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IMPACT OF STRESSORS AND RESILIENCE ON DEPRESSION AND

PSYCHOLOGICAL WELLBEING OF ASIAN INTERNATIONAL STUDENTS

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Abstract

The purpose of the study was to examine the effects of stressors (i.e., academic pressure, language difficulty, cultural adjustment, concerns about finance, and interpersonal stress) and mental health outcomes (i.e., psychological wellbeing and depression) in Asian international students. The study also examined the moderating effects of resilience elements (i.e., individual assets, resources) between stressors and mental health outcomes of the students. The sample included in the current study was 197 Asian international students with student visas (e.g., F-1, J-1), enrolled in higher education institutions in the US. Data analyses included descriptive statistics, independent t-tests, and one-way ANOVA, and hierarchical multiple linear regression analyses. The results demonstrated a significant positive association between stressors (academic pressure, concerns about finance, and interpersonal stress) and depression, and a significant negative association between stressors (academic pressure, language difficulty, cultural adjustment, and interpersonal stress) and psychological wellbeing. The results did not support the moderating effects of resilience (i.e., individual assets, resources) between stressors and mental health outcomes. A discussion of these results; implications for counselors, counselor educators, and higher education professionals; limitations and strengths of the study; and recommendations for future research are provided.

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CHAPTER 1: INTRODUCTION

Background of the Study

The number of international students in the US has increased dramatically in recent years. The latest statistics available show the number of international students was at 1,078,822 in the 2016/17 academic year, which reflects an increment of 3.4% over the previous year (Institute of International Education, 2017). This trend is opposite to the total US undergraduate enrollment trend, which decreased 9.3 percent between 2010 and 2016 (National Center for Education Statistics, 2018). The number of international students is increasing, while the number of US undergraduate students is decreasing. Asian international students deserve special attention within the growing number of international students enrolled in higher education institutions because they represent more than 60% of the total number of international students. The majority of international students come from China, India, and South Korea (Institute of International Education, 2017).

International students from Asian cultures have different worldviews, values, and behaviors than White students in the US (Sue & Sue, 2016). The cultural differences often times create adjustment issues for these students (Yang & Clum, 1995; Sue & Sue, 2016). The shifting from one culture to another culture brings unique difficulties for Asian international students, compared to US students. Language barriers, homesickness, and acculturative stress are some of the unique difficulties reported in studies of international students (Mesidor & Sly, 2016; Yakunina, Weigold, Weigold, Hercegovac, & Elsayed, 2013). International students also struggle to work with unfamiliar systems or finding the resources that they may need (Smith & Khawaja, 2011). In addition, their mental health may be impacted by their acculturative issues.

The stressors mentioned above affect adjustment to college in various ways (Mesidor & Sly, 2016). To achieve a successful adjustment to college, students need to achieve academically, gain a good personal-emotional balance, and establish positive social relationships (Baker & Siryk, 1984). Unfortunately, oftentimes those needs are unmet, and difficulties go unnoticed because Asian international students are viewed as a "model minority," whereby they may be assumed to achieve academic success and encounter very little psychological distress (Chiu & Ring, 1998).

One of the important values of Asian international students is conformity to family and social norms and expectations (Kim, Atkinson, & Umemoto, 2001). The students may feel pressured to follow family and societal expectations, instead of their own. Furthermore, they may often feel worried about "saving face"—being careful not to bring dishonor or shame to their family—by becoming academically successful (Chen 1999; Mori, 2000). The student's achievement often represents the whole family due to the strong emphasis of Asian culture in collectivism and conformity to family. Another value that drives high academic pressure of Asian students may be the Confucian culture (Huang & Gove, 2012; Stankov, 2010). Confucianism has a great impact on diverse aspects of Asian cultures, especially East Asian cultures. Confucian philosophy places high value in education, and scholars are perceived as members of the highest social class, the class that does the "mental labor" and makes important decisions for the whole society. Moreover, researchers have reported that Confucianism has influenced the unforgiving attitude that leads to negative mental health outcomes, such as anxiety and self-doubt (Stankov, 2010). The strong respect for scholars has led Asian cultures to place a high value on academic achievement (Huang & Gove, 2012). Thus, Asian international students may feel a high level of pressure to achieve academically, regardless of their actual performance. Academic pressure and

worry about academic performance were suggested as threats to Asian international students' wellbeing in the literature (Chen 1999; Mori, 2000; Smith & Khawaja, 2011). Additional factors affecting the academic pressure experienced by Asian international students include a new educational environment, a second language anxiety, and the discrepancy of expectations regarding the school's educational services (Smith & Khawaja, 2011). Due to the unique stressors mentioned above, international students may not perform as academically well as they did in their home countries. This lower performance may lead to a decrease in international students' confidence, which may result in lower academic outcomes than they expected (Chen 1999).

Understanding the effect of the above-mentioned stressors on the mental health of Asian international students would enrich our knowledge about these students, understand them more fully, and develop the best ways to serve them in counseling practice. The previous literature about Asian international students focused mostly on deficits and gave little attention to the assets Asian international students may have. Studies have highlighted Asian international students' distress and risk factors rather than addressing their strengths and protective factors. In addition, most of the studies about the psychosocial adjustment of international students have used depression as an outcome (Zhang & Goodson, 2011). Although researchers may benefit by looking at psychological distress, such as depression, it represents a pathological perspective or lens to view Asian international students. It is truly an irony that Asian international students, considered a model minority with no psychological distress, are studied using mostly depression to measure their adjustment and mental health.

The counseling profession uses a strength-based lens in practice and research (Gladding, 2018). The strength-based approach enables proactive actions for counselors to empower

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students or clients. Yet, few studies have used a strength-based approach to understand Asian international students and their mental health. There is a dearth of studies focusing on the assets Asian international students have and use to adjust well despite stress and difficulties (Jung, Hecht & Wadsworth, 2007; Zhang & Goodson, 2011). There is a need to study Asian international students using a strength-based approach.

Psychological wellbeing is a multi-dimensional construct that includes subjective, social, and psychological dimensions, in addition to health-related behaviors (Ryff & Keyes, 1995). Unlike psychological distress and depression, psychological wellbeing is a concept aligned with the strength-based approach. Researchers have used psychological wellbeing as an outcome in the study of diverse populations, including Asian Americans (Baker, Soto, Perez, & Lee, 2012; Iwamoto & Liu, 2010; Park & Millora, 2010). With the exception of the study of Iwamoto and Liu (2010), there is little research that has addressed the psychological wellbeing of Asian international students or factors influencing their psychological wellbeing. Accordingly, both psychological wellbeing and depression were used as outcome measures of Asian international students in the current study. The study aims to contribute to the scant strength-based research on Asian international students and observe a possible difference between psychological wellbeing and depression in Asian international students.

Resilience Models

Resilience models reflect the strength-based approach in that the models help to discover protective factors to promote better psychological outcomes. The moderator resilience model was used in this study. The moderator resilience model is useful to test the buffering effect of protective factors and help identify those factors to build helpful interventions for Asian international students.

As mentioned before, stressors and difficulties that Asian international students face may create serious mental health issues. Despite those stressors, some individuals seem adjusted better to these challenges. Studies in the 1980s identified children's process of recovering from risky situations and called it resilience (Long & Vaillant, 1984; Rutter, 1985; Werner & Smith, 1982). Resilience refers to individuals bouncing back to successful adjustment after going through stressful situations (Masten, 2001). Researchers suggested that resilience is not a special talent; therefore, ordinary people can be resilient with the help of proper protective factors (Bonanno, 2004; Masten, 2001). Also, longitudinal studies report that resilience can be developed over time (Conger & Conger, 2002; Werner & Smith, 2001).

Resilience models were developed in an effort to answer the following question: what could explain the observed variation in the outcome? Pioneers of resilience research suggested different resilience models, including moderator models (Masten, 2014). Moderator models are used to seek out the variables that buffer the full effects of a risk that individuals face. These models are useful in building resource-focused interventions to increase assets that foster resilience (Masten, 2014). Moderators that buffer the negative impact of stressors are identified as protective factors promoting better mental health outcomes. Researchers have studied resilience as a protective factor to find out the elements that buffer the impact of possible stressors (Masten, 2014; Lee, Nam, Kim, Kim, Lee, & Lee, 2013)

Resilience as a Protective Factors of Asian International Students

What factors, then, buffer the impact of risk or stressors? It is known that resilience has two elements: individual assets and resources. Both individual assets and resources can act as protective factors from the stressors that an individual faces. Longitudinal studies have identified assets and resources that predict successful psychological adjustment over time despite adversity,

and have identified the way these protective elements of resilience interact with each other to promote such outcome (Werner & Smiths, 1982; 2001). Other studies also reported protective components that construct resilience, such as personal assets, relationships with caregivers, teachers, mentors, and others, and contextual resources such as cultural factors (Masten, 2014; Tol, Song, & Jordans, 2013). A meta-analysis study of resilience reported that protective factors are more effective than risk factors (Lee et al., 2013). In this study, individual assets and resources aligned well with what generally helps international students to adjust. Mesidor and Sly (2016) also identified the following factors that support the adjustment of international students: school-level program, administration, and social support, as well as, individual coping strategies and personality. These research findings suggested that two elements of resilience (individual assets and resources) serve as protective factors that ameliorate the impact of distress. Both elements were included in the current study.

Individual assets identified by researchers include positive self-perception and optimistic perception of the future (Kim & Lee, 2017; Lee et al., 2013). Positive perception of self and future is likely to be the characteristics of resilient individuals, and even serve as factors that promote the process of resilience building. Resources are another important element in resilience. Researchers have suggested that both relational and contextual resources are elements of resilience. The most commonly mentioned resource is social support (Lee et al., 2013). Social support is frequently studied in the literature about international students' adjustment (Yusoff & Othman, 2011; Yusoff, 2012; Zhang & Goodson, 2011). Social support that helps international students usually comes from family and other sources, such as local people and people from similar cultures (Ra, 2016). Other studies have also suggested that social relationships have a positive effect on international students' life (Hendrickson, Rosen, & Aune, 2011).

Statement of the Problem

Asian international students enrolled in US colleges are often perceived as a *model minority* who experience few difficulties. Oftentimes Asian international students' difficulties affecting their mental health in detrimental to negative ways are overlooked, and they do not receive needed help. Furthermore, it is unknown whether the protective factors observed in the resilience model moderate the stressors and the outcomes of these international students. In addition, the majority of the extant research studied depression as an outcome of the stressors Asian international students face in the US. There is a dearth of studies exploring overall wellbeing as an outcome.

Purpose of the Study

The purpose of the study was to examine the stressors and the mental health outcomes (depression, psychological wellbeing) experienced by Asian international students, and to examine the moderating effects of elements of resilience (individual assets and resources) between stressors and outcomes (depression, psychological wellbeing) of Asian international students.

A conceptual model based on the purpose of the study is shown in Figure 1. The following five stressors affecting Asian international students, academic pressure, language difficulty, cultural adjustment, concerns about finance, and interpersonal stress, are likely to negatively associate with psychological wellbeing and positively associate with depression, among Asian international students. Two elements of resilience, which include individual assets and resources, are likely to moderate the possible negative impact of stressors on outcomes of Asian international students.

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                    │  Resilience as a protective factor │
                    │      •  Individual assets          │
                    │      •  Resources                  │
                    └─────────────────────────────────┘
                                     │
                                     ▼
┌──────────────────────────┐     ┌──────────────────────────┐
│ Stressors of Asian        │     │                           │
│ international students     │     │ Outcomes                  │
│   •  Academic pressure     │────▶│   •  Psychological wellbeing│
│   •  Language difficulty    │     │   •  Depression            │
│   •  Cultural adjustment    │     │                           │
│   •  Concerns about finance │     │                           │
│   •  Interpersonal stress   │     │                           │
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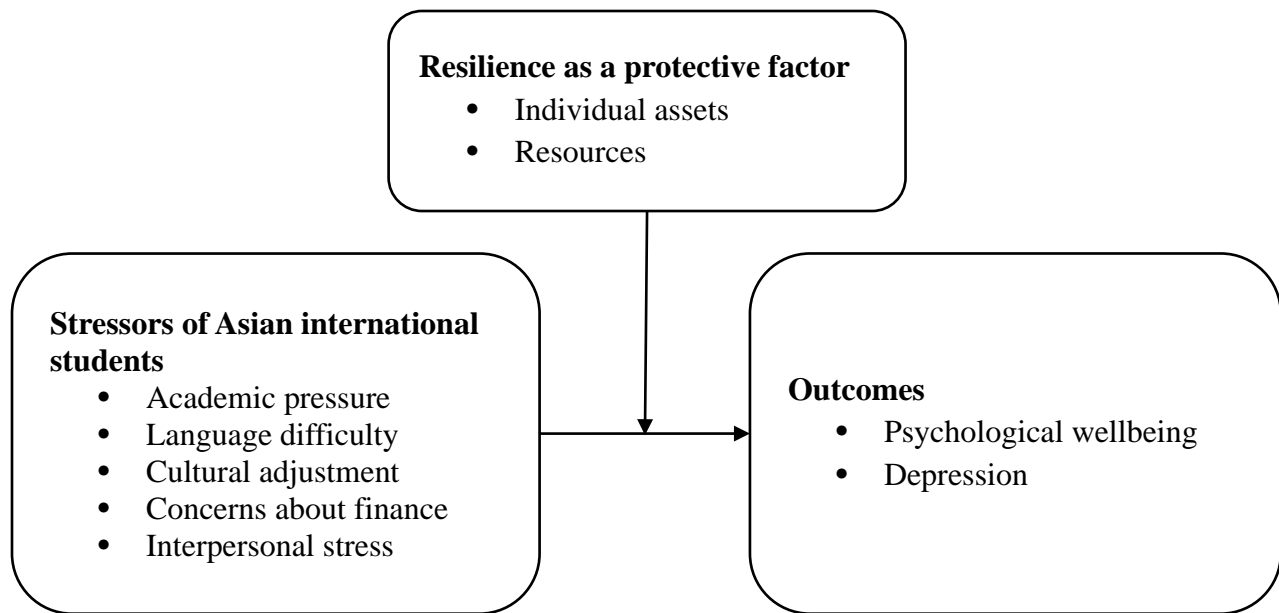
Figure 1. Conceptual model of the study

Research Questions

The following research questions guided this study:

1) Do stressors associate with psychological wellbeing and depression of Asian international college students?

2) Does resilience (individual assets and resources) moderate the relation between stressors and psychological wellbeing?

3) Does resilience (individual assets and resources) moderate the relation between stressors and depression?

Significance of the Study

The results of the present study have implications for researchers studying the experiences of Asian international students enrolled in US colleges and to practitioners in the counseling profession. A Resilience model, which has rarely been used in studies about stressors and outcomes of Asian international students, guided this study. Given the importance of using a

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strength-based approach, the results of this study may provide a valuable addition to the understanding of Asian international students. This is important because the majority of the total international students in the US come from Asian countries. Considering the cultural differences and unique stressors Asian international students face, the results of this study may provide a groundwork to understand their distress and factors that help better their outcomes. Practitioners can also benefit from the current study. The results of the study may provide information to assist practitioners to better understand Asian international students and their resilience (i.e., the roles of resilience as a protective factor on the relation between stressors and psychological outcomes). Practitioners can utilize this information to develop prevention interventions for Asian international students.

Limitations of the Study

Limitations of the current study include sampling, data collection, and cross-sectional analysis. Sampling was mainly convenience-based. Even though the number of participants was relatively large, convenient sampling may cause sampling bias. This may result in bias in potential results. Second, all the constructs were measured by a self-report survey. Self-report may not be an ideal way to measure psychological variables, such as psychological wellbeing, because it may underestimate or overestimate the actual levels. Third, this study collects data at only one point in time. Considering that the resilience model also includes the development of resilience, a longitudinal analysis may be helpful to examine the long-term effects of resilience as a protective factor among Asian international students.

Definitions of Terms

The following terms are defined as they are used in the current study:

Asian international students refer to college students who have come to the United States for the purpose of pursuing higher education. Only those students who are in the United States with a student visa (e.g., F-1, J-1) and enrolled in a higher education institution were included in this study, even if they may personally have intentions to stay longer.

