesses or inadequacies of the host society” (Perrucci & Hu, 1995). The stereotypes regard acceptance and conformity to host academic expectations as a significant index to evaluating students’ academic transformations, rather than mutual understanding, negotiation and support. These hypotheses cause international students who fail to reach the academic standards of host countries being vulnerable to acquiring negative labels. As it happens, more and more international students who study in countries with individualist cultures come from developing countries with collectivist cultures. The cultural difference is too great for many international students to meet the requirements. Without mutual understanding, it is hard for international students to survive and thrive in a new environment.

Second, this study also explores international doctoral students’ academic preparation, including the degree of familiarity with the academic culture of the country of sojourn and expectations about the role of academic transformation (Klineberg, 1981), as well as the gap between their previous experience in China and in the United States. Because international students’ academic expectations are based on their previous educational experiences. Individuals, absorbing their original culture in the process of growing up, regard their culture as the natural way to respond to the world. Many international students with limited prior experiences of study abroad are likely to experience academic challenges, because their academic preparation is based on their original classroom culture. The greater the gap between academic cultures in native countries and host countries, the more challenges international students may encounter (Yang & Clum, 1994). Many students have admitted that they were unable to realize the magnitude of the difficulties likely to be encountered in America when they were in their own countries (Yan &

Berliner, 2011). Ladum (2019) disclosed that unmet expectations predict both the short-term acculturation outcome of acculturative stress and the long-term acculturation outcome of psychological adaptation. Thus, this situation calls for the evaluation of academic preparations and expectations that influence students' reaction to study abroad.

And for doctoral students, many of them are expected to be prepared to be a qualified teaching assistant and a research assistant; a good communicator with classmates and instructors; an advisee who meets the advisor's academic expectations, and the like. Many doctoral students work for their advisors or cooperate with them on projects. Given diverse roles for doctoral students, related study abroad experiences and appropriate expectations may bring about adaption. In contrast, limited academic preparation, as well as difficulties in language barrier and cultural difference, maybe exaggerate their challenges, since there is limited buffer time. Thus, it is important to pay attention to students' academic preparation and expectations, in order to gain an insight into the process of cultural transition.

Third, few studies have identified female international doctoral students with special characteristics that differ from those of other international students, although previous studies have covered a wide variety of topics about academic experiences among different groups of international students. Doctoral students stay in host countries for a long time. For instance, graduate students generally takes 7.1 "years to complete a PhD degree in the United States" (de Valero, 2001). Another web page reported that it takes 8.2 years to get a PhD in average; in education, that figure exceeds 13 years. And fifty percent of students drop out along the way (Berger, 2007). Doctoral students need to go through different challenges in completing PhD milestones and identity negotiations and bear the opportunity cost during the long journey of

doctoral studies. Furthermore, graduate students as adult learners generally have a stable mode of academic reflections and behaviors, compared with high school students and undergraduates. It maybe takes more time to accept and adapt to different academic environment. This study examines the complicated process of managing unfamiliarity and academic transitions.

Fourth, due to the discontinuity of cultures, students are engaged in ongoing dialogues and interaction in which individuals define and redefine themselves (Jenkins, 2008). Studying abroad experiences encourages Chinese international doctoral students' "self-reflexivity that is crucial to stimulate reflection, self-exploration and self-critique, and" facilitate "intercultural adaptation" (Ye & Edwards, 2015, p. 231). Although there are several models (U-curve model, Adler's five stages of culturally adaptive process, etc.) to explore the process of cultural transitions, "the appropriateness of the U-curve hypothesis for understanding adjustment is challenged because international postgraduates" always confront more miscellaneous, complicated, and uncertain situations (Chien, 2016, p. 47-48). Few studies explore female doctoral students' complex experience with distinguishing features through a continuous and long-term standpoint. And Merriam and Kim (2012) posited that learning is more than a rational process, as it is both complicated and emotional. Thus it is necessary to uncover female doctoral international students' transformations from a long-term perspective, in order to reveal the complexity of the continuous negotiation between individuals and environment, as well as emotional struggles from cultural differences.

2.5.2 Cultural Transitions in Social Relationships

Female doctoral students' transformations in social relationships in a long-term perspective is little known. However, social relationship plays an important role in international students' cultural transition, as Ladum (2019) found that having less social support predicts higher levels of acculturative stress. Some studies found that time influences international students' level of socialization with local students. The more time they spend on study abroad, the better they understand the host culture and the better prepared they are to make friends with local persons (Trice, 2004), and the fewer psychological symptoms they have (Zhang & Goodson, 2011). Students in master's programs have only one or two years to understand the host culture. They may already have finished their studies and left the country before they have fully adapted to it. Graduate students generally take a long time "to complete a PhD degree in the United States" (de Valero, 2001), which gives them more time to adapt to cultural transitions in social relationships. However, Yan and Berliner (2011) found that the social needs of international students are best met by interacting with their co-nationals. As Baba and Hosoda (2014) disclosed that length of stay is not a strong indicators of cross-cultural adaption, maybe length of stay is not the most essential factor influencing students' socialization with host-nationals, if they prefer to make friends with their co-nationals. Moreover, they may also face the challenges caused by the temporary residency of international students and the short-term study for the majority of students. Doctoral students are enrolled in a relatively long period of programs, while undergraduate and master students are enrolled in relatively short period programs. Friends that doctoral students make in the beginning of their study may graduate and leave the place where the doctoral student

still works on their milestones in PhD. This may cause the absence of social support for doctoral students and push them to make new friends. Therefore, it is possible that doctoral students face different challenges in different stages and have diverse ways to deal with the challenges. This study will examine how international doctoral students acculturate in social relationships during a long period of study, in order to gain an insight their social support.

2.5.3 Cultural Transitions in Marriage Expectations

Although international students' cross-cultural transitions have attracted attention in the past, there is little knowledge about the experiences of female doctoral students who may be under the specific gender roles and expectations. Previous studies about cross-cultural transitions were constructed on the assumption that all international students of the same gender, across classes and cultures, were socially constituted as a homogeneous group (Gu, 2011; Mohanty, 1988), without recognition of single female doctoral students' special experiences. The absence of related studies brings about difficulties to understand Chinese international doctoral students' transition from women to female doctoral students, as well as from women to being labeled as leftover women and the third gender. Although female doctoral students bear great pressure related to their gender and educational background, their experiences remain poorly understood.

Moreover, different views about passionate love and intimacy vary between western culture and Chinese culture. Individuals' choices about love and marriage in China are caught up in a web of interpersonal relationships and are influenced by the norm of conforming to society, whereas American culture values individual rights and personal expression (Hatfield & Rapson,

2013; Hsu, 1971; Hsu, 1985). Removal from routine original culture offer an opportunity of the exposure to different marriage culture. It provides “the foundation for re-evaluation, for freedom from cultural and familial expectations and for self-discovery that routine” maybe disallow (Brown, 2009, p. 517). Thus, international students who leave their native countries to host countries may also experience different cultural expectations about love and marriage, but few studies have traced the effect of cultural transitions and the impact of gender expectations on these women’s experience.

2.5.4 Cultural Transitions in Religious Environments

There is little in the literature identifying international students’ ongoing interaction with a different religious culture, as well as about their stimuluses or refusal to engage in religious related activities during cross-cultural transitions. The few previous studies provide different results about international students’ responses to diverse religious backgrounds, including resistance and acceptance. Hsu (1985) posited that the needs of intimacy for Chinese people are readily and continuously met within the kinship network. They can maintain psychosocial homeostasis “without resorting to other elements such as gods”. This is different from western culture whose sources of psychosocial homeostasis is religion and faith. However Chinese international students face the physical separation from family members. It is possible for them to resort to religions, reflect on their faith, as well as be indifferent to different religions environments, and insist their original belief. The interaction with different religious backgrounds may be more than a rational or simple process, as it is intricate, personal and emotional (Merriam

& Kim, 2012). It is worthwhile to explore their ongoing interaction with an unfamiliar religious culture, as well as about their motivations or their refusal to engage in these activities during cross-cultural transitions.

“Women are native speakers of this situation and in explicating it or its implications and realizing them conceptually” (Smith, 1974, p. 13). By focusing on these four themes, I attempt to uncover the multifaceted status of these women during their studying abroad and fills in the blanks of previous research. I try to facilitate the stories of these women to be recognized.

2.6 Significance of the Study

The crucial significance of this study lies in four aspects. First, it fills in the blanks of previous research with the recognition of single female doctoral students’ special and complicated experiences. By focusing on these four themes, I attempt to comprehensively uncover the multifaceted status of these women during their studying abroad, and unveil the process of negotiation between their dilemma and the acquisition of strategies of adaptation over extended periods of their PhD study (Tran, 2013). Moreover, the voice of people as Chinese Christians could be heard, especially in the background of cultural transition. Because of the promotion of atheism and Christians accounting for a small proportion in China, people have very limited chances to know Christians’ lived experiences and may be likely to have misunderstanding. Six participants (66.7%) in this research are Christians, and their sharing allows the audience to know more about this group and may reduce stereotypes about Chinese Christians.

Second, I try to respect participants' voice, to create spaces for reciprocal learning, and to empower participants to change their lives. Participants were invited to provide suggestions to others who will be in the similar situation (Kirsch, 1999). And direct quotations and paraphrasing directly drawn from interviews in the draft of the dissertation were sent to participants to check whether or not descriptions reflect their sharing (Rehman & Azam Roomi, 2012). The participants' engagement in this research contributes to facilitating the stories of these women to be recognized.

Third, I attempt to facilitate an understanding of gender and cultural patterns as routine accomplishments fixed in these women's daily lives (West & Zimmerman, 1987). Considerable misunderstanding and confusions surround interactions among language, communication, culture, and education (Gay, 2010). The issues of being labeled as quiet, passive rote-learners, uncritical thinkers (Atkinson, 1997; Ballard & Clanchy, 1991; Bodycott & Walker, 2000; Stanley, 2011), socially isolated group (Trice, 2007), leftover women (To, 2015), and unknown about the challenges related to different religious environments, remain unspoken. There are many information to judge and label them but limited word of these women's voice and struggle in the columns and books. They are expected to actively participate group discussion and manage academic pressure. They are taught to be feminine and get rid of their status of single as soon as possible to meet others' expectations. They learn that women are supposed to be married before the appropriate age. The normalized structures hidden in the host and native culture construct and create challenges for these women. The problem is dismissed that few people pay attention to these women's situation (Friedan, 1963). Their experiences are ignored and the misunderstanding of these "women's common subjugated experience" (Butler, 1990, p. 7) is legitimated. These women, whose voice is stirring, have lived their lives in the pursuit of feminine fulfillment and balancing

different expectations (Friedan, 1963). Stereotypes and lack of knowledge about these women maybe lead to misapprehension. I try to raise the awareness of the impact of gendered structure and cultural pattern on these women.

And I attempt to take different ethnic, academia, and gendered backgrounds into consideration when exploring these women's cultural-transition experiences, in order to achieve mutual understanding. It avoids the achievement patterns and labels for these women to be attributed only to individual limitations. The fault lies as well within the institutional structures, assumptions, and practice of classrooms, lab, and interaction with others, and the society at large (Gay, 2010). I attempt to identify and name aspects of women's experiences that has been silenced and unnamed and facilitate these women's experience and related terms into public discourse. It provides foundations for complaints, argument and actions (Kirsch, 1999). It allows for more effective and efficient strategies that agencies and institutions could adopt to empower these women in cross-cultural transitions.

3.0 Theoretical Framework

This research is grounded in transformative learning theory and ecological system theory. Transformative learning theory helps examine the process of these women's negotiation, and ecological system theory is employed to comprehensively understand the intersectionality of different environmental factors on individuals' experiences during transitions.

3.1 Transformative Learning Theory

Mezirow introduced transformative learning theory (TLT) in 1978 as the framework for analyzing adult learning. "Transformative learning refers to the process by which we transform our taken-for-granted frames of reference" "to make them more inclusive, discriminating, open, emotionally capable of change, and reflective so they may generate beliefs and opinions that will prove more true or justified to guide action". "Transformative learning involves" releasing individuals "from reified forms of thought that are no longer dependable" (Mezirow, 2000, p. 27). Individual becomes "critically aware of one's own tacit assumptions and those of others and assessing their relevance for making an interpretation" (Mezirow, 2000, p. 4). Individuals learn to formulate more dependable viewpoints based on personal experiences, evaluating their environment, searching for "agreement on their meaning and justification, and making decisions based on the resulting insights" (Mezirow, 2012. p. 74). Transformative learning is, in sum, "a

process of examining, questioning, and revising perceptions” (Cranton & Taylor, 2012, p. 5). It is grounded in ten stages, namely:

- “A disorienting dilemma
- Self-examination with feelings of fear, anger, guilt, or shame
- A critical assessment of assumptions
- Recognition that one’s discontent and the process of transformation are shared
- Exploration of options for new roles, relationships, and actions
- Planning a course of action
- Acquiring knowledge and skills for implementing one’s plans
- Provisional trying out of new roles
- Building competence and self-confidence in new roles and relationships
- A reintegration into one’s life on the basis of conditions dictated by one’s new perspective” (Mezirow, 2000, p. 22).

Cross-cultural experiences characterize potent transformative learning settings (Kasworm & Bowles, 2012). Individuals, “embedded in a particular society and culture and era, indiscriminately” absorb “perspectives produced by their” culture into their frame of reference, including stereotypes. It influences personal attitudes, expectations, and interpretations of the lived experiences (Mezirow, 2012; Park, 2017). The original value system works as a filter through which new information passes, “in the process of being perceived, interpreted, and understood” (Fisher-Yoshida, 2003). As the usual behaviors and expectations shaped by the original culture cannot apply to the host environment, anomalies of habits and customs become trigger events that

accelerate transformations (Mezirow, 1990). The exposure to a new culture may brought about a disorienting dilemma, since new customs contradict individuals' previously accepted presuppositions (Etmanski, 2007; Mezirow, 1991).

Previous studies revealed the challenges international students encounter, including the language barrier (Yan & Berliner, 2011), the unfamiliarity of learning and teaching practices (Griffiths et al., 2005), different expectations about the student/supervisor relationship and positionality (McClure, 2007; Spencer-Oatey, 1997), a lack of preparation for cultural differences (Yan & Berliner, 2011), and loss of social support from relatives and friends (Ritz, 2010). Kasworm and Bowles (2012) found that students in higher education often encounter cognitive, sociocultural, and emotional challenges. New “learning environments” may “challenge individuals to” cross “their comfort zone of the known”, because of divergences in beliefs, and a new context “with provocative values and power dynamics”. A disorienting dilemma for single female international doctoral students may arise from one's efforts to understand a different culture that challenges one's presumptions (Mezirow, 1990), different cultural expectations in classroom practices, distinct cultural norms in social relationships and religious environments, or the pressure from being labeled as a leftover woman.

TLT has been employed to uncover the process how social structures influence students, how learners understand “their experiences in various ways which influence the sort of value systems they develop, and that how disorienting dilemmas often challenge the validity of one's values and the assumptions” (Christie, Carey, Robertson, & Grainger, 2015, as cited in Pearson, 2018). It is also regarded as “a possible explanation for the changes” made by “international students in their journey to negotiate higher education” (Tran, 2013). Kumi-Yeboah (2014)

examined the elements shaping “transformative learning experiences of” African international students. Transformative learning tries to explain how individual’s “expectations, framed within cultural assumptions”, “directly influence the meaning” of experiences (Mezirow, 2003, as cited in Kumi-Yeboah, 2014). Brown (2009) suggested that separation “from the familiar home environment gave students freedom from cultural and familial expectations and the opportunity for self-discovery”. Tran (2013), for example, reported analyses of how eight “Chinese and Vietnamese international students” mediated their “academic writing” to adapt to pedagogical practices at an Australian university. The process was complicated, as students negotiated shifting borders in higher education, discovered their potential, and encouraged the emergence of the newly constructed self. Taylor (1994b) described “an experience of dissonance between the host culture and their primary culture”, where the sense of cultural disequilibrium created intense emotions driving people to rectify the situation by building a new balance in the new environment.

Previous studies also found that the transformative power of intercultural settings involves cognition, perspectives, and personal identity. Kim and Ruben (1988) highlighted that an intercultural transformation is the process of change beyond the cognitive, affective, and behavioral limits of people’s original culture and establishing an individual intercultural identity. Kasworm and Bowles (2012) discovered perspective transformation, involving critical self-reflection with authentic discussions and supportive group, expansion of the ability to survive, and development of a positive attitude toward sometimes disconcerting experiences. Thus, TLT could be an appropriate means to discover the complex process of international students’ struggle and exploration during cultural transitions.

Although TLT contributes to exploring different stages of transformations, it fails adequately to address the complicated impact of environmental factors. It focuses on individualistic pattern and the process of people learning “to negotiate and act on their own purposes, values, feelings, and meanings” (Mezirow, 2012). “Several streams of research have approached the complexity of transformative learning through holistic and interdisciplinary perspectives” highlighting the significance of “an ecological vision” and emphasizing the interconnection between individuals and environments (Alhadeff-Jones, 2012; "Davis-Manigaulte, Yorks, & Kasl, 2006; O’Sullivan, 1999; O’Sullivan, Morrell, & O’Connor, 2002”). Notwithstanding these contributions, the reciprocal effects among circumstance, “culture, and transformative learning remain only marginally” examined (Alhadeff-Jones, 2012; Taylor, 2000). It emphasizes the autonomous character of individuals, while overlooking mutual acceptance of social realities as defined by others (Taylor, 1994a). Initial social recognition is significant for the adolescents, and transformative learning clearly “does not happen in a vacuum” (Nohl, 2009). Although the theory has gradually developed to incorporate the importance of environment and relationships with others, it has not examined comprehensively the impact of social and emotional elements on transformative learning itself (Jokikokko, 2009). Indeed, transformative learning is actually a product of the personal and the social (social recognition, relationships), which potentially bring about an emphasis on “individual responsibility for and about others (social accountability)” (Taylor & Snyder, 2012). Therefore, cultural transitions in higher education settings need to be examined in terms of the interactions between individuals and their circumstance.

Moreover, every stage of transformation involves various changes that affect international students and their surroundings, with a variety of outcomes (in terms of emotions and beliefs, as well as behaviors). The complexity of the process necessitates understanding these mutual relationships and ongoing impact on each other. The interactions between environment and students become the positive and negative reinforcements that regulate the feelings, beliefs, and behaviors at every stage (Alhadeff-Jones, 2012). It is necessary to examine the experience of international doctoral students' cultural transitions under the ongoing interaction between individual and environment. In addition, TLT values the cognitive nature of the learning process. However, learning is more than a rational process, as it is intricate, personal and emotional (Merriam & Kim, 2012).

In conclusion, cultural transitions in higher education settings are actually so complex that TLT cannot deal with the complexity of external factors on individuals. Many research models do not consider possible interdependencies between settings, while ecological system theory take consideration of the joint "impact of two or more settings and their elements" (Bronfenbrenner, 1977). It is, therefore, incorporated in this study to adopt a framework for the organization of different environmental factors that may bring about and shape the transformative learning process.

3.2 Ecological System Theory

Ecological system theory (EST), developed by Bronfenbrenner, highlights the complicated impact of ecological systems on individuals. Although EST was designed to explore the role of environmental factors on the developing person, the theory also expertly investigates the joint effect of individuals' exposure to different external settings. It could be used to help sort out the messiness of complicated and entangled factors in global education. EST emphasizes, for example, that individual development results from constant interaction and mutual accommodation over extended periods of time with the environment. The process is influenced by relationships within and between immediate environments and the larger social settings. Five environmental structures are listed as influencing "human development", namely: "microsystem, mesosystem, exosystem, macrosystem, and chronosystem. These are not separate and different systems", but "rather a set of" nested and embedded "relationships, starting at the person's core (microsystem) and moving toward" macrosystem (Bronfenbrenner, 1996, 1977).

The microsystem as the center of EST incorporates the complex of relationships in an immediate setting. It is a setting surrounding with particular physical features, and in this setting individuals are engaged in a pattern of activities, roles, and interpersonal relations. The mesosystem, a system of microsystems, comprises the connections and processes taking place between two or more settings, such as a home, peer group and workplace. The exosystem refers to a larger system that is beyond the control of individuals, who may not even be present, but events occur in this system that indirectly affect processes within the immediate setting in which individuals live. It includes the community, the mass media, government, communication

facilities, and informal social networks. The macrosystem involves the main “pattern of micro-, meso-, and exosystems characteristic of a given culture and subculture”, including economic, social, educational, legal, and political systems. It also refers to the carriers of information and ideology that provide meaning and incentive “to particular agencies, social networks, roles activities, and their interrelation” (Brim, 1975; Bronfenbrenner, 1994; Bronfenbrenner, 1977). Finally, the chronosystem brings the dimension of time into consideration, the change or constancy in the course of not only in the personalities of individual but also the context in which individual lives (Bronfenbrenner, 1994).

EST takes into consideration the complexity of the individual’s socio-cultural environments, and is adopted to sort out and organize how elements within each of the nested systems act as catalysts (Cross & Hong, 2012). Perkins (2012) examined how environmental factors influence “violence exposure and disabilities”, finding the importance of such factors as “individual level and chronosystem” (“timing of exposure to violence”), “family microsystem” (“violence in the family”, family relationships, family setting and parenting style), classroom microsystem (teacher-student interactions, peer relationships, maltreatment, and teacher role) , macrosystems (school climate), and macro level influencing on schools (poverty minority status, and government educational disbursement). EST helps “examine ways in which children with disabilities are vulnerable in micro contexts and how macro contextual characteristics influences each lower level and the mesosystemic relations between microsystems”. Strayhorn (2009) used EST to examine the relationship between male African American students’ educational attainment (e.g., their aspirations) and multiple “contexts, settings, or systems (i.e., schools, neighborhoods)”, by “using a nationally representative sample of respondents to the National Educational

Longitudinal Study. Hierarchical linear regression analysis revealed statistically significant relationships between aspirations and SES, academic achievement, and” the places where they lived. McCue (2016) examined the lived experiences of law students with mental illness. EST was used to examine the different systems and the ways these students navigate their law school experience, including the influence of “family, romantic partners, friends” and the like on their journey to becoming a lawyer. Lange (2012) admitted that transformation is not linear, but rather a looped process with multiple cofactors that can either amplify or buffer the changes. EST is evidently useful for analyzing and organizing the complexity of environmental factors that affect individuals’ transformative learning.

And EST helps investigate the interconnections among different systems and the interactions between different systems and personal agency. It does not view different systems as isolated ones, but as different parts of an integral and joint context. Bronfenbrenner identified two essential factors of student learning: one is the character of the learner and the environments in which he or she lives; the other involves the relationships and interconnections between them (Bronfenbrenner, 1976). Barber et al. (2015) employed ETS to provide recommendations across the levels of EST. It is adopted to decompose the complicated characteristics of fraternity and sorority involvement into different systems and elucidate the interrelatedness among different systems on students over a period of time. Testa-Ryan (2016) used EST to understand and clarify the correlations “among the family, school, and community that” facilitate “the academic resilience of urban, college-bound, Latina high school seniors who overcome adverse circumstances”. Everson (2015) adopted EST to investigate “the collective experience of” “second-year, residential students within Landfall University”. It reveals that “the environment at

the institution” supports and facilitates “student resilience”, when they feel safe and supported. Toston (2013) investigated the impact “of home and school environments' role in student academic goal orientation and motivation”, based on EST. McLinden et al. (2016) adopted EST as a lens to conceptualize and navigate the challenging issues of the specialist teachers’ negotiation in promoting an appropriate curriculum balance, in order to support children and young people with vision impairments. Tudge et al. (2009) suggested that researchers must consider the person, the processes of interconnection between individuals and circumstances, the multiple contexts, and time, in order to use EST fully.

I utilize EST to examine cultural transitions through comprehensive perspectives among all five systems (microsystem, mesosystem, exosystem, macrosystem, and chronosystem) and the interactions between individuals and contexts. Understanding international students’ cultural transitions in higher education settings demands more information related to home, student/supervisor relationships, classroom practices, workplace, host cultural suppositions, as well as personal interactions with contexts.

3.3 Rationale

TLT provides a framework to analyze the procedure of adult learning, including “examining, questioning, and revising original assumptions” (Cranton & Taylor, 2012, p. 5) in academics, social relationships, marriage norms, and religious environments. EST complements transformative learning by providing a comprehensive view of international students’ learning

across and within the influence of different systems and relationships. EST constructs an in-width analysis of different environmental factors that may be influencing international students, TLT constructs an in-depth analysis of transformative learning in cultural transitions (Kline, Gard McGehee, Paterson, & Tsao, 2013). Both TLT and EST value the impact of the time dimension. Doctoral students stay in host countries for a long time. For instance, graduate students generally take 7.1 “years to complete a PhD degree in the United States” (de Valero, 2001). Cultural transitions for doctoral students are accompanied by different challenges in the course of the entire journey. Individuals, environmental factors, and the interactions between different systems change with time (Tudge, Mokrova, Hatfield, & Karnik, 2009). In academics, individuals face challenges at the beginning such as the language barrier and classroom requirements. By the end of the doctoral program, they face such challenges as writing their dissertations and preparing for jobs. In terms of social relationships, they have opportunities to make new friends, but they also face the challenge to break the isolation and witness many friends graduate and leave the area. In different religious setting, they may have more opportunities to get access to, accept and understand different religious environments, or be nostalgic to their home religious environment.

As time passes, moreover, individuals get older. The gender standards related to aging and education may lead to the deteriorating position of older women in the marriage market, because the emphasis on youthful beauty devalues women (England & McClintock, 2009). They are likely to be under great pressure to marry early. Ecological transitions entail changes over time in role, activity, relations, and often place as well (Bronfenbrenner, 1977). TLT and EST could be used to analyze how female doctoral students in higher education settings respond to these cultural transitions during a lengthy period in their host countries. Figure 1 shows the application of the

combination of TLT (Mezirow, 2000) and EST (Barber, Espino, & Bureau, 2015; Bronfenbrenner, 1977; Cross & Hong, 2012; Strayhorn, 2009) in this study.

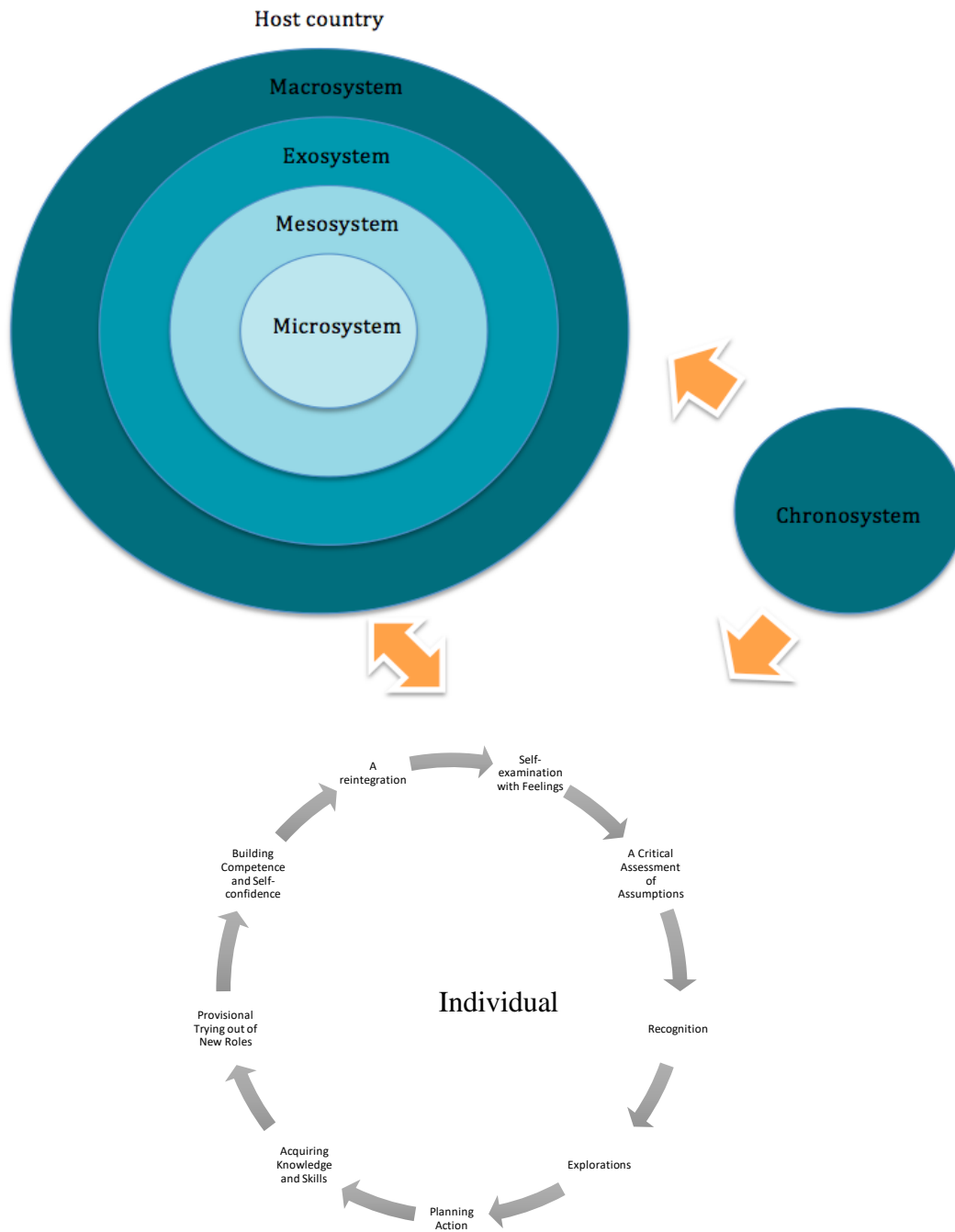


Figure 1 An Overview of Transformative Learning Theory and Ecological System Theory

3.4 Revision of Theoretical Framework

International students face the challenges because of moving from one country to another country. EST recognizes the importance of chronosystem (e.g., change over place of residence). TLT values the impact of original assumptions in the beginning of transformative learning process. The original assumption for international students is based on their personal experience under the influence of native culture. However, a factor that is not paid much attention in both TLT and EST is the continuous impact of international students' native culture, along with their ongoing interactions with social networks in their native countries. Individuals cannot be isolated from their cultural base and history, their experiences, and their social contexts (Johnson-Bailey, 2012). EST emphasizes the impact of individuals' ecological surroundings on proximal processes (Tudge et al., 2009). Microsystem, mesosystem, and macrosystem refer to the ecological systems physically surrounding participants in the present. Bronfenbrenner (1979) argued that individuals learning in educational settings are influenced by the relationships between the characteristics of learners and the surroundings in which they live, as well as the interactions between these environments. Emigrating to another country means crossing macrosystem borders (Bronfenbrenner, 1996). And even though TLT gradually identifies that the assumptions of historical networks and their supporting ideologies need to be brought into awareness (Mezirow, 2012), it does not examine the persistent influence of one's original cultural suppositions, family and homeland social network on transformative learning. The impact of the cultural paradigm in the homeland on transformative learning is not limited to one's own tacit assumptions, although study abroad bring about the changes in ecological setting, and the physical distance from native country. In fact, international

students are always under the joint impact of two distinct and different integral settings. And adapting to cultural transitions involves continuous comparison and reflection on the native culture and the host culture. The reasons are as follows.

First, the development of the Internet, of course, has decreased the distances among people and between countries. For international students, they could communicate with their close relationships in China through FaceTime, Line, WeChat, Signal and so on. It is also easy and convenient to get access to information and news in social media online. Second, as China has been the first leading place of origin in the United States for 13 years regarding the number of international students (IIE, 2022c), individuals could easily make new friends from the same homeland during studying abroad. International students have been shown to prefer co-national friendships (Furnham & Alibhai, 1985). Gill (2007) also found that Chinese international students give priority to social networks with a similar cultural background when they need emotional support or face difficulties in adapting to the host culture. Interaction with other such students reinforces individuals' cultural paradigms, including language and customs. It prevents students from isolation from their original culture. Therefore, original cultural paradigms accompany international students into host countries, where they always interact with native culture.

Third, the impact of native culture is too comprehensive and thorough to be ignored. The frames of reference of individuals often unintentionally absorb cultural paradigms (collectively held frames of reference) or personal perspectives derived from the idiosyncrasies of close relations. A habit of mind includes not only sociolinguistic, but also epistemic, philosophical, and psychological patterns (Mezirow, 2012). The original culture influences individual thoroughly and inclusively. Moreover, family connections and community unity are valued in collective cultures

(Trice, 2007), and individuals are interdependent in collective societies (Triandis, 1995). The close and interdependent relationships could hardly be changed immediately. The influence of family and original community is hard to diminish, even though international students may be physically far away from their homeland. Individuals are continuously and constantly influenced by this cultural pattern and are reinforced by close relationship and information in the native country. Thus, understanding the process of cultural transition needs to take into consideration the continuous impact of native culture. Limited attention to native cultural influences is insufficient to explain the recursive transformation for students during cultural transitions.

I try to fill the vacuum of research related to the ongoing impact of the original culture on international students and to integrate the two ecological systems of host culture and original culture. Figure 2 shows the revision of Figure 1 to provide the framework for uncovering the joint and ongoing impact of original culture and host culture on single Chinese female doctoral students in the United States.

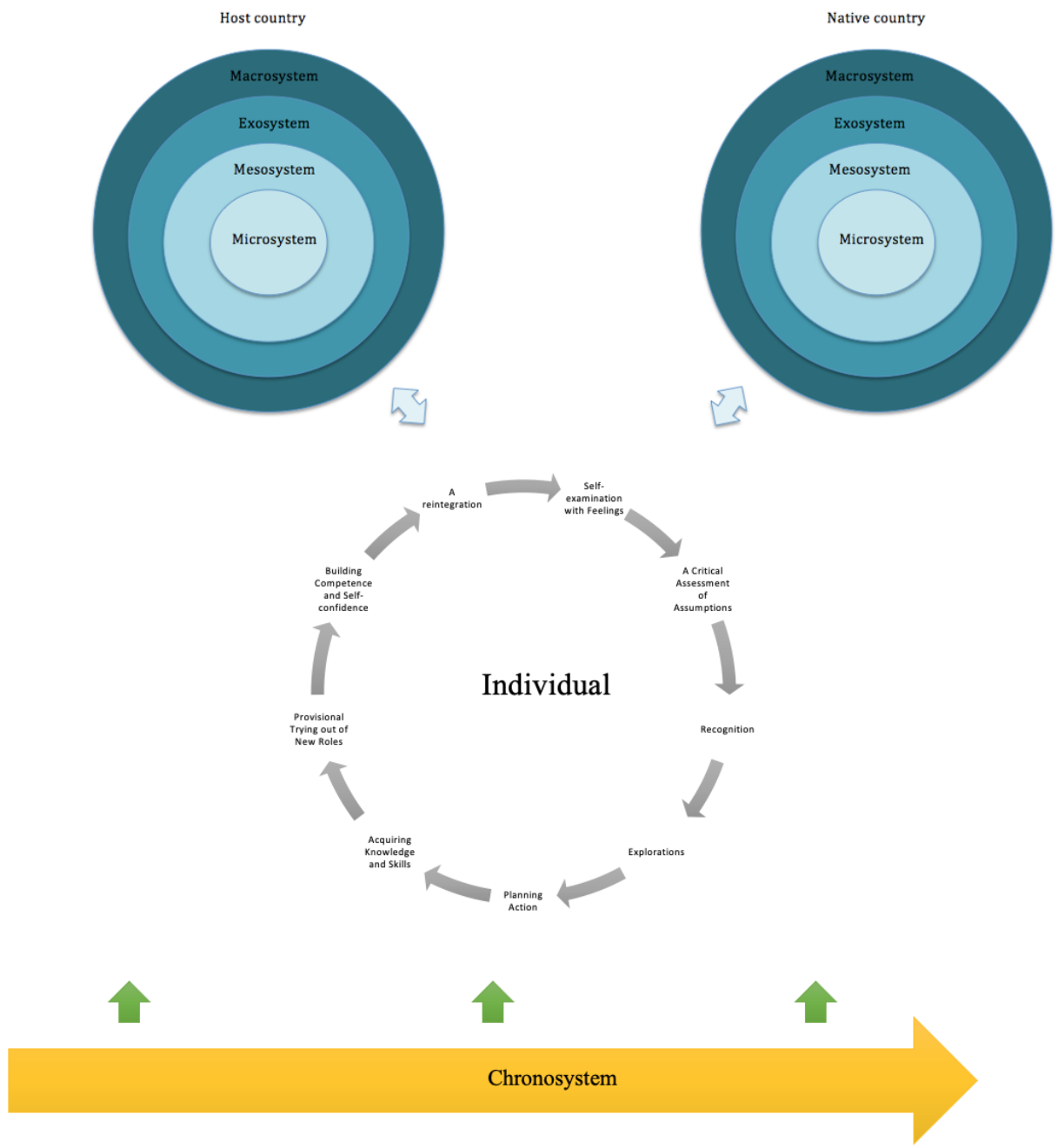


Figure 2 Framework in this Study Based on Transformative Learning Theory and Ecological System Theory

Based on Bronfenbrenner's theory (1977, 1994), I try to assort different systems influencing female doctoral students. Microsystem in host countries refers to close interpersonal connections between individual and the immediate environment that include the department, home, workplace, church and so on. In these settings, female doctoral students engage their roles as students, roommates, employees, teaching assistants, friends, and the like. It also includes a mode of activities and the expectations from these interpersonal connections. Mesosystem refers to interactions and relationships among workplace, classroom, home, and religious place. Exosystem comprises higher education settings, neighborhoods, and communities. The macrosystem includes the essential obvious or hidden pattern of culture that are embedded in educational, economic and political systems.

Microsystem in native countries refers to interaction with family and close friends in the homeland. It also includes a pattern of activities and communications among these others and their role as family member, friends and the like. The settings entail social and cultural characteristics that invite, permit or restrain engagement. Mesosystem refers to the interactions among two more settings. Exosystem involves information in social media and communities, as well as the settings that exert indirect influence on individuals through close relations. Macrosystem comprises the primary pattern among micro- to exosystems of culture or subculture. It also refers to educational, economic, political systems, and cultural paradigms in the motherland.