Model minority refers to the misperception about Asian international students that they are always successful academically with experiencing little psychological distress. Despite this biased perception of the Asian population in the US as a well-adjusted group, research has reported this population experiences significant mental health issues and a need for more research (Sue, Sue, Sue, & Takeuchi, 1995).

Resilience model in this study refers to a moderator resilience model suggested by Masten (2014). The model reflects a process that promotes expected or better outcomes of individuals in the face of adversity and is suitable to examine the buffering effects of moderators between stressors and outcomes (Masten, 2014).

Resilience in this study is based on process resilience, which includes both individual assets and resources as elements of resilience (Friborg, Hjemdal, Rosenvinge, & Martinussen, 2003; Liebenberg, Joubert, & Foucault, 2017). In this study, resilience is defined as "protective resources either within [oneself] or in [one's] environment (Friborg et al., 2003)."

Stressors refer to risk factors that may hinder the appropriate and positive psychological functioning of Asian international students. Risk factors are one of the constructs in resilience models, included to capture the process of resilience. Developmental psychologists view risk factors as a barrier that deters the appropriate development of children and adolescents (Masten, 2014). In this study, the researcher intends to focus more on psychological functioning rather than developmental outcomes due to the cross-sectional nature of this study.

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Mental health outcomes in this study relate to the psychological functioning of individuals. Both psychological wellbeing and depression are included as psychological outcomes of Asian international students to provide a balanced view between pathological and strength-based views.

CHAPTER 2: LITERATURE REVIEW

Stressors of Asian International Students

Asian international students face unique stressors during their study in the hosting country due to distinctive language and cultural differences. Studies have reported that college students, especially first-year students, often experience homesickness, which may lead to mental health issues such as depression, anxiety, and substance abuse (Thurber & Walton, 2012). In addition to the common stressors that most college students face, such as homesickness, international students deal with unique stressors, including the language barrier, cultural differences, perceived discrimination, and practical issue (Smith & Khawaja, 2011; Yang & Clum, 1995).

Language barrier

Language barrier is one of the foremost stressors of international college students (Araujo, 2011). Numerous studies have reported the language difficulties that international students encounter, especially for Asian international students (Rivas, Hale, & Burke, 2019; Sherry, Thomas, & Chui, 2010; Tsevi, 2018). Tsevi (2018) reported English language acquisition was one of the challenges of international students, especially those whose first language was not English, in her qualitative case study. Also, in a qualitative study of Rivas et al. (2019) based on interviews with 17 international students, the interviewees expressed language difficulties in academic and campus experience. Students in that study were enrolled in a mid-sized public university in the Southern area of the US, and more than half of the students came from Asian countries, including Pakistan and Saudi Arabia. Difficulties included feeling withdrawn in communication due to the internal interpretation process before speaking in English and fear of making mistakes in English. Sherry et al. (2010) conducted a mixed-method study using an

online survey among 121 international students at a large Midwestern public university in the US. Students reported existing language barriers, especially spoken language barriers. They also indicated that resources in the university, such as a Writing Center, were received well by some students, while most international students needed more university-level assistance, such as workshops or conversation groups, for speaking English.

Language difficulties may lead to other adjustments, such as isolation, academic difficulties, and loneliness (Chen, 1999; Yan & Berliner, 2011). According to Chen (1999), speaking English as a second or foreign language influences academic issues. Specifically, language ability can affect the understanding of lectures, writing assignments, oral and written examinations, willingness to ask questions and participate in discussion. Language barriers may also hinder international students' communication and socialization with locals (Chen 1999; Mori 2000; Yang & Clum, 1994). Similarly, qualitative findings of Yan and Berliner (2011) suggested an existing language barrier among Chinese international students in the US and highlighted the impact on them. They indicated that Chinese international students continuously encounter the lack of successful communication in English with domestic students, which in turn leads to them isolating themselves with fellow Chinese students. According to the interviews they conducted, Chinese international students expressed their guilty feelings at not practicing English as expected and yet feeling discouraged to engage in conversations with native English speakers due to language and cultural differences (Yan & Berliner, 2011).

Cultural adjustment

Stressors related to acculturation exist among international students and may negatively and seriously impact on their wellness. In addition to the cultural adjustment that international students go through, cultural misunderstanding from universities and colleges was also suggested

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in previous literature (Sherry et al., 2010). Sherry et al. (2010) indicated a lack of understanding about students' culture, especially religious practice. According to the responses they received, students who are practicing Islamic rules felt that their culture was not appreciated on campus, because of limited access to Halal food and a lack of proper praying rooms for Muslims (Sherry et al., 2010). These cultural misunderstandings from the host country may seriously impact on the mental health of international students.

Studies showed that most international students experience loneliness, cultural differences, and difficulties socializing with local people (Parr, Bradley, & Bingi, 1991; Sawir, Marginson, Deumert, Nyland, & Ramia, 2008). This is due to the possibility that the way international students think, according to cultural norms, may not necessarily be the same as that of hosting countries, which may lead to feelings of being misunderstood, misheard, and lonely. Parr et al. (1991) asked college directors of student affairs offices to rate concerns and feelings of international students, and the results showed cultural differences as one of the greatest concerns and loneliness as one of the major feelings of international students. Sawir et al. (2008) interviewed 200 international students in Australia to find out more about loneliness of international students. In their mixed-method study, researchers conducted one-on-one 30 to 50-minute-long interviews with college students in nine Australian institutions. Their results suggested that international students faced cultural loneliness, in addition to personal and social loneliness, because of the absence of the preferred cultural environment. The majority of students who responded that they were lonely, believed significant barriers existed in making friends across cultures. Also, "shock of the new culture (p.161)" was one of the main reasons for loneliness for international students (Sawir et al., 2008). In sum, cultural adjustment was a critical trigger for loneliness among international students in Australia. The results of their study

were applicable to Asian international students because 86% of the participants came from Asia (i.e., Southeast, Northeast, South Asia).

Although national students also experience homesickness, studies argued that international students showed higher levels of loneliness and homesickness than domestic students (Rajapaksa & Dundes, 2002; Zheng & Berry, 1991). Rajapaksa and Dundes (2002) compared international students and American students to examine if there is a difference in adjustment issues. According to the study results, international students had higher levels of loneliness and homesickness than domestic students, as if international students left a part of themselves in their home countries. Zheng and Berry (1991) also argued that homesickness influences international students more profoundly than domestic first-year college students. These findings are especially valid for Asian international students due to differences in values between Asian culture and mainstream culture in the US (Kim et al., 2001).

Academic pressure

Academic pressure is another stressor of Asian international students due to their cultural value on conformity to social norms and Confucianism (Chen 1999; Kim et al., 2001; Mori, 2000; Smith & Khawaja, 2011; Stankov, 2010). International students take risks to go to a foreign country to complete their education even though they may face stressors such as language barrier, cultural differences, and homesickness. One of the reasons to take those risks for Asian international students is the unique cultural values in Asia, despite the existence of variation within Asian groups. First, Asian cultures value academic and occupational achievement. Educational achievement is seen as the top priority in Asian cultures to make family proud (Kim et al., 2001). Researchers have argued that this may be due to the strong respect for scholars who impacted the whole society the most, according to Confucianism

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philosophy, especially in East Asian countries (Stankov, 2010). International students from Asian countries, furthermore, may feel academic pressure because their academic achievement may represent not only their accomplishment but also their family's success. This is because family reputation is often a primary concern for Asian culture (Kim et al., 2001). They should be successful in avoiding family shame. The pressure from the family and society to be academically successful may be an additional layer of a burden that Asian international students carry (Chen 1999; Mori, 2000).

Possible reasons for academic pressure are a new educational environment, second language anxiety, and expectations from family and school (Smith & Khawaja, 2011). Specifically, due to unique challenges, international students may not perform as academically well as they did in their home countries. This may lead to a decrease in international students' confidence, and in turn, may result in less successful academic outcomes than they expected (Chen 1999). Lee and Ciftci (2014) reported that academic self-efficacy mediated the relation between multicultural personality, the ability to cope within multiple roles in cultural contexts, and sociocultural adaptation among Asian international students in the US. That is, academic difficulties and self-efficacy were critical to assist the adaptation of Asian international students.

Interpersonal stress

Another sociocultural stressor of Asian international students is interpersonal stress due to perceived discrimination or isolation (Sherry et al., 2010; Rivas et al., 2019). Rivas et al. (2019) also reported discrimination and prejudice as one of the difficulties international students encounter, based on the 17 interviews they conducted with international students. Interviewees in their study indicated discrimination on campus or even by a professor, although most participants indicated they liked an appreciation of diversity in the US. Discrimination is experienced not

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only in a school setting but also in daily life settings, such as eating out in restaurants and grocery shopping (Yang & Clum, 1994). In addition to perceived discrimination, Sherry et al. (2010) indicated a difficulty for international students to make local friends. According to the results of their study, international students reported that they made friends with others from their own culture or other international students, but they found it difficult to make American friends (Sherry et al., 2010).

The impact of perceived discrimination on the mental health of international students can be significant (Poyrazli & Lopez, 2007; Wei, Ku, Russell, Mallinckrodt, & Liao, 2008; Yang and Clum, 1994). Poyrazli and Lopez (2007) compared perceived discrimination between 198 international students and 241 US students, where 80% of US students were White, in the same university. The results demonstrated a higher level of discrimination among international students than that of US students. Additionally, the researchers suggested that perceived discrimination was a predictor of homesickness among international students, which may lead to negative impacts on students' mental health and wellbeing. Wei et al. (2008) conducted a correlational study among 354 Asian international students at a large public Midwestern university. The results indicated that perceived discrimination was a significant predictive variable of depressive symptoms among Asian international students, even after controlling their perceived stress.

Financial challenge

Practical stressors of Asian international students cannot be ignored, in addition to sociocultural issues. Studies have suggested that financial challenges and work restrictions are relevant stressors for international students (Mori, 2000; Poyrazli & Grahame, 2007; Sherry et al., 2010). The reasons for the financial issues and other practical issues included more expensive

tuition, additional costs as international students, limits of work permit, ineligibility for student loans, and a need to keep up their GPA to guarantee scholarships or assistantships (Sherry et al., 2010). According to Yang and Clum (1994), financial issues of international students are unique because not all financial aid programs are opened to them, and part-time job opportunities outside of the campus are limited due to immigration regulation and. Furthermore, international students may find it difficult to plan for the future because they may have to leave the hosting countries to avoid illegal visa status (Yang & Clum, 1994). Sherry et al. (2010) conducted a mixed-method study using an online survey with 121 responses from international students. The results of their study indicated that the majority (58%) of the respondents in their study had financial issues. International students in their study pointed out the high cost of international student health insurance, loan ineligibility, and a lack of detailed information about the exact fees required to finish the degree as the financial difficulties they were experiencing.

In sum, studies have reported that unique stressors of Asian international students are language difficulty, acculturation, including interpersonal stress and cultural adjustment, academic pressure, perceived discrimination, and practical factors such as financial issues. These stressors may impact negatively on Asian international students, and the current study examines the association of the level of stressors and mental health outcomes, psychological wellbeing, and depression, of Asian international students.

Outcomes of Asian International Students

Both psychological wellbeing and depression as outcome variables were reviewed in this study. Inclusion of reviews about psychological wellbeing and depression provides a balance and rationale to use the strength-based approach to understand Asian international students.

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Psychological wellbeing

Psychological wellbeing has a long tradition in the literature of medicine and psychology. A hexagon model, proposed by Hettler (1984), represents a perspective of medical theorists with an emphasis on health, rather than psychological development. Assessments, based on the hexagon model, focus on health promotion and stress management skills. The limitation of the medical perspective, however, is little emphasis on psychological health as well as the dearth of generalization across ages (Hattie, Myers, & Sweeney, 2004). A different perspective of wellbeing exists in humanistic psychology and positive psychology. The emphasis on purposefulness and strengths can be found in humanistic theories, and theorists in positive psychology, such as Ryff and Keyes (1995), emerged.

Ryff and Keyes (1995) suggested that the multidimensional model as the theoretical foundation of psychological wellbeing, which is based on the convergence of various frameworks of positive functioning. Unlike other research-based on life satisfaction or quality-of-life, which lacks the reflection on the fundamental meaning of psychological wellbeing and a clear conceptual framework, this model provides a clear foundation of psychological wellbeing that reflects the core values of wellbeing in diverse dimensions (Ryff & Keyes, 1995). The model includes six factors: Autonomy, Environmental Mastery, Personal Growth, Positive Relations With Others, Purpose of Life, and Self-Acceptance (Ryff & Keyes, 1995). Ryff (2014) further illustrates the six dimensions by providing definitions of high and low scorers of each dimension. High scorers of Autonomy are described as self-determining and independent. They are able to evaluate themselves by personal standards, not necessarily the same as other people's standards. Those who highly scored in Environmental mastery have a sense of competence in managing the environment. They can choose or create suitable contexts based on their needs and values. High

scorers of Personal growth would like to have continued development and are open to new experiences. Those who are highly scored in Positive relations with others are often described to have satisfying and trusting relationships with others. They are also capable of strong empathy. High scorers of purpose in life believe that there is meaning to present and past life and have goals in life. They are described as having a sense of directedness. Last but not least, those who score high in Self-acceptance has a positive attitude toward the self. They are aware of multiple aspects of self, including good and bad, and accept those aspects (Ryff, 2014). This model is a strength-based approach without pathologizing individuals to have mental health "problems."

The abovementioned six dimensions of psychological wellbeing and their theoretical foundations are based on the eudaimonic perspective of wellbeing that Ryff (1989) suggested. According to Ryff, there are two perspectives in understanding wellbeing. One is eudaimonia defined as "…", and the other is a hedonic approach, defined as "…". Eudaimonia, which focuses on the fundamental meaning of wellbeing, is different from the hedonic approach, which focuses solely on the amount of positive affect or life satisfaction that one experiences (Ryff, 2014). Eudaimonic perspective allows researchers to ponder the essential meaning of psychological wellbeing and the process of wellbeing. Researchers with this perspective have studied the process of being psychologically well in order to examine the way individuals come to hold those qualities of wellbeing. In sum, psychological wellbeing within the eudaimonic tradition is suitable to indicate the psychological outcome of individuals, because it reflects the core of positive psychological functioning based on the strength-based approach.

There is a mixed-use of eudaimonic and hedonic wellbeing in the literature regarding Asian populations, including international students. Some researchers have studied psychological wellbeing from a eudaimonic perspective among Asian students (Baker et al., 2012; Iwamoto &

Liu, 2010). For example, Iwamoto and Liu (2010) suggested that some Asian values, such as dissonance and conformity, moderated the relation between race-related stress and psychological wellbeing among Asian Americans and Asian international students. Baker et al. (2012) reported that psychological wellbeing differed based on acculturative status among Asian Americans.

On the other hand, the majority of studies in Asian international students have used a hedonic approach to indicate psychological wellbeing. Li, Wang, and Xiao (2014) reviewed 18 peer-reviewed studies to examine the predictive factors associated with psychological wellbeing among East Asian international students. Even though their definition of psychological wellbeing is closely aligned with eudaimonic psychological wellbeing, the studies that they reviewed used measurements that are not necessarily reflective of the eudaimonic perspective of psychological wellbeing. For example, in the study of psychological wellbeing among Chinese international students, positive and negative affective states, as assessed by Depression Happiness Scale (D-HS), were used to measure psychological wellbeing (Li, Liu, Wei, & Lan, 2013). Another study which compared psychological wellbeing among adopted Korean Americans, immigrant Korean Americans, and Korean international students used life satisfaction to indicate psychological wellbeing (Lee, Yun, Yoo, & Nelson, 2010). Both studies used hedonic happiness to indicate psychological wellbeing. Accordingly, there is a need to examine eudaimonic wellbeing among Asian international students, rather than hedonic wellbeing.

Depression

Depression has been commonly used as psychosocial adjustment of international students, according to the review article of Zhang and Goodson (2011). Oftentimes researchers have suggested that optimal adjustment or psychological wellbeing amounts to being free of mental health issues or psychological symptoms, and this viewpoint has been used as a rationale

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to consider depression as an outcome (Jung et al., 2007; Lee, Koeske, & Sales, 2004). For example, depression was used to measure psychological wellbeing of international students in the US in a quantitative study of Jung et al. (2007). They conducted a survey of 218 international students to determine the predicting variables of depression. The results of their study suggested a significant association between perceived discrimination and depression. Also, in a quantitative study of Lee et al. (2004), mental health symptoms, including depression, were used as the dependent variable to examine the predictive effects of acculturative stress and social support among 74 Korean international students. The results indicated the significant associations between acculturative stress and mental health symptoms and a moderating effect of social support between acculturative stress and mental health outcomes.

Despite the stereotype of Asians being a 'model minority' who are free of psychological distress, there are studies that suggest Asian students are more depressed than Caucasian students (Okazaki, 1997; Soto, Perez, & Kim, 2011; Young, Fang, & Zisook, 2010). Okazaki (1997) compared the psychological functioning of 165 Asian and 183 White American college students. The results of the quantitative study showed a significantly higher depression level of Asian Americans compared to that of White Americans. Although Okazaki (1997) did not specifically study Asian international students, 67% of Asian college students were born in Asian countries, including China, South Korea, and Japan. Therefore, the results may be applicable to Asian international students. Similarly, Soto et al. (2011) reported that Hong Kong Chinese college students reported higher levels of depressed mood than European American college students did. In another quantitative study by Young et al. (2010), the depression level of college students was compared between 1251 Asian Americans and 586 Caucasians. They found a significantly higher level of depression among Asian Americans compared to Caucasians. Specifically, the results

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indicated that the depression scores of Korean American students were significantly higher than Chinese American, Caucasian students, and other minority Asian American students (Young et al., 2010).

Previous research reported mixed results about the association between acculturation and depression (Gupta, Leong, Valentine, & Canada, 2013; Kuo, Chong, & Joseph, 2008). Kuo et al. (2008) reviewed 24 studies to suggest a conceptual roadmap to understand a psychosocial model of late-life depression among Asian immigrants. In their results, the prevalence of depression was ranged from 18% to 45% among older Asian immigrants. Kuo et al. (2008) also reported the negative association between depression and acculturation levels in the majority of the studies they reviewed. In a meta-analytic study by Gupta et al. (2013), researchers examined the relation between depression and acculturation among Asian Americans in 38 empirical studies. The results indicated a significant negative association between depression and assimilation to the American cultures among Asian Americans. It is likely that international students from Asian countries may have lower acculturation levels because they might have been raised in their home country and moved only because of educational purposes.

However, other researchers have reported the opposite result about the level of depression, indicating a lower depression level of Asian college students than that of Caucasian students (Carmody, 2005). Carmody (2005) reported a significant difference in depression by ethnicity among college students in a study of examining the psychometrics of the Beck Depression Inventory-II (BDI-II) with college students. According to the results of the study, White students reported higher depression than Asian American students. The mixed results about depression levels have influenced researchers to use more than one measurement to examine outcomes or adjustment of Asian international students. For example, Ying and Han

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(2006) used functional adjustment as an outcome variable in addition to depression to examine contributors to the overall adjustment of Taiwanese students in the United States. In their quantitative study about 155 Taiwanese students, the results indicated that social affiliation significantly mediated the relation between extrovert personality and functional adjustment. However, the mediating effect of social affiliation was not supported between extrovert personality and depression. Only acculturative stress was significantly associated with depression in their study (Ying & Han, 2006). In sum, depression may be a good indicator of mental health, but it does not necessarily capture the overall mental health outcomes of Asian international students.

Resilience as a Protective Factor of Asian International Students

Resilience in this research referred to protective factors that buffer the negative impact of stressors on psychological outcomes. This is based on the perspective of process resilience, which emphasized both individual assets and resources as elements of resilience (Masten, 2014). In fact, two broad, yet clearly distinctive perspectives to define and study resilience, exist in the literature. One suggests resilience as a trait, an inherent aspect of the individual, and the other views resilience as an interaction between individual assets and environmental resources. While Luthar, Cicchetti, & Becker (2000) suggested differentiating the two schools of thought by using *resiliency* (to indicate the definition exclusively focused on an individual's personality) and *resilience* (to reflect the definition that promotes ecological process), both terms are often used interchangeably. More commonly used are *trait resilience* and *process resilience*.

Studies on trait resilience, focus purely on individual assets of resilience, often used resiliency to understand issues related to mental illness (Davydov, Stewart, Ritchie, Chaudieu, 2010; Campbell-Sills, Cohan, Stein, 2006; Hu, Zhang, Wang, 2015). Personal assets or traits to

bounce back from adversity, stress, or trauma are rather static across the lifespan in the studies of trait resilience. Conner and Davidson (2003) suggested that resilience is personal qualities that enable individuals to thrive in the face of adversity. Those personal assets include hardiness, persistence, extraversion, self-efficacy, spirituality, self-esteem, and positive-effect (Aburn, Gott, & Hoare, 2016; Conner & Davidson, 2003; Windle, Woods, & Markland, 2010). Trait resilience, however, has been criticized because the framework can easily blame individuals for the outcomes and rarely take account of the influence of resources on the outcomes (Masten, 2014; Ungar, 2008). Bonnano (2012) reported that personality variables only explain a small portion of the variance in behaviors or outcomes of individuals, especially when using multivariate study designs. Moreover, neuroscience studies have emphasized the importance of a healthy environment in facilitating individuals' better outcomes (Cicchetti, 2010; Masten, 2014). Studies over the four decades have focused, therefore, on the interaction of environmental and individual factors to examine process resilience.

Studies on process resilience focus on the interactive process of resilience, which reflects both individual assets and contextual resources. Longitudinal studies have identified assets and resources that predict successful psychological adjustment over time despite adversity, and the way protective elements of resilience interact with each other to promote such outcomes (Werner & Smiths, 1982; 2001). Other studies have also reported protective components that makeup resilience, such as personal assets, relationships with caregivers, teachers, mentors, and others, and contextual resources such as cultural factors (Masten, 2014; Tol et al., 2013). Accordingly, consensual elements of resilience, individual assets, and resources have been proposed based on a number of studies in the literature (Liebenberg et al., 2017)

Resilience in this study is defined based on the perspective of process resilience: a process that promotes expected or better outcomes of individuals in the face of adversity (Liebenberg et al., 2017; Masten, 2014). Unlike trait resilience, relational and contextual resources are also considered as elements of resilience in addition to individual assets. Studies in international students have addressed both individual assets and contextual resources that buffer the negative impact of stressors (Zhang & Goodson, 2011). Accordingly, the current study examines the role of resilience as a protective factor, which includes both individual assets and resources.

Individual assets

Studies have examined individual assets that buffer the negative impacts of stressors. Mesidor and Sly (2016) reviewed the literature to explore factors contributing to the process of psychological, social, and cultural adjustments of international students. Individual differences, such as personality traits, self-esteem, and positive problem-solving skills, were discussed as contributing factors to psychological adjustment of international students (Mesidor & Sly, 2016; Yusoff, 2012). Yusoff (2012) reported that self-efficacy was significantly associated with psychological adjustment among 185 international students in Malaysia. The majority of participants in the study came from Asia.

Researchers have also stressed time management and structured lifestyle as individual assets that influence the success of international students (Paton, 2007; Mesidor & Sly, 2016). This is because some cultures are more time-oriented than others. Paton (2007) reported that time-management is an essential skill since it contributed to the academic failure of international students. Mesidor and Sly (2016) mentioned appropriate time management would let international students feel more relaxed, easy-going, and productive, as well as decrease stresses

or anxiety related to school and acculturation. Also, Kim and Lee (2017) suggested that resilient college students in South Korea are more optimistic about the future and utilize strategic planning more frequently than maladaptive college students in a quantitative study.

Resources

Social support is one of the most frequently mentioned resources of international students' adjustment (Zhang & Goodson, 2011; Yusoff & Othman, 2011; Yusoff, 2012). Zhang and Goodson (2011) suggested that social support significantly predicted psychological adjustment of international students in their meta-analysis. In other studies, perceived social support, especially from friends and significant others, was significantly associated with psychological adjustment of international college students (Yusoff & Othman, 2011; Yusoff, 2012). Specifically, Yusoff and Othman (2011) conducted a correlational study among 185 international undergraduate students enrolled in a large public university in Malaysia. More than 65% of the participants in their study come from Asian countries. The results of regression analysis indicated that support from friends and the availability of special persons were significantly associated with psychological adjustment of international students. Lee and colleagues (2004) suggested the buffering effect of social support against the negative mental health symptoms among Korean international students.

Researchers tried to determine whether certain kinds of resources were more impactful than others (Hendrickson et al., 2011; Misra, Crist, & Burant, 2003; Ra, 2016). Hendrickson and colleagues (2011) emphasized social relationships impacted on life satisfaction of international students. They reported that international students who had a higher ratio of individuals in their network from the hosting country, the US, had lower levels of homesickness and higher levels of life satisfaction. Misra et al. (2003) reported that some resources, such as local peers, academic

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programs, and universities, were more effective than other resources to decrease stressors of international students. In addition, Ra (2016) examined whether different sources of social support had different relations with acculturative stress of 164 Korean international students enrolled in US universities. As a result, only social support from local peers significantly predicted acculturative stress of international students. Other social supports, including old friends, family, religious places, international centers, student organizations, and community activities, did not significantly predict acculturative stress. Taken together, resources in general may ameliorate the impact of stressors among Asian international students, and there is a possibility that some resources may more effective than others.

Resilience Model as a Framework

The grounding framework for the current study was a resilience model based on variable-focused moderators. Masten (2014) suggested two perspectives to study resilience: person-focused and variable-focused. While person-focused studies provide case examples of resilience and the trajectories of individuals, variable-focused studies are suitable to test protective influences on psychosocial adjustment (Masten, 2014). Multivariate statistical techniques contribute to the development of variable-focused studies. The current study design used a variable-focused perspective to examine the specific process of resilience as a protective factor of psychological outcomes among Asian international students.

Variable-focused models of resilience primarily emphasize the patterns and processes that may predict or associate with better outcomes, which ultimately helps design interventions (Masten, 2014). Researchers have proposed models to describe naturally occurring resilience and to describe intervention designs. Especially, factors that explain the variation in outcomes have been of interest to researchers. Researchers have used three types of variable-focused models:

compensatory models, mediator models, and moderator models. Compensatory or main effect models provide evidence of the main effects of assets and risks that individuals face, and mediator models test the mediation effects between stressors or risk and positive outcomes. Moderator models are suitable to examine the protective factors that ameliorate the full impact of potential risk factors or stressors (Masten, 2014). Masten (2014) suggested two types of moderators in these models, which are independent moderators and risk-activated moderators. Risk-activated moderator is only activated when the risk is present, such as airbags or antibodies. Though some researchers have conducted studies to find biological factors or the genes that are risk-mitigating, it is not always guaranteed that risk-activated moderators would function as expected. Individual moderators, however, modify the negative impact of the stressors on outcomes by design or by their very nature. The current study was based on the modified model of moderated effects (see Figure 2). In sum, a moderator model, which is one type of variable-focused resilience model, guided the current study well to examine moderating impacts of resilience as a protective factor of stressors on positive psychological outcomes among Asian international students.
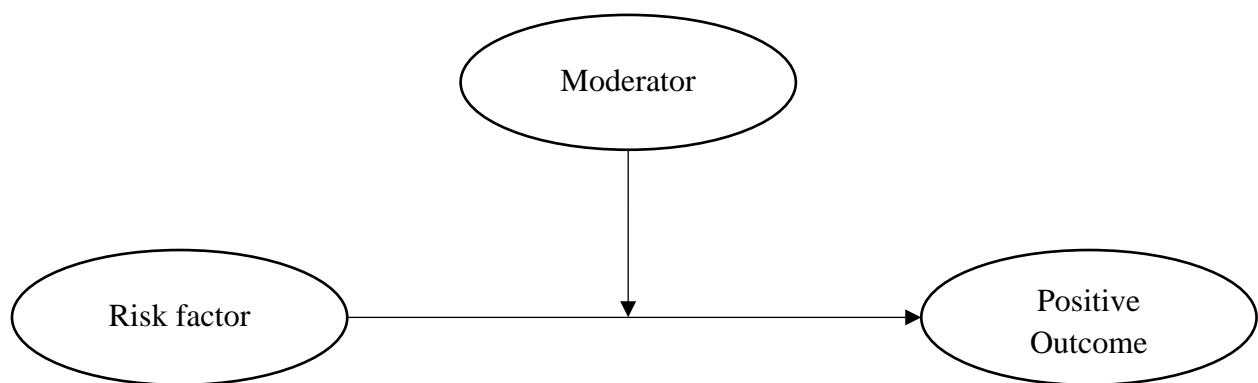
Figure 2. Modified model of moderated effects (Masten, 2014)

CHAPTER 3: METHOD

This chapter presented the methodology for the correlational study of stressors, elements of resilience, and mental health outcomes of Asian international students. Research questions and hypotheses, participants, measures, procedures, research design, data analysis, and assumptions for the data analysis were presented.

Research questions

Purpose of the study was to examine the role of resilience as protective factors between stress and outcomes, such as psychological wellbeing and depression, of Asian international students. Accordingly, research questions of the study were as follows:

1) Do stressors associate with psychological wellbeing and depression of Asian international college students?

2) Does resilience (individual assets and resources) moderate the relation between stressors and psychological wellbeing?

3) Does resilience (individual assets and resources) moderate the relation between stressors and depression?

Participants

Participants included Asian international students who are enrolled in undergraduate or graduate programs in the US. To be eligible to participate in the study, participants reported information confirming the following three criteria. First, international students had to have held a student visa (i.e., F-1, J-1) at the time of participation. Second, participants had to be enrolled in undergraduate or graduate programs anywhere in the US. Finally, participants had to be older than 18 years of age at the time of participation. According to G*Power 3.1., the recommended sample size of multiple linear regression was 184 when having 12 predictors (Effect size F2

= .15, α = .05). Recruitment of the participants depended on snowball and convenience sampling, using emails and social media postings with a link to the online survey. Organizations (e.g., International student organizations, International student services) to which international students have contact were contacted.

Table 1 described the demographic information of the participants of the current study. A total of 197 students was included in data analysis after removing incomplete responses and answers from ineligible students. More than half of them identified themselves as female (54.3%), and more than half of them reported that they were seeking a graduate degree (54.3%). Most of them hold an F-1 student visa (93.4%). Year in school for undergraduate students was equally distributed from freshman (24.4%) to senior or more (25.6%). The largest percentage of the year in school for graduate students was first-year students (32.7%), followed by second-year (24.3%), fifth-year or more (16.8%), third-year (15.9%), and fourth-year (10.3%). As for English proficiency, the majority of students responded that they are either somewhat comfortable (39.1%) or extremely comfortable (21.3%) with English. Approximately a quarter of students reported that they are either extremely uncomfortable (8.1%) or somewhat uncomfortable (18.3%) with English, and 13.2% of participants said English was neither comfortable nor uncomfortable for them. When it comes to country of origin, 45.7% of students came from South Korea, followed by China (30.5%), India (7.1%), and Taiwan (7.1%). Other countries of origin included Western Asia (Kuwait, Lebanon, Oman, United Arab Emirates), Southern Asia (Bangladesh), South East Asia (Cambodia, Indonesia, Myanmar, Thailand, Vietnam), and North East Asia (Mongolia).