4.0 Methodology

The purpose of this study is to understand female doctoral students' experience during cultural transitions by using phenomenological research. Phenomenological research plays an essential role in facilitating and empowering investigation in this study. It allows for the possibility of making these women's voice heard.

4.1 Phenomenological Research

Phenomenology is an effort “to describe the essential structures of human experience from a first-person” point of view (Merleau-Ponty, 2012; Stanage, 1987). The word itself derives from the Greek *phaenesthai*, referring to things flaring up, showing themselves, and appearing. *Phenomenon* means placing in brightness, showing itself from itself (Aagaard, 2017; Heidegger, 1977, 2008; Moustakas, 1994). Therefore, phenomenological methodology attempts to understand anything from the perspective of individuals undergoing the experience, the structure of phenomena that appear to consciousness (Giorgi, 2009) and “from inside their subjective experience” (Giorgi, 2009, as cited in Mayoh & Onwuegbuzie, 2014; Todres & Holloway, 2006, as cited in Mayoh & Onwuegbuzie, 2014). It emphasizes the lived experience (Aagaard, 2017), along with their own interpretations of these experiences (Patton, 2002) instead of the researchers' interpretations, as well as the whole account of the individuals' experiences (Moustakas, 1994).

The several streams of phenomenology include transcendental, descriptive (eidetic), interpretative (hermeneutic), existential and dialogical phenomenology. These streams differ in theory, focus and approach (Cilesiz, 2011; Dimandja, 2017; Mayoh & Onwuegbuzie, 2015; Yüksel & Yildirim, 2015). For example, “transcendental phenomenology developed by Husserl focuses on” thinking “beyond ourselves in order to view the world from above” (Yüksel & Yildirim, 2015; Dimandja, 2017). It emphasizes the nature of “subjectivity and discovery of the essences of experience”. “Only the data available to consciousness”—such as “the appearance of the objects”—are used. It is considered to be “transcendental”, because it insists on reflecting what can be found by reflecting the subjective behavior and its objective relevance (Husserl, 1965, p. 5; Moustakas, 1994). Descriptive phenomenology emphasizes the descriptions of participants’ individual experiences and the essence or essential structure referring to the common points of lived experience. The researcher analyzes specific lived experiences in variations to identify common characters in these experience that identify phenomena transcending different personal experience (Creswell, 2007; Holloway & Todres, 2003; Mayoh & Onwuegbuzie, 2015). The essences and core characters that make the phenomenon what it is are regarded as structures (Holloway & Todres, 2003).

Interpretative phenomenology values interpretation rather than description (Cilesiz, 2011; Dimandja, 2017; Yüksel & Yildirim, 2015). Interpretative phenomenological analysis goes beyond mere description of core concepts and essences to look for meanings embedded in common life practices. And the relation of personal agent to their “lifeworld should be the focus of phenomenological inquiry”, since individuals cannot abstract themselves from the world. Personal “experiences are inextricably linked with social, cultural, and political contexts”. This stream

admits that presumption or expert knowledge are valued guides to inquiry, although making presumptions obvious “and explaining how they are being used is a vital part of the hermeneutic tradition”. It “does not negate the use of a theoretical or conceptual framework as a component of inquiry” (Heidegger, 1962; Lopez & Willis, 2004). Data analysis is an iterative and inductive process involving “line-by-line analysis of all the interview transcripts” by reading and rereading to uncover what these experience mean for participants, distinguishing emergent topics by coding the data, identifying associations among emergent themes, looking for modes in different cases, and building the structure that demonstrates the relationships among them (Lommen, Brown, & Hollist, 2015). Meanwhile, existential phenomenology highlights uniqueness of individuals, social dimension of being, individual’s relationship to others, and individual’s embeddedness in a culture (Cilesiz, 2011; Heidegger, 1962). Dialogical phenomenological research regards participants as co-researchers, and need them to have an important input in analysis (Mayoh & Onwuegbuzie, 2015; Stawarska, 2009).

Although there are many differences among different streams, phenomenological researchers generally focus on embodied, experiential meanings of the world directly experienced, as well as pursuing “fresh, complex, rich description of phenomena as concretely lived” (Finlay, 2013). Many streams share several core principles, including phenomenological reduction and epoché. Phenomenological reduction is valued to call for researchers to shelve past knowledge about the given object. This attitude is also well-known as the “epoché,” that is sometimes regarded a separate step and sometimes as part of the reduction (Giorgi, 2009). Epoché requires the researcher to preclude the impact of prior knowledge, including theories, assumptions, measuring instruments, and previous studies. It also refrains from the conscious tendency to posit

unreflectively “and focus on the existence of objects independent of experience” (Wertz, 2011). “Epoché requires that looking precede judgment and that judgment of what is ‘real’ or ‘most real’ be suspended until all the evidence (or at least sufficient evidence) is in” (Ihde, 2012, p. 20). These principles could help focus on the participant’s lived experience and voice.

Phenomenological research includes several advantages. First, it focuses on participants’ self-evaluation and reflection on their experience. During data collection, participants are encouraged to be engaged in sharing and interpreting their experience on their own, rather than relying on the researchers. This approach values open-minded exploration, while controlling the potential to influence data collection through bracketing, a process to develop awareness and critically analysis of prejudices. Researchers remain open to the participants’ feelings without distortion from their own interpretive point of view (Hill, Pfeil, Moore, & Richardson, 2015). Exposito (2015), for one, used an interpretative phenomenological analysis, an approach allowing international students in America to share stories freely and reflectively. It offered a deeper insight into the essence of these international student experience (Moustakas, 1994; Smith, Flowers, & Larkin, 2012). Participants played an essential role in the process of discovering their own experiences and empowering their own evaluations.

Phenomenologists encourage participants’ involvement not only in data collection but also in data analysis. The process of analysis is based on participants’ stories, rather than on researchers’ expectations. Giorgi (2009) brought up several steps of data analysis. First, the researcher reads the overall description for sense of the whole and holistic, because the meaning within a description can have forward and backward references. Second, the researcher establishes meaning unites. The researcher rereads the same content more slowly and makes a mark to any

transition in meaning without the influence of presumptions. Third, the researcher transforms participant's natural attitude sharing into phenomenologically "psychologically sensitive expressions. The results" comprise the "descriptions of the findings rather than theories or hypotheses", and the second-order descriptions (the invariant meanings). The transformation attempts to generalize the data to facilitate integrating the data from different participants into one structure.

The researcher shows respect to every word that participants share by reading and rereading the contents and by building an essential structure. In order to improve the accuracy of data analysis, phenomenologists have proposed multiple ways to put aside their own influence and focus on analyzing participants' sharing. Interview transcriptions, for instance, are sent to participants to check whether or not the transcriptions reflect their descriptions (Rehman & Azam Roomi, 2012). The emerging themes is emailed to them for their comments on the representativeness of the data (Campbell, 2015). Thus, participants are encouraged to share their experience without impact from researchers and to evaluate their own situations. Individuals are not objects being studied, but participants who improve the research. In addition, cross-checked analysis of the emerging themes is adopted by the researcher based on anonymous interview transcripts, researcher reflection memos, conceptual maps, and questionnaires (Campbell, 2015). Phenomenological research attempts to shift the power of discovering participants' lived experience from the researcher to the participants.

Second, phenomenological research clearly contributes to making vulnerable groups' voices heard and helpless group's experience visible. Lommen et al. (2015) explored the experience of 10 "women living in Montana who chose to attempt relactation", with both "a

phenomenological approach” and a survey approach. The phenomenological approach is adopted without prior assumptions about the results or guides to encourage participants “to talk about any specific aspects of their experience”. Unstructured interviews encourage respondents to describe the experience that are important to them. These approaches help uncover an important “theme that could have affected the initial breastfeeding experience and furthered the need for relactation”, namely, “having a difficult baby”. Leung et al. (2005) studied “the lived experience of postpartum” depression among “Hong Kong Chinese mothers” through a “phenomenological approach”. The study reveals major postpartum stress derives from concerns about “parenting competence”, “the expectation–experience gap”, “baby-minder arrangements”, “childcare demands”, and conflicting cultures. Hill et al. (2015) examined the experience of hepatitis C-positive individuals by using a descriptive phenomenological methodology. Many participants struggle to make a healthy transition to life with the condition, rather than continue to live in a state of sustained uncertainty. The phenomenological approach, thus, encourages individuals who have experienced the phenomenon to speak for themselves without hesitation and respects their sharing without judgment. In this situation, individuals are more comfortable revealing their complex situations and discussing sensitive topics.

Phenomenological methodology is also used to study international students’ lived experiences. Burkholder (2013) used the phenomenological method to explore the lived experiences of six single Turkish graduate students. These students face many difficulties related to building friendship with local students, prejudice because of religious identity, and limited language skill that increase the time spent for class preparation and influence socialization with local students. Dimandja (2017) recently adopted the phenomenological method to explore

undergraduate Muslim international students' lived experience on American campuses and their unique identity related to academic and social transitions. These students declaring their Muslim identity with the hijab and thobe brings about exclusion and feelings of prejudice both on and off campus. The national political climate also raises their sense of intimidation and marginalization. And Exposito adopted interpretative phenomenological analysis to encourage international students in an EAP class to reflectively describe the relationship between what happened and how the participants understood the events, along with examining the commonalities among the international students (Edmonds & Kennedy, 2013; Exposito, 2015).

Third, phenomenological research views individuals' experience under the influence of microsystems and macrosystems to investigate the complexity of participants' experience. Phenomenology allows researchers to understand participants' views, collect contextual data, and provide rich descriptions of the phenomena (Denzin & Lincoln, 1994; Ginsberg & Sinacore, 2013). Ginsberg and Sinacore (2013) examined 12 Ashkenazi, non-Orthodox, Jewish American women through a phenomenological approach that aimed to understand their religion and Jewish women's experience. The article acknowledges that Jewishness conveys complicated meanings that fundamentally influence Jewish women's identity. These women face many challenges in negotiating the gender and cultural expectations of themselves as wives and mothers, as well as a religious minority. In another study, Awosan and Hardy (2017) used Africana womanism and symbolic interactionism as a framework, as well as the hermeneutic phenomenological approach to explore the experiences of 26 "never-married heterosexual Black men and women between the ages of 25 and 35". The phenomenological approach is used to encourage participants to share their "descriptions and interpretations of lived everyday lifeworld essential themes (lived time,

lived space, lived body, and lived human relations) of” the participants’ “nonmarital romantic processes and experiences” (Giorgi & Giorgi, 2003, as cited in Awosan & Hardy, 2017). Rehman and Roomi (2012) explored different factors affecting “women’s work and family roles in the unique Pakistani socio-economic and cultural environment”. An interpretative phenomenological analysis approach helps uncover “challenges faced by women entrepreneurs to” balance work and family responsibilities, as well as the “strategies they used to balance” multiple responsibilities. Phenomenological research, in sum, examines individuals’ lived experiences in their complicated surroundings in order to obtain a wide range of information from social contexts and help better to understand participants’ experience.

4.2 Rationale

Single Chinese international female doctoral students encounter various challenges in adapting to cultural transitions. The complexity of different cultural expectations about language performance, the student/supervisor relationship, academic requirements, marriage, and religion brings about various challenges for these women. They are in a long-term process of balancing the influences from the host culture and their native culture, as well as exploring new roles. However, few studies have focused on these international students with special characteristics, although their experiences are distinct from those of other international students.

Phenomenological research could play a crucial role in helping explore these women’s lived experiences in this study. First, qualitative research is useful to explore and describe the

phenomena, if previous related research is sparse (Morse, 1991). Phenomenological approach, as one method of qualitative research, is needed in this study, because it is helpful to recognize some individuals' general or mutual "experiences of a phenomenon". It could contribute to developing an insight about characters of the phenomenon, or develop practices or policies (Creswell & Poth, 2018). The complexity of individual characters and cultural transitions calls for phenomenological research to discover patterns and themes from the bottom to top by categorizing the data into information units. This inductive process includes working back and forth until the researchers have developed a comprehensive set of themes (Creswell, 2014). Few studies have identified single female doctoral students' experience with special characteristics that differ from those of other international students related to the length of their term of study, their social relationships, the influence of gendered structures and religion patterns. Phenomenological research is appropriate to explore these females' lived experiences in detail and describe the comprehensive picture of their lives.

In addition, phenomenological research contributes to revealing the complexity of female doctoral students' experience with the dimension of time. The value of phenomenological research focusing on such concrete experience helps uncover "dynamic processes rather than seeing the phenomenon as fixed". Phenomenologists emphasize capturing dynamic and ambiguous movement through ongoing experience over time. They insist that individuals are always in the process of becoming; meanings are generated through ongoing experience (Finlay, 2013). Since doctoral students stay in host countries for a long time, it is necessary to take the factor of time into consideration to identify the ongoing process of cultural transitions. Phenomenology

contributes to examining the complicated process that doctoral students manage unfamiliarity and cultural transitions in a continuous and long-term standpoint.

Third, phenomenology tries to eliminate taken-for-granted understandings, while maintaining freshness and openness (Moustakas, 1994), in the intent that participants' descriptions be preserved as much as possible. The process of epoché, for one, requires an awareness of prejudices, continuous reflection, and self-dialogue (Dimandja, 2017; Moustakas, 2011). Phenomenology is a “way of seeing how things appear to” individual “through experience”, it is not just a method, but an attitude whereby phenomenology demands open and fresh eyes on taken-for-granted situations that go typically unquestioned. It reiterates a concern for embodied, experiential meanings of the world as directly experienced (Finlay, 2013). Individual experiences, gender identities, and cultural patterns are intertwined to influence female doctoral students' academic performance, social relationships, marriage expectations, and faith. This study calls for phenomenological research to reduce the influence of presuppositions, in order to reveal the female doctoral students' struggles with cultural differences. It is necessary for me to maintain an open attitude to encourage participants to share their perceptions. I also give attention to the consciousness of the experiencers, in order to understand individuals' experiences “from inside their subjective experience” (Giorgi, 2009, as cited in Mayoh & Onwuegbuzie, 2014; Todres & Holloway, 2006, as cited in Mayoh & Onwuegbuzie, 2014).

Fourth, the phenomenological approach would also view female doctoral students' experience as an interaction between individuals and their surroundings. “Phenomenological expression” values “embodiment,” which appreciates “the uniqueness of” individuals through the bodies in which they “live, interact, and experience the world”. Individual “as a mediating agent

between subjectivity and world, where subjective experiences and bodily function are linked with the environment through threads of intentionality” (Merleau-Ponty, 1945/2012, as cited in Klinke, Thorsteinsson, & Jónsdóttir, 2014). Schutz (1967) posited that personal experiences are not independent from certain structures (Lien, Pauleen, Kuo, & Wang, 2014).

Paying too little attention to cultural backgrounds and interactions between individuals and contexts causes difficulties to uncover the complexity of international student identity challenges and negotiations during their study abroad (Gu, 2011; Ward et al., 2001). International students could hardly avoid the influences from space, relationships, and cultural patterns, since culture is a complicated and omnipresent matrix that works as “an all-encompassing form or pattern for living” (Porter & Samovar, 1994). For example, women who are single and over 27 years old are labeled as leftover women by the Chinese Ministry of Education (To, 2015). Female doctoral students in China are regarded as a “third gender” in addition to male and female. These students are stereotyped as asexual, aloof, unattractive, self-centered, and not feminine enough (Kuo, 2014). All experiences are intertwined, as they occur within certain structures in native countries (Lien et al., 2014; Schutz, 1967). Females, who are vulnerable to being labeled, are normally unable to eliminate the gendered designations from their native cultures. Female doctoral students’ experiences are the result of the interactions between themselves and their surroundings. It is indispensable to explore these females’ lived experiences in terms of the cultural consequences of being called “leftover” women and the interplay between individuals and their native cultural paradigms.

I examine these women as individuals and in terms of their interactions with their environment through phenomenological method. The contribution of phenomenology is to provide

a method to “understand individuals and their interactions with others and their environments” (Lopez & Willis, 2004). It helps think beyond what the participants share about their experiences to what is revealed in their telling (Finlay, 2013). Moustakas (1994) asserted that phenomenology lies in its emphasis on the wholeness of experience, with investigating entities from multiple aspects “until a unified vision of the essences of a phenomenon or experience is achieved”. Moreover, phenomenology helps view participants’ experience outside the box. Merleau-Ponty (1962) considered living space (space), living form (flesh), living time (temporality), and living relationships (relation or interaction) as the four essential factors of the basic structure of the living world (Lien et al., 2014).

4.3 Research Questions

This study is designed to understand the experiences of single Chinese international female doctoral students’ experience during cultural transitions. It attempts to address the following questions:

RQ1. What is the lived experience of single Chinese international female doctoral students in their transition from Chinese culture to American culture in four areas: academic study, social relationships, marriage expectations and religious environments?

RQ2. How does the intersectionality of personal agency, gendered structure, and cultural patterns in the United States and China influence their experience of cultural transitions?

RQ3. What is the meaning of their experiences during cultural transitions and how do these experiences affect their roles?

The meaning these women make of their experience influences the way they carry out that experience, and the context of personal agency “provides a way” “to understand the meaning of” their choices (Blumer, 1969; Seidman, 2006).

4.4 My Positionality as the Researcher

As a single female doctoral international student, I have been through ups and downs during cultural transitions. My experience has made me be interested and motivated to explore these group of women’s lived experience. My first year was tough as an international student. I had never been studied abroad. Although I took TOEFL and GRE exams, I was not prepared for reading books in English, writing papers in English, and communicating with others in English. It was too difficult to meet the academic expectations of core curriculums for the PhD program in the first year. For example, I spent a long time reading all the require materials, sometimes a whole book. Often, in group discussions in classes, I did not understand what they talked about because of language barrier and scarcity of the knowledge about American education. And I felt great pressure to join in group discussions. Mostly, the class I took in China before adopted the lecture form, and I always needed to take notes, rather than expressing my opinions. My academic transition to the United States presented me with the dilemma. I also did not know how to communicate with my classmates and professors. Communication was generally limited to

greetings. The unexpected difficulties in academic area and the lack of support from social relationships made me desperate for help. And I also faced the physical separation from my family members and friends. It took a long time for me to adapt to the new environment. In the middle of my doctoral path, I often encounter the pressure of writing dissertation and publication, especially when my situation does not meet my own expectations. And travel restriction due to COVID prevented me from going back to the United States and I have stayed in China for more than a year and a half. During my last several years, how to be an independent researcher and communication with PittPro (IRB in University of Pittsburgh) always traps me. Thus, in different stages of my studying abroad, I face diverse and difficult challenges from academics and social relationships.

Second, as a single doctoral student, I had received many pressures about being single from my close relations. My family members, especially my parents, have been influenced by the marriage norms in China. It was hard for them to understand and accepted my situation of being single. It turned out that it is also difficulty for me to accept my situation of being single. The Internet and social media help to overcome my physical separation from friends and family. Through the Internet, thus, they sometimes tried to persuade me to the importance of having a significant other, and sometimes they chose to be silent to avoid the conversation. Their social networks also reinforced their worries about my being single. Friends and relatives of my parents would ask my parents questions related to whether I had a boyfriend or not. As they attended wedding ceremonies of their friends' children, they were likely to be heartbroken about my status of being single. Others' marriages reminded them of and strengthened their opinion that their daughter was missing the right time for marriage. They regard marriage as indispensable part for individual's life. They wish me to have a happy life and marry a man who I can trust as soon as

possible. I guess they also feel the pressure of being the parents of single woman who is over 27 years old. One time my dad mentioned that my status of being single made him lose his *mianzi* (the recognition by others of an individual's social positions and dignity) (Buckley, Clegg, & Tan, 2006; Lockett, 1988). He used to be proud of my studying abroad, while at that time he felt disappointed. In order to help me find a boyfriend, they tried to introduce some men to me.

As for me, I was very anxious to find a boyfriend at the first several years of my PhD study. I tried to find a boyfriend to prove my value. I used to be an atheist and became a Christian during my study in the United States. My faith releases some anxiety towards marriage, and teaches me to rely on God, rather than myself. And my mate selection criteria changes, and I hope I could find a Christian as my other half. It is also a tough process to learn to wait for God's plan. However, my parents would like me to be more active to find a boyfriend and could hardly understand why I insisted on finding a Christian husband. The difference in the faith creates a gap in marriage expectations between my parents and me. I have been struggling to explore my new identity with the influence of the normative gender role in China. The difficulties I had experienced rendered me curious about what single female international doctoral students experience. This study responds to the lack of relevant research and I try to facilitate the stories of these women to be recognized.

Third, my personal experience renders me be curious about these women's cultural transitions in religious environments. As the first and the only Christian in my close family network, there are several dilemmas I face in terms of my faith, such as the conflict between atheist background and faith in Christ, unwillingness to trust God in my graduation and marriage, as well as gap with family members due to faith differences. Because of struggles in my faith path, I am

inquisitive about international students' related experience. And I am also interested in exploring these females' experience and attitude towards religious culture transitions, which may be beneficial for the evangelism.

My position allows me easily to understand these women's situation. However, it is also a challenge for me to collect data without a hypothesis. The process of data collection and analysis require that I keep my ego in check and am fully aware that I am not the center of this study (Seidman, 2006).

Bracketing techniques and phenomenological reduction are valued in phenomenological research. Bracketing aims to reduce the researcher's presumptions and pay more attention to participants' viewpoints (Bazeley, 2013). "In bracketing, the researcher holds the phenomenon up for serious" examination. Presumptions are suspended (Patton, 2002). For instance, the researcher continually reflects on whether participants are allowed to express their feelings freely, and identifies emergent meaning units only from the participants' descriptions (Ahern, 1999; Campbell, 2015; Creswell, 2013). This renders it possible to identify the essence of phenomenon with nothing being added and nothing being deduced (Giorgi, 2009). Wertz (2011) concluded that the phenomenological attitude emphasizes the processes and the meaning through which they are subjectively offered, instead of the existence of objects themselves. Phenomenological reduction explores all the intricacies and richness of psychological life that come into consciousness.

4.5 Sampling Procedure

I adopt purposeful sampling, which includes criterion sampling and snowball sampling. “Criterion sampling” refers to “selecting participants who met specified criteria determined by the researcher”. Snowball sampling in this study refers to recruiting participants that I personally know, and those recommended by others, provided they meet the “specified criteria” (Patton, 2002, p. 60-61 as cited in Rahimi, 2017). I recruit those who have “experienced the phenomenon under investigation” (Baker, Wuest, & Stern, 1992, as cited in Korora, 2014; Starks & Trinidad, 2007, as cited in Korora, 2014). Participants meet the following criteria: (a) be a woman from mainland China; (b) be unmarried; (c) possess a F-1 student visa for PhD program in the United States; (d) being at least 25 years old; (e) now living in the United States; (f) be willing to receive two interviews. The sample size can range from two to 25, as in a phenomenological study tradition (Alase, 2017). I recruited nine participants, and included women who did not have a significant other, and women who were single but not available. Each participant received two interviews through Zoom. I received a Faculty/Student Research Award from the School of Education in the University of Pittsburgh. From the grant’s financial support, each participant received 15 USD for the first interview, and 20 USD for the second interview as an appreciation for participating in the study. The first interview focuses on the process of single Chinese international female doctoral students’ cultural transitions in regard to academics and social relationships. The second interview concentrates on the process of transitions regarding marriage expectations and different religious environments. Due to the COVID pandemic, my original plan to conduct face-to-face interviews could not be implemented. Instead, all the interviews were completed through the University of

Pittsburgh's version of Zoom, and the participants were located in the United States when receiving interviews. Interviews were recorded to make sure that I remembered accurately all the information they provided. Mandarin Chinese language was the primary language used during the interviews. Each interview was expected to take approximately one hour. During interview, participants' video was suggested to be turned off for data security, while my video was turned on as a method of engaging participants who could see my responses and feedbacks. Because one-hour interview was long, and people would be easily distracted without video stimulation. The oversampling of Christian participants in this study is because I used snowball sampling to recruit participants and my social network is mainly based on church. The result could not represent the wide range of single Chinese international doctoral students' experiences, but it is beneficial for understanding Chinese Christian's lives.

Phenomenology insists that the researcher needs to reflect on the participant's experiences of situations and clarify "lived meanings, including each person's embodied selfhood, emotionality, agency, social relations, language, and temporality as" apparent "in examples of the subject matter under investigation" (Wertz, 2011). In this study, female doctoral students' experiences are collected and examined in detail, including what those experiences are, the contexts and conditions in which they happen, and what their possible meanings are (Moustakas, 1994). Phenomenology empowers the participants to explore the vast reaches of their conscious lives (Stanage, 1987). I also asked participants about their previous expectations and past experiences, as well as the concrete details of the participants and their interactions with different systems during their PhD study. This would allow for the complexity of their lived experiences to be readily disclosed.

Some precious characters of participants are beneficial for data collection and facilitate better understanding these women's experiences. First, many of them were very candid about their weakness and perplexity during their lives, such as conflict with the advisor and depressing experiences. Their frankness and courage to share their weakness and challenges, even their hesitation to share or refusal to answer some questions, are valuable. Second, many participants were willingness to share their stories and some interviews was longer than originally expected one hour. For example, Mary's each interview lasts around two hours. Third, participants' characters and lived experience vary, which allow people know different aspects of these women. For instance, one participant turned herself into an animated character during Zoom interview, which added more fun into interview and broke my stereotypes of doctoral students. These participants may be chill or confusing in their own status, but still be lovely, sincerely and unique. I feel honor to facilitate their experiences to be heard by other people.

4.6 Data Analysis

I am familiar with the interview data and have a good understanding of the results as a whole (Aagaard, 2017; Giorgi, 2009). I transcribed some interview audios for the rising price of transcription and reviewed other interview audios and removed identifiable information before these interview audios were submitted to TranscribeMe, a transcription vendor. It facilitates my familiarity of interview audio data during this process. Additionally, data analysis was processed with the awareness of the interactions between individuals and their circumstances, which

enhanced the accuracy of the data analysis in reflecting the participants' experiences. NVivo is a tool to uncover meaning units and common themes in data analysis. By having the flexibility of a coding system, NVivo facilitates the management of multiple strategies concurrently (reading, coding, annotating, memoing, etc.) (Bazeley & Jackson, 2013), and allows continuous dialogues with the data (Becker, 1998). NVivo's nodes helped locate data and serves as a way of organizing data—"the undigested complexity" of the data (Bazeley, 2013; Patton, 2002). I used nodes to organize different participants' answers to the interview questions (figure 3) and code the topics of interested, such as influence of COVID and funding. Nodes in NVivo were also adopted to investigate emergent themes (Smith et al., 2012) from the general nodes (academic area, social relationship, marriage, and faith). Moreover, annotations in NVivo were used for summarizing participants' answers to prevent being lost in numerous data and to condense them. It also beneficial for the next step uncovering common topics, because summarization of participant' each answer made long answer be concise and I could easily figure out emergent topics. In addition, NVivo's cases classification aided in reviewing participants' background information.

1.01 Motivations to study in USA	9	12	2.01 Difficulties because of dis...	8	8
1.02 Shortcut to Node of previous expe...	9	14	downs	3	3
1.03 Differences in academic a...	8	9	stable	2	2
1.04 Proud and happy things in...	9	11	ups and downs	3	3
1.05 Challenges in academic ar...	9	34	2.02 Gaps about interpersonal...	9	11
1.06 Personal expectations an...	9	13	Activity type	2	2
1.07 Helps when having challe...	8	11	Boundary	4	5
1.08 Influence of these experie...	9	20	Self identity	2	2
1.09 Where would you like to g...	9	10	Social group	6	6
1.10 Wish for something differe...	9	10	No difference	1	1
1.11 Suggestions to women in s...	9	10			
Faith	0	0	Topic interested	0	0
Environment	0	0	Funding	5	10
Similarity	2	2	Influence of COVID	9	30
Difference	4	8	> Mental health's struggles and cha...	5	6
Faith experience	1	10	self evaluation	2	2
Before PhD study	3	10	Want to quit	3	3
During PhD study	4	7			
Challenges in Faith	2	3			
Faith influence	2	5			
Faith influence in academic	4	12			
Faith influence in Academic a...	1	1			

Figure 3 Nodes in NVivo

Third, Microsoft Excel was used to organize and group (Bazeley, 2013) summarizations and identify patterns after initial coding (Smith et al., 2012), based on the interview questions. Excel allowed for emergent themes to be synthesized, commonalities and differences among cases to be identified, and for intersectionality between individual and ecological systems to be explored (Bazeley, 2013). Through these identifications, evident structure (Wertz, 2011) emerged from the data. Figure 4 provides one example of the emergent common themes of major challenges in academics during different periods of doctoral study and their reactions, as well as another example of the common themes of individuals' and others' expectations about their roles as a doctoral student and their responses.

Common theme
1. 课程
2. 研究 (与课程、工作的冲突)
3. Funding
4. 人际 : 导师、peer pressure
5. Funding
6. 忙碌
7. 工作
8. 能力的怀疑
8. 论文
1. 自我期待 : 工作 ; 研究 ; 毕业 ; 生活 ; 信仰
2.
他人的期待 : 婚姻 ; 经济独立 ; 工作 ; 学习态度&能力 ; 毕业 ; 生活节奏 ; 羡慕

Figure 4 Data Analysis in Excel

Fourth, the participants' interviews were translated from Mandarin Chinese into English, with support from Google Translate. Cross-checked analysis (Campbell, 2015) was also utilized. After finishing the draft of the dissertation, direct quotations and paraphrasing directly drawn from interviews in English and corresponding parts in Chinese, as well as the majority of interview summaries was sent to participants. The second attempt was around one week later after the first attempt, if no response to the first attempt from the participants. The purpose was to confirm that my dissertation accurately reflected their sharing and experiences (Rehman & Azam Roomi, 2012). Six participants gave responses to the email.

5.0 Results

5.1 Surviving and Thriving Experience in Academic Area

According to Merriam-Webster, “to survive” is defined as “continuing to exist or live after...,” while “to thrive” is defined as “grow[ing] vigorously” or “progress[ing] toward or realiz[ing] a goal despite or because of circumstances...”. Doctoral students are expected to encounter many dilemmas during their studies in the United States. Given this context, “surviving” in this dissertation refers to participants’ challenges, the causes of dilemmas from individual and environmental factors, and regrets. It is more related to experience with their struggles, their “self-examination with [*sic*] feelings of fear, anger, guilt, or shame,” and their “recognition that one’s discontent” (Mezirow, 2000, p. 22). On the other hand, “thriving”, in this dissertation, refers to how these women progressed and overcame difficulties and achieved their goals, as well as how they found happiness. It also includes “exploration of options for new roles, relationships, and actions” (Mezirow, 2000, p. 22), as well as factors that benefitted their doctoral life and studies. While surviving is correlated with the obstacles and struggles of doctoral life, thriving is related to successful growth and adaptation to new life in a flourishing state.

5.1.1 Introduction of Participants

Leah: Before going abroad for a doctoral degree, Leah originally hoped to publish a lot of papers and planned to find a teaching position in China after graduation. However, the reality was that she did not reach the academic-achievement level she wanted and was in a confusing stage about her future career. Another of her goals was to experience a different education and lifestyle, which was met during her doctoral studies from my perspective. Because of funding issues, she changed to a different advisor and have a new research focus. She enjoyed the freedom to choose her own courses and research direction in America. In addition, she also experienced a lifestyle change from collective life in China to being alone most of the time in the U.S.

Lele: Lele's previous thought was to do experiment in the laboratory and enjoy better educational resources in America. However, when she found her bigger interest in her current program, she changed her program and also changed from a master's program to a doctoral program. Her confidence in teaching was built up during her doctoral studies and she was active in class and in solving her problems in her academic area.

Hannah: Her motivation to study abroad was to avoid that some perspectives cannot be changed when living in the same culture for a long time. During her doctoral studies, her faith perspective was changed, for she knew the importance of salvation from Jesus, and what priority she should have. Furthermore, one of her motivations for doctoral study was fulfilled, in that a five-year doctoral program would provide her more security in relationships. Sisters living together

shared her academic pressures in thesis and she had community support now³. Additionally, she passed her qualifying examination and faced thesis challenges.

Mary: Pursuing a doctoral program would satisfy her and was God's calling. Her experience of doctoral study influenced her in that she was able to identify her work as meaningful. At the same time, she stated that she could experience God's presence with some former barriers broken down. What's more, her interest in doing new and innovative things was fulfilled. During her undergraduate study, she held her natural interests in check to get a good GPA; likewise, her master's education was focused on the job market. In reality, what she wanted to learn may be more theoretical. Now what she was doing was aligned with her academic interests, and she enjoyed the freedom to choose the courses that were meaningful to her.

Feng: She pursued her doctoral program under COVID influence, which was not her previous plan. She felt that her personality was a little unsuitable for doctoral studies and she even thought about whether she should drop out of her doctoral program. But since she had made this decision, she decided to finish it.

Huang: Her family's opinion greatly influenced on Huang's decision to pursue her doctoral program. The possible benefits of a doctoral degree for future work also attracted her. Her choice was also affected by the little interest she had in her program, the disadvantage of finding a job in China and the difficulty of finding a relatively good job with her major in the United States. During her doctoral studies, she was under pressure when papers could not be finished, research had no

³ The word of "now" in chapter 5 & 6 generally refers to the time or a period when participants received interviews.

progress, and funding cannot be found. On the other hand, her ability improved in presentations and data analysis skills.

Lydia: Lydia's choice to pursue her doctoral studies in America was due to her interest, liking the American teaching and humanistic environment, being easier to rely on oneself to make achievements in America than in China. The first year of her doctoral studies went well, while another semester sometimes she wanted to give up, she doubted herself and was under peer pressure. Her faith and positive character helped her through her difficulties.

Abigail: It was quite natural for Abigail to study abroad because there was just this opportunity and her study also needed further learning. Her doctoral studies shaped her character, including developing patience, collaborating with people, and continuing hard work.

Dahai: She found that she wanted to do research during her master's period. The reason why she chose to study in the U. S. for her doctoral program was that academic area in her field was more mature and she got access to better teachers in the U.S., compared with China. And she had past dependency, for she was in the United States when deciding to pursue her doctoral degree and had built relationship with her current mentor who was also in America. Studying abroad made her be willing to express her demands and started to protect some of her rights.

5.1.2 Surviving Experience

5.1.2.1 Challenges

Doctoral study usually takes a long time and challenges in academic area cover different aspects, including financial support, course, research, interpersonal relationships, life balance and

self-confidence. And their identity as international students may exacerbate their difficulties due to pandemic, and academic challenges may bring about self-doubt.

5.1.2.1.1 Funding Issue

Interview data revealed the importance of financial support for international students' lives in the U.S and funding problem easily trigger dilemma. 44.4% (n=4) of respondents shared that they experienced or has been experienced funding issue. Firstly, failing to get funding is a suffering. Huang made great efforts to seek funding but still could not get it. Funding "has always been a pain" for Huang. Before she started her PhD, she confidently shared with her family that people would get funding at the second and third year after taking one-year class and building relationship with the professor, even if people did not find funding in the first year. Over these years, she had not given up looking for funding and had interviews before, but she failed in the end. Thus, she fell into a pattern from being depressed for a while after failing to get funding, and then she would be motivated again to check if there was any available position.

“My first two years were really really hard. Every time I ask my family for money when paying tuition fees, I always feel that ‘such an old person is still depending on the family for financial support’. But sometimes when I'm in this mood, I'm fine to pull myself out of this mood quickly. I said to myself, ‘My parents don't complain about me, so I can't put so much pressure on myself like this’. Although I know that I can't keep this kind of thought of depending on my parents for granted, I said to myself that I can't let this emotion keep me trapped, because then my parents will be worried too. And they. I even said to myself,

‘since they don't mind it, I don't need to mind it. If I do not spend this money, who could spend this money’. This is more extreme thought, and I rarely have this kind of thinking.”

Moreover, some doctoral students faced the uncertainty of funding, including not passing pre-examination for funding, the pressure of searching funding every term, dealing with losing funding and changing research focus. First, it takes effort to keep position to maintain funding. Although Lele got the position of teaching assistant (TA) in the first year, she failed to pass an English proficiency test as the premise for TA position in the first year. She put a lot of effort to pass this exam and keep this position, in order to get the funding. Second, sometime maintaining funding not only requires a period of effort, but also requires repeated long-term efforts. Lydia’s program had no fellowship and she needed to find a job every semester. Fortunately, she has found a job in the past three semesters and had never paid her tuition fees and had a salary every month. However, she did not find a job for the next semester and felt some pressure. In fact, constantly looking for a job every semester can be stressful.

What’s more, even if funding was obtained, unpredictable things happened to Mary, which caused the funding to end abruptly and putting her in trouble. In the second year of her doctoral studies, she encountered a funding problem, and her previous job no longer needed her, because they were not sure how the situation would be after COVID-19 ended and whether international students would come back that decided her teaching position. At that time, it was difficult to find a job, since it was the most stressful time of COVID. No position was available or there might be 20 or 30 students applying for one position. She was very confused and not sure what was her bottom line, whether she should continue to study, and why God suddenly let this happen. At the same time, she really felt that she was not being valued, and her program didn't care about her.

Since she felt a lot of indifference and potential prejudice during these times, it was difficult for her to regain confidence to her program and her school. In this situation, she made a bottom-line decision that she would give up her study, go back to China, look for a job, and plan to find a partner to marry, after she tried her best to look for a job and asked people help search for a job, but if still failing to get a job. The distressful situation caused by financial problem led her to make such a decision.

In addition, under funding impact, doctoral student also changes research interest and takes different academic path, which cause challenges and self-doubt. Leah had to learn different subject which was totally different from her specialized field during undergraduate, since her previous advisor did not get the funding to support her, but her new advisor's academic interest was on another field. During the first semester after changing the advisor, she "felt like I spent almost every day in self-doubt". Because she registered for one class that was out of her previous field and that was so challenging that she generally had to stay up late to study until 2 am or 3 am when the assignment was due, even though she took a similar online course in advance. And the dilemma was not confined to course, but also in her lab meeting. She couldn't understand what others were talking about during lab meeting that made her seriously doubt her IQ and English. Therefore, funding exerts an essential impact on doctoral students. People suffer a lot when failing to get funding and facing uncertainty of funding. The issue in funding brings pressure and even worse emotional distress, self-denial, and the idea of quitting doctoral studies.