Table 1

Demographic Description of the Sample Population (N = 197)

Variables	Category	n	%
Gender	Female	107	54.3
	Male	90	45.7
Degree Sought	Undergraduate	90	45.7
	Graduate	107	54.3
Visa Status	F-1	184	93.4
	J-1	7	3.6
	Other	6	3.0
Year in School	Freshman	22	24.4
(Undergraduate)	Sophomore	22	24.4
	Junior	23	25.6
	Senior or more	23	25.6
Year in School	First year	35	32.7
(Graduate)	Second year	26	24.3
	Third year	17	15.9
	Fourth year	11	10.3
	Fifth year or more	18	16.8
English Proficiency	Extremely uncomfortable	16	8.1
	Somewhat uncomfortable	36	18.3
	Neither comfortable nor uncomfortable	26	13.2
	Somewhat comfortable	77	39.1
	Extremely comfortable	42	21.3
Country of Origin	Bangladesh	1	.5
	Cambodia	1	.5
	China	60	30.5
	India	14	7.1
	Indonesia	3	1.5
	Japan	2	1.0
	Kuwait	2	1.0
	Lebanon	1	.5
	Mongolia	4	2.0
	Myanmar	1	.5
	Oman	1	.5
	South Korea	90	45.7
	Taiwan	14	7.1
	Thailand	1	.5
	United Arab Emirates	1	.5
	Vietnam	1	.5

Measures

Stressor

Index of Life Stress (ILS; Yang & Clum, 1995) was used in order to measure stressor of Asian international students. ILS was developed to assess stressful life events of Asian international students, and it includes 30 items with five factors: language difficulty, cultural adjustment, academic pressure, concerns about finance and desire to stay in the US, and interpersonal stress. Example items of each factor is as follows: I can't express myself well in English (language difficulties), I don't like the things people do for their entertainment here (cultural adjustment), I worry about my academic performance (academic pressure), My financial situation makes my life here very hard (concerns about finance and desire to stay in the U.S.), I can feel racial discrimination toward me in restaurants (interpersonal stress). Each item was scored based on 4-point Likert scale which ranges from 'never' (0) to 'often' (3). Higher scores mean higher levels of stressors. Scores produced by ILS have been shown to be both reliable and valid.

According to Yang and Clum (1995), construct and concurrent validity was satisfactory, and coefficient alpha of all five factors were more than .71. Also, Misra and colleagues (2003) reported that construct validity was achieved by factor analysis, because all five factors explained more than 55% of the variance. They also reported internal consistency of the whole 31 items, which was .87. Ra (2016) reported Cronbach's alpha of the ILS as .86 in the research about Korean international students in the U.S. Considering this scale is specifically designed to measure distress of Asian international students, it is suitable to use in the current study. Table 3 showed the reliability of the subscales of the ILS in the current study.

Table 2

Reliability of the ILS and its Five Categories for the Current Study

Construct	Cronbach's Alpha
ILS Total	0.832
Concerns about finance and desire to stay in the U.S.	0.757
Language difficulties	0.721
Interpersonal stress	0.796
Cultural adjustment	0.591
Academic pressure	0.672

Resilience as a Protective Factor

The Resilience Scale for Adults (RSA; Friborg et al., 2005) was used to measure resilience as a protective factor. The scale has total 33 items using a five-point semantic differential scale format where each item has a positive and a negative attribute at each end of the continuum. The positive attributes were placed in the right for half of the items in order to avoid acquiescence biases. For example, an item started with "when something unforeseen happens," and the positive attribution, "I always find a solution," was found on the left side of the continuum, while the negative attribution, "I often feel bewildered," was placed on the right side. Another item started with "My abilities" and the positive attribution, "I strongly believe in," was placed on the right side, while "I am uncertain about" was found on the left side of the continuum.

Friborg et al. (2003) developed multidimensional scale to measure protective assets and resources which were believed to be elements of resilience. After the first development of the scale based on 183 adults in an outpatient clinic (Friborg et al., 2003), and confirmatory factor analysis based on 482 adults who applied to a military college (Friborg, Barlaug, Martinussen,

Rosenvinge, & Hjemdal, 2005), the five-factor model was suggested. One of the factors, personal strength, was suggested as a second-order factor to achieve a good fit of the model. The factors include 1a) personal strength/perception of self, 1b) personal strength/perception of future, 2) structured style, 3) social competence, 4) family cohesion, and 5) social resources.

Friborg and colleagues (2005) further explained the structure of the model and proposed two subscales: personal competence and sources of support. The three factors, which include personal strength (both perception of self and perception of future), social competence, and structured style, measure various aspects of *personal competence*. The other two factors, family cohesion and social resources, are suggested to be *sources of support*. Example items include 'My personal problems, I know how to solve' (personal strength/perception of self), 'My plans for the future are possible to accomplish' (personal strength/perception of future), 'I am at my best when I have a clear goal to strive for' (structured style), 'I enjoy being together with other people' (social competence), 'My family's understanding of what is important in life is very similar to mine' (family cohesion), and 'I can discuss personal issues with friends/family-members' (social resources). Reflecting the definition of resilience in the study, the mean scores of two subscales, personal competence and sources of support, were used to provide the level of resilience, and the higher scores indicate the higher levels of resilience.

Reliability and validity were examined in the validation studies, which included internal consistency and convergent and discriminative validity (Friborg et al., 2005). Internal consistency was reported in two ways, Cronbach's alpha was .67 to .79 and alpha calculated by structural equation modeling (SEM) was .76 to .87 in the study of Friborg and colleagues (2005), which reflect the adequate to high internal consistency. In their study, SEM alpha was also reported because it resolves the issues of underestimation of internal consistency using

Cronbach's method due to differential item loadings and fewer items. Convergent and

discriminative validity of the scale was also supported in their study (Friborg et al., 2005).

Convergent validity of the RSA was supported by a high correlation (rs = .31 – 57), except a

correlation between 'structured style' and 'social competence,' and discriminant validity of the

RSA was supported by correlation analysis with personality and social intelligence.

The RSA is one of the scales, which received the highest psychometric ratings in a

methodological review study about resilience scales by Windle, Bennett, and Noyes (2011). It

also reflects the multi-level nature of resilience with multiple subscales and an inclusion of both

the availability of resources and personal agency, unlike other scales that scored the same

(Windle et al., 2011). The RSA has been cross-validated in various countries, including Asian

countries such as India, and China (Cowden, Meyer-Weitz, & Oppong, 2016; Li, Xu, He, & Wu,

2012; Narayanan, 2007). Taken together, the RSA was suitable to measure resilience as a

protective factor among Asian international students, especially because of its strong

psychometric background and its relevance in using different cultures. The current study used

two constructs of RSA, personal competence and sources of support. Personal competence

included perception of self and perception of future, social competence, and structured style, and

the current study called it 'individual assets' to use consistent terms. Sources of support in RSA

included family cohesion and social resources. The current study used 'resources' to call it to

maintain the consistency. Table 2 indicated the reliability of both individual assets and resources

in RSA for the current study.

Table 3

Reliability of the RSA and its Two Categories for the Current Study

Construct	Cronbach's Alpha
RSA Total	.845
Individual assets	.825
Resources	.713

Outcomes

　　Psychological Wellbeing. The Ryff's Psychological Well-Being (RPWB; Ryff & Keyes,

1995; Ryff et al., 2010) was used to measure overall psychological wellbeing of Asian

international students. The original RPWB was developed in an attempt to measure eudaimonic

well-being based on six different dimensions: self-acceptance, positive relations with others,

autonomy, environmental mastery, purpose in life, and personal growth (Ryff, 1989). While the

original RPWB has total 120 items with each 20 items per six dimensions, researchers have tried

to reduce the number of total item due to the length of the questionnaire (e.g. Morozink,

Friedman, Coe, & Ryff, 2010). The version with 18 total items was used in this study due to the

advantage of the least number of items (Ryff & Keyes, 1995).

　　The RPWB-18 has total 18 items to measure six dimensions, and each dimension has

three items. The items were scored by 7-Likert scale which ranges from 'strongly disagree' (1) to

'strongly agree' (7). There are 10 reverse-scored items that are worded in the opposite direction

and were calculated differently. Ryff (2014) suggested that high scores reflect indicators of

"feeling good, happy, positive, or satisfied with life (p.11)." Example questions of RPWB

include 'I tend to be influenced by people with strong opinions (Autonomy)', 'For me, life has

been a continuous process of learning, changing, and growth (Personal growth)', 'In general, I

feel I am in charge of the situation in which I live (Environmental mastery).', 'People would describe me as a giving person, willing to share my time with others (Positive relations with others).', 'Some people wander aimlessly through life, but I am not one of them. (Purpose in life), 'In many ways I feel disappointed about my achievements in life (Self-acceptance, reverse-scored).'

Researchers have provided evidence of good construct and convergent validity of RPWB (Ryff & Keyes, 1995). Studies, however, have reported that reduced RPWB might not be suitable to measure all six dimensions of psychological wellbeing and recommended a cautious use of subscale scores (Abbott, Ploubidis, Huppert, Kuh, & Croudace; 2010; Springer & Hauser, 2006). Accordingly, the total score was used in this study to indicate psychological wellbeing of Asian international students instead of using scores of each dimension. The RPBW has been used for diverse populations. Especially, researchers have used the RPBW in the studies of Asian American populations and Asian international college students (Baker et al., 2012; Iwamoto & Liu, 2010). The internal consistency of the RPBW-18 was .83 in the study of Iwamoto and Liu (2010), and provided good reliability. Table 5 indicated the reliability of RPWB-18 in the current study.

Table 4

Reliability of the RPWB-18 for the Current Study

Construct	Cronbach's Alpha
RPWB-18	0.740

Depression. The Patient Health Questionnaire depression scale (PHQ-9; Kroenke, Spitzer, & Williams, 2001) measured depressive symptoms of Asian international students in this study. The PHQ was first developed as an instrument with a purpose of criteria-based diagnoses of mental disorders, including depression (Spitzer et al., 1999). The PHQ-9, one of the scales of the whole questionnaire, is based on the diagnosis criterion of depressive disorder in DSM-IV. Researchers who validated the PHQ-9 proposed that it may be helpful in diagnosis purpose as well as in rating depressive symptom severity. In the current study, PHQ-9 was used to measure depression level of Asian international students, not to diagnose participants. Total nine items are included in PHQ-9, asking about how often the participants have been bothered by over the last two weeks. Example items are 'little interest or pleasure in doing things' and 'feeling down, depressed, or hopeless.' All questions were scored on a 4-point Likert response scale that ranges from 'Not at all' (0) to 'Nearly every day' (3). The total score is ranged from 0 to 27, and higher scores reflect severe the depressive symptoms the participants report.

Kroenke and colleagues (2001) provided criterion validity of PHQ-9 by interviewing mental health professionals, and construct validity by suggesting high correlation with functional status of participants. Martin, Rief, Klaiberg, and Braehler (2006) also provided construct and convergent validity of PHQ-9 in general population. In addition, Kroenke et al (2001) reported high reliability with a Cronbach's alpha of .86 and excellent test-retest reliability with a correlation coefficient of .84. Young et al (2010) also reported high internal consistency with a Cronbach's alpha level of .87 among college students including Asian Americans.

PHQ-9 has benefits because of its validity and reliability despite the half the length of many other depression measures (Kroenke et al., 2001). Researchers have also validated the use of PHQ-9 to general population (Martin et al., 2006) and used in college student populations

(Eisenberg, Gollust, Golberstein, & Hefner, 2007). PHQ-9 has been validated in other languages, such as Chinese (see Chen, Huang, Chang, & Chung, 2006), and validated to general population (Wang et al., 2014). In addition, researchers have used PHQ-9 in their Asian college students (Young et al., 2010). The English version of PHQ-9 was used in this study. The reliability of the PHQ-9 in the current study was presented in Table 4.

Table 5

Reliability of the PHQ-9 for the Current Study

Construct	Cronbach's Alpha
PHQ-9	0.859

Demographics

Demographic information was asked to students in order to overview the characteristics of the participants and to control distinctive demographic features. Gender, country of origin, enrolled program (undergraduate, graduate) and year in school (first, second, third, fourth, and fifth or more) were included for general information of the students. In addition, two other demographic questions asking about English proficiency and length of staying in the US were asked to control the influence of language and time spent in the U.S. in data analysis. English proficiency was measured by asking "How comfortable are you communicating in English?" with 5-likert scale (1: Not comfortable at all, 5: Extremely comfortable). The length of staying in the US was asked to identify years and months of staying and were calculated as months when analyzing the data to treat it as continuous variable (e.g. 1 year and 3 months were treated as 15 months). The abovementioned demographic features were determined whether to use as control variables in data analysis in order to produce more accurate results of the study.

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Procedures

Data collection began after an approval of the Institute Review Board. The recruitment was based on convenience and snowball sampling. Emails were sent out to organizations that have access to Asian international students in undergraduate or graduate programs to request to participate in the study by answering the online survey if they qualify. A link to the online survey was included in the recruitment letter via emails. Additionally, social media platforms (e.g. Facebook) were used to reach out to eligible students. Participants were limited to those who are 18 years of age or older at the time of the survey and enrolled in the undergraduate or graduate programs. All questions in the survey were written in English. The link in the email directed to an informed consent on Qualtrics (www.qualtrics.com). Informed consent included information about purpose, procedure, duration, the participants' ability to stop the survey at any point without the threat of repercussions, and the right to ask questions, drawing information. Participants were ensured of confidentiality and anonymity of the survey. The length of data collection was one year to reflect diverse periods of one academic year.

Research Design

This correlational study used an online survey written in English at one point in time with instruments that measure the levels of resilience, stress, depression, psychological wellbeing, and demographic features. Initial descriptive report provided a general picture of resilience, stress, depression, and psychological wellbeing of Asian international students. Results of regression analysis with moderator delivers evidence which shows the role of resilience as protective factors between stress and mental health outcomes, including psychological wellbeing and depression.

There are several advantages to use the correlational study with an online survey. First, using online survey is likely to increase the number of participants due to the nature of high accessibility of online survey. This is especially advantageous to increase the number of international students because researcher was able to access Asian international students in various campuses. Another advantage of the study design is that correlational studies allow for complicated relation between variables, examining the moderating effects of the model. Instruments used in this study have supports for their validity and reliability to measure the main constructs of this study. This is a major strength to internal validity. Also, control variables that are used in this research design allows to achieve better external validity because the results of the study showed the relation between variables that are controlled out the demographic features.

Data Analysis

Three steps were taken to answer the research questions and test the hypotheses of the study. First, descriptive statistical analyses were conducted to determine the control variables to include in hierarchical linear regression analysis. A set of independent t-tests and a one-way ANOVA were conducted to compare means of psychological wellbeing and depression by gender, degree sought, Asian cultural regions. Countries of origin were recoded into four Asian cultural regions to examine group differences (North East, South East, Southern, and Western Asia). Additionally, Spearman correlation analysis was conducted among depression, psychological wellbeing, GPA, English proficiency, year in college, and months staying in the US. This is because the abovementioned demographic variables were not normally distributed. Based on these descriptive analyses, the control variables were determined.

Second, multiple linear regression analyses were conducted to examine whether each subscale of perceived stress were significantly associated with their psychological wellbeing and

depression of Asian international students. Third, resilience as protective factors were added as moderators and the moderating effect was tested using hierarchical linear regression analysis. To examine the moderating effect, interaction terms were created using centered means of stressors and elements of resilience were included in the last step of hierarchical linear regression analysis. Control variables, gender, degree sought, English proficiency, and GPA, were included in all regression analyses.

The data that were collected are multivariate data and hierarchical linear regression analysis was used to test the hypotheses of the study. The variables, instruments to measure those constructs, and the levels of the measurements are shown in Table 6. SPSS 21 was used to conduct all statistical analysis. EM (Expectation Maximization) algorithm was used to calculate missing values of variables, excluding demographic information.

The assumptions that are required to conduct linear regression analysis are linear relation among variables, normal distribution of variables, homogeneity of variance, and multicollinearity. First, linear relations between variables were tested by looking at scatterplot and correlations among variables. If the correlations are significant, it is likely that the relations among variables are linear. Second, normal distribution can be tested by checking the skewness and kurtosis of variables. If the absolute values of skewness and kurtosis are more than two standard deviation, it means that the normality is not achieved. Because some demographic variables, including GPA, English proficiency, and months staying in the US were not normally distributed, Spearman correlation analysis was conducted to examine the associations. Third, homogeneity of variance should be assumed. This can be tested by using Levene's test. Last but not least, multicollinearity should be tested to confirm that predicting variables are independent, and one predicting variable is not predicted or impacted by the other variables. If Variance

Inflation Factors (VIF) in regression models are less than 10, it means there is little issue with multicollinearity. Importantly, when testing the moderation model, the variables should be centered in order to avoid multicollinearity issues. All VIF scores in regression models were below 2 in this study.

Table 6

Variables Used in the Study

Variables and Constructs			Instruments/measurements	The level
Control variable	Demographic features		Gender	Nominal
			Degree Sought	Nominal
			Year in school	Ordinal
			English proficiency	Ordinal
			Length of staying in the US	Continuous
Predictive variable	Stressor		Index of Life Stress (ILS; Yang & Clum, 1995)	Continuous
Moderator	Resilience	Individual assets	Personal strength (perception of self/future), Structured style, Social competence (RSA; Friborg et al., 2005)	Continuous
		Resources	Family cohesion, Social resources (RSA; Friborg et al., 2005)	Continuous
Outcome variables	Psychological wellbeing		Ryff's Psychological Well-Being (RPWB; Ryff et al., 2010)	Continuous
	Depression		Patient Health Questionnaire (PHQ-9; Kroenke et al., 2001)	Continuous

Note. RSA = The Resilience Scale for Adults

CHAPTER 4: RESULTS

The results of the preliminary analyses to determine the control variables to include in linear regression analyses are reviewed in this chapter. In addition, it offers the results of hierarchical multiple linear regression analyses to answer three research questions of the current study.

Preliminary Analysis

Data cleaning

The number of responses recorded in the Qualtrics' online survey website was 269. Researcher excluded responses from two students who were not international students (U.S. citizens). Also removed were 70 participants who answered less than 50% of each and/or all instrument. As a result, 197 participants were included in the final data analysis. This total number of participants exceeded the recommended number of participants from G*Power, which was 184, for an appropriate effect size (.15) with 12 predictors in a linear multiple regression fixed model. Missing values in stressors, resilience, depression, psychological wellbeing, and GPA were calculated based on EM (Expectation Maximization) algorithm.

Descriptive statistics

Descriptive analyses were conducted to determine normality test of the variables. Skewness and kurtosis of psychological wellbeing, stressors, and resilience indicated the normality of the variables ($<|2|$). Because skewness and kurtosis of depression was over 2, researcher checked the normality by a Q-Q plot (See Appendix M). Based on the linearity shown in the Q-Q plot, all variables were determined to be normal. Skewness, kurtosis, mean, standard deviation, and minimum and maximum values are shown in Table 7.

Table 7

Descriptive Statistics for All Variables (N = 197)

		M	*SD*	Minimum	Maximum	Skewness	Kurtosis
	Psychological wellbeing	4.85	.68	2.75	6.61	-.132	.037
	Depression	.83	.54	0.00	2.89	.928	.898
Stressors	CFD	1.51	.65	0.00	3.00	.129	-.383
	Language difficulty	1.27	.62	0.00	2.80	-.046	-.170
	Interpersonal stress	.83	.54	0.00	2.67	.646	.451
	Cultural adjustment	1.09	.50	0.00	2.86	.380	.360
	Academic pressure	1.58	.62	.20	2.80	-.321	-.591
Resilience	Individual Assets	3.56	.54	2.20	4.85	-.155	-.397
	Resources	3.81	.50	2.38	4.69	-.664	-.360
	GPA	3.63	.33	2.60	4.30	-1.106	.822
	Year in school	2.54	1.330	1	5	.399	-1.028
	English Proficiency	3.47	1.24	1	5	-.536	-.811
	US stay-month	47.46	35.45	1	195	1.158	1.829

Note. Standard error of skewness = .173, Standard error of kurtosis = .345 for all variables.

[a] CFD = Concerns about finance and desire to stay in the US.

Mean differences

Independent *t*-tests and a one-way ANOVA were conducted to examine the mean differences of psychological wellbeing and depression by gender, degree sought, and Asian cultural regions. All participants self-identified their gender as either female or male, and thus an independent *t*-test was conducted to compare means by gender. As shown in Table 8, depression was not significantly different by gender ($t = .521$, $p > .05$), while psychological wellbeing was ($t = -2.986$, $p < .001$). That is, female Asian international students reported a significantly higher psychological wellbeing than male students.

Table 8

Independent T-test of Psychological Wellbeing and Depression by Gender

	Female (n = 107)		Male (n = 90)		t
	M	SD	M	SD	
Psychological wellbeing	4.98	.62	4.69	.72	-2.986[**]
Depression	.81	.52	.85	.56	.521

[**] $p < .01$

As for degree sought, both psychological wellbeing and depression were significantly different between undergraduate and graduate Asian international students (See Table 9). Graduate students indicated significantly higher psychological wellbeing than undergraduate students ($t = -2.504$, $p < .05$). Also, undergraduate students reported significantly higher depression level than graduate Asian international students ($t = 2.708$, $p < .01$).

Table 9

Independent T-test of Psychological Wellbeing and Depression by Degree Sought

	Undergraduate (n = 90)		Graduate (n = 107)		t
	M	SD	M	SD	
Psychological wellbeing	4.71	.76	4.96	.58	-2.504[*]
Depression	.94	.53	.74	.53	2.708[**]

[*] $p < .05$, [**] $p < .01$

Based on cultural backgrounds, psychological wellbeing and depression of four groups were compared using a one-way ANOVA. As shown in Table 10, no significant difference in both psychological wellbeing and depression was found.

Table 10

One-way ANOVA of Psychological Wellbeing and Depression by Asian Cultural Regions

	North East (n = 170)		South East (n = 7)		Southern (n = 15)		Western (n = 5)		F	p
	M	SD	M	SD	M	SD	M	SD		
PWB	4.81	.68	4.82	.57	5.30	.59	4.68	.83	2.574	.055
Depression	.83	.51	1.17	1.01	.73	.61	.82	.56	.359	.784

Note. PWB = Psychological Wellbeing; North East = China, Japan, South Korea, Mongolia, Taiwan; South East = Cambodia, Indonesia, Myanmar, Thailand, Vietnam; Southern: Bangladesh, India; Western = Kuwait, Lebanon, Oman, United Arab Emirates

Correlations

Correlation analyses were conducted not only to describe the associations among all variables but also to evaluate the multicollinearity. If variables are highly related with a correlation coefficient equal to or greater than the value of .90, then there is a high risk of multicollinearity (Tabachnick & Fidell, 2007). Table 11 indicated the results of Pearson's correlation analysis among all variables. All variables were significantly related and no correlation coefficient was more than .90. Therefore, correlation analysis suggested no evidence of multicollinearity among variables.

Additionally, correlations between dependent variables and demographic information of Asian international students were examined to determine which information to include as control variables in the regression analysis. Table 12 showed the results of Spearman's correlation analysis among depression, psychological wellbeing, and other information about participants, including GPA, year in school, English proficiency, and months staying in the US. Only GPA and English proficiency were significantly associated with psychological wellbeing and depression ($p < .05$).

Table 11

Correlation Matrix for All Variables

Variables	1	2	3	4	5	6	7	8	9
1. Depression	1.000								
2. Psychological wellbeing	-.634***	1.000							
3. Stressor: CFD	.367***	-.204**	1.000						
4. Stressor: Language difficulty	.358***	-.444***	.257***	1.000					
5. Stressor: Interpersonal stress	.360***	-.314***	.296***	.187**	1.000				
6. Stressor: Cultural adjustment	.329***	-.315***	.248***	.332***	.476***	1.000			
7. Stressor: Academic pressure	.492***	-.486***	.302***	.383***	.231**	.209**	1.000		
8. Resilience: Individual Assets	-.563***	.694***	-.222**	-.299***	-.259***	-.296***	-.372***	1.000	
9. Resilience: Resources	-.261***	.418***	-.177*	-.176*	-.236**	-.194**	-.165*	.450***	1.000

Note. CFD = Concerns about finance and desire to stay in the US.

* $p < .05$, ** $p < .01$, *** $p < .001$

Table 12

Spearman Correlation Analysis Among Psychological Wellbeing, Depression, and Demographic

Information

Variables	1	2	3	4	5	6
1. Depression	1.000					
2. Psychological wellbeing	-.634***	1.000				
3. GPA	-.261***	.348***	1.000			
4. Year in School	-.070	.089	.069	1.000		
5. English proficiency	-.195**	.163*	.167*	.115	1.000	
6. Months staying in the US	-.007	.105	.020	.476***	.318***	1.000

*$p < .05$, **$p < .01$, ***$p < .001$

Hierarchical Multiple Linear Regression Analysis

A hierarchical linear regression analysis was conducted to examine the predicting impacts of stressors and resilience as a protective factor on psychological wellbeing and depression of Asian international students. Moderation effects were also tested using hierarchical linear regression analysis with interaction terms created by multiplying centered means of five stressors and centered means of two subscales of resilience.

Research question 1. Does the known stressors associate with psychological wellbeing and depression of Asian international college students?

The results of the hierarchical linear regression analysis to examine the predictive effects of stressors on psychological wellbeing of Asian international students after controlling for demographic information are shown in Table 13. Model 1 with gender, degree sought, English proficiency, and GPA significantly explained psychological wellbeing of Asian international students ($F = 7.348$, $p < .001$). The variance in psychological wellbeing explained was 13% and being a female ($\beta = .143$, $p < .05$) and having a higher GPA ($\beta = .281$, $p < .05$) were positively

significantly associated with psychological wellbeing. Model 2 was also significant after adding

five stressors of Asian international students ($F = 15.824$, $p < .001$). The addition of stressors

significantly changed the R-square of Model 2 ($F_{\Delta R^2} = 19.737$, $p < .001$), and the variance in

psychological wellbeing explained was 43% in Model 2. Specifically, Language difficulty was

negatively associated with psychological wellbeing ($\beta = -.268$, $p < .001$), followed by Academic

pressure ($\beta = -.248$, $p < .001$), Cultural adjustment ($\beta = -.173$, $p < .01$), and Interpersonal stress (β

$= -.154$, $p < .05$). Thus, the results of hierarchical linear regression indicated that the level of

stressors were positively associated with depression, while the level of stressors were negatively

associated with psychological wellbeing of Asian international college students, after controlling

demographic information.

Table 13

Hierarchical Linear Regression Analyses for Stressors Predicting Psychological Wellbeing

	Model 1			Model 2		
	B	SE	β	B	SE	β
Intercept	2.499	.556		4.059	.492	
Female	.195	.094	.143*	.233	.079	.171*
Graduate student	.029	.104	.021	.057	.086	.042
English proficiency	.037	.038	.067	-.019	.032	-.034
GPA	.579	.157	.281*	.192	.137	.093
Stressors						
CFD				.005	.064	.005
Language difficulty				-.296	.072	-.268***
Interpersonal stress				-.195	.081	-.154*
Cultural adjustment				-.236	.088	-.173**
Academic pressure				-.273	.074	-.248***
R^2		.133			.432	
F		7.348***			15.824***	
ΔR^2					.300	
$F_{\Delta R^2}$					19.737***	

Note. CFD = Concerns about finance and desire to stay in the US.

$^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$

Table 14 indicates the results of the regression analysis for examining the predictive

effect of five stressors on depression after controlling the demographic information (gender,

degree sought, English proficiency, GPA) of Asian international students. The results of Model 1

showed the impact of participants' demographic information on depression. Although Model 1

was significant ($F = 3.363$, $p < .05$), only 6% of variance of depression was explained by

students' demographic information with no significant predictors. After including five stressors

of Asian international students, the model was significant ($F = 13.136$, $p < .001$) and the R-square

was significantly increased from Model 1 ($F_{\Delta R^2} = 19.648$, $p < .001$). Model 2 explained 32% of

variance in students' depression. Three stressors, Concerns about finance and desire to stay in the

US, Interpersonal stress, and Academic pressure, were significantly associated with depression of

participants, after controlling impacts of gender, degree sought, English proficiency, and GPA.

As the level of stressors of students increased, the level of depression was also increased.

Specifically, Academic pressure had largest predictive effect on depression ($\beta = .297$, $p < .001$),

followed by Concerns about finance and desire to stay in the US ($\beta = .247$, $p < .001$) and

Interpersonal stress ($\beta = .169$, $p < .05$).

Table 14

Hierarchical Linear Regression Analyses for Stressors Predicting Depression

	Model 1			Model 2		
	B	SE	β	B	SE	β
Intercept	1.956	.458		.868	.405	
Female	.021	.077	.019	-.031	.065	-.029
Graduate student	-.113	.085	-.105	-.144	.071	-.133[*]

English proficiency	-.044	.031	-.102	-.027	.027	-.063
GPA	-.254	.130	-.155	.041	.113	.025
Stressors						
CFD				.203	.053	.247***
Language difficulty				.047	.060	.053
Interpersonal stress				.169	.067	.169*
Cultural adjustment				.110	.072	.101
Academic pressure				.259	.061	.297***
R^2		.065			.387	
F		3.363*			13.136***	
ΔR^2					.322	
$F_{\Delta R^2}$					19.648***	

Note. CFD = Concerns about finance and desire to stay in the US.

$^*p < .05$, $^{**}p < .01$, $^{***}p < .001$

Research question 2. Does resilience (individual assets and resources) moderate the relation between stressors and psychological wellbeing?

Table 15 shows the predicting impacts of resilience on psychological wellbeing of Asian international students before examining the moderating effects. The results of both Model 1 and Model 2 are the same as shown in the first research question. Elements of resilience as a protective factor, individual assets and resources, were included in Model 3 to examine the predicting impact on psychological wellbeing. Model 3 was significant ($F = 28.641, p < .001$) because the change of R-square from Model 2 to Model 3 was significant ($F_{\Delta R^2} = 49.431, p < .001$). The model with demographic information, stressors, and resilience explained 63% of variance of psychological wellbeing. Specifically, individual assets were significantly positively associated with psychological wellbeing ($\beta = .451, p < .001$) and resources were also significantly associated with psychological wellbeing ($\beta = .135, p < .05$). On the other hand, Language difficulty and Academic pressure were significantly negatively associated with psychological wellbeing ($\beta s = -215 \sim -.153, p < .01$). The results indicated that both individual

assets and resources had significant predictive effects on psychological wellbeing of Asian

international students, after controlling demographic information.

Table 15

Hierarchical Linear Regression Analysis for Stressors and Resilience Predicting Psychological

Wellbeing

	Model 1			Model 2			Model 3		
	B	SE	β	B	SE	β	B	SE	β
Intercept	2.499	.556		4.059	.492		4.473	.402	
Female	.195	.094	.143*	.233	.079	.171*	.082	.067	.060
Graduate student	.029	.104	.021	.057	.086	.042	.083	.070	.061
English proficiency	.037	.038	.067	-.019	.032	-.034	-.046	.026	-.084
GPA	.579	.157	.281*	.192	.137	.093	.123	.112	.060
Stressors									
CFD				.005	.064	.005	.065	.052	.063
Language difficulty				-.296	.072	-.268***	-.238	.059	-.215***
Interpersonal stress				-.195	.081	-.154*	-.103	.067	-.081
Cultural adjustment				-.236	.088	-.173**	-.126	.072	-.092
Academic pressure				-.273	.074	-.248***	-.168	.061	-.153**
Resilience									
Individual assets							.562	.069	.451***
Resources							.183	.072	.135*
R^2	.133			.432			.630		
F	7.348***			15.824***			28.641***		
ΔR^2				.300			.198		
$F_{\Delta R^2}$				19.737***			49.431***		

Note. CFD = Concerns about finance and desire to stay in the US.

* $p < .05$, ** $p < .01$, *** $p < .001$

Next, the interaction terms were added in Model 4 to examine the moderating effects of

elements of resilience between stressors and psychological wellbeing of Asian international

students. If the R-square of Model 3 with control variables, independent variables (i.e. five

stressors), and moderator (i.e. two elements of resilience) significantly increases by adding an interaction term in Model 4, indicating a significant moderating effect. Hierarchical linear regression analyses were conducted 10 times because the number of possible interaction terms of stressors and resilience was 10. Table 16 indicated the summary of the results in Model 4 for psychological wellbeing. Although all models with the addition of an interaction term were significant ($Fs = 26.124 \sim 26.734$, $p < .001$), the changes of R-square were not significant in any models, nor the regression coefficients of the models. Therefore, the moderating effects of resilience as a protective factor between stressors and psychological wellbeing of Asian international students were not supported in this study.