5.1.2.1.2 Course Dilemma

Some doctoral students face course challenges, including lacking practical experience, different opinion from advisor's viewpoint and language barrier. Lele shared that many students in her current program had related working or practical experience. On the contrary, she had no such experience in this area at all and only joined some related research. And visa restrictions as an international student prevented her from working out of university, and her knowledge was mainly from books.

Furthermore, conflicts also exist between students' preference and advisors' opinion and between finishing course assignment and doing research responsibility. Doctoral students should take multiple tasks at the same time, such as meeting course requirement and job demands, as well as expectations from tutors in class and advisor, but they have limited time. It is possible that an advisor and a student have different opinion about the priority of students' task. For example, Leah's time for doing research was compressed, because one challenging class took up much of her time. At that time, her boss could not understand her choice and thought she could learn it in private, rather than taking this course, since the thing she may need to learn may only account for one-tenth of the content of this course. Dahai also faced the conflict between class and research. Her research schedule was relatively tight, and she also had tasks for courses. For example, sometimes she had one-day class on Tuesday and worked on homework from Tuesday to Wednesday. When her boss checked her work on Wednesday morning, she suddenly found out that she hadn't done it and would panic. Her boss deemed the important thing for a doctoral student lay in whether one could do research well, rather than class performance, and people only needed to make sure not fail in the class. Although she understood this point, it was hard to adjust her

situation to only focus on research and regard study as not being important. Thus, students need to face the difference between the boss's opinion and their own thought.

Additionally, course challenge was also reflected in language barrier. Language obstacle, coupled with unfamiliarity of the course format made Lele be silent and smile in the seminar-style class at the beginning of studying in the U.S. In such a class, the teacher would not tell students too much in advance. After reading a chapter or a book, classmates would talk about personal ideas, which was a huge challenge for Lele. First of all, her speaking and listening of English was not good. Especially under the circumstance that made her very nervous, she would automatically block a lot of things, and had no idea what they were talking about. Since she couldn't understand others' sharing, it made her not dare to speak at all in that class. Except for one interviewee, all the other participants had studied in the United States before the doctoral stage, which provided them with a buffer for language adaptation and made them be more adaptable to the United States.

Even for students who have been studied in U.S. for several years, they still face other communication barriers, which are caused by difference in language logic, expression not natively in talking and not precisely in writing. For example, after Lele was a little familiar with the class in English, she was more relaxed and answered questions actively. But sometimes the teacher needed time to give feedback to her answers, because she was not prepared well for the response and the difference between English logic and Chinese logic made teachers difficult to understand her answers. Dahai's challenge in English communication and presentation was not localized and precise in writing.

5.1.2.1.3 Research Challenge

Challenges frequently appear in term of research. First, some students face the lack of research opportunities. For example, Lydia thought that she did not make an achievement in academics, because she did not have any publications, and did not have formal research experience in the past year and a half. Secondly, some students encountered difficulties in research process, even though they had research chances. There were too few research projects for Abigail. Research progress could not follow the timeline, because of the uncertainty in her research, which was more due to external reasons, including research topic sensitivity and difficulty to obtain data. Sometimes possibility of research failure was high, and she hoped to have more projects. Dahai sometimes was very stressful. The main reason for the stress may be that the research was not going well, and she felt that life was down for no reason.

Thirdly, difficulties in research are showed in writing, including developing thesis, transferring research result into publication, and inappropriate writing support. Hannah's current predicament was mainly from thesis. For instance, after she read a lot of papers, she didn't know whether she should go deeper into her field, and whether she should and how to develop thesis. Furthermore, although some students can write paper, they can't write it well. According to the interview data, there were three influencing factors. First of all, differences in logical thinking between China and the United States limit the readability of Chinese students' writing. The logic of Lele's writing mixed Chinese-style thinking and American-style thinking, which made it difficult for teachers to understand what she wrote. What's more, it is difficult to present research results well in the form of papers, or student lacks publication. Although Leah enjoyed the process of doing research, she felt that the quality of her papers was very bad and could not transform her

research results into high-quality papers. In contrast, her coworker could write paper very convincingly, although she knew her coworker did not spend too much time and the research was of little value. The struggle of Mary was that she was in an in-between stage, which means that she didn't have any product yet, but she had a lot of unfinished ongoing research projects and academic tasks. Thus, developing thesis and transforming research result to paper trouble doctoral students. In addition, students do not get appropriate writing support. Leah needed help in her paper, and sometimes the revisions given by her boss were different from what she expected.

“My papers were always beyond recognition after revision by him. And then I felt that there were some original parts that I wrote at the beginning, which he changed it during the first round of revision. And then he changed it back to her original part during the second round of revision. You just found out, you found out, I found out that changing the paper was really time-consuming. But in fact he didn't care much about the paper I wrote, and did not pay attention to whether my innovative point, my uniqueness of my paper, was highlighted or not. He cared more about grammar.”

5.1.2.1.4 Interpersonal Relationship

Challenge of interpersonal relationships is also accompanied by doctoral students' study. First, peer pressure is a challenge for doctoral students, when they feel that their peers are better than themselves. For instance, Lydia compared herself with peers, which brought about self-denial. Sometimes she felt that the peers seemed to be very good, and there was enough to have peers in her academic field. What's more, doctoral students who have advisor experience challenges, including the conflict with the mentor and senior student, unavailability of mentors, and difficulty

in expressing one's true thoughts to mentors. Firstly, Leah faced conflict in the relationship with her advisor and a senior student. Discussions with them often ended in unhappiness. Their words about her were particularly negative, and she did not dare to scold them. For this reason, she had seen a psychiatrist for a period of time and was not sure whether it was her problem or their problem. The advisor often could not let go her shortcomings and did not encourage her. Sometimes he was wrong but was not willing to admit it. Secondly, expectations and care from advisor sometimes cause stress. Lele was the last doctoral student of her advisor in the university who had great expectations for her and care about her very much. But sometimes her advisor's caring gave rise to a lot of pressure. Especially when she failed the English test and could not keep her teaching assistant position, the advisor would send her seven or eight 60-second voice messages through WeChat each time, but she was afraid of facing the teacher's message. Thirdly, another challenge is how to communicate inner thoughts with advisor. Dahai faced the problem of communicating with teachers. She had been working with the current boss for a long time who was very strict with her at first, and she was scolded and cried three times. Her boss didn't know how to instruct a student, while she didn't know how to express that she didn't understand. Now the relationship was gradually getting better, and it was in a state of partnership. On the other side, a doctoral student without fixed advisor also has challenges. Lydia, without a regular advisor, shared that she may more desire to have a fixed advisor, to participate in the lab meeting regularly, and to have a connection with the advisor.

Additionally, lack guidance from advisor could put students in a dilemma. Hannah shared that doctoral student needed to the advisor' approval in the later stage of doctoral studies. The thesis should be done by themselves, or people should demonstrate that they could become an

independent scholar. Thus, the advisor would not help doctoral students and not teach them hands-on, which made these students feel relatively lonely. Without collaboration with others, no one had meetings with doctoral students and guided them step by step to solve a problem. She needed to solve the problem only through communication with papers. And unavailability of the advisor was an issue. Huang was very active in contacting advisors at first, but there was a year when she tried to contact her advisor and could hardly connect her. Emails and even text messages did not help a lot for contacting her advisor. Later, she relatively gave up communicating. And COVID exaggerated the difficulty to connect to advisor, as professors did not go to campus.

5.1.2.1.5 Pandemic Influence

Pandemic of COVID has affected many people's studies. Firstly, COVID influence availability of job. For instance, COVID influenced international students' coming to U.S. to study and then affected teaching positions for international students, which was an important reason for Mary losing her job and funding. The loss of funding and the shortage of jobs during COVID caused many problems. She was in deep entanglement and struggle for about 4 or 5 months, which happened during COVID lock down.

Secondly, working from home was very distractive under the influence of COVID and lacked peer pressure and support for Hannah. Hannah shared "because there is an office, then there are some cubicles, and they would work in it. Before the pandemic, some people would go there to work spontaneously, and then I can see that everyone is working and working like this. After the pandemic, there are fewer opportunities like that." Before the pandemic, she could have class together, talk with peers and compare the progress of doctoral study. She would like to catch up if

her progress was slow. In the pandemic, there was no fixed schedule. Communication with peers would not cover things in the program since life was already very difficult and people avoided to put pressure on each other. Due to talking less about doctoral progress, she would be likely to slack off, and the quality and urgency of due was reduced.

Thirdly, it places a great impact on people's life path. Feng's career and study plan were changed under COVID. She was enrolled in doctoral program, while her previous plan was to pursue EdD program several years later. She originally expected to use OPT to work in the United States for a year after graduation and could be more competitive after returning to China. But the reality was that after obtaining master's degree, she failed to find a job, because COVID-19 made it hard, and her major was also not easy to find a job. Since she had never been able to go back, she missed several good job opportunities in China. Under the trade-off, she chose to pursue a doctoral degree, because of no work experience in U.S. and missing job chance in China. Therefore, the pandemic influence was not limited to reducing work opportunity and social support, and it also impact people's future.

5.1.2.1.6 Life Balance

How to achieve the balance among study, work, family and leisure time could be hard for some doctoral students. Doctoral studies in later twenty bring pressure for Abigail. Abigail wanted to do many things faster, which was the difference between the mentality of early twenty and later twenty. She needed family responsibilities and needed to balance personal life and work responsibilities in the later twenty. Focusing more on her growth and study, she thought, may be a very healthy and reasonable investment at a younger age to pursue her doctoral studies, since she

didn't need to think too much about balance. Dahai expected she could finish all work at least before 9pm and then had her spare time to do things she enjoyed, such as doing exercises and listening to music. But the current situation was that time management was not good and she stayed up late. Before going to bed in the middle of the night, she would be very anxious. Thus, life balance could not easily be achieved for some participants.

5.1.2.1.7 Self-doubt

All these challenges are not just challenges, but also brings about self-doubt. Many participants have doubts about their own abilities. For instance, even if Mary had a master's degree in the United States and had worked for two years, she still faced the challenges that she couldn't find her identity and personal value in the beginning two years of PhD study. "We often say that doctoral students would have the imposter syndrome, and we feel that we need to fake", "Basically speaking, I'm not worth being here, I don't feel worthwhile, then why am I here. A lot of things can't be done." She questioned whether she was suitable for doing academics and felt a sense of crisis that she didn't understand anything now.

There were three reasons for self-doubt according to interview data. First, the imbalance between challenging courses and research, coupled with the unfamiliarity of her advisor's research interest, made Leah doubt herself. At that time, her new advisor's academic interest, was different from her specialized field during undergraduate. Self-doubt always hovered in her mind. She was always worried about whether she could finish this semester, whether her boss would kick her out and whether she just graduated directly with a masters' degree. There were too many things she considered. Second, failing to meet advisor' expectations can cause students to doubt their own

abilities. For example, Hannah's challenges included developing argument and how to summarize literature review, for her undergraduate training was not enough for her doing these tasks. She did not study for a master's degree but pursued directly to a doctorate after her bachelor's degree, so there was no buffer and academic preparatory stage from master period for her. Her advisor hoped that the assignment she submitted was the draft's draft, rather than finishing the assignment with the advisor's hands-on teaching. Third, self-doubt exists when efforts to find funding are still fruitless. Huang went through several years in keeping trying to find funding and failed. When she evaluated the reason why she could not find funding, one of the reasons was her ability was limited. She thought that if she was doing very well in quantitative or qualitative method, some teachers would want her help to do some research.

5.1.2.2 Regrets

These doctoral students have many regrets, which represents hardship and challenges during their study. Participants were asked whether they would wish for something different, if they were given the opportunity to restart doctoral study. Abigail felt that everything was fine and did not want to change anything. On the other side, many students wished for something different.

5.1.2.2.1 Regret in Choosing University or Major

It is surprising that four participants (44.4%) wanted to change university or majors. Three of them were not very satisfied with their current university or program. Leah may go to a less competitive university and a less pushy environment. Huang may not choose the university she was currently studying. She received another university admission before, and the assigned mentor

in that university may still be in a young and ambitious status. In fact, she hoped to have an advisor who put most of energies on research and needed students to join his/her research. But the reality was her current mentor's focus was not on research and she lacked research experience. And she may also consider changing to another major which had more funding or clearer regulation about funding, for the funding was a big challenge during her doctoral studies. And, considering her career plan in the future, she may not necessarily choose her current major. Additionally, one student's regret was from lacking social support. For Lydia, the big difficulty in her doctoral studies was that she did not stay in the same place with her boyfriend. The upside was that she could concentrate more; the downside was that she sometimes was lonely. With her boyfriend's company, it might be better to face difficulties. If she were given another chance to choose ideal conditions, she hoped she could stay with her boyfriend in the same place and same university.

5.1.2.2.2 Regret in Social Relationships, Health, and Studies

Some students hope that they would have some personal changes. First change refers to change in social relationships. Leah hoped to improve her emotional intelligence slightly when dealing with conflicts with mentors and a senior student. People around her may have a more accommodating and respectful attitude towards seniors, while she fought back if others didn't respect people at the beginning, so she suffered a lot for her reaction. Second change is related to health. Mary had regrets in health and wished for a healthier use of her eyes and would have paid more attention to her health. Third, some students hoped for changes in their studies. Lele hoped to have a better performance in the seminar of her first semester of master program, instead of being silent all the time. She wished she could have communicated with the teacher about her

dilemma and have asked if she could know the content of the class discussion in advance when she felt difficult. Because she may need a little more preparation for this class than others. Hannah hoped to participate in the training course in the summer before starting the doctoral program, in order to improve her ability of argument development and analyzing what she wrote. Thus, many students would make a different choice if they had the opportunity to restart their doctoral study, while some students had not regret in their academic status.

5.1.3 Happiness and Thriving Experience

5.1.3.1 Previous Experiences' Preparedness

Although doctoral students encounter many challenges, their pre-doctoral experience can be beneficial for their study in the United States. They do not come to study with empty hand but have the skills and years of academic training to bring as their own protective gear and. Interview data shows that previous experience renders participants be more ready for academic challenges.

5.1.3.1.1 Foundation for Work, Class and Research

Previous working and study experience lay a solid foundation towards doctoral studies. First, work attitudes are shaped. For instance, Mary's previous work experience shaped her independent academic character. She shared that PhD could be regarded as a job. In her work, she realized that it was not that she wanted to complete the tasks given to her by the teacher and to please the teacher, but to work for herself, plan ahead for herself, and identify the research interest she would like to dig into. Independence of research and work was valuable to her, instead of being dependent on the ideas of teachers or advisors.

Second, these women's experience before renders them be more prepared for challenges in class. Courses people took before in China facilitate their being familiar with similar curriculum contents. Despite the challenge in language, Lele could rely on previous academic training to handle the statistics course in America. For Dahai, the master's experience was very helpful in language adaptation. She could not understand people's sharing in class and lacked confidence at the beginning of her master's class in U.S. In contrast, her feeling was that everyone could understand the class and complete the homework relatively smoothly. In this situation, she doubted herself. In those two years, she gradually got used to communicating in English. Even if she didn't get the point from others' talking, she could try to understand others. Dahai in her first year of doctoral studies would no longer perceive a deep cultural difference, and English would no longer hinder her from expressing herself normally. Previous study experience in U.S. also gave Lydia opportunities to adjust to English-communication in academic environment, and made Feng enjoy study and life in U.S. In addition, Huang's master-level study helped understand and adapt to American graduate school and perceived the difference between China and the United States, in terms of critical thinking and plagiarism.

Third, previous experience becomes the starting point of research interest in the pursuit of doctoral study for Dahai. She had an internship for one year in China. What she did during the internship was related to the technology she used currently. She also accumulated some friends who were doing the same direction. Their enthusiasm was very contagious to her. Her master's study intentionally was taken advantaged to prepare for the application for a doctorate, including gaining scientific research training and accumulation of her interested topics. Therefore, previous

experience is beneficial for shaping work attitude, adapting to class in America and stimulating research interest.

5.1.3.1.2 Academic Community Building

Previous experience is advantageous for building academic community and reach out to others in an academic environment. For example, Mary knew better how to reach out to others in an academic way during the doctoral stage, especially in the contexts where English is employed or settings where multicultural components are foregrounded. In contrast, she went abroad to study for the first time at her master stage and didn't know how to do that. At that time, she knew that others were intentionally reaching out to her, but she didn't know how to establish connections with others, especially in the academic setting. However, after coming out to study her doctoral program, she made a lot of progress in this aspect. For example, if she was more interested in the research one person did, she knew how to make an appointment for another chat or develop a colleague relationship beyond classroom. And she also knew the appropriate time to talk about the possibility to collaboration if they had related research interest. She had better skills to reach out peers and faculties.

5.1.3.1.3 Life Preparedness

Previous experience prepares students not only for academic, but also for daily lives. Interacting with foreign people in China and previous studying experience in the U.S. reduces challenges in daily life. Leah sometimes worked as a volunteer at school in China, accompanying some international students and guiding them to buy things. So, when she interacted with some foreigners at the beginning of living in America, she might not feel much difference and could

adapt it quickly. Furthermore, the previous study experience in the United States helps students adapt to life in the United States. Hannah may not experience much transition in daily life due to her undergraduate study in the United States. And Abigail's culture shock appeared during her transition from middle school to university, rather than in her doctoral studies, because her undergraduate university was an international university, and she also obtained exchanging experience between universities.

5.1.3.2 Happiness

Some interview data reveal these doctoral students' thriving experience, which make them be happy and proud of themselves.

5.1.3.2.1 Academic and Teaching Ability Improved

Academic and teaching capability being enhanced makes doctoral students be proud of themselves. First, academic knowledge was accumulated. When Leah first started her Ph.D. program, she was easily overwhelmed and desired to depend on others. Any academic problem was a big problem, and she couldn't understand other group member's publications, even if she had had a week to read. Now in group meetings, she could understand what other people talked about, and sometimes gave them advice. Huang had not acquired knowledge of statistics before, such as Stata and SPSS. Writing articles had been based on the others' opinions. Now she could analyze data which could support what she learned.

Moreover, teaching confidence was built up. As a TA last semester, Leah independently prepared materials and assignments, and could answer any questions from students in office hour.

This situation also applied to Lele. One teacher felt that Lele had made a lot of progress as a TA and decided to let her try teaching this year. If she was OK, she can teach alone next year. What makes her happy was that she went from not being confident in teaching, feeling that she might not be able to do teaching, to gradually enjoying this job. In addition, Huang was more willing to express her own opinions, without fear of being laughed at by classmates and teachers. Thus, these participants experience the changes from incapability and dependence on others to independence and proficient, from being at a loss to being confident, from being reluctant to sharing opinions to being more willing.

5.1.3.2.2 Self-worth being Affirmed and Financial Support

It means a lot for doctoral students to gain affirmation from advisor. Every time Hannah received her advisor affirmation about what she did, she would very happy. The self-worth of Mary was affirmed by her advisor. She encountered the funding challenge since her previous job no longer needed her. Her funding issue was exaggerated by the difficulty of finding a job due to COVID, not understanding God's will, feeling that she was not valued by her program, and the need to decide on funding before summer. When the limited time was left, her advisor in the minor major, a Christian whose research direction was also the spiritual level, sent her an email between March and April. He was willing to provide funding for her and could also seek help from others if he could not provide enough funding. The advisor in her minor major⁴ also encouraged her not

⁴ Based on Mary's updated information in 2023, the minor major advisor became her major advisor since she was invited to apply for the double major Ph.D. and was admitted officially.

to give up God's calling for her. His sharing of God's calling for her were valuable and encouraging, and she turned these words into a flyer and hung it on the wall.

Moreover, for many doctoral students, it makes them happy to be recognized by their peers for their academic ability. Abigail was very happy when the research was done well, the paper was accepted by a good conference, and she was recognized by others. It also applies for Dahai. Some doctoral students in the same field but being slightly more senior than Dahai praised her in a conference, thinking that she was doing quite interesting research. Being recognized by her peers for the first time made her happy and proud. In addition, Lydia's self-worth was recognized by her work. This semester she took the position of Assistant Instructor and taught students independently. As an international student, she can get this job opportunity to teach them, which let her feel quite proud.

Getting financial support is a happy thing for doctoral students. Lele was very happy about passing the English proficiency test this year, which was a requirement for doing TA work. Pass the English exam could keep the position of TA, which guaranteed Lele have the funding. Although she obtained the position as TA in the first year, she failed to pass the English test.

5.1.3.2.3 No Happy or Proud Thing

It seems to be no happy or proud things in some students' academic experience. Hannah shared that she seemed to have no happy or proud things so far. "I just keep going step by step and wished I could graduate, but I was still reading paper." Feng felt nothing made her happy or be disappointed. Things developed according to her own abilities, and the results were within her

expectations. For example, she worked hard on a project, and having good feedback was the result she expected and deserved. It would not be regarded as a particularly gratifying thing.

5.1.3.3 Support in Challenges

5.1.3.3.1 People in Academic Environment

Luckily, there were many supports that helps these students go through academic dilemmas. First of all, cohorts and classmates support doctoral students in both academic environment and daily lives. Considering that Lele was the only international student and English was not her native language, classmates spoke English more slowly when talking with her and explained more to her when she could not understand it. For Mary, two cohorts walked with her through challenging classes, teaching work, and office work. In the first year, they took classes together. Vulnerability played an important role in their relationship. They would talk to each other that they couldn't understand a lot of Bourdieu and Foucault's writing, being honest with each other and sharing class notes. In the second year, they taught classes together and would share things and support others emotionally. In the third year, three of them were working together in the college office. Their friendship and academic community were built up during ups and downs and become the source of stable support. When Mary had physical health issues, they substituted her to let her go to urgent care. In three-people community, especially with one people, they were good partners, and would share their progress comfortably.

Furthermore, teachers' academic help includes preparing students more academically capable, financial support, networking, and publication. Dahai deemed that receiving academic

training from her advisor seems to improve her ability, even if it was very hard. Her advisor was a person who was willing to teach and played a role in guiding her. For Mary, the help of mentors involved affirmation of her academic value, funding, future planning, and networking. Mary considered the advisor in her minor major and former advisors as her mentors. Her advisor in minor major was willing to providing funding support during her difficulty in funding, affirmed her academic value and gave suggestions in future planning and publications. And the former advisor made many efforts to help her be enrolled in her program, regularly invited students and brought them a meal, and guided her how to explore course choices. Since her previous advisor, also as an administrator, knew many professors well, the former advisor helped her networking and advises her to choose courses that professors may be suitable for being her mentor. She knew her advisor in the minor major because of the connection of the former advisor. And the teaching position in the second year was also found because of the connection that the former advisor helped to establish. In addition, another supervisor was willing to enroll students to publish, and she joined this research team, which would have publication recently.

Assistance from advisors was not limited to academics. Some faculties and advisor in the same field may give Abigail academic advice and help solve a problem in the process of research. They may also share what kind of mistakes would be made in the growth stage, which aspect she may start from to improve herself, and how to correct mistakes. Other advice involved time management in the research process and personal growth, such as how to be patient, how to persevere when encountering difficulties, and how to manage emotions well.

5.1.3.3.2 Faith

Faith makes a big difference for some students and is beneficial for handling with pressure. Faith enabled Lydia to survive through a bustling semester, believing God would lead her. Faith helped Lele overcome the negative emotion from a seminar-format course. The teacher was very strict with homework. Once she had a particularly bad grade, which brought about her negative thoughts of not wanting to live, because her grades would affect the TA position, and she was afraid that the position would not be kept that could cause the funding to be lost. Even though she was in such pain every week, she would participate in her Chinese church group's activities and Sunday services, and gradually overcome negative emotion.

5.1.3.3.3 Friends and Family

Friends' encouragement and accompanying become consolation. A friend from Another country kept reminding Leah that she graduated from a top-ranking university in China and must believe that she was very smart. Every time her encouraging words and a very firm attitude made Leah felt confident again. Huang had a very good roommate who was also a doctoral student during past two years. Sometimes they ate together, and usually had a lot of conversations at home, even when they were unhappy. Occasionally hanging out and walking with friends was beneficial for her. Although Dahai was far away from her friends and they had no way to help her solve the actual problem, sometimes she would find it a comfort to chat with them.

Second, it's relaxing to communicate with family. For instance, Lele sometimes heard her parents talk about what happened at home, as well as what happened to her dog or a relative, which made her feel very relaxed and feel like she was still in China. Although she didn't always tell

them about her own distress, her mother sometimes sensed it and would ask her. Her mother as a Christian would pray for her that made her better when praying together.

5.1.3.3.4 Self

Some students release their stress by themselves. Feng liked to play games and released stress by watching large and global professional games competition that had nothing to do with her life, as well as watching a particularly sad movie, the kind of movie made people want to cry after watching one or two minutes later. She would be fine after crying. And Lydia was good at encouraging herself from some positive results or small progress, despite difficulties. Although being an assistant instructor did not meet the expected salary and required more time than expected, she was motivated and felt that the meaning of her work when students understood it. Therefore, supports that empower these women to thrive during their doctoral studies include people from academic environment, faith, friends, family, and themselves.

5.1.3.4 New Role Explored

5.1.3.4.1 Ability Improvement

Studying abroad experiences exert considerable impacts on these doctoral students. Personal ability was improved, including the capability of solving problems, resisting pressure and living independently. First, the ability to solve problems was better. The biggest change for Leah was that she must learn to solve problems by herself or learn how to use some resources to help herself. In the face of difficulty in lacking practical experience, Lele strived to deepen her understanding through different methods. She used some internship programs to do observance,

recorded others' experiences shared by many classmates or teachers, and checked information by sharing and comments through the Internet, such as YouTube and social media. Furthermore, in response to lacking knowledge of laws and policy in her field in U.S., she acquired chances to repeatedly learn it. When she was not sure about related regulation, she would Google it. Additionally, her teacher also recommend many high-quality journals and she now read one paper written by other every day, as a response to challenge in writing, mixing Chinese logic and America logic.

Second, capability of stress resistance is improved. Huang sometimes needed to face academic pressure, such as obstacle in writing paper, no progress in research, and barrier in finding funding. Stress could cause her insomnia and was also one of the reasons of hair loss. She sometimes deemed that she failed academically and still needed to get financial support from her family, which led to her obsession of shopping during one period of time. The predicament had shaped her ability to resist stress. In the past, she would sometimes cry at night when she was in a bad mood, but now she would persuade herself, "Why are you crying? Isn't the talk show good? Isn't that movie good? Is there a good reason to cry?" Although sometimes she still cried, she was not very sad in her heart. Instead, she regarded her crying as detoxing.

Third, independent ability has been strengthened. In the past, Huang might ask friends to help, but now she can solve many things on her own. Leah's ability to live independently was also enhanced. Leah had been living in a group environment since elementary school and rarely dealt with things alone in China, while she in America spent most of the time alone. Despite challenges in adapting to living alone at the beginning, she figured out the merits. For instance, she could better her life schedule and her schedule did not need to consider too much about others' schedule.

5.1.3.4.2 Character being Shaped

Interview data reflect changes in personal character. First, there is a change in express one's opinion. Lele was now more active in discussion classes, who once kept silence all the time in a seminar class. For instance, she would immediately ask if she didn't understand, and immediately shared her opinion when she had an idea. The transformation of Dahai was from being less willing to argue with others in the past to being very willing to express her demands and needs. Because after coming to the United States, she needed to deal with a lot of things by herself in most of the time and protected some of rights and benefits under some situation, such as water leaking at home and presenting herself during job searching for the position of research assistant. Now some women around her were being treated unfairly, and she was particularly willing to tell them that it was not their problem, as if she helped pervious self who was unwilling to express viewpoint. Feng would express herself in the classroom if given the opportunity. However, she used to be eager to express her ideas, but now she gained more knowledge, and may not be in a hurry to express opinions in life. Even if she disagreed others' point, she would not say anything.

Second is the change in personality, including appreciation, persistence, empathy, patience and the like. Hannah was more grateful and cherished the current community. Hannah shared that she could have been lived by herself under the pandemic, but would had not known what she was doing, if there had been no program, no friends, roommates, mentors, and church. She appreciated staying with others and having her community. Doctoral studies shaped Lydia's persistence. She learned how to persevere in self-doubt, inability to do something, and peer comparison. Lele's program improved her ability to be peaceful and empathetic. Lele could put herself more on others' shoes, be more empathy with others' feelings, and have less negative speculation about others,

which may be caused by her program. Doctoral studies played a positive role in shaping Abigail's personality, such as patience. Abigail believed that academic experience was not just to obtain a title and a PhD degree, but to build up a person. "In a research question, in the process of waiting for data, or even in a paper's submission or publication, it would take a long time. So, during this process, people cultivate patience, cannot be in a hurry, needs to step by step, and then need to focus on the current work."

Third, some doctoral students have a deeper understanding of faith. For example, Hannah realized the significance of her salvation by Jesus and could put less emphasis on whether people get along with each other by her own standard. She knew what one's priority was and what work could be accounted forever. And Mary could really experience God's presence without barrier now, from with barrier in her relationship with God previously.

5.1.3.4.3 Transformation in Academic and Career Plan

During their studies in the United States, some students' academic and career plans also changed. Lele changed her majors and changed from master's to doctoral program, because of identifying her new passion. And Leah changed career planning. Before, she hoped to have a lot of publication and then find a teaching position in the university in China. However, now she was in a very confused stage, since she didn't decide whether she wanted to work in a company or do post-doc in the future. Several reasons were behind this change. First, her writing ability limited her research achievements. Although she enjoyed the process of doing research, the quality of her writing paper was very poor, and she could not present her research results into high-quality paper, while her coworker can do it even if the research value was of little value. And the way her boss

helped her revise her paper was time-consuming. The revision focused on grammar but did not emphasize her innovative point of her paper. Second, she did not reach the academic-achievement level she wanted in America and thought that she was not a person with a particularly high level of scientific research ability. Based on her estimation, she cannot achieve the high level she aspired to in the academic world in the future and it would be better to work in industry. Third, the conflict in the relationship with her boss and a senior student led her to see a psychiatrist for a while. Fourth, working academia was really stressful which was not her good choice. One teacher in her university she knew was super busy with classes, applying for funding, and socializing for funding. And faculties she joined their research in China were also bustling. Although she liked to explore different things, it was difficult to sacrifice a lot of time on research and she could not stand such academic pressure. At the same time, the academic lifestyle and honor were not so attractive. She hoped to have a work-life balance after graduation and preferred to have a normal life.

5.1.3.5 Conclusion

In conclusion, these women face various challenges, according to interview data. Funding issue easily cause predicament. Lack of practical experience, different opinion from advisor's viewpoint and language barrier lead to course dilemma. Research challenge is widespread among participants, including lack of research chances, plight in research process and writing. Social relationship also troubles doctoral students, such as peer pressure and relationship with advisor. Pandemic exaggerates these women's dilemma, which exert a negative impact on job availability, work and even career and learning path. Additionally, some of them struggle in life-work balance. What's more, these challenges' influence is not limited to their lives, but also bring about

destruction on self-confidence. What's surprise for me, four participants (44.4%) wanted to change university or majors for different reasons. And participants also have regrets in interpersonal relationship, health and study. Surviving these challenges become tests for many women. Some of them overcome the difficulties, while some of them did not. Some of them took a long time to solve it, while some of them still are struggling. On the other side, some factors play beneficial roles for these women's thriving during these dilemmas. Previous experiences prepare them for work attitude, course adaption and stimulate research interest. Academic community building skills are gained. Interacting with foreign people or study in America before their doctoral studies facilitate them to be more ready for lives in the United States.

Second, their thriving experience includes academic and teaching ability being improved, self-worth being affirmed, and obtaining financial support. What's more, they are not alone in the storm, because they get helps from people in academic environment, faith, friends, family and themselves. What's important, they are trying to explore and expand the definition of themselves, including improving ability, building up characters, transforming academic and career plan, and having a deeper relationship with God. Therefore, the difficulties become their blessings for some people. Difficulties did not limit them but contribute to their new exploration.

5.2 Surviving and Thriving Experience in Social Relationships

Social support is indispensable for people's daily life and the importance of social relationship could hardly be ignored. International students face the distance from family and

friends in their native country and interact with people in the host country. It is necessary to explore whether these doctoral students have social support, how these doctoral students adapt to the distance from social connections in China and build social network in the U.S.

5.2.1 Surviving Experience

5.2.1.1 Challenges

According to interview data, these participants experience being short of friend and community, pandemic influence and encountering social-relationship barriers.

5.2.1.1.1 Lack of Friend and Group with Belonging

Some respondents lack friends or social group. At the beginning of doctoral program, Huang was worried that she could not make friends. Even if she made efforts to make friends with Chinese classmates, but not everyone was willing to be her friends. She also hesitated about whether she needed to have more local friends and doubted whether she was not social and outgoing enough. In the second stage, she was a little bit reluctant to make friends with Americans and preferred to find Chinese friends. Her confusion was that she didn't know how to handle close but not too intimate friendship. Now she accepted that her personality was not too outgoing, and she didn't have a strong will to be assimilated into the local environment in the United States. If there were friends from America, China or other countries who knew each other because of having the same class or other reasons, it would be good to be friends. But it would also be fine that they could not be friends. Thus, her attitudes towards making friends changed from trying hard to find friends and doubting herself, to accepting her personality and not pushing her hard to making

friends. And Lydia didn't have a particularly close friend for a period. This problem may also come from comparisons with others who seem to have very close friends.

And some women did not have social group with a sense of belonging. Dahai wished to have more friends, such as friends at work who may chat about each other's progress at any time, as well as friends with similar hobbies. She was really interested in hanging out with others, because life was too boring in the very small town where she lived now. Maybe groups hadn't been found yet, such as groups of playing music together, hanging out, viewing exhibitions, and eating together. Feng felt that there was no place in America she had a special sense of belonging, except the place where there were many Chinese. But the benefit of this place was confined to speaking Chinese freely. The group of chasing idols may provide more topics to talk, because people liked the same idol. But she now was not so engaged in chasing idols, because there was no stage and concert, so she didn't have much interest.

5.2.1.1.2 Pandemic Influence

The pandemic places many impacts on social relationships, including decreasing social opportunities, reducing reliance on people, and mental health issue. First, there are fewer opportunities to interact with other people. For example, Lydia planned to invite a few people from her program to have a meal together during the Mid-Autumn Festival (traditional Chinese festival), or hang out with them, but COVID made this plan not be implemented. For Lele, COVID brought barriers to interact with local classmates. Before the pandemic, there were still a few local classmates in the United States who would send messages. After COVID, since all classes were online, and communication was made by email. Sometimes she felt that she did not integrate into

the local cultural atmosphere, but sometimes she felt that it did not matter even if she did not integrate into it.

Second, the pandemic also reduced people's dependence on others. Leah had particularly depended on a man in her lab and had been afraid that he would graduate early and could not see him anymore. But working from home, caused by the pandemic, made her adapt to the working environment without many people around her who made her feel at ease. It also reduced her dependence on him, so his graduation and left did not bring about much sadness she imagined.

Third, the pandemic also affects people's mental health and creates tension in relationships. Feng's previous roommate experienced a miserable year due to the pandemic, and mental state was not very good, which caused trouble for her and another roommate. Later, when she found out that it was not her problem, she moved out immediately and decided never to have another roommate again. This experience caused her PTSD (post-traumatic stress disorder). She thought that the pandemic may cause many problems for people, which referred to an issue about how an international student can maintain a good mental and psychological state during the pandemic.

5.2.1.1.3 Barriers in Social Relationships

Social-relationship obstacles appear during doctoral studies, such as different schedule with friends, changes in surroundings and boundary issue. Abigail shared that if people of the same age were not taking the academic path, many people were already working. Pursuing a doctoral degree was more time-consuming. Although the time was more flexible, holiday would be occupied to work while others had fun during holiday. Different time schedule with friends in work brought about some social difficulties. Even having close friends, the challenge would

emerge when friends left. It is possible that they would face friends' graduation and left, since the doctoral program lasts for a longer time. For Leah, one senior student graduate and left who had been her company since she first came. Before this friend left, sometimes she had gone to this senior student' house for having a meal and a fun together after school, which could not happen again. And another close friend returned to native country. This intimate relationship was reflected in no hesitation in sharing, no judgment on sharing her good feeling about man, but patience in comforting her.

Second, communication with friends were reduced, when Dahai started her doctoral program. Transitioning from a social-science oriented environment to non-social-science oriented environment, Dahai found that many students had social anxiety. Although she was fine with daily interactions, sometimes she felt lonely. And there was not much fixed schedule when living alone, such as when to eat and when to play. Sometimes she would procrastinate at work, because she didn't have any expectations in her spare time and didn't need to finish her work quickly for another schedule. Her way of dealing with loneliness includes participating in this study and chatting with me. When she saw the introduction of this research, she thought I would be a very interesting person, and joining in this research was also an attempt at interpersonal relationships.

Third, cultural difference is an essential gap, which may block friendship building and maintaining. For instance, Huang felt that communication with people was barrier-free and each other can understand the content of conversations in China, for friends grew up in a very similar environment. Even people from different regions of China during undergraduate time had some differences, the cultural value system that everyone was in was basically the same and there was no difficulty to understand each other. On the contrary, the challenge to make friends from

different cultural backgrounds was that there were very few topics to talk about. Sometimes she could not share anything while chatting, because she didn't figure out what they talked. The TV drama and movie she may watch now were from China, rather than America, and her understanding of the United States came from some news, recommended information in Facebook or Instagram. She's not obsessed with American culture and did not keep up with all the latest stuff. And communication issues were reflected in not only lacking sharing topic, but also sometimes language. Her English had not reached a certain level that she can chat with them freely. Difficulty existed to understand each other during communication.

5.2.1.2 Distance from Family and Friends in China

As an international student, studying abroad means staying away from their social network in China physically, such as family, friends, and previous classmates. Family relationship has been built and maintained from their birth, which places an essential role in the growth. Friends and classmates gradually exert an important role as companions to walk through their hardship and happiness, as well as study, work and recreational times. When they choose to pursue doctoral studies, it refers to being away from parents and friends for several years. These doctoral students have different level of adaption to the distance from family and friends in China, including no such worries, ups and downs, and being troubled.

Some doctoral students do not have related concern caused by being away from social connections. For instance, the conveniency of Internet facilitates the communication among people. Lele shared that people could see each other through WeChat (like Facebook in China), in addition to not being able to meet each other physically, which was fine. On the other hand, some

doctoral students have experienced ups and downs in relationships with people in China. For instance, Leah experienced the transition from family conflict with her dad before studying abroad to gradually understanding her dad and having relationship reconciliation. She also experienced the honeymoon period at the beginning of living abroad and then having conflicts with roommates and missing home, and experienced interim from challenges to adaption.

Second, some people were troubled by distance from family and friends in China. The time of leaving home and coming to America was the most troublesome time for Huang. Homesickness was not so strong in daily life, since she usually video called them or texted them. The most troublesome time was about a week before she returned to the United States. At that time, she had been in China with family and friends for a while, but she knew that she would be flying back to the United States next week, and that period was the most tormenting. Every day was counting down. She would leave in seven days, would leave in three days, and she would board the plane tomorrow. Just a little by a little, she could become more and more struggled. And the pandemic caused Abigail's trouble, because the pandemic affected her mobility, and there were few or even no opportunities to contact directly or meet people who did not live in the same place, while she hoped to have this kind of connection. Troubling issues for Lydia included difficulty in helping parents and having estrangement from previous friends in China. Dahai's distress was caused by the obstacles of communication caused by time difference and physical distance and the difficulty in reply to messages in WeChat anytime, as well as parents' unfair judgment caused by different expectations about each other's lives.

5.2.1.3 Interpersonal Interaction's Gap Between China and America

Studying in the U.S. brings about environmental changes, including culture difference in social relationships. The gap of interpersonal interactions these doctoral students experience contains the difference in social norms and diversity of recreational activity.

5.2.1.3.1 Social Norm

Different social norms remain among social groups. There are no uniform social rules in a group comprising individuals from various cultural backgrounds and Chinese social rules could not applied to diverse cultural backgrounds, based on interview data. Mary frequent contacts were not mainly Chinese. Many things that were subconsciously used in Chinese environment did not make sense in her current situation. She explicated "I drew upon the implicit identity structures that are resourced from within the Chinese culture a lot before I came to ... for my doctorate study. For example, being a good student means to not interrupt the instructors in class, being a polite student means to address the faculty as Prof. [last name] or Dr. [last name], being a good person means being loyal to the fundamental Chinese values, such as stay low-key about one's achievements as much as possible. I experience quite a few breakthroughs from being conditioned by such culturally available identity structures, and therefore I become more proactive, open, advocative for myself, and flexible in engaging multicultural talks and activities." The benefits of her multi-cultural experience in daily life helped her be more proactive, open and be able to reach out different groups in academic environment. Hannah's friends were originally from Korea, Vietnam, Taiwan, and China, which were very diverse groups. Most people directly expressed their opinion without being polite hiding indirect Chinese communication factors. In this case,

monocultural social rules did not apply. For example, people from China were raised in the cultural expectations, such as bringing gifts when visiting others' house, not coming to others' place too late, not staying overnight, and not brothing others too much. When interacting with Chinese people, there was always a set rule that everyone should know it and may have similar expectations. But in a diverse-cultural environment, not all parents taught children similar social rules, so there would be no similar expectations towards each other, which brought about a feeling of a whole new community.

Second, the rule of boundary differs, including living ways, communication, and interaction in academic area. In living ways, Leah's living environment has been greatly changed from living a collective environment since primary school in China to living independently at most of the time in America. Moreover, in communication aspect, people would be polite and generally not cross the boundary between academic affair and personal things. Leah thought that the majority of people in the United States were very polite and would also politely decline others' seeking for help if the relationship was not good, while people ignored unfamiliar people in China. Leah found the communication boundary was clear among classmates in America. Chatting during class break or after class basically refer to what the teacher just taught in class, which may be because she was not familiar with them. And communication with the teacher basically focus on the work. On the contrary, chatting with teachers and classmates in China would easily cover personal affairs. After class, two female classmates would be likely to chat about their private affairs.

5.2.1.3.2 Recreational Activity

Diversity in activity differs between China and America. Some students revealed that there were limited activities to do in the U.S., compared with diverse activities in China. Lele felt that she could do a large number of activities with friends in China, such as singing and exploring secret rooms. Although there were also places where she lived to provide similar activities, they were not so good. In the United States, activities of hanging out with friends were confined to going to supermarket, going to someone's house to eat, going out to eat, or exercise, may because of the pandemic. Huang commented that there were many other emerging activities in China, such as indoor board games, which seemed to be rare in America. Second, food difference exists. Huang shared there were only a few choices in Chinese restaurants when she went out for meals with others. In contrast, Chinese food was subdivided into several types of cuisines in China. Each cuisine contained different foods, and people had many choices. When Lele saw her friends shared delicious food on their post, she felt very sad that she couldn't eat it, but could only cook it by herself, and even didn't know if the taste of the food was the same as the original dish. In fact, food as an important part of Chinese culture differs greatly from diet culture in the United States.

5.2.1.4 Attitude Toward Making Friends From Different Culture

Different people held different attitudes towards making friends of different cultural backgrounds, including being open or the opposite attitudes. For people are willing to having friends from diverse environment, some doctoral students make it, some still have hesitation, and some fail.

5.2.1.4.1 Being Open and Building Friendship

First, some people possess an open attitude and make friends. For example, Leah didn't feel like too much challenge in this aspect, maybe it was because she's intrinsically easier to make friends. Her friends were relatively easy-going and nice to be interacted with. And she refused to make friends with people like her senior student and some foreigners who did not want to talk with Asians or people who had a sense of superiority and pride. Thus, she was easy to interact with people of diverse culture because of her personality and making friends selectively.

Moreover, some people overcome cross-cultural challenges and have good friends by sincere communication, faith, and love. For instance, Mary experienced friendship dilemma, due to difference in culture and personality, and then had relationship reconciliation. Her friend in the same fellowship of church was an Indian who came from a different culture that she couldn't understand a lot of things at first. And his personality was completely different from hers, and he suppressed his emotions so much and did not understand why others had emotional expressions. In this friendship, there were difference in cultural background and personality. In the early days of their relationship, when they were in bible study mode or serve mode, they were fine. Later, when they had more opportunities to hang out within the group, contradictions appeared. For example, they discussed plans of watching fireworks on July 4 last year. He probably asked her a question about whether she liked this or that. Her habit of expression was not directly to provide an answer, but to provide 3 or 4 sentences of background information. However, he just cut her off and said "that is not my question. You are not giving me an answer". She was offended and felt that if he couldn't accept her expression comfortably, they wouldn't be able to continue to develop friendship. But later she prayed for him when something happened to him, and he were

packed with other things to avoid dealing with his emotions. Then, in their bible study they talked about emotionally health spirituality, and the synchronization between emotion and spirituality. Gradually, he made some changes and began to be more comfortable in sharing himself and accepting her emotions. And they also communicated the thing she was uncomfortable with, and he understood and learned not to cut her off. At this point, they experienced relationship reconciliation and enhancement. Thus, friendship barrier was overcome under the influence of prayer, church curriculums, the friend's change and sincere communication. What's more, loving each other could contribute to friendship maintenance. Hannah's roommates, sisters from the same church, were originally from different countries, but they were tolerant of each other and overcome the barrier in communication and food. Her roommates were very Americanized and spoke English and they all understood that she was not very good at some English expression. Although there were some differences in food preference, they could express themselves, such as preferring food not being so spicy.

5.2.1.4.2 Being Opening but Having Obstacles

Some people are willing to making friends with people from different cultural backgrounds, at the same time hesitation also co-exists in one participant's heart. Abigail encountered challenge and had presumption with regard to being friends with people from different cultures. Her communication with them would have a sense of freshness, because there might be some allusions or slang terms in communication sometimes and everyone had a different set of information. While difference brought about stimulation, there may be some challenges in the process of understanding or cooperating with each other, because it took a little more effort to

understand each other. If it were cultural differences, she would be more inclined to spend more time to understand each other. Not everyone she met were happy to spend the time on sharing, but some would. The challenge was that she might sometimes give herself too many obstacles to assume that others might not be willing, but in fact others were very willing.

Second, some people seem fail to have a close relationship or fit in group, due to limited knowledge about different culture, language barrier and deep-rooted previous value. Unfamiliarity with different culture was reflected in Dahai's situation. Dahai thought that people from different cultural backgrounds were very nice, but sometimes she didn't know the boundaries very well because of lacking understanding other's culture. For instance, she often ate with an Iranian classmate who was enrolled in the same year with her, in the same college, and did related research. During their communication, she could share some small but very interesting things, but she could not chat with this classmate like chatting with me, because she was afraid that something might be cultural taboo. She thought she may be too sensitive, but it would be better to be careful. And the difference in cultural background led to the fact that all Huang's friends were still Chinese, and there were not many local friends. Communication with local friends was confined to greeting and chatting several sentences, but she would not usually hang out with them.

Moreover, Lydia shared that language was still a major challenge. It was easy to communicate with people either from Taiwan or some other regions in Chinese language, due to no language barrier, even if there were gap in cultures and beliefs. Language gap would exaggerate existing cultural differences. For example, the boss of her previous summer project invited everyone out to have ice cream and chat. She had no idea at all about the TV show they talked about, because she didn't watch what they watched. Difficulty in language, coupled with talking

about things she was not familiar with, create communication barrier. In fact, she held a relatively tolerant and opening attitude toward other people's different concepts, cultures, customs, and diets which were not obstacles for her to make friends. But the main challenge was probably language.

People could also adopt the same way as they are treated in interpersonal interaction, but still maintain their own value that are cultivated in her native country. Some Lele's classmates from Africa were straightforward and outspoken, and sometimes she didn't know why she was suddenly asked personal questions. A classmate from Africa once asked her after class if she received TA's salary and how much it was. She responded it directly by showing her email to let the classmate see how much money she received, since this classmate asked it so directly. She treated her classmate from Africa as the way she was treated, but she would keep her own way to treat others. Lele thought that the doctoral students who studied abroad were not at a young age and had very well-established values. Different cultural environment could bring about shocks to doctoral students and can't really change them, because their values have been deeply imprinted in themselves. Unlike young people who went abroad for college or high school, they could integrate into the local culture and become one of them.

5.2.1.4.3 Refusing Attitude

Doctoral students may choose to refuse to making friends with people from different backgrounds. Feng really didn't like to make friends with people from different countries. She communicated with them politely but didn't take the initiative to make friends. For her classmates, she was fine to know their culture but avoided communicating with classmates in private, because she felt very tired if she had to use English in her personal life. She had a lot of things to do. Every

time during private events, they might ask, "What would happen in terms of this thing in China", and then she would have to explain it to them. She didn't like doing this kind of presentation or mini talk to others in private.

5.2.2 Thriving Experience

5.2.2.1 Social Network With Belonging

In the United States, it is a blessing that international students have groups that allow them to have a sense of belonging, friends that you meet frequently (Kliem et al., 2015) or friends that they often contact online. These women have different groups and friends to support them and they could have chances to thrive with social support during doctoral studies.

First, doctoral students have supporting community with people in academic area. Abigail had several good friends in the PhD community, and they can really give advice to each other when they encountered similar problems or confusion, since no one could walk alone. Dahai had a sense of belonging from a group through the Internet. This group was made up of relatively young scholars and students who were doing scientific research. They may just graduate with a doctorate, just be enrolled in a doctoral program, or even master's students, who helped each other.

Second, the church also provides many Christians a regular meeting group and a sense of belonging. As six participants in this research are Christians, social support from the church was mentioned. For instance, Mary had many friends. Her actual needs, or some emotional, psychological, physical needs, were really met in time, and she knew she had family here. A lot of urgent needs were met, so she didn't feel very lonely. On the contrary, people, especially

international students, shared with her that their loneliness was very strong. One of her friends said that his/her friend, having a dog, thought that he/she might be unconscious due to unexpected situation in the house but no one would know if there were no such dog. And another “international student in town who adopted a dog during Covid in case anything went wrong when they took a walk”. “The student is from East Asia and apparently, they were afraid that others would attack them randomly because of all the false understanding of the breakout of COVID having something to do with Wuhan, China.” The purpose of adopting a dog was to make an impression that they were also human on “the strangers, the Americans who live here. They would think, ‘oh we are attacking a real person instead of a less human or inhuman enemy or something’”. However, the sense of loneliness was not as strong for her as for other international students mainly because of the social connections and solid friendship she had in town. This is even truer during the COVID lock-down. And she expected someone to reach out to her if there were something happening to her during 24 or 48 hours, or when she left an emergency message to someone. For example, if she came back late at night and concerned someone was stalking but she couldn't get a taxi, she knew someone would come to pick her up within three or five calls. Someone in the U.S. would trust her unconditionally and they would prioritize her if they knew it was her emergency. They were brothers and sisters from the current church and the Chinese church. In addition, the church fellowship Lydia was currently in provided her a sense of belonging, and everyone quickly built a caring relationship with each other.

Third, doctoral students could have support from friends. One of Leah's friends who had been there since she first came, also made her feel at ease. For example, when moving from one place to another, he would help her; sometimes they would go hiking together; her cat could be

fostered with him if she returned to China. What's important, similarity in cultural background could play a positive role in friendship. Huang's friends who gave her a sense of belonging may still be friends related to China. There were two types of friends. Friends in U.S may live in the same place or have the same classes before. Because they were all Chinese, she would still count them as connection to her country. And for friends in China, they might just send some wish message on each other's birthday or some festivals, and then started chatting for half an hour, or they start chatting casually. In fact, she didn't have many friends, but these friends were the ones who hadn't seen each other for a long time but still would not be too embarrassing. The numbers of friends were not valued by her but the depth of friendship. Sometimes too many friends would be a burden for her. Therefore, similar background may create more chances to be friends.

5.2.2.2 Happiness and Contentment

5.2.2.2.1 Social Support

One of the happy things in social relationships for doctoral students is having friendship and getting social support. When Lele's friends saw something and suddenly thought of herself, it made her happy. And the deep relationship satisfies people. Hannah made a lot of friends during the doctoral stage. She was also very happy during undergraduate, but the relationship at that time was a bit shallow. In the current church, everyone lived together, which reflected the form of the church mentioned in the second chapter of the Acts in the Bible. Living together was really like a family. Feng had a few good friends who can develop into lifelong friends. Some were classmates and some were acquaintances when chasing idols. What's more, friends' support and sharing are

valuable. Some of Leah's friends were very supportive. One female friend if she could, offering help whenever Leah needed it, firmly believed in her even more than herself. Huang were happy during her doctoral studies, since she had several friends. Friends would accompany her through times of stress and chat when needed. The social network was small in a foreign country, and a few friends who could chat were extremely precious. On the other side, social distance is desired sometimes. One of the things Huang was happy about was the way she got along with her American classmates, who did a good job of keeping a social distance. When she didn't want to chat very much, people would get her point when she responded, "next time".

5.2.2.2.2 Breaking Social Isolation

Some women are happy about breaking through relatively isolated status and developing close relationship. Lydia experienced loneliness at the beginning, and later improvement in interpersonal relationships. In the first two semesters, she basically had not much interaction with other students. There were few Chinese people in the same project. However, during this year she met many nice brothers and sisters in the student fellowship in the church and the tutor. She was not as lonely as at the beginning of doctoral studies. And Mary had a similar experience. In the first year of her doctoral studies, her overall academic and non-academic lives were a mess, not just because she spent two years before in China. Like entering another planet, all the operating rules were different in the U.S. In the first year, she was quite curled up or isolated, and not comfortable in various social environments. At that time, she did not know people who they were and had no deep social relationship, not just hanging out, drinking coffee or eating together. In her fellowship of church, there were people from all over the world. It took me half a year to get used

to the accent. Maybe in her larger environment, she only got to know 3 to 5 people. In the second and third years, she felt that it was the process of being explored and expanded for herself and many people surround. Until this year, what made her very happy was that her good friends were not just as her brothers and sisters, co-workers, colleagues, or classmates, and her friends consisted of many people from different cultures. She was very happy that the friend, she had thought in the first year she might not be able to be friends with them in the life, or the friend that they would not be able to open up to her, really became her good friends. They were comfortable to share some deeper things in their lives.

5.2.2.2.3 Improvement in Social Skills and Knowledge

People are happy about their improvement in social capability and knowledge. Leah was better at interact with different people. Now she may be able to predict what responses different people would give, so sometimes she would not be so disappointed because of others' bad attitudes or words. She also would not care too much about other people's feedback about her, because people's evaluation about her during many years gradually made her understand what kind of person she was.

Furthermore, getting access to different culture could be beneficial for learning from each other and inspiring one's development, which make people happy. As Abigail's observation, everyone liked to hang out with people of similar backgrounds and speaking similar languages. But it's a little more fun to meet people with very different backgrounds in the United States from her viewpoint. Her collaborators came from all over the place, and she found that each one brought with their own cultural-background characteristics. Working together was very interesting, not

only the exchange of knowledge, but also the exchange of culture and increasing creativity. For example, she cooperated with a classmate from South American, and obtained the chance to know this classmate's country, school system, and views on the relatively turbulent political environment. This classmate gave her a new perspective about the country she was not familiar with. And Americans preferred to be energetic and liked being outdoors, which also inspired her. Therefore, the things that make doctoral students happy in personal relationships comprise having close friendship and personal improvement.

5.2.2.3 Conclusion

Doctoral students' surviving experience in social relationships include challenges in social relationships, distance from social network in native country and difference in social interaction between China and America. Challenging experience in social relationships consists of lacking friends and social group, as well as friends leaving. Furthermore, pandemic brings about reducing social chances and interpersonal dependence, and mental health problem which lead to dilemma in relationship. Social-relationship barriers during doctoral studies comprise different working schedule from friends and change in environment. Cultural difference block friendship building for lack of communication topics. Moreover, as international students, they encounter long physical distance from social connection in China which participants held different attitudes towards. Convenience of Internet and family support made some participants no related concern, while some participant experience handicaps. Some participants experience ups and downs in their family relationship and reconciliation.

Second, the gap of interpersonal interactions contains the difference in social norms, diversity of recreational activity. Chinese social custom could not apply to social group that consist of people from different backgrounds. And the difference of boundary rule exists in living and communication between China and America. And based on interview data, there are more diverse recreational activities in China to be engaged with friends.

Third, people held diverse attitudes towards making friends from different culture. Majority of participants are willing to make these friends. However, the result differs. Some participants have close relationship due to personality and choosing friends. Sincerity in communication, and faith and love also contribute to building these friendships. Furthermore, one participant enjoys cooperation and communication with these people but sometimes interact with hesitation and presumption. For some women, it is hard to deny that cultural obstacles exist in communication because of limited knowledge about different culture, language barrier and deep-rooted previous value, although some participants are open to make friends. Additionally, language and cultural gap may also give rise to refusing attitude.

Compared with their surviving experience, social network with belonging is beneficial for their thriving experience in host country. The community support comes from academia and church. What's more, friends could take care of each other, and similar cultural background influence positively in friendship. In addition, the happy things in social relationships for these women include having social support, breaking social isolation and developing intimate friendship, improvement in social skills and knowledge communication.

5.3 Surviving and Thriving Experience in Marriage Expectations

5.3.1 Surviving Experience

5.3.1.1 Challenges of being Single

These women encounter various challenges because of being single/unmarried in different periods of doctoral studies. The challenges include lack of social support, pressure from environment and barriers to finding a husband.

5.3.1.1.1 Lack of Social Support

Based on interview data, some single women lack social support. Leah thought that being single led to lack of social support from boyfriend during moving and doing maintenance. The obvious challenge for Dahai was that no one gave her a help or a reminder in her personal life. Since she had to prepare every meal by herself, she always treated her meals too casually. For friends around who she knew lived together with boyfriends or girlfriends, the cost of living was much lower. She hoped to find a person whose schedule was matched and who could take care of her to some extent.

The disadvantage of being single include not only lack of practical help in life, but also loneliness and lack of security in psychological aspect. In Leah's opinion, a boyfriend may not be able to protect her, but no one could protect her without a boyfriend, but only by herself, which reduced her sense of security. She had a feeling of loneliness, since there were some things that no one can share with. Similar situation applied to Lele that she cannot share her big challenges or a small joy, although most of the time she was fine. Since she spent a lot of time alone, she had

developed a habit of talking to herself. Dahai was still a little afraid of loneliness. For example, silence was overwhelming in the room over one night, which seemed as quiet as death and made her feel scary.

Moreover, COVID leads to decline in personal interaction and isolation that exaggerates emotional needs. During the COVID period, especially during the lockdown, which is from the end of 2020 to the first half of 2021, Mary was far away from home, and friends in the United States did not dare to interact with each other. The time of COVID had magnified her emotional needs, although these emotional needs had existed for a long time because she had been single for almost ten years. Sometimes, maybe before going to bed, or maybe at a certain time she saw a beautiful thing, she would like to share with a special person about her moments, emotions, experiences, big or small but unique things.

5.3.1.1.2 Difference from Environment

Difference exists between friends' lives and one's own. During the age range between 25 and 30, many friends around Abigail gradually had their family lives, and the gap between peers' lives and hers existed. Lele knew a lot of married people, and sometimes she didn't have a lot of common topics with them because she was single. Hannah would be tempted by other people getting married or engaged, and she wondered when she would have such a relationship or get married, despite her being happy for them. Dahai did not have a particularly strong obsession that she must have a boyfriend. In contrast, traditional value, or friends in a relationship or in marriage would bring about an invisible pressure that seemed to notify her that the social clock kept beating

and reminding that she grew older and whether she was going to die alone. Thus, discrepancy between friends and oneself may bring about pressure in marriage.

Pressure was not only from peers, but also from family members. Huang had been in predicament for a period, which sourced from the process in which her family expressing their position that she should solve the marriage issue from implicitly to explicitly. For example, the elderly in her family would attempt to reach out the single and available men in the United States for her. She had also been blind dated and been introduced some men. And Huang's peers also introduced men to her before. She was probably introduced to maybe three or four people, before starting a relationship with her boyfriend.

Parents' influence was not just limited to the time after studying abroad, but also before. Before doctoral studies, Mary promised her mother that she would find her partner before 30 years old, because she may wish her mother would be more at ease. That was why she cared about her age, in order to keep promises. On the other side, she did not set 30 years old as the deadline and could accept being single for a longer time. There might be an invisible thread in her heart that she must find a boyfriend before graduation around 32 years old. Then she would give herself more space.

5.3.1.1.3 Obstacles in Finding a Husband

Difficulties to finding a husband refer to limited candidates who meet spouse criteria, some characteristics of women and packed schedule. For Leah, it's too hard to find someone who fully met her preconditions. There were limited number of people with similar age and being single, unless she accepted people who was 4 or 5 years younger, people who had some signs of balding,

or someone who did not meet her preconditions in one aspect. Dahai was willing to explore a possibility with another person, but she really had no way to find such a suitable person, because she observed the state of the couples and found that she could not be any role in these relationships. And men of the similar age were too young, and sometimes it was hard to have emotional resonance.

Moreover, some characteristics of individuals would also bring difficulties to find a boyfriend. Leah would consider many things in the process of finding a partner, which led to hesitation and lost opportunities when meeting the right person. she knew a man who was two years later to be enrolled. He was perfect in all aspects. But since she was graduating soon, which made her feel lack of possibility. Mary's challenge was that she didn't know how to initiate in a relationship, and it was difficult to figure out that she had more feelings for one person, not just as friends or brothers. Mary's struggle was how she broke out of the current situation of being single but emotionally needy of a spouse. On the other hand, Mary felt that it was fine of being single, because she had many friends and her other practical needs, or some emotional, psychological, and physical needs were taken care of in time. In addition, tight schedule would also influence finding a partner. Leah had been busy recently, and planned to graduate soon, which made her no time to think about it. After she started to work, she may meet new people and bring more opportunities.

5.3.1.2 Influence of Negative Labels or Misunderstanding

It is necessary to explore the impact of the gendered culture, such as “leftover women” and “the third gender”, affect female doctoral students. Based on participants' responses, some women

receive negative labels or misunderstanding because of feminine identity, being single or educational attainment, while some did not. And responses to these comments varies from people to people.

5.3.1.2.1 Limited Impact

Limited influence of negative labels is due to few related comments, or more friendly attitude in macrosystem and friendly microsystem. First, some female doctoral students do not receive negative comments. For example, Leah had not been negatively evaluated or misunderstood because of gender, single status, or education. For Lydia, women were not minorities in her major, which may lead to few negative comments due to gender.

Moreover, negative labels have been reduced in the society while female scientists' value has been recognized. Feng shared that there might be a lot of comments about leftover women and the third gender, when she just came to the U.S., while not many related comments on some domestic reports she read in recent two years in China. Dahai also found the negative label was reducing. Many negative comments existed in 2013 and 2014. There were very nasty comics that regarded the female doctor as a non-human and non-emotional creature. The situation was much better now both in China and abroad. It seemed that woman as a rational figure can be accepted, and academia did not require being rational all the time. The advantage of women was that they were better at communicating and coordinating among different experts in a team and negotiating conflict. She thought that women were willing to pay prices to seek a benefit for a team. Dahai mentioned a paper published in Science in 2013 which mentioned that teams with female scientists were smarter teams with higher general intelligence and the first author of that article was a

woman. So, she felt that the article self-empowered women. Therefore, with the independence of female scientists in their economic status and their contributions becoming more and more visible, their social status was improving, based on Dahai's sharing. The society may hold more positive attitude towards female doctoral students.

In addition, despite the negative macrosystem, there is limited influence on women due to friendly microsystem. Lele did know such comments before, but no one had told her directly. Most of her friends in China did not dare to give related comments on her, as did her parents. She didn't know whether it was out of fear or respect. And this negative label had little effect on her because she became a doctor student after she studied abroad. If she had studied for a doctorate in China at that time, she would have had a lot of pressure and would have been stigmatized and labeled as a female doctor.

Despite friendly microsystem, sometimes they face their inner struggle. Abigail read relevant labels in the mac environment, such as relevant reports and network information. In microsystem, she heard the labels of leftover women and the third gender before mainly from jokes mentioned by friends, instead of serious comments, which had limited impact on herself. People around were relatively polite, and she felt more conflicts from herself rather than from the external environment. During most of the time, her current status made her feel comfortable. Occasionally, she thought that she might have received more support if she were in a family environment. But being single can focus more on personal development. Thus, even in a microsystem with few negative comments, people might sometimes have some inner struggles.

5.3.1.2.2 Big Impact

These voice and labels from the environment exert negative impacts on some doctoral women. For example, Mary shared that the labels of the leftover women and the third gender affected her, and she accused herself in terms of marriage and love affairs. When she was rejecting a man and expressed that she might not be on the same page as him, she started to cry for a mix of reasons. One of reasons was that she was accusing herself in her heart, "You are just setting an unnecessary high bar in finding a life partner, your chances for marriage had vanished due to setting an unnecessary high bar in finding a life partner. Then, you still, that is, you are, you are already so old" (“你就这样作吧，就是都是这么作没的。然后，你还，就是，你已经、你已经年纪这么大了”). "It's just that you're so old and you don't even want to try" (“就是你年纪已经这么大了，你连愿意试都不愿意试”). These voices truly represented her inner activity, "You don't even want to try. You're just setting an unnecessary high bar in finding a life partner. Why can't you try? Isn't he your good friend? Can't you feel accepted by him? What are you doing? Do you know that you are hypocritical?" (你连试都不愿意试，你就是在作，你有什么不能试的呢？对方不是你的好朋友吗？你不是能够在对方身上感受到接纳吗？你做什么呢？就是你知不知道你很矫情？ ”). Probably she was engaged with studies or other things, which prevented from triggers for this inner accusation that always existed in her heart. Thus, some women absorb negative labels from outside worlds into their inner voice and cause their inner struggles, as well as make judgments on themselves.

5.3.1.2.3 Response to Negative Labels

In fact, cultural labels or misunderstanding exists but doctoral students gave different responses, including overcoming, staying away from, accepting or actively respond to this gendered culture, or ignoring negative words.

First, some doctoral students are anxious about being single before, but then choose to deal with the influence of gendered culture and distinguish truth and lies. For instance, Huang admitted the influence of these labels. She before was worried and doubted herself, and later felt that it was unnecessary to pay attention to this kind of labels.

“...at 24 and 25 years old, when I basically decided to pursue a Ph.D., I was thinking, "It's over. I'm already so old. I will be a female doctor in the future, despite I would be only after graduation. I wonder whether being a female doctor would cause peer men having more pressure.” At the time, I really wondered whether this situation was caused by my own identity or something. Later I realized that this was not what I wanted, nor was it caused by me. It's just a social prejudice. Since it is a prejudice, I don't think I need to pay attention to it. Because it is a prejudice in itself, I feel that being serious about a prejudice seems to waste my own time. Right? The female doctorate is an official title of mine, no matter you admit it or not. Right? I just have a better performance in study than you, right? You did not get the admission, but I got admission. Sometimes it's hard to acknowledge others' excellence. As for the label of the so-called old leftover women, I really think "whatever you say, I won't listen to it." I can find, I really can find the other half, and he will not concern these identities. Really for me, the right people don't have concerns about

our relationship because of what I was called as a "third gender" or some other labels from environment as you mentioned."

Mary also experienced the process from judging herself to recognizing the truth and lies. When Mary was rejecting a man, many accusations appear in her hear, such as "setting an unnecessary high bar in finding a life partner " (作). In current situation, she was beginning to realize that she needed to bring these voices to God, no matter what kind of voices were. She felt that the voice of "setting an unnecessary high bar in finding a life partner " was the voice of many voices added together, and it became her voice. This voice included the voice from her mother, her roommates at the university (all the roommates in the university were married), other people she knew, Chinese culture, and some expression in ones' eyes. These voices from the outside world eventually became part of her voice. Before a little earlier, there were only two ways for her to deal with this voice, either silently digesting and accepting it, or taking escape from the voice. She had had no ability to question the composition and content of this voice. However, at this time she spent a lot of time, energy and emotions to choose the third way which turned out a very good process. She brought it to God and analyzed with God every word and every expression in people's eyes to see which parts were lies. Since she took the time to deal with these voices, she knew very well which of them were lies. After this experience, these voices would still come out now, but she had the strength to say to this voice, "No, you are a liar. You are you are not true. I do not need to listen to you."

In addition, some people hold mixed attitudes towards gendered label and have more understandings about doctoral students. Lydia as a woman disgusted and could not accept these comments before. At the same time, she felt that the group of doctors, maybe not only including

female doctors, was distant and seems excellent. After becoming a doctor, Lydia deemed that doctoral students were also same as other people. Therefore, some doctoral students experience ups and downs under these labels and overcome these negative influences through distinguishing right from wrong or breaking stereotypes after becoming one of doctoral students.

Second, some people choose to stay away from negative influence. Hannah didn't think these labels had any effect, maybe because there were relatively more people surround in doctoral program in America than in China. Even in this situation, she was afraid of returning to China, because she did not want to be influenced by marriage-related culture in China. Although she didn't know exactly what kind of influence it would be, she knew that Chinese related culture was different from that of the United States. On the other hand, she had some impressions of how women and doctors were treated in China, and she was not ready to accept it or did not want to accept it. What's more, Hannah sometimes did not introduce herself as a doctoral student but as a graduate student to avoid stereotypes of being a PhD student, although she did not hear negative labels and misunderstanding. She preferred not to distance herself from others and not be regarded as a very ambitious, very stoic, and academically oriented person. She tried to avoid a preconceived impression of her because of her studies. Even in the United States, there were only a small number of PhD students, and she didn't want to be shelved and isolated because of high education level.

One way of staying away from negative labels is to choose friends or group without negative judgment. Lele heard these comments before. But after she studied abroad, people she contacted with were friends in the United States or friends in China who really got along with her. They would not use such labels to describe her, because they had a good relationship with her, or had better cultural literacy. Those who might comment this label were filtered out by her, and they

were not in her social network. Mary was also unlikely to become friends with people who had a strong misunderstanding of her at these aspects, and may have blocked them at an early stage, so she had limited opportunity to hear such negative comments. When Mary first went to the Chinese Fellowship, some elders recommend her to find a husband before graduation, after knowing her pursuing doctoral degree and guessing her age. This may also be one of the reasons why she did not stay in the Chinese Fellowship, “because she felt the assertiveness in the church aunties’ voice, that she would not be a good Christian if she failed to find a life partner by graduation”.

Third, some doctoral students accept the reality of gendered culture and make adjustments. Despite some inner conflicts and resistance, Lydia agreed with the church tutor’s viewpoint, that is, the women, being old and having a doctorate, were difficulty to find a partner. She was receptive to well-intentioned advice from the tutor who suggested her and her boyfriend to consider getting married. Although she wanted to fight against mainstream opinions and break this impression, she knew that this was a fact and reality. When other people were with goodwill and tried to stand on her shoes, she found it appropriate to take the advice.

Moreover, one doctoral student chooses to be proactive to respond to the gendered environment and would like to take advantage of the male-dominant rules to win the game. Facing with the dominant male voice in academia, Dahai would like to prove herself and join the game. Others mentioned it to her several times that her logic was not strong. She felt that it was because she was unaware of the convention in speaking and research. In her opinion, the conventions were not good enough. Her trying to build up her own structure was very weak that was not recognized by the academic world. No one has ever spoken that her speaking logic seems to be a feature because she was a female scientist. On the other side, the gap between preference of self-

expression in her academia field and her characteristic exists. Men were more likely to be willing to prove themselves in conversation, and she did not have a particularly strong urge to demonstrate her intelligence. However, now the academic world preferred people who were eloquent, who were willing to prove themselves smart, and who conformed to the convention in expression, so she was at a disadvantageous situation. But since she knew the rules of the game, she would like to play this game to prove herself. The more people thought she was not capable, the more she preferred to demonstrate it. Thus, some people choose to respond to the rules in academia positively and would like to be successful through adapting to the environment and following the rules.

The negative comments from environment exert an impact on not only women, but also on her family. One participant's parent adopted positive attitude toward the environment, that is, he defended their daughters when facing others' question. One time, Lele's mother mentioned that her father was very angry because he was asked why his daughter was still studying in her late 20s in the United States. Her dad responded, "You need to work until 60 years old. Why can't you start to work later? It doesn't matter." She thought that her parents might hear these ideas. After all they were in China and many people knew that they had such a daughter. Thus, women were not the only group to be subject to this gendered culture. It is possible that their family was also subject to it.

Fourth, some doctoral students had heard the negative labels, but pay no attention to others' judgment. Some people may regard Dahai as the person referred to by the label in secret, but she did not care. When Huang just started her doctoral studies and came back home in one summer, she felt that her elementary school classmates during their gathering half-joked and half-seriously

said that she was so old and still studying. Under this circumstance, she would usually filter these unfavorable words out automatically and choose not to listen to their nonsense.

5.3.1.3 Impact of High Educational Achievements on Finding a Husband

People hold different opinions on the influence of the identity as a female doctoral student on finding a husband. The influence some doctoral students mentioned includes the small number of candidates, the threat of women with high educational level in marriage under some cultural influence, and the difference in the spiritual world. In contrast, some women thought there was no influence because of American culture or the criteria of finding a partner.

5.3.1.3.1 Less Choice of Potential Husband and Knowledge Discrepancy

A high degree of education affects finding a marriage partner because some people prefer to find a partner with a similar academic degree. Leah considered that the future partner could not be a man only with a bachelor's degree, except he was extremely excellent. People who pursued doctoral degrees accounted for a small proportion of the multitude, so it was difficult to find a partner with a similar degree. Lele believed that people with different educational degree were like a pyramid. People with less educated degree accounted for the large proportion, while people with the higher education degree were less and had less choice to find a partner. And women considered a combination of factors when looking for a partner, rather than just appearance. She thought that women may be more cautious and were less likely to choose a man just because of his good-looking, regardless of the person's education and character. If some women paid more attention to education and they were highly educated, the range of choices would be relatively limited.

Second, there are differences between the work of doctoral students do and others' work, which may create gap of knowledge. Mary deemed that the intellectual world of two people may be different. For example, if what she did every day and what she studied were not the main components of her future partner's world, it would be difficult to explain her study to others. Thus, the intellectual gap may bring about barriers in communication.

5.3.1.3.2 Cultural Discrimination

Unfriendly attitudes toward highly educated women in culture would influence female doctor' marriage. High educational achievements for women are regarded as the source of pressure in relationships in terms of finding a life partner. For instance, Mary used to think that high educational achievements would impact women's finding a life partner. In many environments she experienced before, the combination of age and education was a sensitive factor. In the Chinese culture, no matter in China or the United States, there was a concept of "two people being matched or not", which was used to measure whether two people's status was compatible. Chinese culture regarded that the family would be turned upside down and not balanced if a woman had studied for so many years, or there was a highly educated wife.

Second, the cultural impact infiltrate into not only macrosystem but also in microsystem, such as family. For example, Huang's mother persuaded her father that her daughter's high degree of education did not seem to be an advantage in the market of finding a boyfriend and a husband, if their daughter wanted to return to China. Third, gendered culture influence is indirectly reflected in women's choice. It is possible that people would like to choose to find a partner with similar education background in order to avoid conflict in the relationship. Lele did not ask for a partner

with similar social status and education background, but she considered that her future husband may have some psychological burden if a big gap in education backgrounds between him and her. She didn't hope that the academic gap would become a fuse for quarrels and estrangements between them in the future.

Fourth, cultural influence is also reflected in men's choice. According to some participants' sharing, many men prefer not to find a partner better than themselves. For instance, Feng found that a man under the influence of East Asian and Chinese cultures didn't want to find a partner who was more excellent than himself in all aspects. Her conclusion came from the environment and online information. There was a forum called Hupu, basically a forum app for many men in China. In this APP, she could figure out men's expectations for wife, including having a harmonious relationship with the husband, being a helper to the husband, educating children, making money, being beautiful, and being filial to their parents. Feng viewed these expectations as the so-called male self-esteem.