Table 16

Moderating Effects of Resilience Between Stressors and Psychological Wellbeing

Interaction Terms	B	SE	β	p	R^2	F	ΔR^2	$F_{\Delta R}{}^2$
CFD * IA	-.097	.085	-.053	.256	.633	26.405***	.003	1.299
Language difficulty * IA	.049	.087	.026	.572	.631	26.184***	.001	.320
Interpersonal stress * IA	.024	.102	.011	.816	.630	26.124***	.000	.055
Cultural adjustment * IA	.124	.111	.051	.269	.632	26.389***	.002	1.231
Academic pressure * IA	-.145	.087	-.076	.098	.636	26.734***	.005	2.761
CFD * R	.076	.104	.034	.464	.631	26.233***	.001	.538
Language difficulty * R	.114	.105	.052	.278	.632	26.378***	.002	1.182
Interpersonal stress * R	.150	.099	.073	.131	.635	26.630***	.005	2.302
Cultural adjustment * R	.163	.136	.055	.233	.633	26.435***	.003	1.432
Academic pressure * R	-.047	.107	-.021	.659	.630	26.156***	.000	.196

Note. CFD = Concerns about finance and desire to stay in the US, IA = Individual assets, R = Resources

*** $p < .001$

Research question 3. Does resilience (individual assets and resources) moderate the relation between stressors and depression?

Before examining the moderating effect of resilience as a protective factor, both elements of resilience were included in the hierarchical linear regression. As shown in Table 17, Model 3 with the addition of both elements of resilience was significant ($F = 16.088$, $p < .001$). The change of R-square was significant ($F_{\Delta R^2} = 18.382$, $p < .001$), and 49% of variance of students' depression was explained by demographic information, stressors, and resilience. Specifically, individual assets as an element of resilience were significantly negatively associated with depression of Asian international students ($\beta = -.356$, p $< .001$), while resources were not associated with depression. Additionally, Concerns about finance and desire to stay in the US, Interpersonal stress, and Academic pressure were still significantly positively associated with depression (βs = .126 ~ .224, $p < .05$). In sum, only individual assets were significantly negatively associated with depression of Asian international students after controlling for demographic information.

Table 17

Hierarchical Linear Regression Analyses for Stressors and Resilience Predicting Depression

	Model 1			Model 2			Model 3		
	B	SE	β	B	SE	β	B	SE	β
Intercept	1.956	.458		.868	.405		.624	.374	
Female	.021	.077	.019	-.031	.065	-.029	.042	.062	.039
Graduate student	-.113	.085	-.105	-.144	.071	-.133*	-.156	.065	-.144*
English proficiency	-.044	.031	-.102	-.027	.027	-.063	-.011	.025	-.025
GPA	-.254	.130	-.155	.041	.113	.025	.084	.104	.051
Stressors									
CFD				.203	.053	.247***	.171	.049	.208**
Language difficulty				.047	.060	.053	.015	.055	.017

			B	SE	β	B	SE	β
Interpersonal stress			.169	.067	.169[*]	.126	.063	.126[*]
Cultural adjustment			.110	.072	.101	.046	.067	.043
Academic pressure			.259	.061	.297[***]	.196	.057	.224[**]
Resilience								
Individual assets						-.353	.065	-.356[***]
Resources						-.038	.067	-.035
R^2	.065			.387			.489	
F	3.363[*]			13.136[***]			16.088[***]	
ΔR^2				.322			.102	
$F_{\Delta R^2}$				19.648[***]			18.382[***]	

Note. CFD = Concerns about finance and desire to stay in the US.

[*] $p < .05$, [**] $p < .01$, [***] $p < .001$

To examine the moderating effects of the elements of resilience between stressors and depression of Asian international students, each interaction term was added in Model 4. Similar to the results for psychological wellbeing, hierarchical linear regression analyses were conducted 10 times due to 10 possible combination of interaction terms between stressors and resilience. The summary of the results in Model 4 for depression is shown in Table 18. The results indicated that resilience did not show any moderating effects between stressors and depression, even though all models were significant (Fs = 14.709 ~ 15.001, $p < .001$). The changes of R-square were not significant in any models. In conclusion, resilience as a protective factor did not moderate the relation between stressors and depression of Asian international students.

Table 18

Moderating Effects of Resilience Between Stressors and Depression

Interaction Terms	B	SE	β	p	R^2	F	ΔR^2	$F_{\Delta R^2}$
CFD * IA	-.113	.079	-.078	.154	.495	15.001[***]	.006	2.046
Language difficulty * IA	-.058	.081	-.039	.470	.490	14.753[***]	.001	.524
Interpersonal stress * IA	-.048	.095	-.029	.613	.490	14.709[***]	.001	.257

Cultural adjustment * IA	-.055	.104	-.028	.600	.490	14.712***	.001	.275
Academic pressure * IA	-.063	.082	-.041	.444	.491	14.763***	.002	.589
CFD * R	-.126	.096	-.072	.191	.494	14.948***	.005	1.723
Language difficulty * R	-.096	.098	-.055	.330	.492	14.823***	.003	.952
Interpersonal stress * R	-.080	.093	-.049	.387	.491	14.790***	.002	.751
Cultural adjustment * R	-.072	.127	-.031	.573	.490	14.719***	.001	.318
Academic pressure * R	-.069	.100	-.039	.490	.490	14.745***	.001	.479

Note. CFD = Concerns about finance and desire to stay in the US, IA = Individual assets, R = Resources

*** $p < .001$

Summary of the Results

Figure 3 shows a summary of the hierarchical linear regression analysis. As shown, solid arrows indicate the significant associations, while the dotted arrows show non-significant results. A relation between cultural adjustment and psychological wellbeing is indicated as not significant, because the association was no longer significant after adding resilience in the regression analysis. Similarly, a relation between personal stress and psychological wellbeing is illustrated as a non-significant association.
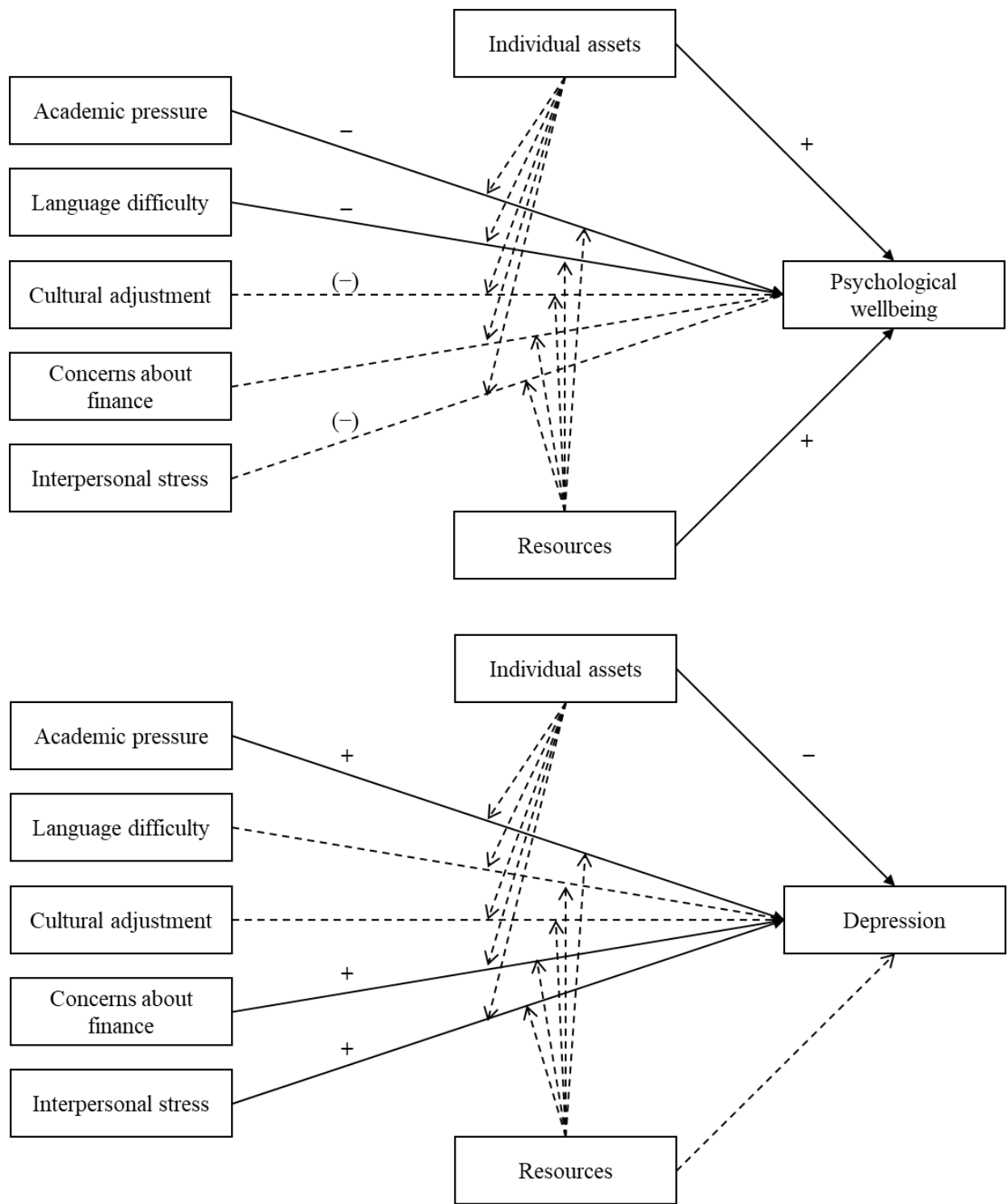
Figure 3. Summary of hierarchical linear regression analyses

CHAPTER 5. DISCUSSION

Discussion of the Results

The first aim of the study was to examine the associations of five stressors with psychological wellbeing and depression of Asian international students after controlling for demographic information. The second purpose of the study was to investigate the moderating effect of two elements of resilience, individual assets and resources, between stressors and depression of Asian international students. The third and last purpose of the study was to examine the moderating effect of resilience, operationalized as individual assets and resources, on the association between stressors and psychological wellbeing of Asian international students. A set of hierarchical linear regression analyses answered the three research questions, and discussion of the results is as follows.

Research Question 1.

Do stressors associate with psychological wellbeing and depression of Asian international college students?

The results of this study indicated that the stressors impacted differently on psychological wellbeing and depression of Asian international students. Academic pressure and Interpersonal stress impacted both psychological wellbeing and depression of Asian international students after controlling for demographic information. Language difficulty and Cultural adjustment affected only psychological wellbeing, while Concerns about finance/desire to stay in the US was associated only with depression of Asian international students. The variance in depression explained by control variables and stressors was 38.7%, which indicates a large effect size (Cohen, 1988). The variance in psychological wellbeing explained by control variables was 13.3%, and by stressors was 43.2%, suggesting a large effect size (Cohen, 1988). The significant

predictive effects of stressors on mental health outcomes, psychological wellbeing and depression, found in this study were consistent with the results in previous research (Sawir et al., 2008; Yang & Clum, 1994; Wei et al., 2008). A discussion of each stressor affecting Asian international students is presented below.

Academic pressure. Researchers have suggested that academic pressure is a distinctive stressor for Asian international students due to their unique cultural values, such as Confucianism and the emphasis on educational achievement for family proudness (Kim et al., 2001; Stankov, 2010; Smith & Khawaja, 2011). The results of the hierarchical linear regression confirmed the significant positive relation between depression and academic pressure of Asian international students as well as the significant negative relation between psychological wellbeing and academic pressure.

In the regressions with depression as the dependent variable, Academic pressure showed the largest standardized regression coefficient. This result suggested that academic pressure of Asian international students impacted on the depression level, relatively more than other stressors even after controlling demographic features. The results of the study supported the previous research suggesting that academic pressure is another layer of a burden for Asian international students to carry (Chen, 1999; Mori, 2000). Also, academic pressure might be a critical stressor that increases depression for international students because maintaining academic achievement is critical for some students to be eligible for scholarships and other assistantships (Sherry et al., 2010). Therefore, the current study showed confirming results that academic pressure is one of the main stressors that significantly impact on depression among Asian international students.

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Academic pressure had the second largest impact on psychological wellbeing of Asian international students. This indicated the academic pressures, which Asian international students are facing, have significant negative impacts on their psychological wellbeing, after controlling demographic features. The results align with previous literature. Previous literature suggested that the more academic pressure students have, the less confident Asian international students may be (Chen, 1999). Accordingly, the results of this study supported that academic pressure was significantly negatively associated with psychological wellbeing of Asian international students. As discussed by Kim et al. (2001), Asian culture emphasizes educational success and individual achievement represents the success of a family. Asian international students might feel multiple layers of academic pressure as a 'model minority' on campus and with high family expectations. For them, successful academic achievement might be an obvious duty to serve for family reputation, rather than an accomplishment to celebrate.

Interpersonal stress. Interpersonal stress due to perceived discrimination is another stressor of Asian international students. As previous research suggested, interpersonal stress and perceived discrimination was negatively associated with psychological wellbeing of Asian international students in the current study. Researchers have indicated that international students encounter discrimination and prejudice on campus (Araujo, 2011; Rivas et al., 2019; Young, 2017). The results of the previous research have supported that discrimination was associated with lower academic achievement, discomfort in the classroom, lower psychological functioning, and depression (Kernahan, Wei, & Davis, 2014; Poyrazli & Lopez, 2007; Wei et al., 2008).

Discrimination against Asian international students includes racial prejudice and discrimination due to English proficiency and having an accent (Lee & Rice, 2007; Yeo, Mendenhall, Harwood, & Huntt, 2019). Prejudice and discrimination took place on campus from

faculty, staff, and peer students. Previous research reported that intelligence and fidelity of Asian international students were doubted due to their accents or English proficiency (Rivas et al., 2019; Yeo et al., 2019). For example, due to the accents, Asian international students' opinions might not be valued as much as those of their domestic counterparts in the classroom. Students might not get a chance to take the lead on a class project because of the prejudice that Asian international students are shy. This might cause a distorted view that discrimination is an individual-level issue because it implies that Asian international students are discriminated against due to the low-level language proficiency or cultural differences (Houshmand, Spanierman, & Tafarodi, 2014). Internalizing the cause of discrimination may lead to isolation, leaving students to deal with the discrimination on their own without institutional support.

Another prejudice might include an unrealistic expectation of Asian international students as a model minority (Chiu & Ring, 1998). Students from Asian countries encounter a bias that they would not cause any troubles and be successful, academically, and psychologically. The expectation to succeed in every aspect might deprive an opportunity for Asian international students to be vulnerable and ask for help. This might, in turn, lead to Asian international students' lower mental health, which may result in more isolation without proper access to resources.

Language difficulty. Language difficulty was significantly associated with psychological wellbeing in the current study. The results support previous research, which has reported the importance of language barrier of Asian international students. Literature has suggested that language barrier was the foremost difficulty that Asian international students are facing, impacting their academic achievement and adjustment to college (Araujo, 2011; Baklashova & Kazakov, 2016; Tovares & Kamwangamalu, 2017). Regardless of their actual

English proficiency, researchers suggested that students who are self-conscious about their English ability or accents might experience higher levels of stress (Young, 2017). This language difficulty affects not only their academic performance but also their social adjustment (Andrade, 2006; Sherry et al., 2010). Therefore, the results of the current study were consistent with those of previous research.

Although researchers have indicated that language barrier was associated with depression and anxiety in international students (Araujo, 2011), the results of this study did not support that stress about language difficulty was significantly associated with depression of Asian international students. However, language difficulty did affect psychological wellbeing of Asian international students in a negative way. Previous studies indicated that language difficulty caused anxiety in communication (Rivas et al., 2019) and led to isolation (Yan & Berliner, 2011).