5.3.1.3.3 No Influence

Some doctoral students thought high educational attainment would not affecting the process of finding a life partner. First, being engaging in American culture could reduce the impact of Chinese culture. Mary now believed that higher education would not affect the search for marriage partners. She was currently in an international student fellowship under an American church, which was rarely influenced by Chinese marriage culture. Although there were differences in the intellectual world with others, she did not feel the influence of high education on many occasions in her fellowship. The difference in the intellectual world did not affect other people's

curiosity about her, although they needed to deal with the difference in pace. And even if others could not understand her research interest, it did not prevent her from showing herself in many other aspects of life. Instead, because of staying with non-academic friends, she realized that she could not carry on many of her academic states and identities in every state of her life. There were times when she needed to chill, when she needed to let go of scientific research or studies, and when she needed to have fun. Huang did not date local person before, but she held that high education in the United States was not a very troublesome factor in finding a husband. Local people thought that having a romantic relationship was not a particularly difficult thing, if two people had common topics to talk about and they could try it. But they were very cautious and careful about marriage. Moreover, living in current academic environment may facilitate finding Mr. Right. Lydia thought that pursuing a doctoral degree would not an obstacle, if a woman was looking for someone who was excellent as herself. Because the higher-level education a woman had, there would always be people who were as good as a woman or better than herself.

5.3.2 Thriving Experience

5.3.2.1 Support in Challenges

Supports that helps doctoral women get through the difficulties caused by being single are available for some women. Support in challenges include individual themselves, faith and church, family or tutors, friends, and American-culture support. In contrast, some of them do not find support during challenges or do not have related difficulties.

5.3.2.1.1 Individual Themselves and Others

Some doctoral students overcome their challenges by themselves. Sometimes Huang thought that many problems caused by being single were not problems if one could be strong enough. Most of problems were still relied on herself to solve. Abigail held the more one grew up, the more one learned to focus on oneself and learned to determine what may be suitable to do in current environment. When people around start their marriage, one needs to concentrate on one's path and avoid comparing with others.

Second, support from friends is important. Huang sometimes talk about this topic with friends, and they would persuade and enlighten each other. Dahai had friends around who pursued being single and pursued love with their desired understanding because of their sexual orientation, rather than definitely finding someone of the opposite sex. They were a kind of support for her and formed a default alliance to defend against speculation about them from the environment or questions about why they were not married yet, because they can divert the firepower by sharing "someone also had not been married yet." They had a sense of alliance, and Dahai can talk to them when loneliness approached. Moreover, support from family or advisor helps in these women's lives. In the predicament, Abigail felt that experience of academic advisors, or family elders were helpful to her, and they provided more positive influence. She did not feel the pressure of having a family.

5.3.2.1.2 Faith Support & Culture Support

Helps from faith and church ease some women's pressure. For example, Lele thought that her faith was the most helpful strength, and she could communicate with and entrusted her issues

with God. When facing with the predicament of being single— sometimes no one could share her difficulties and could accompany her to do things she avoided doing—she could talk to God and share her pain with God. Most of the time, she felt that she has entrusted her difficulties to God and it helped relieve her suffering.

Second, church leaders and mentors exert a positive influence on some people. Communication with her direct female leader in Church meant a lot for Hannah. Leaders generally were married and could understand people since they also encountered different predicament before marriage. The leader can analyze the current situation with her and provide support when someone approached her. Moreover, the fellowship in church also provide support. Mary was currently in a very American-style environment, and people's attitude towards marriage was diverse, which was different from all the fellowships she had experienced before. People in her previous fellowship, which is under a Chinese church she committed to in her Masters, recognized, accepted, or showed a strong sense of anxiety, and even mentor might also give advice to individuals under the acknowledgement of a strong sense of anxiety. In her current fellowship, some people felt that "I'm not married yet", while some people got married very early under the influence of marriage pattern of traditional Christian families in their area. Some of them may be over 30 years old, and unmarried. Some were chill, and some were not. Various attitudes were presented in the fellowship, which was a big breakthrough for her. The way her mentor's counseling, as well as the dynamics in their fellowship, made her feel that she can chill and work through in her own way. And others thought it's a good thing that she can chill. On the contrary, she imagined that if she were in a Chinese fellowship, and if she was talking about this matter with other people, people would not understand why she was not in a hurry at this time and felt she did

not pay appropriate attention to it. They may not be expressed directly, but she would know their question mark inside from the expression, tone, pause, and other's performance.

Third, American culture provides a buffer for a doctoral student. Huang did not have a sense of oppression from American macro environment, which was generally friendly to an unmarried young woman like her over certain age. People would not comment, "You are so old. Why don't you get married? Why don't you have a romantic relationship?" In fact, they would communicate, such as "did you have a hard time in graduate school?" They thought she was very good. No matter whether they were sincere or polite, she felt relatively relaxed.

5.3.2.1.3 No Support or No Challenge

On the other hand, some doctoral students do not find support during these challenges or do not need support. Under Leah's predicament in finding a partner, it seemed that no one or anything helped her very much. The feedbacks she received were negative. Several good friends had broken up. Seeing how sweet they were at the beginning, she witnessed how painful it was to break up now. She didn't know if she could bear this shock. If there were a suitable person as her partner but there were a high probability that they would break up, her concern was whether the breakup would bring depression to her and the like. And there were no major dilemmas and challenges for Feng in this regard, so no one had helped her much.

5.3.2.2 Individuals' Changes under these Experience

5.3.2.2.1 Marriage Expectations being Changed or not

The majority of participants' expectations changed after studying abroad, such as time for marriage, future partner, and attitude towards blind dates. The first change is the expectation about time for marriage. Some people's ideal time to have a family was postponed. For instance, at the beginning of doctoral studies, Abigail was in the stage of adapting to her study and did not have much planning or arrangements for personal life. It may be that her studies occupied most of her attention and energy. After she started to get used to doctoral studies, many friends around her gradually had family lives. And she maybe also has some ideas of having a family and might think before that the age between 25 to 30 years old was also a relatively appropriate age. But in the process of studying for a Ph.D., she gradually realized that she was still in a relatively unstable stage as a student in terms of either personal income or social identity. She might expect to consider marriage after graduation, when there was a relatively stable environment and a more stable job. Based on her personal experience, she shared that doctoral period might not be a good season to get married but appropriate for study. She would like to put more emphasis on research and hope to make some academic achievements.

In contrast, Lydia's marriage time was advanced. Before her doctoral studies, Lydia had a boyfriend for a long time. She never thought about getting married before because they were in different places pursuing doctorate degrees. Her previous plan was to consider marriage after their graduation and having stable jobs. She thought there was no need for marriage to bind them together. When receiving the interview, she planned to get married, and they were doing pre-

marital counseling with the pastor. The change was mainly a result of her faith being changed and more knowledge about the meaning and purpose of marriage in Christianity.

Secondly, their expectations about their future partner have been changed. For example, Leah insisted on some, gave up on some, and added some expectations. When she first came to America, she was looking forward to finding someone like a prince to marry under the influence of the cartoons and movies she watched since childhood. Later, she thought that a future partner with a similar cultural background might have more common grounds with her. There was also a time when she wanted her future husband to be highly achieved in academics. She figured out later that it might not work if he was very boring. Now, someone who was more compatible with her life would be a better choice. At the same time, some expectations for the other half were still important, such as being nice to her, not allergic to cats, a little more handsome, responsible, honest, and smart.

The burden of finding a husband was released during doctoral study. Before her doctoral studies, Huang had high expectations for marriage at the beginning of studying abroad. She would like to find a person matching her background exactly in terms of all aspects, such as education degree and appearance. And she also had a fantasy about transnational marriage, since the mixed-race baby was very cute. Then the anxious period came when she was going to graduate from master program and when she was 24 and 25 years old. This anxiety without hope lasted for about a year because she couldn't find a boyfriend and couldn't get married. However, after studying for a Ph.D., Huang's anxiety was reduced. The big difference was that she didn't insist she had to find a partner and accepted her being single if she tried her best and couldn't find a partner she was

satisfied with. And another finding was she seemed to have more common topics with Chinese men, and her current boyfriend was also Chinese, instead of seeking a transnational marriage.

Mary obtained more insight into her needs in relationship and expectations about her future life partner. Before Mary started her Ph.D., she thought implicitly that there was a specific type of men she liked, including character and knowledge of faith. After her doctoral studies, Mary gained more understanding about herself. She gradually realized that the precondition of her entering a romantic relationship was that the man would start as her friend at first, remain a long-term and close friendship. It was difficult to like someone only after meeting each other a few times.

Third, some people change their attitude from resisting blind date to embracing it. Huang's attitude towards blind date had changed from being very repulsive at first to accepting it for two reasons. First, there were not many opportunities for her to meet single unmarried men, because she was not a social person. Blind date was a way to meet men. Second, she didn't want to reject others without trying to know them. It was possible that they would have many common topics. And Mary also rejected match making before, because an intimate relationship for her was built up after getting to know each other, becoming friends, and possibly having a deep acquaintance. If not, she might be disgusted. She held more positive attitude recently, but no one did match making for her recently. In contrast, Lele accepted the possibility of blind date being arranged by her parents before studying abroad, but now she would like to find the right one without compromise.

Fourth, people experience the change in attitude toward the relationship between men and women. Leah thought she would not be easily to have crush on people as previous time. Even if she had a crush, she would not fall into love quickly and think about that person all day long.

Because she could tell that no matter how perfect a person looked, he might also have something that she may not accept, or various other problems appeared after long-time contact. Lele's experience made her be more cautious towards men. One reason was the influence of faith. God's definition of the relationship and intimacy between men and women made her want to live a very sacred and prudent life. The second reason was the influence of her previous experience with a man who made her feel that some men would have some nasty thoughts. The third was for her own safety. After all, she was a woman in the United States. Another change is the expectation about love. Before, Dahai had expectations for a romantic relationship and more believed in love. But after more than two years in the United States, Dahai now thought that she may be more suitable for living alone due to her experience. True love was like a UFO that she might have only heard of it but never seen it.

Fifth, another change refers to characteristic growth, with regards to dealing with the struggle in being single. Hannah responded differently to her mother. When her mom asked her "do you have a boyfriend" before, she would get angry and feel much pressure. Every time her mother asked similar questions, she sometimes would have a headache and told her mom not to ask her this question again and wished to have a boundary. But her mom would keep asking, which made her frustrated, and she could not understand why her mom could not follow her suggestion. In this process, she learned to humble herself to explain to her mom patiently, and persuade herself, "Old people are like children. If I had children in the future, I would also need to tell them again and again. So, I could just regard this as my practice." She more patiently explained her situation to her mother in love now. Facing the struggle of being single, Mary started to sort out with God and experience God's comfort. Moreover, another change is making decisions more independently,

rather than gain a sense of security from making the same choices as surroundings. Abigail believed that we usually did things, following what most of the people around us or the social environment were doing, which made us secure. But she considered that she may learn to be more independent in her own choices and in her own life plan.

On the other side, some doctoral students remain similar expectations about marriage. Hannah's expectations for marriage were that the two of them would get along well, have common topics, and be harmonious. She valued her husband's spiritual situation in Christ. There was no particularly ideal time for marriage, and there was no ideal other half. Since her mother got married around 26 or 27, she would like to get married at similar time before the age of 30. And Feng had no expectations about marriage and was a non-marriageist. Deciding not to get married was based on her analysis, being not suitable for a long-term stable and intimate relationship with someone. She got used to living alone and could have a romantic relationship, but the freshness of falling in love would not last for half a year. Getting married was similar as staying in the jail. She thought about getting married during her first romantic relationship, while she didn't have this idea after she grew up. There were too many interests in her life that made her be hard to give a long-term commitment.

5.3.2.2.2 Reasons for Change in Marriage Expectations

Many factors contribute to the doctoral women's change in their expectations about marriage. First reason is personal experience. Previous relationship conflict gives rises to the change. Two years ago, Dahai looked forward to romance and thought that she could be a giver in a relationship. However, now she questioned whether she was suitable for an intimate relationship.

Conflicts in relationship changed her viewpoint. For example, one of the reasons for the breakup in last relationship was that she failed to meet his needs in communication frequency. And it seemed hard for her to establish the concept of "we". In particularly intimate relationships, she always emphasized her needs, instead of "our" needs. Opinion conflicts were revealed in family expectations, such as having children or not. She was reluctant to have children, and at least was not sure whether she wanted children or not, while her ex-boyfriend insisted on having children. It seemed that he didn't make it clear and figure out the reason of his insistence. In fact, he did not need to pay a huge price for his insistence on having children, while she would be the one who would bear the main cost of having children, including her body and career. She can't accept this at all. Leah's previous expectations about which kind of men were suitable was changed, because of her interaction with others, which helped her realization about the inside needs about her future partner.

Moreover, being more independent and failing to find a boyfriend brings about the change. Huang shifted from being anxious about not being able to find a boyfriend to being OK without a boyfriend. There were two important reasons. The first reason for this change was that she became increasingly independent. She used to think that having a boyfriend could help her carry water and repair cars. Later, she found that she could do it independently and enjoyed it very much. Moreover, she tried to find a boyfriend, but it didn't go well. Before she started the relationship with her boyfriend, she might have been introduced to three or four men without result. This may contribute to her being more chill because she had tried but the relationship was not something in her control.

Second, influence from environment were exerted on female students. Distance from people in native country sometimes could reduce their impact. Parents' role in Lele's marriage plan was changed. Before her doctoral studies, Lele's parents had a great influence on her marriage expectations. She thought that her parents would arrange blind dates when she reached certain age. Her previous plan was to find a not bad husband, buy a house near her parents' home, get married, and have children. The schools near her parents' house were very good and her future children could study in these schools, and she could go back to her parents' home every day, which would be the portrait of her whole life. At that time, she didn't have great expectations for marriage that was a task given by her parents to complete. Her ideal husband would be honest, be nice to her parents, and respect her. However, the influence of parents has been reduced after her coming to the United States. The physical distance from parents gave her more freedom that parents could not control who would be her future husband and whether she wanted to find a husband or not. She would consider marriage only if she found the right one. Thus, the distance give rise to more freedom in marriage in Lele's case. On the other hand, sometimes physical distance could not block influence from native country. The environment made Huang feel that it was the right time for her to have a relationship, but she failed to find a boyfriend. One reason was many peers started to have boyfriend, and another was parents' attitude suddenly changed.

From macro environment, Feng's changes in marriage thought were greatly influenced by online information and feminism. Feng believed that she was not suitable for marriage mainly from college. In the past two years, as there was increasingly various information on Internet, people begun to understand feminism and could know others' people's lives, including women in intimate relationships and marriage, and fertility problems after marriage. These reports were not

positive. For example, the video she watched was a woman giving birth to a child, which made her feel panicked. And two people got married after many-year relationship, and the man cheated or had prostitute. There were also the issues of domestic violence, PUA (Pickup Artist), treating parents, and the choice of going home for Spring Festival.

Third, faith influence could not be denied in some female students. Lele felt that the God she believed in somewhat protected her, in terms of relationship between men and women. She hadn't been in a serious dating relationship before, so she didn't know what the dating relationship would be like. Before, her hypothesis about dating relationship was purely based on imagination, TV shows, or the people around them. At that time, she thought she should follow others' way. But after conflict with the man her mom introduced in intimate relationship, she realized that she might not think the same as others. She can accept God's rule in intimate relationship and was very comfortable under God's protection. And after believing in the Lord, Lydia thought marriage was still not reliable if two people had no faith in secular marriage, but she felt that marriage was a different thing for Christians. One very important reason for her change in marriage plan was that she decided to believe in the Lord this year and learned a lot about the meaning and purpose of marriage in Christianity, and how a marriage and a relationship between men and women pleased God for Christians. After considering some factors, now she planned to get married.

5.3.2.2.3 Being Satisfied with being Single or not

Fifth nine of participants shared that they were satisfied with being single. For instance, Lele was satisfied with her time at her own disposal. She found that some friends in the Chinese church basically had no control over their own lives after they had children. Women may have to

do a lot of things for their family, children and husband, and really didn't have any time to deal with their own affairs. Lele found now contentment that her time was controlled by herself without considering other people's feelings and catering to others. Hannah was content that she hadn't had a commitment to marriage yet and now she lived with her sisters and had a community to support. Participants who were single but unavailable were also contented with their status. Lydia enjoyed her current life, including their wedding preparations.

On the other hand, some doctoral students are not satisfied with their lives. Leah's dissatisfaction came from her concept that a normal woman should at least have a romantic relationship once before the age of 30, but she failed to meet her standard. She lived alone now and spent the majority of her time with her cat. She believed that a normal person should have some social interaction. Now she had limited interaction but desired socialization with friends, classmates, and a romantic relationship. Dahai was not particularly satisfied with her current life, since her schedule was very irregular and chaotic. She was fine with being single but wanted to be happy. She was still struggling to adjust her schedule to become a little healthier. Being a doctoral students brought about lack of sleep, not to mention doing exercise. Her dissatisfaction with her current state had nothing to do with being single or not.

In addition, sometimes people have both satisfied and dissatisfied aspects. On one level, Mary had so much satisfaction in her life that she didn't need to base who she was and many things on the fact that she was single or that she didn't want to be single. Being single would not be the most important factor affecting her decisions. On another level, she was not in a contentment. She didn't feel she continued to be single in a long run. For Huang, her satisfaction was that she seemed to have her own independent life, although she was in a relationship. Because she was not in the

same city with her boyfriend. The difference from her previous life was that she had someone to share her feelings when she was very tired. The dissatisfaction was that they basically did not meet each other in person and communication time was limited, due to their not living in the same place, her boyfriend's busy work schedule, and jet lag.

5.3.2.3 Conclusion

Consequently, the disadvantage of being single include not only lack of practical help in life, but also loneliness and lack of security in psychological aspect. Moreover, environmental pressure comes from different life stage from peers, as well as gaps between parents' expectations and women's current marriage status. Difficulties to finding a husband refer to limited candidates who meet spouse criteria, personal characteristic and tight schedule.

Furthermore, limited influence of negative labels is due to few related comments, decreasing negative attitude in macrosystem, and friendly microsystem. And there is increasingly friendly attitude towards single women and high-achieved women in academia, and female scientist's contribution is more visible. On the contrary, these voice and labels from the environment exert negative impacts on some doctoral students. Cultural labels or misunderstanding exists but doctoral students gave different responses. Some doctoral students experience ups and downs under these labels and overcome these negative influences through distinguishing right from wrong or breaking stereotypes after becoming a doctoral student. Moreover, some people choose to stay away from negative influence, such as being afraid of returning to China to avoid marriage-related culture in China or choosing social network without negative judgment. What's more, one participant chooses to accept it and made adjustment on her

marriage plan, while another prefers to actively respond to this gendered culture. In addition, some doctoral students ignore these negative words.

People hold different opinions on the influence of the identity as a female doctoral student on finding a husband. The influence some doctoral students mentioned includes the limited number of people with similar academic degree, the disadvantage of high educational achievements in marriage custom, and the difference in the intellectual world. In contrast, no influence of an academic achievement for some women is due to American culture and many excellent people in doctoral students' lives.

Supports that helps doctoral women get through the difficulties caused by being single are available for some women, while some of them do not find support during challenges or do not have related difficulties. Help in challenges include individual themselves, faith and church, family or tutors, friends, and American-culture support. And individuals' changes under these experiences include marriage expectations being changed or be maintained. The majority of participants' expectations changed after studying abroad, such as time for marriage, expectations about future partner, and attitude towards blind date. People also experience the change in expectations about love and attitude toward men. Character is also built up, regarding dealing with the struggle in being single and interaction with the parent.

Many factors contribute to the doctoral women's change in their marriage expectations. Personal experience could be an important reason, including previous relationship conflict, independence development and failing to find a boyfriend. Environmental factors arise from physical distance from social connection in China, online information and feminism. Additionally, faith impact also exists.

In terms of whether these women are satisfied with being single, fifth nine of participants give affirmative answers. The reasons vary, such as individual freedom in time, community support, and being independent. The dissatisfaction come from failing to meet social norms and aloneness. And sometimes people have both satisfied and dissatisfied aspects in single status.

5.4 Surviving and Thriving Experience in Religious and Faith Environment

5.4.1 Surviving Experience

5.4.1.1 Differences of Religious and Faith Environments

Many students' experiences show that the milieu of religion and faith in China and the United States are very different. The differences are manifested in three aspects: access to religion, religious and faith life and the degree of political support.

5.4.1.1.1 Access to Religion

The difference exists in terms of access to religion. In China, based on participants' sharing, the number of people having religion in China is small. Schools promote atheism. There are few opportunities to get access to religion. Feng shared that there was no religious environment in China, so she can't feel it. The only chance she identified as a religious factor was a halal canteen in her undergrad university, but she thought that the halal canteen was related to ethnicity. Leah deemed that the percentage of people with religious beliefs in the country was very small. Most people with beliefs in China may still be Buddhists and the like, while a large proportion of people did not have religion. Huang felt that there were not many opportunities and occasions in China to talk about religion and beliefs. Especially in the university environment, it seemed that everyone was atheist.

The access to Christianity seemed to be limited. One participant compared discrepancy among people with different religions and shared that there were not many Christians, or Christians gave others an impression of being underground secret. She always went to church in China before

and found that many people came quietly and secretly or were not willing to directly express their beliefs. But Buddhists or Taoists, mainly Buddhists, were more willing to tell others that they were Buddhists. Another participant basically did not have the chance to encounter religion in China. It may still have temples, but for Christianity, especially in recent years, it was rare to see churches, or have missionaries come to preach or come to schools, or the like. And because of the influence of an atheist education promoting in mainland China, when she came to the United States, she didn't quite accept and understand Christian teachings about the existence of God for a long time.

On the other hand, in America there was religious atmosphere, including architecture and religious resources in the United States. One participant shared that there was much freedom in religion and faith in the United States, and no one cared about others' beliefs. Many churches existed, and she met some people preach to her on the way, which was rarely seen in China. Huang said that there were many churches architecture and some people around would often indicate that they would join some activities in church on Sunday. And more sources of religious information were available. Even though no one in the United States invited Dahai to a religious group, she felt the atmosphere of faith.

Moreover, people were more willing to share their beliefs. One participant shared that in the United States, she observed that people were very willing to talk about their beliefs, when people came to church, participated in activities, or were in their daily lives, even if they did not believe in Christ or have other beliefs. In addition, people have more chances to get access to religious groups. There were many Christians surround one participant during her master. She saw good testimonies from them, which had some positive effects and allowed her to take a crucial step in her faith change.

5.4.1.1.2 Faith Life

The difference was about spirituality and faith life. The first gap is about the atmosphere of church activity and the constraint degree of the canon in church. Lele found the disparity between the church she went to in China and the church she went to in America, because Christian church she went to before was relatively rigid and not very interesting in China. Usually, after going to church and listening to sermons on Sundays, there were no other activities. After she came to the United States, she realized that people could shake their head in a very happy way, when singing worship songs. After the sermon, people would have some time to eat together before pandemic. Leah thought that religious regulations seemed to have limited impact on young people with religious beliefs in the United States. Some Christians lived together before marriage, smoked, drank, and participated in particularly excited parties. It seemed that there were not so many strict requirements for dress. But it seemed to have more requirements for doctrine in China. For example, when she went to the previous church, she had to wear a shirt with sleeves, and her skirt had to cover her knees.

Second, difference also exist in aspect of the impact of faith on life. One participant deemed that belief played a different role in people's lives in different places. In China people wished a god would give them when needed, but life was mainly controlled by themselves. She thought that Chinese people were relatively superstitious. Their mindset was that they spent money, asked for it, and would get it. Before she became a Christian, she would live in the mountain for a month every year with her sister who believed in Tibetan Buddhism in China. There was a temple there, which was thought to be very effective for answering what people sought and was also one of the major Buddhist temples and mountain in China. Many people spent a lot of money in the temple

to repair golden Buddha statue and other things. Superstition was they asked for help, when they lacked something, they were seriously ill, would like to seek a career path in the government for their child, or wanted a child. And their superstition did not focus on a fixed object, and they were very good at worship religions everywhere. As long as it was a god, the Chinese would worship it. But when they did not lack anything, they would not rely on this belief. Leah felt that one of the reasons why many elderly people believed in the Lord was similar to believing in Buddhism for the guarantee of safety or the like and did not care about understanding doctrines.

On the American side, Lele found that the whole environment had a more religious setting, either among Americans or Chinese people. Even if people may not believe in the Lord, they would be familiar with Bible since childhood and this religious culture. Moreover, people thought that the one they believe would control their lives and was a core part of themselves, whether believing in Christ or other religions. They want to do things for the religion they believed, rather than for their benefits of gaining something from their faith. Most of the older Christians Leah knew in America were probably more devout and belonged to more classical white Americans, who had a happy family, and the family members were very kind.

Third gap is about the magnitude of pressure from environment. One participant shared that the pressure, because of her identity as a Christian in China, was visible and easily felt. It came from colleagues, roommates, someone she met on her way, activities she did at Christmas, classmates, and comments under her moments being posted publicly in WeChat (an APP being similar to Facebook). She was reminded and challenged about why she chose to follow God, as well as being reminded and motivated in such situations to go back to God. God was her lifeboat, and she had to hold on to him so she wouldn't be pulled down by all the other voices. On the other

side, one big difference she found in the United States was that people thought that it was good for her being a Christian, even if non-believer friends thought being a Christian was a common thing, or it was her own decision, or something else. That explained the comment she heard before, "It is actually easier to come to the United States to be a Christian, and you will be spoiled." This meant that Christians didn't need to pay an obvious price, and didn't need to bear much obvious pressure, because of being a Christian, attending Bible studies, and going to church on Sunday. Another realization for her was that she had more time and energy to experience and understand how her relationship with God under no outside pressure. Besides, there was no pressure due to the tolerant policy being practiced in another participant's university. Her university was relatively open, accepting any religion to form various groups in the school.

Fourth is the difference in boundary. Most of the people Leah knew in China were at similar age as her and had the same cultural background, and the relationship would be more intimate. For example, if she needed help, someone would help her quickly. In America, people would also help her, but they may consider about the boundary. Leah felt that everyone seemed to have some boundaries. Even they were in the same church, people may not wish to be interfered too much in their lives, or they didn't have a lot of in-depth contact with each other until they became particularly good friends.

5.4.1.1.3 Political Support

The difference is reflected in policy support. One participant shared that there were differences in the religious environments between China and America, that is, one country had more restrictions and the other was more liberal and with more freedom. Moreover, one participant

shared that China's religious policy was more sensitive, may have more consideration, and have more control, because China had more concern about heresy and cult. And the control of the pandemic may be much stricter. On the contrary, the U.S. government didn't care about religions, and of course the government could do better to control COVID. Chinese government and American government seemed to adopt a different parenting style, in terms of the control of cults. America belonged to free-ranging parents, while China always held hands to prevent children from falling.

5.4.1.2 Similarity in Faith Life

There were some similarities between people of the same faith in China and America. Leah believed that there seemed to be no big gap for people of the same belief. Moreover, Hannah found that many friends who were now in her hometown had a good church experience, spent time with friends they knew in the church, attended gatherings and others, based on the moments being posted in WeChat. There was considerable variation in the faith lives of Christians between people being actively involved in church life and church goers, which happened both in China and in the United States.

In addition, Christians need to deal with the pressure from environment. One of the participants deemed that Christians in China and the United States faced similar challenges to some extent. Christians in China faced challenges, especially in workplace. For example, it was normal to work overtime during weekend. People could have different responses to the temporary command from the boss that Sunday would be taken up to work. And in the United States, Christians needed to encounter many irritating things, such as the relationship between LGBTQ

plus and Christians in her university. These things were not a direct threat to the lives, health, and safety of Christians, but people needed to choose how to respond God through annoying things.

5.4.1.3 Join Religious Activities or not

Sixth nine of participants are Christians. Among all the people join religious activities, some of them contacted the local church before their doctoral studies, while some of them built their relationship with the church during their doctoral studies. During Hannah's undergrad period, she started connections with people in the current church, and took the initiative to find them. And the reason she made up her mind to be a member of the current church was that the church's priority was very clear about why they wanted to live together. The purpose of their living together was for better service, to invite students to their homes and host these students and love these students. When she was not part of this church, she felt very loved and cared for. She would also like to love others with them in the same way and witnessed this kind of love can transform people. Furthermore, some students established a connection with the church during their doctoral studies. Mary got to know the American church she joined because the American church would hold a large furniture give-away activity for international students every year.

Moreover, some students were invited during their study in the United States but chose not to participate in religious activities. Feng rejected the invitation because she was not interested. The reason why Huang refused to join religious activity was complicated. Huang was not an atheist, and religion was sacred to her. She felt that she was not devout and her purpose to join religious activity was not very sincere, so she refused to participate in these activities. And she could not accept going to the church if she was not in an appropriate outfit. Although her boyfriend

didn't officially believe in which religion, there was a strong Catholic atmosphere in his home. Once she hung out with him, passed a church and he went in, she waited outside. She wondered whether she should pray with him, whether it would be too blasphemous to go to church in slippers. Religion had a very holy place in her heart, and reverence may be the best way for her. Besides, limited knowledge to distinguish the true religion from the false and her personality also influenced her decision.

In addition, Dahai was not invited to participate in religious activities in the United States which she felt very strange about. But she had a good impression about joining the church, since it can give her a sense of life. Once, one of her close friends was chatting with her outside and this friend suddenly left for a while, because church friends wanted to give moon cakes for the Mid-Autumn Festival, and she also received a moon cake. And she also knew that they would give free meals to each other. She felt that this was the feeling of a family, and she relatively admired this interaction.

5.4.1.4 Adaption or Challenge in Different Religious Environments

Some students did not encounter dilemma when living in a different religious environment. There was no big challenge for Lele because she was in a Chinese church. Although she was in the United States, many people in her church came to the United States at a not very young age and had a very mature cultural value, that is Chinese people in America. She felt no difference of the church in China and America in terms of faith. If she had joined an American church, she felt that she may take time to adapt and would have some shocks. Lydia had been in the United States

from master period to PhD period, and there were Chinese Christian groups in both places, which may cause no challenge for her. Feng did not have related challenges, and so did Huang.

On the other hand, there were challenges for some students. First, challenge appears after getting access a different religious environment. The difference of sharing in Christianity and the theory of evolution at the beginning of studying abroad could bring about confusion for one participant. At the beginning of contact with some Christians, Lydia could not understand Christianity and pondered whether it was a superstition, when they shared that human beings were created by God, rather than evolution. And some of these friends were in related fields such as biology. These seemed to subvert her original cognition. But these Christians were very humble and friendly, so she did not feel the pressure to push her to accept their faith.

Conflict appears in terms of the value held in faith, the academic field, work environment, and cultural environment. Abigail felt that even in the place with relatively more open attitude to belief, people's religious lives may encounter different shock. For example, in the PhD's academic community, everyone might compete in publications. But if someone had a lot of faith-related activities, it might lead to someone's not fitting in academic community. Moreover, there may be some differences in working mode. For example, there may be some minor conflicts between the faith-guided working view and the world's view of working hard. The concept of working mode, how to treat work, how to get along with colleagues, might be affected by religion and faith. In addition, the conflict with the cultural environment also existed from Abigail's viewpoint. Especially in the relatively liberal cultural environment in the United States, when discussing some social science topics, all the people's attitudes tended to be more liberal, while the faith-guided values may conflict with this cultural environment. Facing the conflict with the environment would

lead her to think more about her beliefs, what she believed in, and how to face the conflict. She always had this related struggle, seemed to have overcome these challenges, or find it was very hard, which had been reciprocated.

Third, struggle appear during the transition to a new church lifestyle. Moving from undergraduate church life to current church life brought about a little challenge for Hannah. Her undergraduate life had a fixed life mode, with enough own space and being self-sufficient. But in order to adapt to the current church life that the believers usually lived together, she needed to give up a lot. In the Christian faith, Jesus told his disciples to deny themselves, take up their cross and follow him. Her cross may be the desire to be self-sufficient, or the desire to be alone.

Fourth is confusion about the church's behavior, as well as people's sharing and sermon. For example, Leah had confusion about church preaching and worship. She feels that most of the churches were now in a state of demise. Most of the old people died, and most of the young people no longer wanted to be bound by the church. Now there were some more popular churches, all of which adopted fancy style to attract young people. For example, at the beginning of worship, the speakers were set to a high volume, and a group of people sang and danced on the stage, and everyone sang along with them. But it was less than half an hour for the sermon that used a very dramatic story to attract people's attention. This was not the church she wanted. And the pastors of her current church preached some things, such as COVID and vaccine, which she hardly agreed with. For example, the pastor would often say that COVID was God's punishment, and the end of mankind came. Later, after the vaccine was developed, the pastor said that the vaccine was against God's will, people's following their own way, and meaningless. But when the vaccine was able to bring the pandemic under some control, the pastor began to say that vaccines were wisdom

bestowed by God. The pastor's sermon made her feel conflicted. In addition, no one had yet been able to answer her confusion.

5.4.2 Thriving Experience

5.4.2.1 Impact of Experience

Experience related to religion and faith exerts impacts on some participants. The first influence is on personal attitude toward religion. One participant decided to follow Jesus. After graduating from master program, Lydia started her doctoral program at a new place and did not contact local church immediately. From the second half of 2020 to the first half of 2021, she witnessed what happened in American society, American election, the division of society, and the ugliness of human nature. These brought her to think about in which status the human society should be. Her feeling was that morality and non-legal constraint seemed not exist if people did not have faith and did not believe in the existence of God. She figured out that people should believe in God, should not live like current situation, and should pursue goodness that she saw in Christians. So, she contacted the current church through previous friends and participated their fellowship once in summer. And they were practicing evangelism in that summer and asked for her help with their homework to accept their visit. She happily agreed and decided to follow Jesus during their visit. And another participant changed from worship gods everywhere to become a Christian and value her God's will. She used to worship Buddha every year in China. At that time, if she saw a temple, she also went in the temple to worship and seek what she needed. Others asked for a romantic relationship, and she also went to the temple with others to seek a romantic

relationship. But after arriving at America, she no longer had the heart to ask for whatever she lacked in temples. Her faith was what her God wanted her to change, not focus on seeking from God what she lacked.

On the other hand, Leah shifted from the stage of being confused about her faith to giving up thinking about these confused questions. Leah had been a Christian from elementary school to the present. After many years, sometimes she really doubted the correctness of the existence of this religion. But her father was a very devout Christian, and she witnessed her father's big change in a good direction. On one hand, she would like to confirm and persuade herself that this God really existed. On the other hand, she was also confused by some content of the pastor's sermon and wondered why she couldn't accept it if she was really a Christian. At the same time, she also questioned the existence of God. Now she stopped thinking about these things anymore because it's hard to figure it out.

Second is personal lifestyle changes. There was no difference in the core principle of the faith between Hannah's undergraduate church and the current church. But there were closer relationships between brothers and sisters in the current church that followed the teachings of the second chapter of the Acts in the Bible. The believers usually lived together, had a community, and were very involved in daily life. In contrast, individuals in the church during her undergrad may be more inclined to be more separate from each other. Hannah enjoyed the current church, although sometimes she still wanted to have her own space, be alone or did not want to communicate with others. When she lived with sisters, her issues gradually appeared in social relationships, which repeatedly reminded her that she was a sinner. This realization was valuable for her.

On the other hand, some students felt no impact. Feng shared that there were no challenges and misunderstandings because she did not have many friends with religions around her. There was limited communication between her and people who preached to her on the road and she would not see them again, which limited their influence. Huang also had no conflict because she did not participate in these faith-related activities. And it seemed that people did not treat her differently because of her refusing to join faith-related activities. They all respected each other and understood when she declined their invitation. Dahai had not been in contact with many different religions, and her friends from church should all believe in Christianity. There wasn't much personal influence due to different religious surroundings. But she believed that people of faith were relatively credible.

5.4.2.2 Role of Faith in Christian Lives

5.4.2.2.1 Impact on Academic Life

Faith enables some Christians to survive under busy schedule and stress. Lydia had a bustling semester, with three courses and the job as an assistant instructor for the first time that she needed to prepare everything by herself. And one of the courses was particularly challenging. She decided to believe in the Lord during her doctoral studies, and regularly participated in church activities. She didn't know how the semester would be like without this change. Despite her tight schedule, there had never been a situation that she can't make it through. The change of faith made her feel that God would lead her, and she should be entrusted to God. And Lele became more confident during facing the challenge of English and being a teaching assistant. An important

reason for this transformation was that she believed in the Lord in the United States, for she could share her pressure with God.

5.4.2.2.2 Impact on Social Relationships

The church provides many Christians community support. Leah felt that the church she was in was an anchor. In fact, she didn't seek too much help, but felt that there was always a place there, which made her feel at ease. Lele had a similar feeling that the group in the Chinese church she joined gave her a sense of belonging, because she met and chat with them every week, and she knew each other's affairs very well. And friends in the Chinese church helped her solve some problems when she had issues sometimes. She originally thought that she would have no friends in America, since she was not good at making friends. But the reality was different from her previous thought. Hannah's church family also made her feel a sense of belonging.

Second, faith facilitates relationship reconciliation and pressure-solving. For example, Mary experienced the transition from missing home and lack of security during COVID to being deeply connected to God and parents. She was usually not homesick and lived well in the United States, while her parents usually missed her more. But she had been through several months of challenges during COVID under the impact of limited interpersonal communication and the stress of seeking a new job. Her status gradually influenced her dream, which recurred with similar endings at least two or three times a week. The ending of the dream was that she went home and were settled after having so many dreams, since she was with her parents in the dream. Then she would wake up, and the first 1-2 minutes of waking up was particularly painful, since the sense of security in the dream were destroyed bit by bit during that time. Opening her eyes, she literally

wondered where she was, what she was doing, what time was it, what she was doing, and who she was. This situation lasted for about two or three months. What was visible, reflected in her dream, was her homesickness; there were some emotional things during the COVID period, and discouraging things inside. Meanwhile, her relationship with God was bad, because of her job searching. She was not able to connect what happened to her with God. Even though she tried to read the Bible, pray, have devotional time, she would still have that dream. She spent some time vaguely dealing with it but seemed have no ability to deal with it. The turning point appeared before work issue was resolved, that is, she once went to sleep again, and experienced 1-2 minutes after waking up from a dream, and for the first time she cried out for God in that state. That experience was amazing, since at the first time she deeply experienced the unchanging character and faithfulness of God when the world seems to be completely turned upside down. What she felt was that everything in her life, including who she was, changed. But the only constant thing was that she could put herself in God because he was unchangeable. Since that time, she has never had that dream again, and began to restore her relationship with God. The deepest part of her heart was connected to God. Although she could not go home, she can choose to give her a sense of security in this way. After her life had been renewed through this experience, she appreciated the relationship with her parents even more, and was willing to call them and share more with them. She hoped that parents can connect to her better through sharing. In the past, she cared more about what she wanted to, and didn't want to chat with them after she finished talking. After this experience, her relationship with her parents has changed, and more importantly, she really wanted to be with them. Thus, crying out for God' help made her experience the faithfulness of God and restored her relationship with God and parents.

5.4.2.2.3 Impact on Marriage Expectations

Faith exerts positive influence on some Christians. First, faith provides protection during conflict in intimate relationship. After Lele came to the United States, her mom introduced a man to her. Her previous opinion was in agreement with the idea that two people in dating may have some intimate interaction. But this man gave her some bad impressions. For example, this man kept instilling the opinion of men's strong sex desire in her, while she did not have this desire. His instilling his idea made her uncomfortable. Later, she decided to become a Christian, and felt a force from faith to urge her to end this relationship. After deciding to believe in the Lord and ending this relationship, her change was that she would insist her opinion about the dating and intimacy relationship between men and women, instead of making a compromise. Thus, Lele's previous understanding of intimacy in relationship was influenced by the people around her, movies, and TV shows. Her conflict with a man in intimate relationship helped her realize her needs and she found protection in faith.

Second, faith helps solve the negative impact of gendered culture. Labels such as leftover women and the voices from the surrounding environment affected Mary and had been a part of her. Mary now gradually let them surface and sorts them out with God. Many of the biblical truths that she had known before were slowly starting to be felt and experienced by her. Especially in her finding-a-partner experience or some recent experiences, she has begun to truly and clearly realize that God accepted her as she was, or she was precious in God's eyes, and he considered her as his daughter.

Third, faith offers security in relationship and changes marriage plan. Pre-marital counseling prepared Lydia and her boyfriend to learn a lot about marriage and made them be able

to adjust their expectations. She and her boyfriend were now Christians. After being with each other for so long, their settling down could make them be more at ease and focus more on certain things. Their relationship with God as another point of the triangle would be more stable. Before, she felt that marriage was not so secure, and marriage did not mean anything maybe before she believed in the Lord. It was possible that marriage could end at divorce. Now with faith as the foundation, she believed that marriage was more meaningful and secure.

Fourth, faith-related resource could support when facing challenge from being single. Mary had some troubles due to being single. She participated in an online workshop that was some resources provided by her church. One of the points touched her that people often had a misconception that people had to wait until we entered an intimate relationship, then people can develop a deep relationship, and people's needs would be satisfied in a deep relationship. The speaker mentioned that if God had not brought someone into an intimate relationship (a romantic relationship or marriage), it did not mean that one was abandoned, but meant that women can have a deep relationship with sisters, although sisterhood relationship was not the same as intimate relationship. But a deep relationship with a sister can meet many needs in one's life. One didn't need to wait until he/she entered an intimate relationship then feeling loved or needed. God created a lot of good, very healthy relationships for people to practice and experience love and being loved, as well as need and being needed. In her current life, Mary can healthily build some relationships to be fulfilled and needed, as well as expressing love.

5.4.2.3 Conclusion

In conclusion, interview data revealed the big gap in religious and faith environment between in China and in the United States. The first difference is access to religion. People with religion accounting for a small proportion, limited occasions to talk about religion, and finite exposure to Christianity in China. In contrast, more religious factors and resources in U.S., much freedom and more willingness to share beliefs for people. Second gap refers to faith-related life, including church-activity atmosphere, the impact of canon, and role of religion in people's lives. It also consists of the magnitude of pressure from environment and different boundary rule in relationship. Third difference is policy support, that is, one country has more restriction, and another is more liberal. On the other hand, similarity in faith-related lives exists for people of the same belief. And Christians both in China and in the United States needs to deal with conflict between faith and environment.

Moreover, sixth nine of participants are Christians. Some of them contacted the local church before their doctoral studies, while some of them built their relationship with the church during their doctoral studies. On the other hand, some women chose not to participate in faith-related activity due to different reason, such as lack of interest, the sacred role of religion while not having a sincere heart, limited knowledge about the true and false religion and preferring staying at home. Additionally, one participant was not invited to faith-related activity.

Living in different religious environment, some women adapted to it, because of similar Chinese culture in Chinese church or no religion. On the contrary, some women have challenge because of the sharing in Christianity and the theory of evolution, as well as the gap of value held

in faith, academic area, and cultural environment. Challenges also appear during transition to a new church lifestyle and confusion exist about the church's behavior and sermon.

On the other side, women also have thriving experience. Their personal attitude towards religion change, including changing faith or giving up thinking about confusing things in the church and about faith. And personal lifestyle changes to live within church group. On the other hand, there is no impact for some students, because of limited friends with religion, not joining faith-related activity, and respect of religion freedom among friends.

Impact of faith in Christian's lives covers women's academic lives, social relationships and marriage expectations. Faith enables some Christians to survive under tight schedule and academic stress. Church provides many Christians community support and promote relationship reconciliation and pressure-solving. In addition, faith provides protection in intimate relationship, help to deal with passive effect from gendered culture, and provide security in marriage relationship. Faith-related workshop inspired one participant in the challenge of being single.

6.0 Discussion and Conclusion

6.1 Uniqueness of Participants

I explored the stories of single Chinese international female doctoral students in the United States. A combination of three unique characteristics distinguishes these women from other groups. First, they are doctoral students, which sets them apart from undergraduate and master's program students. The doctoral program in America is generally long-term and comes with uncertainties, such as fluctuating advisor-advisee relationships, research challenges, financial instability, and the impact of the COVID-19 pandemic. Pursuing a doctoral program entails a high opportunity cost, as dropping out would result in the loss of invested time, money, and missed opportunities. These students often face challenges, and some respondents wanted to change university or majors if given the opportunity to restart doctoral study. However, none of the participants quit their studies when interviewed, highlighting the importance of exploring their challenges and understanding their reasons for persevering in their academic paths.

Moreover, in terms of social relationships, these students form their friendships in America but may witness the departure of friends who completed shorter programs or graduated earlier. Variability exists in their social circles. Their experiences in a different cultural context can create differences between them and social groups in China, such as Lydia's estrange from friends in her childhood and Dahai's different path from many previous friends' and classmates' paths. Additionally, long-term exposure to different culture may bring about changes in self-identity,

such as a shift in faith, as exemplified by Lydia. Besides, being a doctoral student may pose obstacles in finding a significant other, as the pool of eligible candidates may be limited, and there may be societal disadvantages for highly educated women in certain cultures. For instance, Huang's mother thought that her daughter's high educational achievement did not seem to be an advantage in the marriage-searching market in China.

What's more, their work as a doctoral student entails unique features. Unlike individuals with regular jobs, many doctoral students lack fixed schedules and their work is time-consuming, such as Abigail's engagement in work. The misalignment of schedules with friends who have regular jobs may bring about social challenges. What's more, some of their works are unstable, as demonstrated by Lydia and Mary, and some could only do part-time jobs, such as Huang. This instability impacts their financial support and adds variables into their doctoral lives. Additionally, research progress and opportunities are not guaranteed, such as uncertainties experienced by Abigail. In addition, they often shoulder multiple responsibilities simultaneously, including coursework, employment, collaboration within research teams, personal thesis, potential publication authorship, and conference presentations. Switching roles among these responsibilities can increase the difficulty of their work.

Additionally, doctoral students arrive in the United States at an age when their value systems are already established and may be resistant to change compared to high school and college students. This can result in challenges when adapting to the local culture, as observed in the cases of Huang and Lele. Furthermore, doctoral students have multiple accountabilities beyond academia. They also have personal lives in social relationships and faith and religion, and may

have marriage pressure. Managing these various responsibilities could lead to conflicts, as seen in Dahai's work-life balance issue.

The second special characteristic is their identity as Chinese people studying in America. This is reflected in cultural and language differences. Cultural gaps exist, making adaptation difficult, such as navigating differences between western culture in America versus Eastern culture in China, collectivism versus individualism, critical and independent thinking versus submissive and dependent culture, simple diet culture and various cuisine culture, and various religious landscapes compared to an atheism-dominant country. For example, Lydia had no idea about the TV show colleagues shared, when the boss of her previous summer project invited everyone out to have ice cream and chat. Language barriers, English as their second language, may limit their ability to translate their research results to high-quality papers as for Leah and affect accuracy in writing as for Dahai. Secondly, family plays an important role in the lives of Chinese individuals. Physical distance from family in China could bring about more personal freedom, as experienced by Lele, while family's impact and expectations remain influential for some women as seen in the case of Huang. Traditional values in Chinese society prioritize marriage and family, influencing the expectations of parents and peers. Thirdly, Chinese students constitute the largest proportion (31%) of international students in 2021/22, according to the open door report (IIE, 2022a). This situation has lasted for a long time. It provides Chinese students numerous opportunities for interaction with fellow Chinese individuals. For instance, Lele joined a Chinese church, and Huang had friends from China, which created a buffer in a different culture environment. At the same time, it may reduce motivation to socialize with local people, and many of them do not need to step out of their comfort zone to socialize with people from different cultural backgrounds. Fourthly,

holding back one's own thought and keeping a low profile could also be a characteristic in a large number of Chinese people. This characteristic might depress their inner thoughts and let them miss some opportunities.

Third, identity as a single woman also add a special characteristic into their experience. Marriage is regarded as an indispensable part by many Chinese people, while being single women does not align with traditional expectations and cultural patterns, which create a handicap for these women. With women's age growing and being single, fertility health become some parents' concern. Furthermore, being single and living in a foreign country may increase the chances of loneliness and a lack of social support, as experienced by Leah and Dahai.

6.2 Interaction with Ecological Systems

During female international students' doctoral journeys, they experience difficulties and happiness, have regrets, and explore new roles. At the same time, diverse voices from environments also coexist. Some ecological factors align with or support these women's needs, while some expectations from ecological systems conflict with their opinions or differ from their current status. Women's responses to voices from environment vary, including maintaining personal choices, making resistance, making adjustments, or accepting their voice.

6.2.1 Individual's Interaction with Ecological Systems

6.2.1.1 Leah's Story

In academic aspect, Leah went through a tough time after changing her lab and research focus because of funding issues, and only expected to live and did not give up. For her microsystem in her native country, her mom wished she could live well and did not do anything that was out of line. Her dad did not want her to go abroad for the danger in foreign countries and wished her to get her master's degree and then go back to China. And as for microsystem in her host country, she experienced the conflict with her advisor and a senior student. Her advisor adopted belittling and pushing method, while she preferred encouraging method. Many people treated her very nice, and she had some close friends. In terms of her interaction with agents in her ecological systems, her expectations were as same as mom's expectations, but did not align with her dad's expectations. She chose to insist on her plan of studying abroad and pursuing a doctoral degree. Moreover, she had seen a psychiatrist for a period, due to the conflict with the advisor and a senior student. She wished she might have enhanced her emotional intelligence a little bit at that time. On the other hand, people around treated her well which made her be more positive and wanted to persevere.

Second, in terms of marriage part, microsystem in her native country includes different opinion from her mom about men's appearance as the standard of choosing a husband, her mom's support in her decisions in marriage, and dad's expectations about her having a boyfriend and getting married as soon as possible if possible. Her dad wish she could be protected by a man. Her mom wished her to be happy and could accept the possibility that she would never get married. It

may be caused by her mom's regrets in giving up her career for family and her observations from her own and others' marriages. Moreover, as to macrosystem in her native country, cartoons and movies she watched from childhood time built the positive image of tall, rich, and handsome men, which made her believe that marriage with this kind of men might promise her a happy life. On the other aspect, people in her American church held that the best choice for her was to find someone practicing the same faith. As her responses to voices from environments, she insisted her own inner thoughts, although she respected her parents and people in the church. Because she was the one who made the final decision and took the responsibility.

Regarding the status of being single, Leah was a little bit lonely, lacked social support and was not very satisfied with her single status. In her opinion, she as a normal woman should at least have a romantic relationship before 30 years old. Her barrier to find her husband refers to difficulties in finding people who met her expectations, her tight schedule and many concerns when she has looked for a boyfriend. In the religious part, she felt no big difference in faith-related life between people with the same belief in China and the United States. Relationships in America had more boundary.

6.2.1.2 Lele's Story

As for Lele's academic life, she changed her major and transferred from a master's program to a doctoral program. She hoped to graduate successfully and obtain a certificate in her field. In regard to microsystem in her native country, her parents felt hard to believe she could get admission for her doctoral program and were happy. Mom thought it might, should be God who led her on this path. Regarding her life, parents were concerned that she was very exhausted in her

doctoral studies, was not young, and was alone in a foreign country. For them, it would be a better choice to buy a house, work, get married and have children near home. Microsystem in her host country included her advisor's care that made her stressful, and social support from the group in the Chinese church she stayed. What's more, in terms of her interaction with environment, she did not have much pressure from parents but much stress from her advisor. Parents didn't quite understand her choice but still supported her. Parents were also sensitive and avoided letting her answer uncomfortable questions. Moreover, her advisor-advisee relationship was better, due to her parents' analysis, her understanding about her advisor and her better performance in class, although she still would like to escape from her advisor.

Furthermore, regarding marriage, microsystem in her native country include parents and friends. Parents wanted her to find a husband as soon as possible who could take care of her. They had concerns about the health risk of having a baby at not a young age. She chose friendly friends in China. The impact of macrosystem in her native country was revealed in her pervious understanding of intimate relationships from individuals around her and films and television programs. In her microsystem of the United States, friends in the Chinese Church in America were curious about her future partner, but they did not urge her. Second, as to her interaction with environment, distance from parents caused the decrease of parents' influence, and she might stay away from friends who may judge her life. Her marriage plan shifted from a task given by parents to focusing on her own opinion. She would consider marriage until finding the right one and refusing impacts from environment. In religious and faith part, she was now in a Chinese Church.

6.2.1.3 Hannah's Story

In terms of academic life, Hannah would like to graduate on average (six years) and work on thesis with her current advisor. As for microsystem in her native country, her dad may wish her to go back to work after graduation, while her mom was fine with her staying in U.S. and accepted her choice. In terms of microsystem in her host country, advisor did not want to teach her step by step and wished her to work on thesis independently. Her advisor also hoped that the assignments she submitted were the draft's draft and her advisor had expectations on her ability in argument. Peer positive pressure was reduced because of the COVID pandemic. Her interaction with environment includes three aspects. Hannah was easily influenced by her advisor's feedbacks. Moreover, her parents were inclusive and would not push her do things. Third, sharing with sisters in the same church about challenges in her thesis and their prayer made her be a little released. Being understood by them was important.

In marriage part, her mom from microsystem in her native country wanted her to find a smart one, while she thought the great wisdom in life depends on one's spiritual situation. On the other hand, there were many supports from microsystem in her host country. Talking to her leader in her church was helpful when she faced challenges due to being single. Her leader understood her, helped her analyze the situation, and would provide support when someone approached her. She had a community support from sisters who lived together and were from the same church. Hannah had different understandings about marriage with her friends in her previous church in the United States. Exosystem in her host country refers to her current church which provide beneficial and good teachings in the marriage aspect. As for her interaction with environment, her response shifted from being angry initially to trying to communicate, when facing the stress from her

mother's inquiries about whether she had a boyfriend or not. In terms of her status of being single, Hannah was content that she hadn't had a commitment to marriage yet and she lived with her sisters and had a community to support her. Sometimes she would be tempted because people around got married or engaged and she wondered the time she would get married. In religious and faith part, many friends who were in her hometown had a good church experience in China. In the United States, her roommates were from diverse cultural backgrounds and were sisters in the same church. Current church community provided support during her transition.

6.2.1.4 Mary's Story

In academic aspect, Mary hoped to do research faithfully, sincerely treat the knowledge she needed to learn, and be challenged and expanded in her knowledge and abilities in academia. At the same time, she wished to gradually align with God's calling, be able to love others through research, her major, and many other ways. As to microsystem in her native country, her parents wished her to look for a job in the United States after graduation and stay in America. And the pastor of her previous church in China wished her to return to serve the church. On the other side, as to microsystem in host country, two cohorts were her stable support in her challenging classes, her teaching job, and office work. Her mentors provided supports in academia, social network, finance and the like.

Different attitudes were adopted during her interactions with agents in different ecological systems. She did not respond her parents' expectation about her staying in America directly and she was not sure about whether she would stay in America after her graduation. She adopted a proactive attitude and spent time talking to parents about her academic expectations. Parents gave

advice but accepted her expectations. Furthermore, she did not communicate with her pastors deeply and did not want to break their hearts, for serving in her previous church might not be God's plan and she needed a healthier relationship with God and with people. Additionally, she could sense other people's expectations, but did not particularly care.

In marriage aspect, her parents from microsystem in her native country shifted from being anxious to not pushing her recently. And for macrosystem in the native country, accusation of herself as “setting an unnecessary high bar in finding a life partner (作)” was the voice consisting of voices from her mom, roommates in college, some other people, and Chinese culture. On the other hand, for microsystem in the host country, her tutor in her current fellowship thought it didn't matter if she would be single for a lifetime and others in her fellowship had diverse attitudes towards marriage. Some older women in the Chinese Fellowship thought she should find a partner before graduation. For exosystem, the COVID pandemic led to absence of social relationships which amplified her emotion needs. Second, with regard to her interaction with environment, she spent time on facing her inner accusations and environment voices with God and found comfort in God. Her tutor's words and people's diverse attitude towards marriage in her church fellowship made her chill. Mary also had three couples as role models for their marriage status, including parents, pastor and his wife, and mentors of her church during graduate school. Their marriage has had God as the holy third part in their marriage relationship. She also received understanding and encouragements from two friends. Third, as for her status of being single, Mary had so much satisfaction in her life and being single would not be the most significant factor influencing her decisions. On another level, she was not in a contentment. She feared no available person due to fixed social networks and her difficulty in taking an initiative to take a further step

in her relationship. And she did not have the significant other to share some of her moments sometimes and struggled in how to change her status of being single. In faith part, she was currently in an international student fellowship under an American church.

6.2.1.5 Feng's Story

In Feng's academic life, she chose to apply for a doctoral program due to the influence of the COVID pandemic. She hoped to finish her program for five years, since the best time in her life was 25-35 years old and it was very boring to spend all these times staying in university from her perspective. She wished her life would be colorful. Second, microsystem in China includes her family. Parents were glad that she pursued doctoral program and hoped her to have publications, join academic activities, doing research with her teacher, and graduate as soon as possible. Her dad could not understand why she needed to pursue a doctoral program for a long time. For her work plan, her sister expected her to go back, for policy in her hometown was favorable for individuals with doctoral degrees to work in the government. Parents wanted her to work in the university. Third, regarding microsystem in her host country, she had different research interest with her advisor and didn't know her advisor's expectations. The doctoral peers were devoted to academics and had a lot of research experience. Fourth, with her interaction with environment, her previous work plan was to be a teacher in university, while she now wished to be a consultant in a consultant company and do things that she feels comfortable with. Her career planning was different from family members', but they all wanted her to graduate early. Second, despite some peer pressure, she thought everyone had a different development direction and had their own path.

For marriage part, microsystem in her native country refers to expectations from family. Feng talked with her parents many times about her unwillingness to have a marriage, while her mom held the necessity of marriage since everyone would get married and had concern about who would take care of her in her old age without marriage. Her mom occasionally asked about her status in marriage. Her sister wished she could find the right one early but respected her choice. As for macrosystem in China, online information, such as information in Hupu Forum, reflected the impact of gendered Asian and Chinese culture on men's looking for a wife. It also provided access to feminism theory and problems in marriage and fertility issue. In addition, she thought high expectations about married women existed in China. Additionally, there was limited impact of friends' weddings from microsystem in her host or native country. Second, she chose not to marry and understood her parents' opinion about marriage for the environment they grew up but preferred to not sharing her relationship status with her parents due to different ideas about dating relationship and marriage. And she was very satisfied with her single status. And for the religious and faith part, she did not have many friends with religions around her. Feng had been invited to participate in faith-related activities, but never participated because she was not interested.

6.2.1.6 Huang's Story

In academic aspect, Huang felt that she probably would not stay in academia. She hoped more opportunities to get access to better resources after graduation. Second, many voices existed from microsystem in her native country. Her parents hoped her to get more better job opportunities after graduation and hoped that she could be well. They would not exert pressure on her. Grandparents, especially grandma, emphasized she was not young. Some of previous classmates

thought she might be better off by her doctoral studies. Several people asked her the same question about the time for graduation and returning to China during a period. For microsystem in America, it had been difficult to connect her advisor for a year and the COVID pandemic made connection even harder. Third, microsystem in America refers to the accompany from her friends and previous roommate. Fourth, regarding her interaction with environment, parents' expectations were her motivation at most of time. Grandparents' reminding about her age sometimes made her feel the invisible pressure. She thought only her and her classmates know the struggle of being a doctoral student. People's asking her graduation plan caused pressure that she was not young without marriage, children, and graduation. Normal communication among friends warmed her heart.

In marriage aspect, pressure exists from microsystem in her native country. There was stress from friends in China who got married and started their dating relationship. Huang also experienced the change of parents' attitude and stress from grandparents at her 24-25 years old. After she had a boyfriend, she needed to deal with her dad's dissatisfaction about her boyfriend, accompanying with her mom's support. Some friends from microsystem in her host or native country kept asking her why she remained single, even after her reminder, while some friends provided support. Macrosystem in her native country refer to online information. She would learn from some beneficial articles related to relationship in Zhihu (being similar to Quora, based on Wikipedia). On the contrary, the macrosystem environment in her host country towards single women at not a young age (大齡) as her was generally friendly in America.

Interaction with environment: She understood about her dad's feeling to her boyfriend, and her mom and she acted as an intermediary. The choice she may make was to stay away from friends who crossed the boundary about her marriage. She let her dad to deal with grandma's problem.

Second, in terms of status of being single, her satisfaction was from her own independent life, although she was in a relationship. She had someone to share her feelings when she was very tired. The dissatisfaction was that the time of meeting in person and communication time with her boyfriend was limited. What's more, in religious part, some people around her would often indicate that they would join some activities in church on Sunday. It seemed that people did not treat her differently because of her refusing to join faith-related activities in the United States.

6.2.1.7 Lydia's Story

Regarding academic life, Lydia thought that she did not make an achievement in academia and hoped to have more chances to be involved in research and have research outcomes. Faith, her positive characteristic and her teacher's support enabled her to survive through her academic challenge. Second, in her microsystem in America, Lydia did not have a fixed advisor. One professor, she was interested in being his research assistant, hoped students would be more active in learning more things and could do research independently.

For marriage, parents from microsystem in China wished her and her boyfriend to get married but without urge. Wedding ceremony would be too simple from her mom's thought. At the same time, her marriage plan was greatly influenced by her faith, including the belief in Christ, premarital counseling, and conversation with the church tutor from microsystem in the United States. However, western culture, macrosystem in host country, had little effect on her marriage opinion. Friends' blessing for their marriage came from microsystem in her host or native country. As her interaction with environment, she took the church tutor's advice to get married and thought premarital counseling was helpful. She saw many Christian couples and admired their good

relationships and mutual support after more than 20-years marriage. In terms of single status, Lydia enjoyed her current life, including their wedding preparations. For religious and faith part, there were Chinese Christian groups in both places in America from her master's period to PhD period.

6.2.1.8 Abigail's Story

As for academic part, Abigail hoped to make influential and contributive research. She would be more able to recognize her own value and efforts if her labor had output. In microsystem of America, some faculties and advisor in the same field may give Abigail advices on research, individual growth, time management, and the like. Regarding exosystem in the host country, people helped each other and celebrated everyone's accomplishments in her school. In the conference, individuals would put forward a lot of suggestions on each other's papers and publications. Second, for her interaction with environment, Abigail learned to work better with people and build each other up, rather than being often in a state of competition or comparison.

In marriage aspect, many friends in microsystem in her host country gradually got married. Life was a little different from friends' lives in the same age who were married. As for status of being single, she felt that her PhD period might not be a good season to get married and everyone has their own schedule for working and starting a family. Regarding religion and faith, she experienced the conflict of priority between her faith and work environment, such as a gap between faith-guided attitude and liberal attitude toward some social science topics.

6.2.1.9 Dahai's Story

In academic part, Dahai hoped to train herself to be a qualified researcher and preferred the position as a faculty in the U.S, due to the advantage in financial support, freedom in doing research and connection to people in the same field. Second, as for microsystem in her native country, parents expected her financial independence and expected her to return to China quickly after graduation. Parents more wished her to have a stable living environment which was in China from their perspective and have a close family bond among them. And some children of relatives and parents' friends at home would ask her questions about their studies and looked for her sharing of experiences in study. Her academic path was different from many people's path, such as classmates and some friends in China. On the other hand, microsystem in her host country refers to her boss and a friend. Her boss constantly provided her academic trainings and also placed great pressure on her due to her advisor's requirements of the quality of her work and efficiency. Her friend's sharing inspired her academic interest. This friend's commendation and expectations were always her support. They supported and encouraged each other, which made her academic path not be particularly alone. In exosystem, Dahai had a sense of belonging from an online group comprising relatively young scholars and students who were doing scientific research. Third is her interaction with environment. After realizing her financial independence, her parents were happy about this and gave more respect to her decisions. She ignored her parents' expectation which did not align with her career pursuit and would pay more attention to her career development. Her struggle in her relationship with her boss was gradually shifted to a bettering relationship.

The second part is marriage. For microsystem in her native country, her father thought that she might have been thinking too clearly after studying too much and could not get married in a

confused status. More people she knew were not in a status of single. From her observation, marriage did not need to take into account many factors beyond love. Exosystem's impact was reflected in her cautious attitude towards marriage, which was influenced by a TV show in China "Goodbye Lover" (a TV show related to divorced couple or couple facing divorce crisis). Macrosystem in her native country refers to social media that promotes happiness of two people together. On the other side, as for microsystem in her host country, a large proportion of people she knew was female doctoral students in a similar age and many of them were single. Based on her observations of several friends, marriage was a luxury and a means to get more social networks. What's more, in terms of interaction with environment, being a doctoral student can be her good reason for not getting married. Her parents' impact was small for the long distance. Moreover, alliance was built from friends who pursue singlism and homosexual love. She was cautious about the decision to marry and didn't feel the strong social pressure to urge her. Additionally, for status of being single, Dahai was not particularly satisfied with her current life since her schedule was very irregular and chaotic. Her dissatisfaction with her current state had nothing to do with being single or not. Moreover, sometimes it was hard to have emotional resonance with men in the same age. She also lacked social support and experienced loneliness. Traditional concept and others' dating relationships and marriage created an invisible pressure.

Third part is religion and faith. Dahai has not yet had the opportunity to reach a faith-related group in the United States but felt the atmosphere of faith here. In her microsystem, she had a good impression about joining the church, since it can give her a sense of life. Her close friend getting moon cakes from church friends for the Mid-Autumn Festival, and their giving free meals to each other gave her the impression of a family's feeling that she relatively admired this interaction.

6.2.2 Characteristics of Individual's Interaction

6.2.2.1 Academic Life

In terms of these women's academic lives and career paths, microsystem plays an essential role (figure 3). Microsystem in China includes parents and other family members, previous classmates, friends, pastor, and people women knew. Parents were most frequently mentioned, and many parents had different opinion about their career paths after graduation. Friends or previous classmates of Huang and Dahai thought their doctoral studies were a better choice. On the other hand, microsystem in America comprises four categories, including advisors and other teachers, cohorts and people in the same lab, friends or roommates, and individuals from churches. Advisor was an important part in their doctoral studies. Positive mentor-mentee interaction could build up these women's confidence and academic abilities, as well as helping women overcome difficulties, while an intense relationship or unavailability of advisor would exert a negative impact on women. For instance, two Mary's mentors provided supports in her finance, self-value recognition, and so on. On the contrary, the conflict between Leah and her advisor had led her into troubles. Peers or cohorts could become a source of support. Before the COVID pandemic, communication with peers could motivate Hannah to catch up when her academic progress was slow. Moreover, friend and individuals in church could also contribute to surviving in these women's academic struggles and stimulating their academic interests. Hannah shared with her sisters who lived with her about difficulties in her thesis and their prayer made her be a little released. Two participants also have

support from academic community and online group in exosystem. For example, Abigail shared others provided a large number of suggestions on publication in the conference.

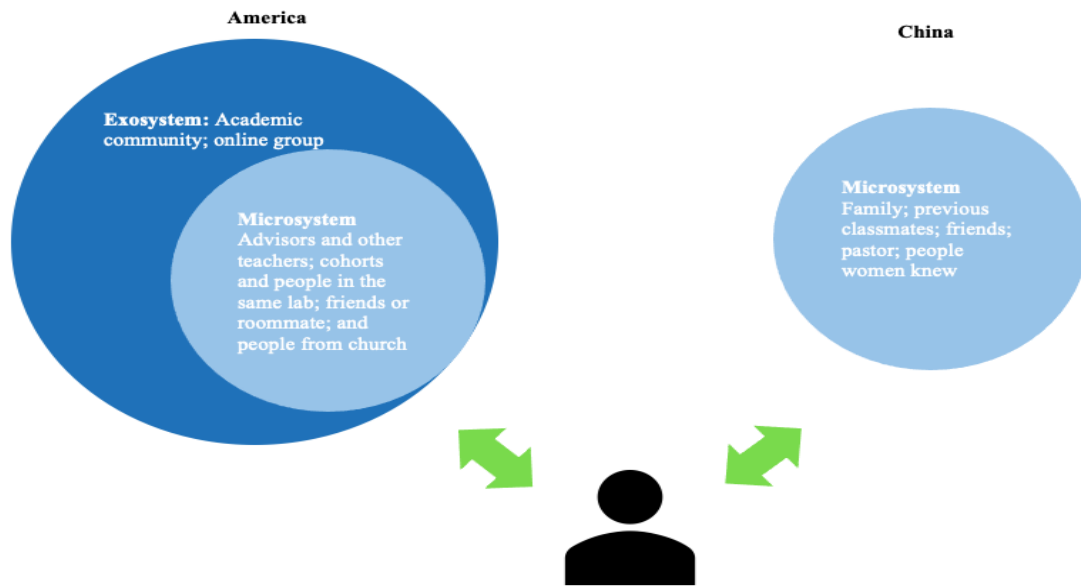


Figure 5 Academic Ecological Systems

6.2.2.2 Marriage Status

Compared with women's academic lives, ecological systems in women's marriage paths are more personal. Parents and other family member are the main source in microsystem in China. Some family members give women more freedom in their marriage, including Leah's mom, Feng's sister and Lydia's parents. In contrast, some family members show strong opinions for women's marriage. For instance, Huang's grandma insisted on push her to get married. In addition, parents could also change their attitude from being anxious to being more relaxing, as seen in Mary's parents' attitude.

Second, friends work as another agent. Friends' getting married or having a dating relationship could bring about invisible pressure on women, as experienced by Dahai. For some

women, such as Abigail, the impact of friends' marriage status was limited. Although the gap between Abigail's life and her friends' married lives exist, she realized that the period of her doctoral studies might not be suitable to have a marriage. Moreover, some women stay away from friends who cross the boundary of their personal lives in their marriage status, as seen in the cases of Lele and Huang. On the other hand, some friends could be a comforter or form an alliance to fight for questions from environment, as to Lele, Huang and Dahai.

Third, people in church also exert an important influence for many Christian respondents, as figure 6 shows. Some women value the support from their leader or tutor in church or other people from church. For instance, Hannah's leader understood her and provided support when people approached her. Premarital counseling in her church for Lydia was beneficial. And some Christian's couples work as their role model or was woman's admiration for Mary and Lydia. And individuals in church provide community support for Hannah and Mary. On the other hand, difference in opinions about women's marriage exist. For instance, people's idea about Leah's future husband in church did not align with her thought.

Fourth, exosystem including teachings from Hannah's current church and the COVID pandemic that brought about the absence of social relationships which amplified Mary's emotion needs. Macrosystem for these participants refers to the value revealed in people around, cartoons, movies, TV shows, online information, and culture. For instance, TV drama influenced Lele's previous opinion about a dating relationship, and cartoons and movies affected Leah's previous standard of future husband. And gendered information about a good wife for men is also hidden in Hupu Forum based on Feng's sharing, and social media tries to promote happiness of two people together in China according to Dahai's sharing. Moreover, convenience of Internet help people to

know information, such as knowing other women’s lives and feminism theory for Feng, and Internet provide a method for Huang to seek advice. Based on the interview data, microsystem plays an essential role in participants’ academic lives, while both microsystem and macrosystem exert impacts on women’s marriage status.

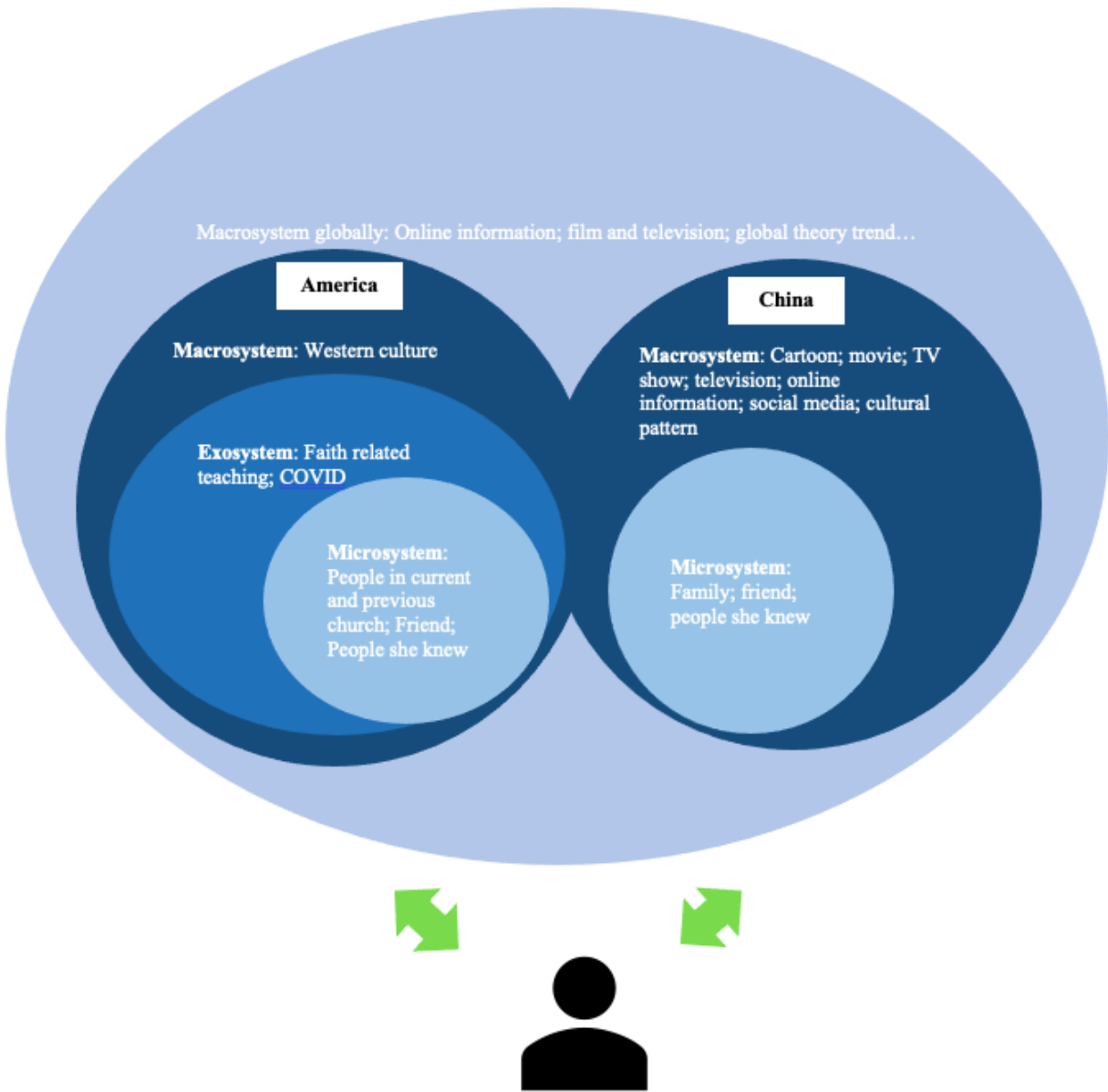


Figure 6 Marriage Ecological Systems

Beyond different systems in China and America, some influential factors are beyond borders and spread globally, such as online information, movies and theory trends, which creates the overlap part of macrosystem between China and the United States. It allows women get access to diverse information and may impact women's attitudes towards their marriage. For instance, Feng's change in her marriage opinion was influenced by feminism theory that belongs to one of theory trends globally, rather than local opinions. In the past, TV drama impacted Lele's viewpoint about a dating relationship. Cartoons and movies affected Leah's standard of future partner. Likewise, Lydia felt similar opinions about full-time housewife among China, Japan and South Korea. The example she gave was a Korean movie "Kim Ji-young: Born 1982 " that showed the problems encountered by a full-time housewife that many of her work and sacrifice were not recognized in family. This situation also applied to China, such as her mom's devotion as a housewife that did not get her dad's recognition. Therefore, information dissemination has broken the isolation of culture and information in each country, and opinions have been exchanged and interacted through movies, TV shows, cartoons, social media and Internet internationally, which exert impacts on women's marriage expectations.