Despite the disadvantages which language difficulty brought to Asian international students, depression of students in this study were not impacted. In sum, language difficulty was significantly negatively associated with psychological wellbeing, while it was not significantly associated with depression of Asian international students. Although language difficulty impacted differently on psychological wellbeing and depression, its impact is critical because it may influence other stressors, such as interpersonal stress and academic pressure.

Cultural adjustment. The results of this study showed that cultural adjustment was significantly negatively associated with psychological wellbeing of Asian international students. This supports the results of previous research that indicated cultural adjustment or acculturation stress was associated with mental health outcomes (Sawir et al., 2008; Young, 2017). Sherry et al. (2010) suggested that the initial stages of cultural adjustment could be the most difficult time

for international students and indicated the importance of considering both cultural adjustments to host culture and cultural misunderstanding about the international students' culture by others. In sum, according to the results of the current study, the more Asian international students are stressed about cultural adjustment, both from the acculturation process and from a continued misunderstanding about Asian culture, the less psychological wellbeing they have.

It is meaningful to note that cultural adjustment was not significantly associated with depression in comparison to other stressors in this study. Other significant stressors, academic pressure, and practical issues had relatively larger impacts on depression than cultural adjustment according to the results of the current study. Although studies have indicated the cultural adjustment process may lead to loneliness and homesickness of international students (Sawir et al., 2008; Zheng & Berry, 1991), stress about cultural adjustment may not be directly associated with depression among Asian international students.

Concerns about finance and desire to stay in the US. Practical issues, including concerns about finance and desire to stay in the US, were significantly positively associated with depression in the current study. The results were consistent with the previous research that indicated most international students had financial issues in college (Sherry et al., 2010). Due to the limits of financial sources for international students, students might feel overwhelmed financially, as well as psychologically. It may also lead to a feeling of helplessness because international students might have no resources to legally support themselves without scholarships or family support. It is notable that concerns about finance and desire to stay in the US did not impact on psychological wellbeing in the current study. Stress about practical issues might have a stronger impact on the negative aspect of mental health than positive outcomes of Asian international students, according to the results of this study.

Research Question 2

Does resilience (personal assets and resources) moderate the relation between stress and psychological wellbeing?

This study was designed based on the moderator model suggested by Masten (2014). It was hypothesized that resilience would ameliorate the negative impact of stressors on psychological wellbeing among Asian international students, but the results of the current study did not support that hypothesis. Previous literature showed mixed results about a moderating effect of resilience between adversity and mental health outcomes (Ifeagwazi, Chukwuorji, & Zacchaeus, 2015; Lines et al., 2018). A study by Ifeagwazi et al. (2015) showed a significant moderation effect of resilience between alienation and psychological wellbeing. Researchers conducted quantitative research among 337 undergraduate students in Nigeria to examine the moderation effect of resilience between alienation and psychological wellbeing. One of the reasons why the results of the current study differ from those of a study of Ifeagwazi et al. (2015) may be due to cultural differences among samples in each study. The role of resilience in Asian culture might look different from that in Nigerian culture. Another study by Lines et al. (2018), however, reported that resilience did not moderate the relation between stress and physical wellbeing. Participants of their study were 135 Australians, and the researchers examined the moderating effects of resilience as a psychological capital. The results did not support any moderating effects of resilience between stress measured by cortisol and physical wellbeing. The conceptual model Lines et al. (2018) used was similar to this study in that they also examined the moderating effect of resilience between stress and wellbeing. The moderating effect of resilience was not found in both studies, despite different measurements used.

Even though the results did not support the moderating effects of resilience, the direct effects of elements of resilience on psychological wellbeing among Asian international students were found, even after controlling the impacts of stressors as well as demographic information. The addition of elements of resilience increased by 10.8% of the variance of psychological wellbeing explained by predicting variables. According to the suggestion of Cohen (1988), this change indicates a large effect size. Each element of resilience was addressed below.

Individual assets. The results of the study indicated that individual assets showed the largest direct impact on psychological wellbeing of Asian international students. According to a resilience model (Masten, 2014), resilience is a protective factor in promoting positive outcomes. The significant association between individual assets as an element of resilience and psychological wellbeing in this study aligns with a strength-based model that emphasizes personal assets to promote positive mental health outcomes, despite difficulties. Although a buffering effect of individual assets was not supported in this study, the results of the study suggested a need to develop individual assets to increase psychological wellbeing of Asian international students.

Individual assets in this study included personal strengths, structured style, and social competence. The results supported the association of personal assets and psychological adjustment in previous research (Mesidor & Sly, 2016). Despite the different time orientations in diverse cultures (Paton, 2007), structured time management and goal-driven style appeared to be more effective in increasing psychological wellbeing of Asian international students. Also, positive perceptions about self and future align with optimism, which was reported to have a positive relation with psychological adjustment of college students (Kim & Lee, 2017). Social competence might be another element of individual assets that promoted psychological

wellbeing of Asian international students. As Asian international students have higher social competence, they may be able to have more connections with both the local community and people from their own nationality. These connections may lead to more support and resources for them to feel less isolated and to have better psychological functioning. In sum, a positive perception of self and future, a more structured style, and higher social competence were strongly associated with psychological wellbeing of Asian international students, according to the results of the study.

Resources. Another element of resilience, resources, was significantly directly associated with psychological wellbeing of Asian international students. A perspective of process resilience suggested the importance of resources as one of the elements of resilience, in addition to individual assets (Liebenberg et al., 2017). Conceptually, positive mental health outcomes are associated with a higher level of process resilience, which includes resources as well as individual assets. The results of this study were consistent with the perspective of process resilience because resources, an element of resilience, significantly improved psychological wellbeing of Asian international students.

Resources in the current study included family cohesion and social resources. Previous literature has provided numerous confirming results that social support and resources have a positive impact on psychological functioning and adjustment to college (Zhang & Goodson, 2011; Yusoff & Othman, 2011; Yusoff, 2012). Consistent with previous research, this study also supported the positive association between resources and psychological wellbeing of Asian international students. The more they have cohesive family and social resources, which they can ask for help or discuss the issues with, the better they function psychologically.

Research Question 3

Does resilience (personal assets and resources) moderate the relation between stress and depression?

In opposition to the hypothesized results, the current study did not support the moderating effect of resilience between stress and depression among Asian international students. Although studies have provided evidence to support a moderating effect of resilience between difficulties and mental health issues, such as burnout and depression (Wagstaff, Hings, Larner, & Fletcher, 2018; Wingo et al., 2010), other studies have reported non-significant moderation effect of resilience (e.g., Lines et al., 2018). Resilience did not buffer the negative impact of stressors, but it may be possible that resilience might mediate the relation between stressors and depression. In other words, the lower level of resilience might be the mechanism of a positive relation between stressors and depression. As Masten (2014) suggested, the mediator model is another variable-focused model of resilience. In a study by Fossion et al. (2013), researchers suggested the role of resilience as a mediator instead of a moderator between trauma and depression and anxiety disorder. Their results supported the mediating effect of resilience between trauma and depression and anxiety disorder, which was consistent with the results of Bonanno, Galea, Bucciarelli, and Vlahov (2007). The results of the study suggested a possibility that the role of resilience between stressors and depression of Asian international students was a mediator.

Although no significant moderating effect was found in the hierarchical linear regression, the results of the study indicated the direct effect of elements of resilience on depression among Asian international students. The addition of elements of resilience increased by 19.8% of R^2 ($\Delta R^2 = .198$), which indicates the large effect size (Cohen, 1988). Discussion about each element of resilience is as follows.

Individual assets. Individual assets were found to be significantly negatively associated with depression of Asian international students in this study. The results of the study suggested a strength-based lens to find assets that decrease depression of Asian international students. Instead of pathologizing students with depressive symptoms by focusing on weaknesses, the concept of individual assets of Asian international students emphasizes the strengths to reduce depressive symptoms.

Previous literature suggested that resilient personal traits are associated with depression (Wagstaff et al., 2018; Wingo et al., 2010). The results of this study provided additional support that individual assets are associated with depression of Asian international students. The more students have a positive perception of self and future, have a structured style, and have social competence, the less likely students have depressive symptoms. As a study by Kim and Lee (2017) suggested, optimism and strategic planning appeared to be important to increase psychological wellbeing of Asian international students. Additionally, having social competence to create and maintain relationships with others seemed to be an effective strategy for higher psychological wellbeing.

Resources. Unlike individual assets, resources were not significantly associated with depression of Asian international students. The results suggested that the resources of Asian international students have no direct impact on depression. In other words, it may imply that individual assets might have a larger impact on depression of Asian international students than resources from family and others. Despite the conceptual framework of process resilience that suggested the importance of both individual assets and resources, resources did not have a significant impact on the depression of Asian international students. This might be due to the potential stigma of help-seeking behaviors in some Asian cultures (Mitchell, Greenwood, &

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Guglielmi, 2007). Seeking help for mental health issues, such as depression, may create a sense of shame because an issue of an individual might represent an issue of a whole family in Asian culture (Kim et al., 2001).

Subscales of resources in the current study included family cohesion and social resources. Positive functioning for Asian international students may be based on personal assets for them, rather than the resources that they may or may not be able to achieve. This may be due to the Asian culture, which emphasizes family reputation more than anything (Kim et al., 2001). As Asian culture prioritizes academic achievement and family reputation, Asian international students may have difficulty seeking help from their family or other resources. In combination with potential language barriers, it may be even more challenging for some Asian international students to ask for help and/or to utilize services provided by their institutions. In a study by Ra (2016), only social support from local peers was significantly associated with acculturative stress of East Asian international students, while support from family or other resources were not significantly associated with stress. The results of the current study might be consistent with Ra's findings (2016), which provided important implications of social support that are truly effective for psychological wellbeing of Asian international students.

<div align="center">**Implications**</div>

The results of the study illustrated the associations of stressors (i.e., academic pressure, interpersonal stress, language difficulty, cultural adjustment, and concerns about finance and desire to stay in the US) and elements of resilience (i.e., individual assets, resources) with psychological wellbeing and depression among Asian international students. Although Asian international students are often seen as a model minority who enjoys high success and lower struggles than the general population, their mental health outcomes are affected in negative ways

by stressors. Furthermore, stressors and resilience impact psychological wellbeing and depression differently and, thus, demand different interventions to promote different mental health outcomes. Counselors, counselor educators, and other education professionals in college could use the results of the current study to better promote selective positive mental health outcomes among Asian international students.

Counseling Professionals

Studies have reported the difficulty of seeking mental health services among international students, especially Asian international students (Mitchell et al., 2007). The reasons Asian internationals have difficulties utilizing professional help for their mental health may include unfamiliarity of the American counseling service system and cultural and language barriers (Brinson & Kottler, 1995; Khawaja & Dempsey, 2008). Counselors should be aware of these difficulties that Asian international students have and should act proactively to minimize those barriers to access mental health services. One way to do it is by having a translated flyer to introduce mental health services available on campus. Even if Asian international students do not need translation to understand what mental health services are available, having flyers in multiple languages could serve as a welcoming gesture to international students. Also, running workshops or orientations to raise awareness of mental health services as a part of outreach programs can be another way to attract Asian international students who would benefit from utilizing mental health services.

Counselors have an ethical responsibility to improve their multicultural and social justice competency to better serve diverse populations, as stated in the ACA codes of ethics (American Counseling Association, 2014). It is critical for counselors to acknowledge the distinctive stressors of Asian international students to better understand them. Instead of using a lens to

perceive Asian international students as a 'model minority,' an effort should be made to be aware of academic pressure that is significantly impacted on the mental health of Asian international students. Other stressors, especially practical issues and perceived discrimination should also be acknowledged when working with Asian international students. If counselors imply or facilitate a false belief that the discrimination against Asian international students is due to their lack of English proficiency or their lack of acculturation, students, as well as counselors, may neglect the institutional efforts that should be advocated for (Houshmand et al., 2014). Therefore, it is crucial for counselors to acknowledge the difficulties that Asian international students encounter and help advocate for them.

Counselors should also be aware of the protective factor to promote mental health of Asian international students. Interventions to build a positive perception of self and future, realistic strategy to learn goal-oriented and structured style, and social resources can be very effective in increasing psychological wellbeing as well as decrease depression of Asian international students. In addition, discussing the resources that are realistic and helpful can be critical in working with Asian international students with depressive symptoms. Because family may not be the best resources for some Asian international students, counselors should be mindful to look for diverse supports that would be more helpful. For example, connecting with local peers could be meaningful support for Asian international students to reduce acculturation stress (Ra, 2016).

Counselor Educators

Counseling professionals should be culturally sensitive and continue to develop their multicultural and social justice competencies (Winterowd, Adams, Miville, & Mintz, 2009). This includes counselor educators who have great impacts on counselors-in-training. Because of the

multiple hats that most counselor educators hold, it is especially important for counselor educators to be aware of stressors that Asian international students face and potential intervention strategies to best serve them. In assisting Asian international clients, counselor educators should be able to address potential stressors in supervision with counselors-in-training to better understand the background of the clients. For example, counselor educators could invite counselors-in-training to think about how to invite Asian international students to discuss potential discomfort about the counseling process by acknowledging potential cultural and language differences. Additionally, counselor educators can facilitate the discussion with counselors to acknowledge diverse stressors that Asian international students encounter and to create intervention plans that are helpful for them. Exposing information about Asian international students and knowledge about persons with different nationalities and persons speaks a different language will greatly help improve multicultural sensitivity, awareness, and skills of counselors-in-training (Jacob & Greggo, 2001).

Counselor educators can apply the results the current study provided to the international students in the counseling profession as well. As the population of international students in higher education grows, the recruitment of international students, especially Asian international students, is also increasing in the counseling profession (Lau & Ng, 2012). Counselor educators should be aware of the potential challenges that Asian international students in counseling encounter to better train them. It is important to also acknowledge the different approaches to counseling in the home countries of students than that of the United States. Inviting the discussion about a different perception of counseling in class and in supervision may facilitate the growth of Asian international counselors-in-training.

The results of the current study, which provided information about the impact of stressors and elements of resilience on mental health outcomes of Asian international students, could be a rich addition to counselor education. Especially, applying the results of the study in multicultural counseling and counseling theory courses could be effective in promoting knowledge and skills to work with Asian international students.

Higher Education Professionals

The results of this study provided implications for professionals in higher education. Faculty and administrators who work with Asian international students can better understand the unique difficulties encountered by these students, including academic pressure, practical issues, and perceived discrimination, faculty, and instructors should be mindful of the impacts of stressors on mental health outcomes of Asian international students, and provide appropriate accommodations if needed. For example, allowing the use of a dictionary in exams can be one of the accommodations that can minimize the potential language barriers. Also, staff in International Student Center, Global Programs, and Student Affairs (e.g., Counseling and Psychological Services, Academic Advising Office, Career Counseling Center, and Residence Life) can benefit from programs or workshops to increase their multicultural awareness. Staff in higher education should also promote institutional efforts to hinder discriminations based on nationality or language proficiency.

In addition to understanding the stressors of Asian international students, higher education professionals can collaborate with each other and with the community to build resilience of Asian international students. For example, to increase the structured style, one of the elements of resilience, staff in Academic Advising office may check in with Asian international students' study skills and refer to Center for Learning or Writing Center. Also, administrators and

staff in universities and colleges can collaborate with the local community to build diverse levels of social support and resources. Because of the uniqueness of Asian culture, family cohesion may be a support and pressure for Asian international students. Having multiple levels of support, including family support, therefore, may assist mental health outcomes for Asian international students.