6.2.2.3 Religious and Faith Environment

There were six Christians among participants. In their microsystem, two participants shared that they joined Chinese church or Chinese Christian groups, while Mary joined international student fellowship and Hannah lived with sisters from the same church who came from diverse cultural backgrounds. On the other hand, for other participants, Feng had limited friends practicing religions, while Huang had some friend with religion, who respected each other's faith and

religions. And Dahai had a good impression of joining church from her close friend's interaction with church people, but she did not reach a faith-related group. On the other hand, three of Christian participants mentioned they have one or more family member as Christians, as their microsystem in China (figure 7).

There are some similarities of their faith life in their microsystem. Many Hannah's friends in her hometown had a good church experience. Christians in China and America includes people being actively involved in church lives and church goers. Moreover, people could experience God and review their relationship with God in both China and the United States. One participant shared the visible pressure as a Christian from people around and met on her way, activities in Christmas, comments under her moments being posted in social media in China. She needed to seek help from God and review her relationship with God. On the other side, unlike obvious pressure in China, she had more time in America to understand how her relationship with God and went through obstacles with God's help. For Abigail, conflict emerged in terms of the value held in faith and environment. Facing these conflicts would lead her to think more about her beliefs and how to handle it.

In macrosystem, according to the interview data, America has more freedom and faith-related resources and architectures, and people are more willing to share their faith. On the other side, China has more restrictions of religion, and there were a small proportion of people with religions. Many Christians seem to prefer not to share their faith publicly, and there were limited chances to get access to Christianity. And one participant revealed the visible stress as a Christian from the environment.

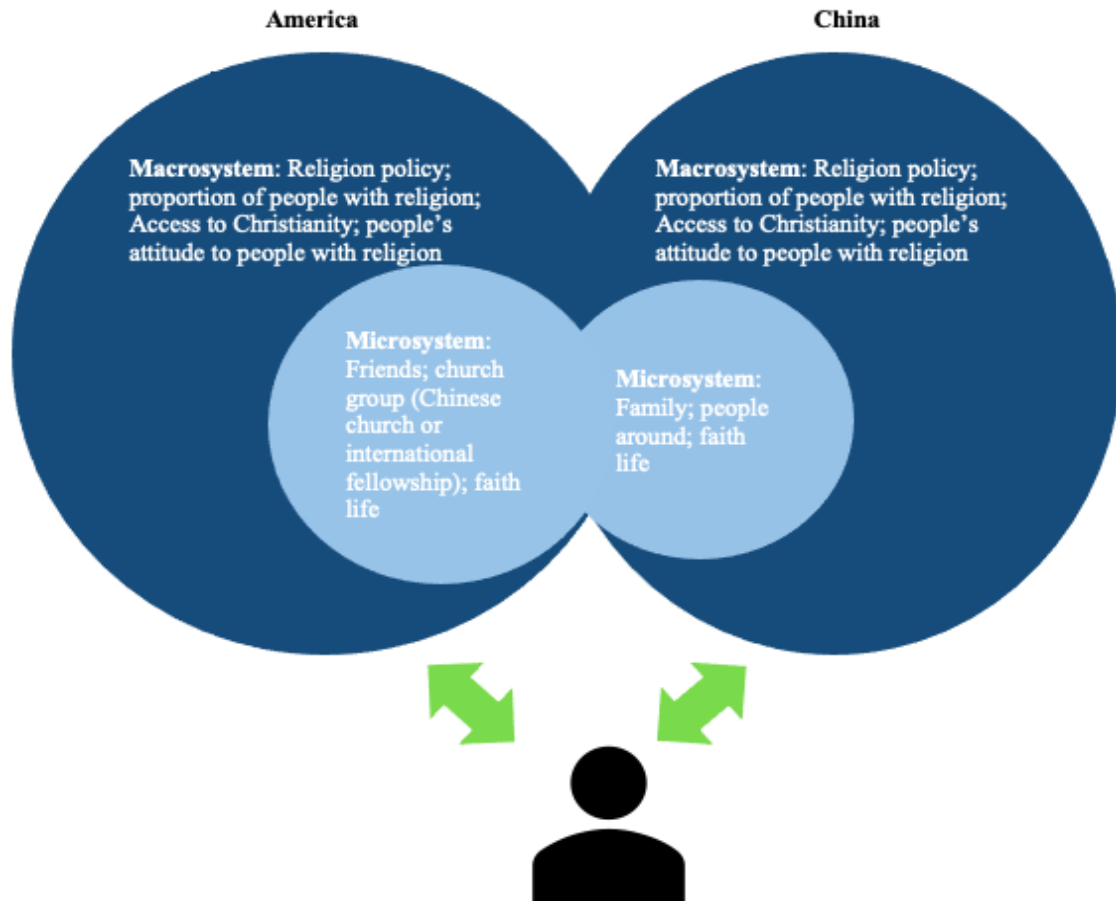


Figure 7 Religion and Faith Ecological Systems

6.2.3 Theory Contribution to Ecological System Theory

According to the interview data, there were few mesosystem in doctoral students' lives, a system of microsystems comprising the connections and processes between two or more settings (Brim, 1975; Bronfenbrenner, 1994; Bronfenbrenner, 1977). EST's focus was the developing person's environment whose group identity is valuable, such as family and school, and who need group support to interact with environment. However, doctoral students as an adult always

represent themselves to interrelate with surroundings. And the process of their doctoral studies aims to train them to be independent, and doctoral students need to demonstrate their abilities of being “an independent scholar” as Hannah shared, which drive them to be less dependent on the group. However, it does not mean they are totally independent from the environment. In fact, they also need community to support their academic paths and lives in the United States. Moreover, for most of international students, their social connections in host country were relatively scarce, and group identity needs time to build up. And single women do not have a family as their home to interrelate with other ecological systems. At this situation, they were likely to interact with different ecological systems individually. Therefore, connections between two or more settings less exist during their doctoral studies for these women.

Second, EST may consider including system of an individual’s previous social networks that do not belong to their current ecological system. Some previous social networks’ influence would fade with a physical distance. However, importance of some social networks is still played in one’s personal life. For instance, Mary regarded her pastor and his wife and mentors of the church during her master’s period as her role models of marriage status. Third, it seems to be hard to categorize COVID into an ecological system but the pandemic indeed influences people’s lives. For example, the pandemic gave rise to a lack of social relationships which magnified Mary’s emotion needs. Under the COVID pandemic, Hannah had less chances to work with peers in person and was less motivated in her study due to less communications with peers about doctoral progress.

Fourth, sometimes it is hard to distinguish the boundary between exosystem or macrosystem. Exosystem is a larger system beyond individual’s control, including community,

mass media, government, and the like, while macrosystem refers to the main pattern of micro-, meso-, and exosystems, characteristics of a given culture and subculture, as well as carriers of information and ideology (Brim, 1975; Bronfenbrenner, 1994; Bronfenbrenner, 1977). It seems to have overlap parts which bring about a difficulty in categorizing different things to exosystem or macrosystem. For instance, Dahai shared social media in China promotes happiness of two people together. It may be appropriate that social media are categorized as exosystems that indirectly influence Dahai's setting, and the value reflected by social media would be accounted as macrosystem, the characteristic of culture of encouraging people to find a significant other.

Fifth, the possibility of having the main pattern of micro-, meso-, and exosystems, as well as characteristic of a given culture and subculture in macrosystems (Brim, 1975; Bronfenbrenner, 1994; Bronfenbrenner, 1977) might be harder in the future. Diverse values appear, and Internet facilitates different information to be more accessible, which brings about obstacles in creating main pattern of culture. For instance, as Dahai shared, social media in China promotes the happiness of two people, while TV show in China "Goodbye Lover" (a TV show related to divorced couple or couple facing divorce crisis) also exist, which led to her cautious attitude towards marriage. And Feng shared men's standard of looking for a wife in Hupu Forum under gendered Asian and Chinese culture's impact, while people increasingly learn about feminism theory. Thus, different voices and convenience of Internet facilitate melting glacier of the main pattern of culture.

6.2.4 Parents' Role

The interview data also identify another crucial theme. Family, especially parents, still play a significant role in female doctors' lives. First, women's independence in their doctoral studies, physical distance, as well as parents' limited knowledge about their children's learning, do not cause them to disappear in these women's academic lives. Seven participants mentioned their parents' expectations about their academic paths, including opinions about their daughters' pursuing their doctoral studies or study abroad, financial independence, research involvement and career plans after their graduation.

Sometimes family members hold similar idea with these women and were their support, such as parents' often being Huang's motivation, while there were sometimes different opinions. When difference appears, some women insisted in her own thought, such as Leah's decision to study abroad and Dahai's career plan without considering family's divergent idea. What's more, escaping directly from answering parents' expectation was adopted, as Mary's response to her parents' expectation about her staying in America after graduation. And the way of explanation of self-status to parents was also used. Feng explained her program setting several times in response to parents' expectation about her graduation time. On the other side, although some parents sometimes hold different ideas, they still choose to trust and support their children. For example, Lele's parents were worried about her study burden, her age and being alone in America and have another thought about a better life. However, they chose to respect her choice.

Moreover, children's marriage was a core expectation from some parents who expressed their urgency, such as Hannah's mom repetitively asking, "do you have a boyfriend". Some of

parents' worries came from fertility considerations. Feng's mom had concern about the negative impact on women who gave birth to child at a not young age, which applied to Mary's mom and Lele's parents. Eight of nine participants mentioned their parents' expectations in their marriage. However, women had different responses. First, some women accept parents' opinions and try to reach parents' wish. Before Mary's doctoral studies, she promised her mother to find her life partner before 30 years old. Second, sometimes parents' opinion would subtly impact women's expectations. For instance, Lele's parents' concern about fertility risk would not influence her finding a husband but impacted her family planning that she must bear children early in her marriage. Third, resisting or ignore parents' effect is some women's attitude. Leah insisted her own inner thoughts, since she should take the accountability of her marriage, instead of others. Feng still chose not to marry. And physical distance reduced parents' impacts on their marriage plan for Dahai and Lele. Fourth, some of women were in the middle of accepting and resistance to parents' influence. Expectations of Hannah's mother may sometimes subtly become her expectations, but sometimes she was consciously and strongly resisting her mom's expectations. Additionally, despite the gaps in marriage between women and their parents, some women chose to share their thoughts to their parents and deal with issues, rather than refusing communication. Feng talked many times about her unwillingness to get married. Huang tried to smooth her dad's dissatisfaction about her boyfriend with her mom's support. On the other hand, women's attitude towards parents' expectations are not fixed. For instance, Lele's marriage plan shifted from being regarded as a task given by her parents to concentrating on her mood.

In addition, six participants are Christians, and during interview three of them mentioned they have one or more family member as Christians. One participant shared that her dad became a

Christian when she was a little child, and she followed her dad to be a Christian. Another participant was the fifth generation of Christian in her father line and there were Christians in her mom's family. Their own family had faith habits, such as reading Bible and praying together. And one participant mentioned her mom would pray with her when her mom sensed her struggle, which was helpful. Therefore, Christian family background allowed them to get access to Christianity and had impact on their lives.

Based on previous research, family connections and community unity are valued in collective cultures (Trice, 2007), and individuals are interdependent in collective societies (Triandis, 1995). It is hard to deny the importance of parents' role, while many of them develop an independent mind and become less dependent on parents' thought.

6.3 Transformative Learning

Transformative learning started after women's previous frame of reference (Mezirow, 2000) could not work in their doctoral lives. However, the interview data show that not all the difficulties would not lead to transformative learning. Different stories happen.

6.3.1 Academic Life

Some academic predicaments initiate the procedure of transformation learning. For instance, at the beginning of Leah's PhD program, Leah encountered numerous academic

problems after having a new advisor whose research interest did not align with her undergraduate academic training. She was proactive to solve the gap and took actions, such as registering related courses. Under self-doubt and conflict in advisor-student relationship, she insisted in her choice and did not quit her doctoral studies. Now, her academic ability was improved, and she shifted from being at a loss to gaining academic independence. Similarly, doctoral studies built up Abigail characteristics of diligence and perseverance to make achievements, although her progress every day, and even every month was limited. Lele recognized her bigger academic interest, so transformed to a new program. She explored her new role and acquired new knowledge through internship program, recording others' experience, and online information.

On the other side, it is possible that people could also be in first several stage and do not complete transformative learning. Hannah was reading papers and hoped to write something. But she was a little stuck, since she felt that she did not read enough paper and had limited knowledge about working on thesis. What's important, not all the dilemmas would lead to the final step of transformative learning. Leah faced the reality of her limited ability to transform her research results into high-quality papers. She also lacked appropriate writing support. Furthermore, it is possible that actions people take to changing their dilemma may fail. For example, failure to getting a funding had been a thorn in Huang's heart, although she had been active to seeking fundings. She would be depressed for a while after failing to get funding, and then she would be motivated again to check if there was any available position.

6.3.2 Social relationships

Some individuals experience transformative learning in social relationships. In the first year, Mary was isolated and not comfortable in various social environments. Maybe in her larger environment, she only got to know limited persons. The following two years was the period of being explored and expanded for herself and many people surround. Until this year, her friends comprised many people from different culture. Unlike all her previous experiences, she began to feel that she had surpassed the definition as a Chinese, and gradually accepted her identity as an international person.

On the other hand, it is possible that transformative learning process did not work well, and people might give up exploration of new role. For Huang, the first stage was worries about that she could not make friends. Despite efforts to make friends with her Chinese classmates, not everyone was willing to be her friends. It existed both her hesitation about whether she needed to have more local friends and self-doubt about her characteristic in socialization. In the second stage, she was a little bit unwilling to make friends with Americans and preferred to have Chinese friends. Now she accepted her personality of being not too outgoing, and her strong idea of being assimilated into the local environment in the United States disappeared. Lydia was open toward making friends from different culture, but language barrier remained as a big issue.

Additionally, studying abroad does not always trigger transformative learning in social relationships, and some individuals keep their previous behaviors. For instance, Lele adopted the same way people from other culture treated her, but still maintained her own previous value and way.

6.3.3 Marriage Expectations

Some women went through transformative learning on their previous assumption of marriage. At the beginning of doctoral studies, Abigail focused on her studies. When getting used to her doctoral studies at the age of 25-30, she may think that 25-30 years old was a relatively good age for marriage. Now, she may consider having a family after having a relatively stable environment after her graduation. What's more, faith could initiate transformative learning. Before Lydia's doctoral studies, her relationship with her boyfriend lasted for a long time but she never thought about getting married during her doctoral studies. Now, she planned to get married. An important reason behind her change was she believed in Jesus and learned a lot about the meaning and purpose of marriage in Christianity. Likewise, under the influence of gendered culture and voices from environment, Mary accused her of "setting an unnecessary high bar in finding a life partner" when she rejected a man. Instead of accepting or evading her inner conflict as usual for a period, she took a large amount of time to bring her struggle to God and analyzed with God to identify the lies in her inner accusation. Her previous inner accusation, therefore, lost its control in her life. In addition, experience might trigger transformative learning. Before coming to the United States, Dahai had expectations for a romantic relationship. After more than two years in the United States, she felt that she might be more suitable to live alone. When she received interview, she shared that it was unlikely to get married during her doctoral studies. In contrast, people may remain their marriage expectations during her doctoral studies, as Feng generally maintained the thought that she would not get married.

6.3.4 Religion and Faith

People go through transformative learning in religious and faith part. Lydia's “-for-granted frames of reference” (Mezirow, 2000) about evolution theory made her have trouble in understanding Christianity and pondered whether it was a superstition, when Christians shared that human beings were created by God. But she experienced Christians' friendly attitude at the beginning of study abroad. From the second half of 2020 to the first half of 2021, she witnessed election in America, split-up of society, the weakness of human nature and the like. These brought her to think about in which status the human society should be. She figured out that people should believe in God and should pursue goodness that she saw in Christians. So, she contacted her current church through her previous friends and decided to follow Jesus during one visit by Christians. Therefore, her “taken-for-granted frames of reference” was transformed (Mezirow, 2000).

At the same time, some people do not go through transformative learning. There was no big challenge for Lele because she was in a Chinese church. From her perspective, there was no difference of the church in China and America in terms of faith. So was Feng and Huang who did not have related challenges, so no transformative learning happened.

6.3.5 Theory Contribution to Transformative Learning Theory

The interview data revealed some individual's transformative learning process did not follow ten steps. Sometimes people stay in the fixed cycle and did not move forward to next step for a period. For instance, at the first two years, Mary went through the period of imposter

syndrome, doubted her suitability of doing academics and had no publication. She fell into a pattern that she had to work hard to prove her potential every time, and she wanted to work harder next time to prove herself after getting her mentors' approval. Similarly, conflict appeared for Abigail between the value held in her faith and the widespread values in academic, working and liberal cultural environment. Facing the conflict with the environment would lead her to think more about what she believed in, and how to face the conflict. She always had this related struggle, seemed to have overcome these challenges, or find it was very hard, which had been reciprocated.

Second, environment factors could facilitate or block people's transformative learning, which demonstrates that transformative learning clearly does not happen in a vacuum (Nohl, 2009). In fact, breaking through Mary's fixed pattern of repeatedly trying to get approval from mentor was caused by mentor's support during funding issues. Her mentor's recognition of her academic value in God's calling to her was encouraging. She realized her mentors view her as someone being irreplaceable. Likewise, the requirements about Dahai's work from her boss pushed her to constantly to break out her previous habit to achieve a better state. On the other side, an environment force or an essential event could hamper transformative learning. For instance, the COVID pandemic brought Lele encumbrance to interact with local classmates, since all classes were online.

Third, sometimes people choose to live with struggles and stick to their own choice. Feng chose her doctoral program under COVID's impact. During her doctoral studies, she had been thinking about whether she was suitable for pursuing doctoral degree for a long time, even considering whether she would drop out. Because she didn't like the current way of life a little bit. Unlike other cohorts' active attitudes in research, she didn't want to do anything unless there was

something she had to do. However, she chose to finish her PhD, no matter how unhappy or other status she was in the process, and would not drop out, even if she occasionally vented her negative emotions. What's more, some people try to escape from dilemma, instead of transformative learning. Leah's struggle in her faith did not initiate transformative learning. On one hand, she witnessed the beneficial impact of faith in her father. On the other hand, sometimes she really doubted her faith, while she would like to confirm and persuade herself that this God really existed. And some of her struggles was to accept some people's words and behaviors in the church, and some contents of the pastor's sermon. Now she chose to stop thinking about these things anymore because of the difficulty to figure out.

Fourth, transformative learning in social relationship may not always happen but adaption to social relationship and relationship reconciliation may happen. Leah enjoyed freedom in living abroad at first, such as attending Taylor Swift's show, home-cooked food and no more canteen food, and distance from her dad. Then she experienced missing home and previous classmates, conflict with her roommate, and then relationship reconciliation with her father. At last, Leah gradually adapted to life in America. Although sometimes she missed home, she quickly had self-adjustment.

6.4 Suggestions

There are some suggestions to help single Chinese international female doctoral students survive and thrive during cultural transitions and prepare women who may be enrolled in

international doctoral programs in the future. Moreover, some advice was provided for different agents, such as school and university, in order to support this group of women in need.

6.4.1 Academic Area

6.4.1.1 Individual Level

Advice for single female doctoral international students covered their personal attitudes and relationships in their academic areas. First suggestion is personal attitude. Being humble and open to change in academic is encouraged. Hannah has recommended not to think too much of oneself, because the deeper one studies, the more one would find things one do not know. It would be advisable to research with a humble attitude. And in terms of how to treat possible changes during doctoral studies, Mary has suggested women not to be afraid that they may be changed by the environment and their own research direction but to be open to changes. The change, being caused by doctoral studies, may include not only personality, hobbies, interests, but also many things that are important and precious to individuals. Her own experiences could demonstrate the value of her suggestion. Before she came to study for a doctorate, she expected to build her existing value system and worldview more deeply with more resources and help, so that she could better build the expected academic kingdom and become a better researcher. Instead of pursuing a doctorate in her early 20s, she had already built her own world with a relatively clear understanding and the rules of operation in her world. But when she received interview, she had shared that she realized that the very foundations of her kingdom may need to be reshaped many

times, while her own reaction was that she didn't want these reshaping many times. She gave some examples to explicate her opinion.

“...especially in our university, it had a trait of a little bit leaning to the left. Many good professors in our department are very concerned about minority groups’ right. Personally, I really spent some time thinking about it, such as the relationship between the LGBTQ plus community and me. It is not just how I should get to know them academically and how I read papers about them. But they are a group, they are humans as I am. If I, as a human, could not accept them, I could not engage in that course, and even I could not engage a theoretical tendency that course represents as a whole. However, it's very hard for me, because I need to fight with many of my inside opinions. Some of them are based on faith, some are based on the Bible, but a lot of them are constructed by me and are based on some values in cultural society. In our department, there are actually male restroom and female restroom, but we also have unisex restroom. How to look at this issue? And we would really address what our pronouns are. I identify myself as she/her/hers. How to look at some of these academic-based things in fact impact many of my core beliefs.”

Mary thought her definition about herself in all aspects of her life would be challenged and reshaped through her cognition in academic area. But to some extent, she would suggest these women to be open to changes, because what was rebuilt up would not cause discomfort, at least for her. And it turned out to be something better. But how to accept this process of being destroyed and rebuilt was difficult for her. It may also be difficult for other students who may be in similar situations.

What's more, being confident, not being afraid and taking care of oneself are also important. Being confidence was the suggestion from Lele. Lele did not have much pressure in her not high-ranking university and has shared that the more important thing for Chinese female students is to have self-confidence. She has shared that "people who come from the Middle East or other countries in Africa, also do not have a good English level, but they dare to express, and they dare to talk about anything in class". Even their answers did not have any connection with the question brought up by the teacher, they could still give many examples and were willing to express themselves, which was a way to train themselves. "But Chinese people, especially Chinese women, always think, 'Ah, is that better if I don't say it? Is that better if I am not too high-profile and to show off myself?'" She has shared that Chinese women are very good at many aspects. Especially during their doctoral studies, many of them are more detailed than men, or their knowledge are not less than men's. I think I think the main thing is to have confidence." Leah also has agreed on the importance of confidence. She has suggested women not to lose themselves, but to always have confidence. They could listen more to some seniors' advice but also learn to make decisions by themselves, since everyone's suggestions have certain biases. Individuals need to bear their own responsibilities.

In addition, the ability of dealing with pressure is also valued. Finding and cultivating self-interest could reduce stress. Feng released her pressure by watching global professional games competition and sad movies. And being positive and sensitive to one's own little progress could also benefit oneself as Lydia. Besides, doctoral students could learn from these respondents' experiences, that is, not being afraid. Even though one may go through many challenges during doctoral studies, this journey may also become blessings, because academic and living capabilities

can be enhanced, characters can be shaped, and support can be received from others. Feng has suggested women to be happy and their lives are not just campus lives. Additionally, it is also beneficial to take care of oneself during individuals' tight schedule. Mary had regrets in health and wished to pay more attention to her health.

Second, women are encouraged to pursue their doctoral studies and many factors need to be considered for program application. Lydia has shared that if students have a similar background to her and have certain interest, energy and ability, she recommended that people could study for a doctoral degree, because this is a process of exploration and people could figure out whether they are suitable for doctoral studies only after they try. Much happiness existed in Lydia's journey of studying and working. She was happy when her students learned knowledge and her work was helpful to their understanding. It was also cheerful when she learned and understood knowledge in the professional field, such as solving difficulties when she learned using R programming language to write some codes. Besides Lydia has thought that there is no disadvantage regarding studying a doctoral program, even if people do not graduate. Because people would have more job choice after graduation in China and the United States. From her perspective, doctoral studies are very beneficial for training one's ability to live independently. Some people might concern about being too old to get a doctorate, which would influence their finding a partner in the future, while she did not have this issue and planned to get married with her boyfriend. In addition, from Huang's perspective, when choosing a school and major, people should consider whether personal research interest matches the ideal advisor's, understand this university's funding and management in advance, and have a deep understanding of the school. When she applied for her doctoral program, she only considered the rankings of US News of university and felt that her major and

university seemed to be quite high-ranking. However, she has shared that this is not enough. If given another chance, Huang may not choose the university she was currently studying and may also consider changing to another major.

Third is about the necessity of social relationships and how to build academic community and other community. It would be blessing if doctoral students could build up a good relationship with their advisors and if they could receive appropriate academic trainings and supports from their advisors, such as Mary and Abigail. Since Mary previous advisor knew many professors well, previous advisor helped her networking and advises her to choose courses that professors may be suitable for being her mentor. She knew her mentor in her minor major because of the connection of her former advisor. And the teaching position in the second year was also found because of the connection that the former advisor helped to establish. Secondly, it would be better to have a group support, since doing research is a very lonely process and requires collective effort based on the interview data. Abigail has suggested that one must be in a group. Doing research is a very lonely process, which not many people may understand and required collective effort. It is advisable for these women to often communicate with people who do research on the same topic, people in their school, classmates, and advisors. Moreover, cohorts and classmates could be doctoral students' support, such as Lele's classmates speaking English slowly to let her understand and Mary's cohorts' accompany through challenging class, teaching job, and office work. Additionally, friends' encouragement and accompanying become solace, such as Leah's friend from another country and Huang's previous roommate. Chatting with family could also be a source of relaxation as experienced by Lele.

Regarding how to build a supportive community, Abigail has deemed that it is important to have a win-win attitude and be happy for others' achievements. According to her own experience, making achievements in research could not be only from the efforts of an individual or a team. At the same time, it also needs wisdom to do cooperation. She has suggested to wisely deal with competition and publications and to protect the progress of research. But data is essential in her academic field, which make others be difficult to copy, even if research progress or idea is shared with others. And Hannah has suggested that these women do not expect to be superior to others and may need to know that someone is better. Instead of comparing with other people's achievements, one needs some motivation from peer pressure, which is very important for people who do not have a lot of self-motivation. For example, Hannah would update with peers mutually about their progress and work in an office before the COVID pandemic. She would like to catch up if her progress was slow. Leah also has recommended women to learn how to build a good relationship with their teachers and individuals who are closely related to women's research. It does not mean that these women should cater to them, but means that these women should learn how to communicate better with people who are not very easygoing. Besides, based on the positive role being playing in Christian respondents' academic life, it is advisable that Christians or non-Christian could search for the support from faith, when encountering difficulties. For example, faith enabled Lydia to survive through a bustling semester, believing God would guide her. Faith helped Lele overcome the negative emotion from a seminar-format course.

6.4.1.2 School and University Level

In school and university level, networking chances could be offered to international doctoral students, which reduce the chance of isolation and help build up their academic community with faculties and doctoral students. In this way, faculties and staffs in university could have more chance to understand international doctoral women's struggles and happiness. Networking could promote more mutual understanding that may decrease the conflict in advisor-advisee and teacher-student relationships, in order to avoid conflicts in these relationships as experienced by some participants. Faculties may inspire from how colleagues guide international students and students may get inspiration from how cohorts deal with the conflict with their advisors. What's more, it is favorable that university could provide a cooperative and informal platform to break isolation of each school and create chances of communication among international doctoral students and among female doctoral students. Sometimes one woman feels helpless in her doctoral studies, and her experiences may share common characteristics with many counterparts' academic lives. When they get the chance to know others' experiences, they could learn from others and support each other. It would be better if graduates could join this community, they could share how they walk through challenges during their doctoral paths, such as how to deal with academic relationships, balance life and work, build up academic self-confidence, and handle marriage pressure. It may become inspirations for current doctoral students.

Second suggestion is related to challenges in a lack of research chances and funding. 44.4% of respondents in this research revealed that they experienced or has been experienced funding issues. It is possible many doctoral students have similar problems. As an adult and doctoral student, they may suffer more pressure to gain financial independence, and the tuition for

international student is a large amount of money and the cost of living is also not low. It is advisable to provide more information for funding opportunities for schools and universities. What's more, more workshops could be held to communicate faculties' research and students' research experience and interest, as well as the available positions and internships in different labs and teams. It is also favorable that mentor-mentee relationships in research can be build to guide doctoral students' research, since many participants faces lack of advisor's guidance in research, such as no-fixed advisor for Lydia and advisor's focus seems not on research for Huang. In order to increase the chance to build research-support relationship, mentors should not be limited to faculties. School and university could encourage people who have experiences to guide others' research and are willing to support others in research to be mentors.

Third, 56% (n=5) of participant shared different struggles in advisor-advisee or boss-employee relationship. It is possible that some international students are not familiar with advisor-advisee culture in America and do not know how to handle problems in their academic relationships. For example, some Chinese students are not brave to express their inner thoughts, such as Huang's not changing advisor even though the long-term unavailability of her advisor. Leah's conflict with her advisor and a senior student let her see a psychiatrist for a period. It is favorable to have workshops to introduce how to handle conflicts in academic relationships. It is beneficial to have academic counselors who could encourage students to express their thoughts, give mental and academic supports, and protect students' rights. And academic counselors could give suggestion to academic-relationship conflicts, provide information related to funding and job opportunities, and answer students' academic confusions. The most important thing is that academic counselors should have a loving heart, empathy and are willing to help students in need.

Compared with psychological counselors, it would be better that academic counselors have similar academic challenges before, understand advisees' struggles, and could give appropriate suggestions.

Moreover, it is significant for advisors to realize their importance in doctoral students' academic path⁵ and encourage students to better themselves. Affirmation from advisors is valuable for some students, as demonstrated by Mary. In contrast, Leah's advisor's sticking to her shortcoming and not-encouraging words hurt her a lot. In fact, love and support, as well as identifying students' progress, could play a positive role in their academic journeys. It is also essential for students to understand advisor's situation and to proactively communicate with their advisors. Mutual communication and understanding are essential for relationship. At the same time, school or college could allow changing-advisor information being more accessible and changing-advisor choice being more understandable and supported. So, it could avoid students stuck in the advisor-advisee challenge without appropriate help.

Fourth, four participants (44.4%) wanted to change university or majors if they were given the opportunity to restart doctoral study. Three of them were not very satisfied with their current university or program. It is hard to ignore these women's challenges in their doctoral paths and the reasons behind their idea. It would be favorable to have more research to explore these group's voice. Moreover, it is better for university to provide academic counselors to help students identify their challenges and provide suggestions to solve their current difficulties, rather than letting these

⁵ This suggestion is inspired from one transcription in my CEAC's work in the School of Education in University of Pittsburgh.

students deal with struggles by themselves. If students could not get appropriate support from their original advisor, or if a previous advisor could not continue their role as an advisor, academic counselor or their previous advisor could recommend some proper candidates, just as Mary's previous advisor helping her know her advisor in her minor major.

Fifth, it is beneficial to improve doctoral students' academic confidence since some respondents faced or had encountered lack of confidence. Mary had imposter syndrome as a doctoral student for a period and questioned whether she was worthwhile and whether she was suitable for doing academic. Lydia shared "I don't think I'm very good at communicating with the teacher, that is, to contact the teacher and express my willingness to join his lab and be his research assistant, because I really feel that I still don't have enough, not qualify". It is also applied to Huang. Huang thought that if she was good at quantitative or qualitative method, some teachers would want her help to do some research.

Thus, to solve this problem, schools or programs could have a clear object of academic training and provide corresponding courses and resources to improve doctoral students' academic capabilities. Lele shared that at present many workshops in her university focused on how to be a teacher, or "how to avoid racial discrimination" and other topics related to social issues. Lele has hoped that the university can provide doctoral students with some resources and individuals they could consult with when they wrote papers, or the university can arrange some courses related to data analysis when they were in the stage of data analysis. Doctoral students also need guidance in their employment, when graduation is approaching, and students have to make a career choice. Revising resumes and mimicking interviews provided by the career center may not meet their needs, since they need major-based and profession-specific guidance as experienced by Leah.

Secondly, people's recognition from the same professional field could be doctoral students' encouragement, as for Dahai and Abigail, and mentors' support could help students recognize their self-value in academia, as for Mary. And more related research could help facilitate the value of female scientists being recognized, just as a paper published in Science in 2013 which identified the influence of female scientists in the team that was mentioned by Dahai.

Sixth, assistance could be supplied for recovery from the effect of the COVID pandemic. The COVID pandemic exerts a negative impact on some international students, such as psychological state and social relationships. Feng's roommate's adverse mental health problem during the pandemic also caused her PTSD. Absence of social relationships amplified Mary's emotion needs. In fact, several reasons bring about Chinese international students' difficulties during the COVID pandemic. Many international students physically stay away their family in their native country, while local students have more family connections. And it has exaggerated vacuum of social relationships for international students because of lockdown at the beginning of COVID-19, the threat of being infected, the widespread cautious attitudes towards the pandemic among Chinese people. It is likely to lead to isolation with others and affect mental health. Thus, it is necessary for the community and university to identify these international students' needs in mental health. For example, psychological counselling and workshops could be more available and accessible to these students. It is also advisable to cooperate with churches to support students in need, as Lydia and Lele received support from their church. Moreover, university could build bridges among students and break international students' social isolation. For instance, universities and schools could build various platforms for international students to meet each other. And it would be better to create chances for doctoral students to work and communicate together because

it is possible people lack peer pressure to motivate them in their academic paths as experienced by Hannah.

Seventh, language support could be provided. Language barrier for some women includes not only spoken English, but also English writing and presentation capability, such as how to translate research results to good papers for Leah and improve localized and precise expressions in presenting and writing for Dahai. Language courses, especially academic writing trainings, could be provided by universities and each school, which is beneficial for international students' publications, thesis writing and academic achievements.

6.4.2 Social Relationships

The suggestion to prepare women who may be in the similar situation in the future to have good social supports includes expanding social networks and adopting appropriate attitudes towards making friends. First, people could expand their social connections if they needed. Dahai needed advice for getting good interpersonal support and shared that people could contact her if someone was more introverted than her, and she understood the situation very well. For students with a little social anxiety, she has suggested them to try as much as possible to develop more hobbies that need others to do together. Feng has encouraged these women to participate in more activities, may meet more people and may find friends. Lydia has recommended to have a connection with local Chinese Christians, and Christians can give them a lot of help and support. Leah suggested that these women could try to have a good relationship with roommates and neighbors first, if they had no religious belief. On the advantageous side, the COVID pandemic

being in control in the United States and travel restriction being removed in China could increase social interactions with others in America. It could also enhance the chances of returning to China and reduce regrets caused by staying away from their native country, such as family, diverse recreational activities and food in China.

Second suggestion refers to personal attitudes toward making friends. It would be better to be open and make friends sincerely and actively. Leah has encouraged women to be more open in making friends and avoid having a strong sense of rejection towards others, including individuals they are not familiar with. People who have not been in contact with before and who may not be good friends as one think, may be more suitable to be one's friends. She also has suggested that it would be better to avoid having a strong purpose in making friends. For example, don't make friends with people because they take the same class and look smart. She has believed that the important factor in friendships is whether they value you enough and treat each other sincerely.

Moreover, there are strategies to handle with interpersonal interactions. Hannah has suggested people to find a good way to put it forward when facing conflicts, and do not suppress it to please others or avoid conflict, which would create hidden barrier in the relationship. It would be better to have a boundary when one interacts with others. According to the book Hannah was reading, people could set up a boundary from the beginning, and people would be free in the boundary. Without setting the boundary, others' crossing the boundary would cause people lack of freedom, and people would need to carefully explore each other's boundaries. Abigail felt that the core thing to have good interpersonal relationships with people is to have win-win mindset in the group, help each other during difficult times, be happy with each other's achievements, and get along with others with sincerity. Huang has suggested that individuals should avoid too much

influence from people surround and accusations of being isolated or abandoned by themselves if not proactively joining social activities as friends do.

Third suggestion is about having appropriate attitudes towards making friends from diverse culture. Individuals are encouraged to stay out of comfort zone to make friends from different backgrounds, if they are interested. Lydia thought if someone wants to integrate into the American cultural networks, it would be easier to take the initiative to understand their culture. Abigail shared that sometimes people could step outside of comfort zone a little bit and that experience is worthwhile. Stepping out of a familiar environment can feel like a challenge, but every challenge would stimulate growth in one aspect. We could also learn from Mary and Hannah who overcome cultural and language differences, because they have the same faith or similar academic or work paths with people from different cultural backgrounds. They also spend time together, have mutual understanding and support, sincere communication and love among their friendships. It would also be better to possess an open attitude to make friends as Leah, as well as putting aside many obstacles to assume that others might not be willing to understanding each other as Abigail mentioned. It is beneficial to understand culturally sensitive factors proactively. It could reduce social distances because of unfamiliarity of different culture taboos that brings about hesitation in Dahai's interactions with her Iranian classmate.

On the other side, it would be better for women to anticipate obstacles in culture and language adaption and to take a comfortable position in social relationships. Lele has recommended these women to be psychologically prepared, that is, they may not be able to integrate into their local environment. She has thought a doctoral student is a very mature person, and it is difficult to integrate into the local environment after going abroad. It is unnecessary to

think hard to fit into the local environment, and finding a familiar social group would be beneficial, especially at the beginning of coming to the U.S. At the same time, she has believed that people also need some challenging social groups, such as classmates and teachers, and need to maintain these relationships. Moreover, Huang's experience is to be comfortable in making friends. Don't push oneself too much, and just follow one's own character. Some people are willing to learn more about the culture, to make more American friends or friends from other countries, which is good. But if someone feels very painful and laborious in this process, there is no need to push oneself, although she sometimes regarded her similar behavior as not being very motivated. If one's comfort zone can also allow oneself to have growth, it is appropriate to stay in the comfort zone and not to push oneself to jump out of comfort zone to be uncomfortable from Huang's perspective. Thus, it is beneficial to understand others' culture and step outside of comfort zone to know others, while it is good to be prepared in the possibility of not fitting into local social groups. At the same time, it is unnecessary to fit into local social environment if too much difficulty. Even if one could not have good friends from different culture, one still could be content with her other social lives, as seen in the cases of Huang and Lele.

6.4.3 Marriage

Suggestions focus on individual attitudes, individual attempts to change the status of being single, and support from environment for single female doctoral international students in the future.

6.4.3.1 Individual Attitude & Attempt to Change Single Status

Independent thinking is significant under different marriage expectations. Women could build up one's own reliable value system, rather than letting others' judgments and labels in society control one's thoughts, based on the interview data. Women are likely to experiencing pressure from peers and family members due to being single. Abigail has believed that we usually do things as what most of the people around us or the social environment is doing, which brings secure. It is beneficial that individual cultivates more independent thinking and learn to focus on one's own path and avoid comparison with others' marriage status. Moreover, women are also suggested to figure out their own thoughts. Feng has recommended women to follow their own hearts and recognize personal needs. She has shared that if people do not know their preference, their attitudes towards marriage are easily influenced by others who placed pressure on them, like "you need to get married, or you have to get married. Look, all people are married, and you are the only one left. You can't get married". Huang has a similar idea. She has suggested women must figure out their own ideas first, and women's own emotion and state of mind are the most important things.

The exploration of personal life is also significant. Hannah's suggestion is women do not make choices only to object to what other people define women. Women can find out what the meaning of their lives are, build a priority, and then find a group of people who have the same priority as themselves. Women build a good relationship with them, which women can get a lot of emotional as more as spiritual support in lives. That could be beneficial for female doctoral students because being a PhD is very lonely and one must be mentally prepared from Hannah's perspective.

Second, suggestions are provided related to individual's attempts to change the status of being single. Lele personally has held that people under safe and appropriate circumstances could have a relationship that could contribute to dealing with the relationship between men and women later. If there is a suitable person, it is best to start the relationship to get related experience. Mary has shared that women could try to meet new people online and build a relationship if they are comfortable. She had several Chinese friends around her. Some were Christians and some were not. They may meet men on some American dating sites that were likely to be Christian-related. At least one couple who was married and the other was still in a romantic relationship, who met on the dating website. Their status broke her perception of blind date that she used to feel unreliable, and the men in these two couples were good. And Leah thought she was the person who need more help. Her advice is to observe single female friends over 30 years old and see whether they are active or passive to be single. If they are passively single, women can observe which traits of them lead to being single, and then avoid those traits. Then there may be some hopes of breaking the single status. She believed that sometimes a person is single for some reasons, possibly caused by themselves. Leah also felt that she had certain characteristics, which led to her being single, such as being too picky about men and always staying at home without chances to meet new people.

6.4.3.2 Support from Environment

Another suggestion is about where to get social support. Since some challenges for being single include a lack of social support and security, as well as loneliness for some women, it is necessary to help them to find support. Firstly, program could be offered to help women recognize

lies in culture and their own precious value by support from their community, university, church, online resources, and so on. Although negative gendered labels have been reduced in China, it does not vanish, and the impact still exist in some women's lives for a period, not only through social media, but also through people around. The negative labels are absorbed by some women and become their inner accusations for a period, as for Mary and Huang. It is appropriate for the environment to help these women some support to distinguish the lie from the truth. As Lydia has thought, there should be two types of women, one who regard being single as a problem, and the other who don't think being single is a problem. One group of women is influenced by many opinions in the society and may feel anxious if they are single. For this type of women, it would be beneficial to provide them with some counseling programs or various activities, in order to help them update this concept and realize that being single has many advantages and is not a problem. Besides, reliable activities could be held to increase single men and women's chances to know each other, because of limited candidates who meet spouse criteria for some women in their community and social groups.

Secondly, there are several advice for parents and things parents could know. The interview data reveals parents' importance in these women's lives. It is a blessing to have parents' support, such as parents' often being Huang's motivation and Lele's parents respecting her choice although they had concern. Parents also could be proud of their daughters, for cultural transition has shaped their daughters' valuable characteristics, such as being independent and diligent, and problem-solving capability. Moreover, in terms of some parents' marriage concerns, it is favorable to know their daughter will get married sooner or later. Even they did not get married, they have more social support from both the native country and the host country. Church also provided various

supports for Christians. Additionally, it is better for parents understand the fact that some women experienced lack of social support, pressure from environment and barriers to finding a husband due to being single. Parents' encouragement and understanding could be a blessing for their daughters, as well as talking with daughters, listening to daughters' sharing and trusting their decisions.

On the other side, parents also need their daughters' understanding and support. Parents have their take-for-granted assumptions about their children's marriage, career path and the like. If they did not experience "a disorienting dilemma" and always stayed in their fixed and gendered culture that marriage is indispensable, it is hard for them to change their suppositions. Daughters could adopt a thoughtful attitude to respond their parents' worries about their marriage. For instance, Hannah became more patient to explain her situation to her mother in love when her mom asked her "do you have a boyfriend".

Thirdly, friendship could be another support. Dahai has considered that women could invite sisters and buddies to hang out together and live one's life well without being afraid of being single. Another participant has recommended to build a single women's alliance. Others could help when needed and people could play together during the holidays. But she thought it may not be realistic, because ten women sometimes can't match a man. Moreover, it is beneficial to set aside things people value and have other relationships. Mary has suggested to leave our own purpose aside, no matter what kind of purpose, such as finding a boyfriend, or considering that the spouse in the future would be people with the same faith. Although these purposes are very important, people can put them aside for a while, and build friendships, to meet people, to experience fellowship, and relationships. So far, she had not found a boyfriend, had rejected someone's

affection before, and had struggled and doubted herself. But she felt that, instead of looking for intimacy for the sake of intimacy, what God is calling us into a true relationship with people in the Holy Spirit. In addition, individuals with similar struggles before may provide advice to people in marriage-related difficulties. For example, suggestions are needed, such as Mary's confusion about how to initiate the relationship. On the other hand, doctoral students are encouraged to pay no attention to others' gendered judgment as Dahai. And if it is hard to ignore and hard to change macrosystem immediately, people could change their microsystem, that is, choosing friends or groups without negative judgments as to Lele and Mary.

Fourthly, living in the United States could relatively stay away from gendered culture and create a buffer space from family marriage expectations and peer pressure in China. And American culture holds friendly attitudes toward highly educational women in marriage from Huang's and Mary's sharing. Being engaged in American cultural could be a way to reduce the influence of Chinese culture. On the other side, it would be beneficial that Chinese culture could be changed that high educational achievements for women are regarded as the source of pressure in marriage. More research and workshops could be held to facilitate these women's stories to be heard, which could break the prejudice and made their stories to be understood and supported. Fourthly, people could find support in church. Lydia suggested that single female doctoral student could also come to a Chinese church, meet more friends, and have various support. In fact, Hannah and Mary received mentor' support related to marriage from their church. Moreover, Christians could lay their stress on God and pray about their struggle, as for Mary recognizing lies through bringing accusations to God.

Fifthly, there is one piece of advice for these women's future husbands. It is appropriate for their future husbands to appreciate the value of these women and recognize how lucky they are to marry such wonderful women who have high educational achievements, and are intelligent; who are bilingual, employable and capable of working anywhere in the world due to their experience in cultural transition; who possess valuable characteristics, such as perseverance for not quitting the program as Leah and pressure resistance as Huang; who master the capability of independently living, the ability to protect her rights as Dahai, as well as the capacity for independent thinking, such as finding the right life partner without compromising as Lele.

6.4.4 Religion

The suggestions related to adapting to different religious and faith environment include personal attitude women could hold, social support they could seek, cautious attitude they should have toward cult.

6.4.4.1 Attitude

First, it is recommended to maintain tolerance and openness, follow one's own heart, be cool-headed and positive to challenge. For religious environments, the difference exists in terms of access to religion, religious and faith life and political support, while similarity also exists. It is possible that one may experience difference between Christianity and the theory of evolution as Lydia. Christians may experience the difference among the value held in faith, the academic field, and cultural environment as experienced by Abigail. It is possible to experience faith

transformation as for Lydia, finding a more suitable church as for Hannah or faith struggle as for Leah. It is also possible that there is no challenge in different religious environment as Feng and Huang or no chance to be invited to a religious activity as Dahai. People's experience in different religious environment varies.

Being open and allowing difference would be favorable. Dahai shared that no matter what faith someone has, she would respect and be willing to interact without any discrimination. She has believed that in normal contacts, there are some issues that do not need to be paid much attention to, and it is advisable to allow the difference to exist and keep one's most important part, which is consistent with friends'. Lydia has recommended they should be open and tolerant, rather than having a hostile and confrontational attitude.

Secondly, women could explore their heart and express their thought courageously. Lele has recommended these women to follow their own heart. In the face of environmental changes, cultural differences, and many differences in religion, she recommended that individuals think clearly about what they want and follow their own heart. Following one's heart does not mean that an individual should treat a culture and belief that one has never experienced with a very critical thought. More importantly, individuals need to look at other people's beliefs and culture with an open and inclusive attitude and accept the challenges from the environment. No matter which faith one chooses, one must accept it in the most suitable and comfortable state and their choice is based on one's heart. She suggested not to choose a faith or religion because of the benefit the religion could bring in terms of identity or other aspect. For women who have no faith like her and have friends with faith, Huang has suggested that it is very good to get access to different things if

someone is willing to join faith-related activities; if someone is like her, don't be embarrassed to refuse the invitation, since it is a personal choice.

Thirdly, women could hold a calm and positive attitude toward the challenge. Leah has suggested individuals to remain calm, restrained, and not lose their judgment. When an individual suspects something related to religion, they don't have to argue fiercely with others and don't have to take immediate actions. One can continue doubting and spending more time exploring the answer. On the other hand, if one feels that religion and faith is of little significance to her, or the current living situation is better, one can selectively ignore difference of religious environments. If one really feels that this problem complicate one's life and future choice, Leah has suggested that one can think about it. Furthermore, one can embrace the challenges and develop wisdom in the face of challenges. Abigail thought it's good to have challenges sometimes, because an individual cannot make a progress without challenges and would lack opportunities to think or verify their beliefs. Especially in a challenging environment, individuals can learn how to deal with them, and their wisdom also grows in the process from her perspective.

Fourth suggestion is to beware of cult and heresy. For instance, Hannah advises women to meet different people and be careful, since some religions in America are cults and heresies. Women should be mindful of its teachings, probably not just by what they say, but by how they do it, and then get involved and see what their lives are like. If women feel that something is not right and their explanations do not make sense, women should try their best to leave.

6.4.4.2 Social Support

Women are encouraged to seek help from groups and individuals and explore the meaning of life. Abigail encourages women not to be afraid to ask. Many people face the same problem and could support each other in a community. Hannah has recommended individuals to search for the meaning of life. When they find it, they would know what kind of people to associate with is most in line with their definition of the meaning of life. Mary has suggested women to be comfortable to be themselves. But when they encounter some very difficult and urgent situations, she has reminded these women that there is a very friendly environment outside to reach out, and self-destruction is not the only option. If these women are happy, comfortable, or content, they do not necessarily need to explore the outside world. But people sometimes encounter some difficulties, because they do not have connections, whether emotional and relational, which exaggerates difficulties. For example, one thing she thought was difficult before was outdoor activities. She almost refused any outdoor activities in her first year, such as hiking, camping, skiing, canoeing, and rafting, because she was a very uncoordinated and clumsy person and was easily injured. Her explanation was that she had to study, had too many classes, and she did not like it. But she found later the reality was, she was afraid of being sick while lacking close friends and family to take care of her.

"But this year I explored, and I found out that it was because I really didn't dare to get sick. If I got sick, especially if, for example, I twisted my ankle twice this summer, and then I had problems with my retinal, this kind of disease would cause troubles for others. But I did not have a relationship that was close enough that I could bother others in my first year. I think people who were close enough she could seek help weren't around me. Then I think

the thing maybe I want to talk to other women is, if one day you really have the same feeling that there is no relationship around me close enough to seek help and my life is lonely to a degree. That kind of loneliness is a deep loneliness, and you could not really connect to others emotionally and relationally. I think the encouragement I want to give is that the situation is not like that. If you really feel that you really need some emotional and relational connections, go out of your current comfort zone, you you will meet a lot of beautiful people who are different from you, but who can also build emotional, emotional and relational connections with you.”

Faith plays the positive role in many Christians’ lives, such as helping survive under tight schedules as for Lydia, providing community support for Hannah, helping relationship reconciliation and handling with pressure for Mary, providing protection in conflict in intimate relationship for Lele, and provide security in marriage for Lydia. Based on their sharings, Christians could always seek help from faith and non-Christian also could if one is willing.

6.5 Conclusion

I am confident in drawing conclusions for these participants, despite having a small sample size in this research. I had the opportunity to worked closely with each participant, conducting two interviews that were audio-recorded to make sure accurate recall of the information they provided. Moreover, direct quotations and paraphrasing statements directly drawn from interviews in English and corresponding parts in Chinese, as well as the majority of interview summaries were

shared with participants after completing the draft of my dissertation. Thirdly, interviews were primarily conducted in Mandarin Chinese and using native language could allow participants to express their opinions more easily and precisely. Fourth, many of participants were open and honest about their weakness and challenges, such as funding issues. These actions enhanced the accuracy of reflecting participants' sharing and experiences (Rehman & Azam Roomi, 2012). As a result, I have confidence in sharing my insights about their struggles and strengths with depth and authority.

6.5.1 Importance of Theoretical Framework

The theoretical framework in this research, a combination of TLT and EST, play an important role in data analysis. TLT, as a proper means, investigates the complicated process of international students' struggles and changes during cultural transitions. For instance, Lydia's taken-for-granted frame of reference (Mezirow, 2000) related to the theory of evolution conflicted with Christianity and she pondered whether Christianity was a superstition. At the same time, she experienced friendly attitude from Christians at the beginning of her study abroad. However, this gap in faith did not trigger her moving into the stage of "exploration of options for new roles, relationships, and actions" (Mezirow, 2000, p. 22). What did trigger her transformative learning were the American election, the societal split, the weakness of human nature and the like that she witnessed from the second half of 2020 to the first half of 2021. This seems to have brought about "a critical assessment of assumptions" (Mezirow, 2000, p. 22). These phenomena led her to ponder in which status the human society should be. She figured out that people should believe in God

and should pursue the goodness that she saw in Christians. Thus, she took action and contacted her current church through previous friends and decided to follow Jesus during one home visit of Christians. Her taken-for-granted frame of reference was transformed (Mezirow, 2000) during cultural transition. Thus, her cross-cultural experiences provided chances to initiate transformative learning. TLT was able to help me identify different stages of this woman's transformative learning.

Time is a core value of EST and TLT. EST emphasizes change or constancy in the course of time not only in individual's personality but also the circumstance in which individual lives (Bronfenbrenner, 1994). TLT also values individual's transformative learning over time. In fact, the change over time is not only reflected in Lydia's change in her faith but also in the context in which Lydia lived.

On the other hand, the disadvantage of TLT lies in its inability to fully uncover the complex influence of environmental factors. Its concentration is individualistic pattern and the process of people learning to interact based on their own goal and values (Mezirow, 2012). Although the theory has gradually realize the significance of environment and relationships with others, it has not examined comprehensively the impact of social and emotional elements on transformative learning (Jokikokko, 2009). In fact, these women are not isolated from their circumstances, which may align with or be against, enhance or discourage their own perspectives, or trigger women's transformative learning. EST helps sort out the messiness of complicated and entangled factors in global education (Bronfenbrenner, 1996, 1977). With the support of EST, it is easy to identify the impact of ecological system from microsystem to macrosystem on these women. For instance, microsystem, such as family members and previous classmates in China and advisors and cohorts

in the United States, exerts an important influence on these women's academic life and career path. EST also helps sort out different factors in exosystem, including faith-related teaching and the impact of the COVID pandemic, in terms of these participants' marriage expectations, for example. It also categorizes agents in macrosystem of religious and faith environment, such as religious policy and the proportion of people with religion. Thus, the messiness of complicated and entangled factors in these women's lives was sorted out (Bronfenbrenner, 1996, 1977) with the assistance of EST. This theory thus contributes to understanding female doctoral students' stories.

Second, the findings confirm the revision of framework to include ecological system in the native country is appropriate. One point that is not emphasized enough in both TLT and EST is the constant influence of international students' native culture, as well as their continuous interactions with social networks and online information in their native countries. Individuals cannot be isolated from their cultural foundation, experiences, and social circumstances (Johnson-Bailey, 2012). As interview data shows, the Internet reduces dramatically the distances among people, between countries, and from native culture. For instance, Lele commented that although they were not able to meet family and friends in China physically, people were able to see each other through WeChat. Feng could get access to online information in China, such as gendered information about a good wife for man in Hupu Forum. Ecological system in the native country constantly impacts the lives of single Chinese female doctoral students in the United States.

At the same time, the data shows that the influence of native culture and network is not limited to native country. In fact, Chinese relationships and culture are across the boundary and have been built up in the U.S. First, the large number of Chinese international students in the U.S.

allows some women stay in the comfort zone of Chinese culture and reduce challenges during cultural transition. Huang's friends who gave her belonging may still be friends related to China. Some of them were Chinese in the U.S who may live in the same place or have the same classes before. Moreover, not only Chinese friends in the U.S. provide bounding, but also Chinese church. For instance, despite different religious and faith environments, Lele felt no big difficulty because of staying in a Chinese church and no difference of the church in China and America in terms of faith. Mary had Christian friends from Chinese church who would trust her unconditionally and would prioritize her if some emergencies happened to her. Thus, Chinese friends, church and culture in the U.S. are still important parts of participants' lives, and the influence of native culture is extended to host country and continuously impacts some Chinese international students.

Third, interview questions in this research reflect the characteristics of TLT and EST. Time is an essential element of EST and TLT. In this study, I emphasize the factor of time in interview instrument design. It is necessary to consider changes in the long term of PhD program, which are explicit in some interview questions, such as "describe the things you have encountered in your studies and academic pandemic that make you happy or proud during different periods of your doctoral study". Moreover, instead of only reviewing these women's current situation, questions are designed to explore participants' previous experience and its impact, such as "did your previous experience make it easy for you to start your doctoral study in USA," and "before your doctoral study, did you have any faith (such as atheism, Christian, Buddhism, Confucianism)." Digging into experiences before studying abroad could contribute to identifying the pattern of participants' previous mindset and reasons behind their choices.

Moreover, transformative learning refers to “a process of examining, questioning, and revising perceptions” (Cranton & Taylor, 2012, p. 5). Several interview questions could help to review the process of transformative learning. For example, one set of questions assists in discovering the stages of an individual’s “disorienting dilemma” and reaction, “describ[ing] challenges you have in interpersonal relationships during different periods of your doctoral study. How do you deal with the challenge? How did these experiences affect you?”

In addition, EST places emphasis on the process of individual development that is affected by relationships within and between immediate environments and the larger social settings (Bronfenbrenner, 1996, 1977). Interview questions also aim to investigate the interaction between individuals and environment, such as “in these dilemmas and challenges, who or which things have helped you a lot?” Moreover, interview questions not only cover an individual’s microsystem, such as “what are the expectations of your marriage from family, friends, and the group you belong to in China and U.S.?”, but also macrosystem, such as “based on your knowledge, what are the similarities and differences of cultural expectations about marriage for women in China and in the United States?” Therefore, interview instrument in this study embodies the features of TLT and EST and helps explore participants’ changes and interactions with ecological systems over the course of their doctoral studies.

6.5.2 Importance of Phenomenology

Using phenomenology turns out well. First, phenomenology is an effort to describe the essential structures of human experience and understanding from a first-person point of view

(Merleau-Ponty, 2012; Stanage, 1987). Phenomenologists have proposed methods to put aside their own influence and focus on analyzing participants' sharing. Under this context, after finishing the draft of the dissertation, I sent direct quotations and paraphrasing directly drawn from interviews in English and corresponding parts in Chinese, as well as the majority of interview summaries to participants. It improved the accuracy of participants' sharing and reducing my influence (Rehman & Azam Roomi, 2012) in the dissertation. In order to increase feedbacks from participants, I tried to check whether the participant had any feedback twice. The second attempt was around one week later after the first attempt. Six participants gave feedbacks, which were beneficial for data accurateness. Thus, I gained another chance to know and understand participants' stories, viewpoints, and concerns. Furthermore, instead of one interview for each participant, nine participants received two interviews. It allowed participants to have more time to ponder their experience and allowed me to get more details of their stories in two interviews.

Second, phenomenology valued the significance of reflection on the participant' experiences of situations and clarify lived meanings by the researcher (Wertz, 2011). I have collected and examined female doctoral students' experiences in detail, including what those experience were, the circumstance and conditions in which they happened, and what their possible meanings are (Moustakas, 1994). For instance, in terms of academic lives, I compared their previous motivations to study in the U.S. and previous lives in China or before doctoral studies, with their stories during doctoral studies, which gave rise to a clear picture of which motivation they achieved, which one they failed to achieve, which plans and perspectives they have changed, what improvements they have made and what characters they have developed, as well as what parts struggled them or cheered them up. Their lived experiences were more understandable and

accessible for audiences and me. Moreover, phenomenology empowers the participants to explore the vast reaches of their conscious lives (Stanage, 1987). I asked participants about their previous expectations, as well as the details of their experiences and their interactions with different systems. This allowed for the complexity of their lived experiences be readily disclosed.

Third, there are two suggestions for phenomenological research. Inviting people from participants' ecological systems to share their stories could help disclose respondents *Phenomenology* stresses lived experience (Aagaard, 2017), along with individuals' own interpretations of these experiences (Patton, 2002) instead of the researchers' interpretations, as well as the whole account of their experiences (Moustakas, 1994). Participants played an essential part in the process of discovering their own experiences and empowering their own evaluations. Phenomenology helps disclose individual's true story with reducing the researchers' influence and provides opportunities of hearing participants' voice. However, there is one limitation of valuing one's own interpretations. It is possible people review their lived experience from their own standpoint and without a holistic and objective perspective. People may hold different attitudes towards the same thing from family members, friends, colleagues, bosses, and the like. It is advisable to recruit people from participants' ecological systems to share their related stories and viewpoints⁶, which may give audience the whole picture of participants' experiences. For instance, interview data revealed family, especially parents, still play a significant role in female doctors' lives. Inviting participants' parents to share their expectations and attitudes towards their

⁶ This suggestion is inspired from one talking with my previous teacher.

daughters' choices in career and marriage, which may make the audience easily understand participants' stories and family's influence. Second, it is also appropriate to have follow-up interview after these women's graduation. When people experience different things, they may change their interpretations towards the same thing. For instance, many participants went through academic challenges, such as funding and interpersonal relationship issues. Some struggles even brought about self-doubt. These challenges could be a blessing when they enter the workplace and find that these challenges have shape their personality, such as persistence and the ability to solve problems, and help them easily adapt to challenges in work. It is also possible that some challenges gave rise to negative impacts that continuously influence their life. Thus, it is advisable to recruit people in respondents' ecological systems into the research and have a follow-up data collection to understand these women's stories.

6.5.3 Insights from this Research

There are several insights I would like to share with audience. Participants in this study have amazing stories and characteristics that help gain more understanding of these group of women. In fact, there were many difficulties and regrets in these women's doctoral studies. Their regrets in academic areas are various, including conflicts with mentors and a senior student and health issue. Their happiness could be the changes from incapability and dependence on others to independence and being proficient as Leah, from lacking confidence to teach to gradually enjoying her teaching job as Lele, from being reluctant to sharing opinions to being more willing for Huang. Furthermore, many participants were straightforward and frank about their struggles, such as

conflict with the advisor and depressing experiences. Their willingness to share provides chances for others to glimpse difficulties and happiness of this group of women. Additionally, some participants held very positive attitudes to solve their difficulties. For instance, Dahai's way of dealing with loneliness includes participating in this study and chatting with me.

The second insight is about some crucial themes of their stories. Experiences in the context of cultural transitions play a positive role in their lives. Some participants undergo a transition from being interdependent to becoming more independent during cultural transitions. For instance, Huang might seek help from friends in the past, but she has solved many things on her own. While in China, Leah had been living in a group environment for many years and rarely dealt with things alone. However, in America, she spends most of her time alone. Dahai has become more willing to express her demands and needs, whereas in the past, she may have been less inclined to engage in arguments with others. Moreover, these women gradually develop a deeper understanding of themselves and their needs in marriage, and their previous assumptions about matrimony have changed a lot. For instance, Abigail gradually realized that as a student, she was still in a relatively unstable stage and might expect to consider marriage after graduation, when there was a relatively stable environment and a more stable job. Huang's anxiety in finding a husband was reduced. She no longer insisted on finding a partner and accepted of being single if she tried her best but couldn't find a satisfactory partner. Lele's experience made her be more cautious in her interactions with men, while Dahai has come to believe that living alone may be more suitable for her.

On the other side, they went through many difficulties, such as funding and language issues, the difficulty to make friends from different culture, and faith conflict, as well as having many things to be proud of and cheer them up. They also receive some negative gendered labels,

including the third gender and leftover women and attempted to survive through these stereotypes. Furthermore, Mary mentioned “a deep loneliness” she experienced before when giving advice to prepare women who may be in different religious environments in the future. She described the feeling people “could not really connect to others emotionally and relationally” and no relationship was intimate enough to seek assistance and the level of loneliness reached to a deep degree. From my perspective, this feeling may be common among many international students, and it may appear anytime during doctoral studies. For instance, when students initially study abroad, they transition from a familiar environment in China with deep social connections to an unfamiliar context with limited close social networks. Many international students have to rely on themselves to tackle challenges in academics and their daily lives. It is also possible for this deep loneliness to emerge when they fail to develop close relationships or their intimate friends leave, even if they stay for a period in the U.S. Huang once worried about not being able to make friends, and not everyone was willing to befriend her despite her efforts to make friends with Chinese classmates. Some individuals are also afraid to step out of their comfort zones and interacting with others, limiting their opportunities to make new friends. Moreover, the COVID-19 pandemic has led to a decline in personal interactions and increased isolation. Finding ways to break social isolation and reduce the chance of experiencing deep loneliness can be a challenging issue for many international doctoral students.

However, challenges can sometimes also become a source of strength. Some participants overcame isolation and developed close social relationships. For example, although Mary felt isolated and not comfortable in different social contexts during her first year. By this year, her circle of friends consisted of people from various culture. She gradually accepted her identity as

an international individual. In addition, these women receive support not only from social connections in the U.S., but also from family and friends in their native country.

Additionally, physical distance does not isolate women from the influence of agents in their native country. The interview data reveals that parents and other family members, previous classmates, friends, pastors, and acquaintances from China still play a role in the participants' academic microsystem. Furthermore, women's ecological systems in relation to marriage expectations are more personal. Parents and other family member serve as the primary source within the microsystem in China. Macrosystem, including cultural patterns and online information in China, also holds substantial influence. Additionally, both microsystem and macrosystem exist within the religious and faith ecological system, encompassing elements such as family, religious policies, and proportion of individuals with faith.

The third insight is that these women hold great importance in society. Firstly, doctoral students play a significant role across various fields. Bernstein (2011, as cited in Holmes et al., 2015) revealed students with the research doctorate or PhD are considered as having high potential to become future world leaders. PhD graduates are equipped for careers in academia as well as diverse fields such as business and government. Manning (2021) emphasized the vital role of scientists and researchers, including postgraduates, in pushing the boundaries of science. However, retaining women in PhD programs remains a challenge in higher education (B. D. Holmes et al., 2015). Given the significance of the work done by doctoral students and the retention issue specifically for female doctoral students, it is crucial to explore the struggles experienced by these women during doctoral studies and identifying ways to support them. Moreover, female Chinese international PhD students, as a subset of female doctoral students, also hold importance in society

and serve as role models for individuals considering study abroad. In fact, this group of doctoral students not only faces challenges commonly encountered by their peers, but also encounters difficulties during cultural transitions and under gendered culture. Limited knowledge about these women's stories could easily lead to misunderstanding and stereotypes. It is indispensable to have more research to investigate these women's stories and help them overcome difficulties and thrive in their doctoral studies.

The fourth insight the contributions of this research. I attempt to identify aspects of women's experiences that have been silenced and unnamed, thereby bringing these women's experience and related terms into public discourse. This endeavor provides foundations for expressing complaints, making argument and taking actions (Kirsch, 1999). By shedding light on their experiences, this research allows more people to understand these women. It also enables the development of more effective and efficient strategies that agencies and institutions can adopt to empower these women during cross-cultural transitions.

This study discloses these women's stories from a holistic perspective. In fact, culture encompasses diverse and varied meanings and contents. In an attempt to categorize culture, Porter and Samovar (1994) proposed three categories: artifacts; concepts (which include such beliefs or value systems as right or wrong, God and man, ethics, and the general meaning of life); and behaviors (p. 11). International students often encounter multiple cultural transitions that extend beyond academic areas and social relationships. According to Porter and Samovar (1994)'s categories, these transitions encompass artifacts, value systems, beliefs about God and humans, the meaning of life, behaviors, and more. The significance of this study lies in its examination of the completeness and integrity of international students' lives in the host country. This research

provides a comprehensive glimpse into the stories of these women, showcasing their experiences to survive and thrive across academic areas, social relationships, marriage expectations and religious environments.

The theoretical framework is beneficial for these women's stories to be heard. TLT helps explore the complicated process of international students' struggle and role exploration during cultural transitions. The complicated and entangled factors in these women's lives is sorted out (Bronfenbrenner, 1996, 1977) with the assistance of EST. Using phenomenology also facilitates participants' self-evaluation and reflection on their experience (Hill et al., 2015) and allow participants to speak for themselves without hesitation. Thus, the combination of EST and TLT, as well as phenomenological method, facilitate the investigation in this study.

6.5.4 Suggestions for Women and Future Projects

It is crucial to assist these women in gaining confidence, as some respondents faced or had encountered a lack of confidence. For instance, Mary had imposter syndrome as a doctoral student for a period and questioned whether she was worthwhile and whether she was suitable for doing academic. Lydia shared "I don't think I'm very good at communicating with the teacher, that is, to contact the teacher and express my willingness to join his lab and his research assistant, because I really feel that I still don't have enough, not qualify".

There are several ways for these women to gain confidence. It is crucial for them to recognize their own significance, not only in terms of their contribution to academia, but also because of their remarkable experiences as single female Chinese international doctoral students

who have thrived and overcome numerous challenges. The interview data demonstrates that these challenges have not defeat them, but instead have shaped their tenacious and admirable characteristics, such as persistence, diligence, and problem-solving abilities. Moreover, their ability to navigate and survive during the COVID-19 pandemic, with limited social opportunities and restricted travel that hindered their ability to meet with family and friends in China, further exemplifies their incredible strength and resilience.

Secondly, community support plays a crucial role in building these women's confidence. Within the academic ecological system, Individuals, such as advisors and fellow students, could provide valuable support. Advisors, for example, should recognize their pivotal role in these women's studies, acknowledge their advisees' hardship during cultural transition, appreciate students' progress and achievements in academia, as well as giving them more encouragement, because advisors' affirmation holds great importance for doctoral students. Moreover, universities and communities should provide more psychological counselling and emotional support to students in need. Feng brought forth an issue about how an international student can maintain good mental and psychological well-being during the pandemic. It is imperative to help individuals overcome the negative impacts caused by the COVID-19 pandemic and foster reconnection with others. Simultaneously, various agents, such as schools and universities, should provide chances for international students to engage with other scholars in different academic fields because of the importance of academic community support. For instance, Abigail's close friends within her PhD community can give suggestions to each other when they encountered similar problems or confusion. Creating avenues for these students to connect with peers provides a valuable support network.

Except academic social relationship, it is vital to create opportunities for these women's interactions with individuals from different cultural backgrounds and to provide workshops to introduce characteristics and rules of different culture, which help students engage with individuals from different culture. In fact, many participants were willing to making friends with people from different cultural backgrounds, however, some people seem fail to have close relationships or fit in group. For instance, Dahai was afraid that something might be cultural taboo during her communication with an Iranian classmate. Lele found communication with teachers in the U.S. basically focus on the work, while chatting with teachers and classmates in China would easily talk about personal affairs. More knowledge about different culture, thus, can help Dahai in her interaction with her Iranian classmate and better international students' understanding of communication boundaries in the U.S.

Thirdly, there are several ways to reduce the negative influence of gendered culture and gain confidence when women are single. As a response to challenges in marriage, one could choose friends or groups without negative judgment as Mary and distinguish truth and lies as Huang. As Abigail has suggested one learns to concentrate on one's path and avoids comparison with others' marriage status, women should learn how to enjoy their own lives. Furthermore, one can receive support from friends as Huang and from faith and church as Lele. It would also be a blessing if parents could try to understand their daughter's status of being single and give more support, rather than pushing their daughter toward marriage. Additionally, living in American cultural environment could create a buffer zone and decrease gendered influence from China. For instance, various attitudes towards marriage existed in Mary's fellowship, which was a big breakthrough for her, while people in her previous fellowship under a Chinese church she committed to in her

master's program recognized, accepted, or showed a strong sense of anxiety. Huang shared American macro environment was generally friendly to an unmarried young woman like her over certain age.

Fourthly, it is apposite to know that some international doctoral students would experience challenges or confusion as some participants. For instance, the difference of sharing in Christianity and the theory of evolution at the beginning of studying abroad brought about confusion for Lydia. Conflict existed for Abigail among faith-guided value, and perspectives in her academic community and widespread viewpoints about work and social science topics. It is also important to know that conflicts could also be a blessing, although it is not an easy task. For instance, Abigail's conflict would lead her to think more about her beliefs and how to face the conflict. She had been struggling in this area, seemed to have overcome these challenges, may find it difficult and new problems appeared, which had been reciprocated. What're more, based on the significance of faith in many Christian participants' lives, Christians can seek help from church when study abroad. For example, Mary had many friends. Her actual needs, or some emotional, psychological, physical needs, were really met in time, and she knew she had family here.

At the same time, there are several suggestions for future research. First, it could involve more participants to figure out common themes among these women. Second, it would be interesting to recruit both doctoral students who persist in completing their program and those who choose to quit. In this study, four participants wanted to change university or majors, if given the chance to restart their doctoral studies, but none of them quitted. It is worthwhile to investigate the reasons behind women's insistence in their doctoral studies and the factors leading to some

women's decision to quit. Understanding the highs and lows experienced by these women would be beneficial in providing better support for them.

Appendix A Interview Instrument

Demographic Information: Age (year); the year of being enrolled in doctoral program; the school or college they are enrolled in; Do you have a boyfriend; Are you now located in the United States

Academic pandemic

1. What were your motivations to study in USA?
2. Did your previous experience make it easy for you to start your doctoral study in USA?
How these experiences work for your doctoral study?
3. Are there any differences between China and the United States in terms of academic pandemic? Did these differences affect your doctoral study in the United States?
4. Describe the things you have encountered in your studies and academic pandemic that make you happy or proud during different periods of your doctoral study.
5. Describe major dilemmas and challenges in academic pandemic during different periods of doctoral study. How do you face these difficulties or challenges?
6. After you were enrolled in your doctoral program, what are others' expectations about your roles as a doctoral student? What are your own expectations? How do you react to these expectations?
7. In these dilemmas and challenges, who or which things have helped you a lot?
8. How did these experiences affect you?
9. Where would you like to get more help?

10. If you were given the opportunity to restart your doctoral study, would you wish for something different?

11. Do you have any suggestion to prepare women who may be enrolled in international doctoral programs in the future?

Social Relationships

1. During your doctoral study, have you ever been bothered because of distance from family and friends in China?
2. Is there any gap between your previous experiences about interpersonal interactions in China and your experiences in the United States (such as interaction with colleagues, classmates, the group you belong, advisor, friends, family, and university)?
3. Describe the things that make you happy in your personal relationships during different periods of your doctoral study.
4. In the United States, do you have a group that allows you to have a sense of belonging, friends that you meet frequently (Kliem et al., 2015) or friends that you often contact online? If so, why did you connect with each other? If not, do you wish to have more friends? What kind of friends are you looking forward to?
5. Describe challenges you have in interpersonal relationships during different periods of your doctoral study. How do you deal with the challenge? How did these experiences affect you?
6. Is it a challenge to make friends with people of different cultural backgrounds in the U.S.?
7. What suggestions do you have to prepare women who may be in the similar situation in the future to have good social supports?

Marriage Expectations

1. What were your previous expectations about your marriage before you started your doctoral study in USA? For example, the ideal time to get marry and the ideal husband.
2. Have your expectations about marriage changed during different periods of doctoral study? If yes, what are the changes and what cause your expectations change?
3. Describe the challenges you have because of being single/unmarried in different periods of doctoral study and how you react to the challenges.
4. What are the expectations of your marriage from family, friends, and the group you belong to in China and U.S.? How do expectations from others affect you?
5. Based on your knowledge, what are the similarities and differences of cultural expectations about marriage for women (such as the appropriate time for marriage; the freedom in marriage; the role of parents in children's marriage) in China and in the United States?
 - a. Do the different cultural expectations about marriage impact you?
6. Have you ever received negative labels or misunderstanding because of your feminine identity, being single or your educational attainment?
 - a. In your opinion, does high educational achievement influence women's finding husband in China?
 - b. In China, female doctoral students in China are regarded as a "third gender" in addition to male and female (Kuo, 2014). Have you ever heard about the labels of the "third gender" and "leftover women (Shengnü)"? If yes, did these labels influence you?
7. In these difficulties and challenges, who or which things have helped you a lot?
8. How did these experiences change you?
9. Are you satisfied with your status of being single?

10. What kind of support you hope you could get in order to help you go through challenges related to being single/unmarried?
11. Do you have any suggestion to prepare women who may be in the similar situation in the future?

Religious Environments

1. Before your doctoral study, did you have any faith (such as atheism, Christian, Buddhism, Confucianism)? If yes, could you talk about your faith?
2. Based on your experiences now, what are the similarities and the differences of religious environments in China and in the United States?
3. Have you ever been invited to join religious activities? If yes, what was your feeling about the invitation? Why did you have these feelings?
4. Have you ever joined religious activities during your study here?
 - a. If yes, what motivated you to join them? How about your experience?
5. Do the differences in religious environments bring about cultural shocks, challenges, or misunderstandings during different periods of doctoral study? How do you react to it?
6. Do you explore new roles, relationships and actions to deal with cultural shocks, challenges, or misunderstanding?
7. How do your experiences in different religious backgrounds affect you?
8. What kind of support you wish you could get in order to help you go through these challenges related to religious environment?
9. Do you have any suggestion to prepare women who may be in different religious environments in the future?

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