Limitations of the Study

Several limitations should be considered when interpreting the results of the study. First, the power of the interaction term could have been stronger. The ideal number of participants is 400 to gain .80 power with small effect size (.02) in the moderation model, according to G*Power (Faul, Erdfelder, Lang, & Buchner, 2007). Although the power of the main effects on mental health outcomes was sufficient ($> .95$), the power of the interaction term was low ($< .50$). Thus, the results of the moderating effect should be interpreted carefully. Second, the sampling bias may be a concern because Asian international students who participate in the survey may be more comfortable communicating in English as the survey is written in English. This may create a bias of the international student sample who is more likely to adjust well, given that language barrier is one of the major adjustment issues of international students (Chen 1999; Mori 2000; Yang & Clum, 1994). Third, the self-reported instruments were used in this study. Responses of participants might have under- or over-represented the true scores of their stress, resilience, and mental health outcomes. Participants might have completed the instruments reflecting social desirability. Fourth, a diversity of nationality could have been improved. Although the diversity in the nationality of participants was large (total 16 countries), two-third of the participants were from South Korea and China. Asian international students are a heterogeneous group that has different cultural norms depending on their countries of origin. Given that both countries are two

of the top three countries of origin among Asian international students in the US, the diversity in nationality could have been increased with more participation from South Asia. Last, the current study used a cross-sectional research design. The results of the current study did not capture the process of resilience due to the use of cross-sectional data. Also, cause-and-effect conclusions were avoided because of the nature of cross-sectional data.

Strengths of the Study

Despite the limitation, the current study has unique strengths. First, the sample in this study is diverse, with 16 nationalities and relatively balanced gender and degree sought. The group differences were also tested to control the potential differences between groups for examining a more accurate relation between variables. Second, to my best knowledge, there is no research about the relation between stress and mental health outcomes among Asian international students using a resilience model. This opens up opportunities to apply resilience models to underrepresented populations as well as Asian international students. Instead of using a pathological lens, using a resilience model will provide a more strength-based framework to better understand and serve the underrepresented population. Third, this study used both psychological wellbeing and depression as outcome variables. With the results indicating different predicting variables on psychological wellbeing and depression, this study provided a richer understanding of two aspects of the mental health outcomes of Asian international students. That is, the intervention strategies when working with Asian international students should be different based on the purposes of the interventions. Fourth, this study will serve as a baseline study to examine the impact of COVID-19. The outbreak of COVID-19 in 2020 incurred increased discriminations against and hatred toward Asians (Litam, 2020). Because the

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data was collected before the outbreak, this study sets the groundwork for post-COVID-19 research about the mental health outcomes of Asian international students.

Overall, the study helps to raise awareness of impacts of stressors and resilience on mental health outcomes of Asian international students, and the need for more studies on the protective factors, all of which provided implications and practical suggestions to counselors, counselor educators, and higher education professionals.

Recommendations for Future Research

Future research could overcome the limitations of the study and expend the results. First, a more diverse population in terms of nationality might be helpful to generalize the results. Diversity in nationality may include having more participants in South Asia as well as from the regions outside of Asia. Additionally, a comparison of the results with the domestic students might provide a richer understanding of the differences and similarities between domestic and international students. Second, a mediating model can be tested in future studies. With mixed results of moderating effects of resilience in previous results, the current study was not able to support the moderating effect of resilience among Asian international students. However, it is possible that a mediating model may better explain the role of resilience among Asian international students. Future studies based on a mediation model might be beneficial to examine the role of resilience. Third, it may be possible that the moderating or mediating effects may look differently by demographic features, such as the level of degree sought among Asian international students. Future studies can examine a different role of resilience between stressors and mental health outcomes by a degree level that Asian international students are seeking. Fourth, longitudinal studies will be beneficial to understand the process of resilience among Asian international students. Longitudinal studies would be able to provide the individual

differences in the process of resilience among Asian international students as well. Fifth, a qualitative research design may offer a richer exploration of the resilience of Asian international students. Consensus on quantitative measurements of resilience has not been built strongly yet (Liebenberg et al., 2017), and thus some researchers decided to study resilience using a qualitative paradigm (e.g., Williams & Bryan, 2013). Because resilience is highly affected by cultural criteria about the level of risks and adjustments, the qualitative method may provide a richer understanding of resilience among specific groups, such as Asian international students. A qualitative study exploring the protective factors to adjust well despite challenges will provide fuller pictures to understand the resilience of Asian international students, complementing the limitation of quantitative studies.

Last but not least, a future study can compare the levels of stressors and mental health outcomes of Asian international students before and after the outbreak of COVID-19, followed by the pandemic. Many Asian Americans and Asian international students have been discriminated against and targeted at hatred crimes due to a misperception blaming them as a cause of a virus (Litam, 2020). Future studies examining the impact of the pandemic due to COVID-19 on stress-levels, resilience, and mental health outcomes of Asian international students will provide invaluable implications in counseling with Asian international students.

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Appendices

Appendix A: The Resilience Scale for Adults

Please select a box in the following continuum which best describes you.

When something unforeseen happens	I always find a solution	□□□□□	I often feel bewildered
My personal problems	are unsolvable	□□□□□	I know how to solve
My abilities	I strongly believe in	□□□□□	I am uncertain about
My judgements and decisions	I often doubt	□□□□□	I trust completely
In difficult periods I have a tendency to	view everything gloomy	□□□□□	find something good that help me thrive
Events in my life that I cannot influence	I manage to come to terms with	□□□□□	are a constant source of worry/concern
My plans for the future are	difficult to accomplish	□□□□□	possible to accomplish
My future goals	I know how to accomplish	□□□□□	I am unsure how to accomplish
I feel that my future looks	very promising	□□□□□	uncertain
My goals for the future are	unclear	□□□□□	well thought through
I am at my best when I	have a clear goal to strive for	□□□□□	can take one day at a time
When I start on new things/projects	I rarely plan ahead, just get on with it	□□□□□	I prefer to have a thorough plan
I am good at	organizing my time	□□□□□	wasting my time
Rules and regular routines	are absent in my everyday life	□□□□□	simplify my everyday life
I enjoy being	together with other people	□□□□□	by myself
To be flexible in social settings	is not important to me	□□□□□	is really important to me

Please select a box in the following continuum which best describes you.

New friendships are something	I make easily	☐☐☐☐☐	I have difficulty making
Meeting new people is	difficult for me	☐☐☐☐☐	something I am good at
When I am with others	I easily laugh	☐☐☐☐☐	I seldom laugh
For me, thinking of good topics for conversation is	difficult	☐☐☐☐☐	easy
My family's understanding of what is important in life is	quite different than mine	☐☐☐☐☐	very similar to mine
I feel	very happy with my family	☐☐☐☐☐	very unhappy with my family
My family characterized by	disconnection	☐☐☐☐☐	healthy coherence
In difficult periods my family	keeps a positive outlook on the future	☐☐☐☐☐	views the future as gloomy
Facing other people, our family acts	unsupportive of one another	☐☐☐☐☐	loyal towards one another
In my family we like to	do things on our own	☐☐☐☐☐	do things together
I can discuss personal issues with	no one	☐☐☐☐☐	friends/family-members
Those who are good at encouraging me are	some close friends/family members	☐☐☐☐☐	nowhere
The bonds among my friends is	weak	☐☐☐☐☐	strong
When a family member experiences a crisis/emergency	I am informed right away	☐☐☐☐☐	it takes quite a while before I am told
I get support from	friends/family members	☐☐☐☐☐	no one
When needed, I have	no one who can help me	☐☐☐☐☐	always someone who can help me
My close friends/family members	appreciate my qualities	☐☐☐☐☐	dislike my qualities

Appendix B: Index of Life Stress

Please answer how often you feel the way described in each of the statements which most closely represents your own personal experience living in the United States.	Never	Rarely	Some-times	Often
1. My English embarrasses me when I talk to people	0	1	2	3
2. I don't like the religions in the United States.	0	1	2	3
3. I worry about my academic performance.	0	1	2	3
4. I worry about whether I will have my future career in my own country.	0	1	2	3
5. I can feel racial discrimination toward me from other students.	0	1	2	3
6. I'm not doing as well as I want to in school.	0	1	2	3
7. My English makes it hard for me to read articles, books, etc.	0	1	2	3
8. It's hard for me to develop opposite-sex relationships here.	0	1	2	3
9. I don't like the ways people treat each other here.	0	1	2	3
10. I don't like American food.	0	1	2	3
11. People treat me badly just because I am a foreigner.	0	1	2	3
12. I think that people are very selfish here.	0	1	2	3
13. I don't like the things people do for their entertainment here.	0	1	2	3
14. I can feel racial discrimination toward me in stores.	0	1	2	3
15. I worry about whether I will have my future career in the United States.	0	1	2	3
16. Americans' way of being too direct is uncomfortable to me.	0	1	2	3
17. I study very hard in order not to disappoint my family.	0	1	2	3
18. I can feel racial discrimination toward me from professors.	0	1	2	3
19. I can't express myself well in English	0	1	2	3
20. It would be the biggest shame for me if I fail in school	0	1	2	3

Please answer how often you feel the way described in each of the statements which most closely represents your own personal experience living in the United States.	Never	Rarely	Some-times	Often
21. I worry about my financial situation.	0	1	2	3
22. I don't like American music.	0	1	2	3
23. I can feel racial discrimination toward me in restaurants.	0	1	2	3
24. My financial situation influences my academic study.	0	1	2	3
25. I worry about my future: will I return to my home country or stay in the United States.	0	1	2	3
26. I haven't become used to enjoying the American holidays.	0	1	2	3
27. I don't want to return to my home country, but I may have to do so.	0	1	2	3
28. My English makes it hard for me to understand lectures.	0	1	2	3
29. I want to go back to my home country in the future, but I may not be able to do so.	0	1	2	3
30. My financial situation makes my life here very hard.	0	1	2	3

Appendix C: Patient Health Questionnaire depression scale

Over the last 2 weeks, how often have you been bothered by any of the following problems?	Not at all	Several days	More than half the days	Nearly every day
1. Little interest of pleasure in doing things	0	1	2	3
2. Feeling down, depressed, or hopeless	0	1	2	3
3. Trouble falling or staying asleep, or sleeping too much	0	1	2	3
4. Feeling tired or having little energy	0	1	2	3
5. Poor appetite or overeating	0	1	2	3
6. Feeling bad about yourself – or that you are a failure or have let yourself or your family down	0	1	2	3
7. Trouble concentrating on things, such as regarding the newspaper or watching television	0	1	2	3
8. Moving or speaking so slowly that other people could noticed? Or the opposite – being so fidgety or restless that you have been moving around a lot more than usual	0	1	2	3
9. Thoughts that you would be better off dead or of hurting yourself in some way	0	1	2	3

Appendix D: Ryff's Psychological Well-Being

Circle one response below each statement to indicate how much you agree or disagree.	Strongly agree	Some-what agree	A little agree	Neither agree nor disagree	A little disagree	Some-what disagree	Strongly disagree
1. I am not afraid to voice my opinions, even when they are in opposition to the opinions of most people.	1	2	3	4	5	6	7
2. For me, life has been a continuous process of learning, changing, and growth.	1	2	3	4	5	6	7
3. In general, I feel I am in charge of the situation in which I live.	1	2	3	4	5	6	7
4. People would describe me as a giving person, willing to share my time with others.	1	2	3	4	5	6	7
5. I am not interested in activities that will expand my horizons.	1	2	3	4	5	6	7
6. I enjoy making plans for the future and working to make them a reality.	1	2	3	4	5	6	7
7. Most people see me as loving and affectionate.	1	2	3	4	5	6	7
8. In many ways I feel disappointed about my achievements in life.	1	2	3	4	5	6	7
9. I live life one day at a time and don't really think about the future	1	2	3	4	5	6	7
10. I tend to worry about what other people think of me.	1	2	3	4	5	6	7

Circle one response below each statement to indicate how much you agree or disagree.	Strongly agree	Some-what agree	A little agree	Neither agree nor disagree	A little disagree	Some-what disagree	Strongly disagree
11. When I look at the story of my life, I am pleased with how things have turned out.	1	2	3	4	5	6	7
12. I have difficulty arranging my life in a way that is satisfying to me.	1	2	3	4	5	6	7
13. My decisions are not usually influenced by what everyone else is doing	1	2	3	4	5	6	7
14. I gave up trying to make big improvements or changes in my life a long time ago.	1	2	3	4	5	6	7
15. The demands of everyday life often get me down	1	2	3	4	5	6	7
16. I have not experienced many warm and trusting relationships with others.	1	2	3	4	5	6	7
17. I think it is important to have new experiences that challenge how you think about yourself and the world.	1	2	3	4	5	6	7
18. Maintaining close relationships has been difficult and frustrating for me.	1	2	3	4	5	6	7
19. My attitude about myself is probably not as positive as most people feel about themselves.	1	2	3	4	5	6	7
20. I have a sense of direction and purpose in life.	1	2	3	4	5	6	7

Circle one response below each statement to indicate how much you agree or disagree.	Strongly agree	Some-what agree	A little agree	Neither agree nor disagree	A little disagree	Some-what disagree	Strongly disagree
21. I judge myself by what I think is important, not by the values of what others think is important.	1	2	3	4	5	6	7
22. In general, I feel confident and positive about myself.	1	2	3	4	5	6	7
23. I have been able to build a living environment and a lifestyle for myself that is much to my liking.	1	2	3	4	5	6	7
24. I tend to be influenced by people with strong opinions.	1	2	3	4	5	6	7
25. I do not enjoy being in new situations that require me to change my old familiar ways of doing things.	1	2	3	4	5	6	7
26. I do not fit very well with the people and the community around me.	1	2	3	4	5	6	7
27. I know that I can trust my friends, and they know they can trust me.	1	2	3	4	5	6	7
28. When I think about it, I haven't really improved much as a person over the years.	1	2	3	4	5	6	7
29. Some people wander aimlessly through life, but I am not one of them.	1	2	3	4	5	6	7
30. I often feel lonely because I have few close	1	2	3	4	5	6	7

Circle one response below each statement to indicate how much you agree or disagree.	Strongly agree	Some-what agree	A little agree	Neither agree nor disagree	A little disagree	Some-what disagree	Strongly disagree
friends with whom to share my concerns.							
31. When I compare myself to friends and acquaintances, it makes me feel good about who I am.	1	2	3	4	5	6	7
32. I don't have a good sense of what it is I'm trying to accomplish in life.	1	2	3	4	5	6	7
33. I sometimes feel as if I've done all there is to do in life.	1	2	3	4	5	6	7
34. I feel like many of the people I know have gotten more out of life than I have.	1	2	3	4	5	6	7
35. I have confidence in my opinions, even if they are contrary to the general consensus.	1	2	3	4	5	6	7
36. I am quite good at managing the many responsibilities of my daily life.	1	2	3	4	5	6	7
37. I have the sense that I have developed a lot as a person over time.	1	2	3	4	5	6	7
38. I enjoy personal and mutual conversations with family members and friends.	1	2	3	4	5	6	7
39. My daily activities often seem trivial and unimportant to me.	1	2	3	4	5	6	7

Circle one response below each statement to indicate how much you agree or disagree.	Strongly agree	Some-what agree	A little agree	Neither agree nor disagree	A little disagree	Some-what disagree	Strongly disagree
40. I like most parts of my personality.	1	2	3	4	5	6	7
41. It's difficult for me to voice my own opinions on controversial matters.	1	2	3	4	5	6	7
42. I often feel overwhelmed by my responsibilities	1	2	3	4	5	6	7

Appendix E: Demographic Questionnaire

1. What is your gender?

      a. Female

      b. Male

      c. Other

2. What is your age?

      a. Drop down menu: 18-110 (increasing by increments of one)

3. What is your VISA status?

      a. F-1

      b. J-1

      c. Other: please specify

4. What is your country of origin?

      a. Drop down menu with all Asian countries.

      b. "other" will be an option with a write-in form.

5. What program are you currently enrolled?

      a. Undergraduate

      b. Graduate

6. What year are you in?

      a. First year

      b. Second year

      c. Third year

      d. Fourth year

      e. Fifth year or more

7. How comfortable are you to communicate in English?

        a. Not comfortable at all (1)

        b. Somewhat uncomfortable (2)

        c. A little comfortable (3)

        d. Somewhat comfortable (4)

        e. Extremely comfortable (5)

8. Amount of time spent in United States in months

        a. Short answer: ____year _____month

Appendix F: Informed Consent

<div align="center">

Consent for Exempt Research
The Pennsylvania State University

</div>

Title of Project: *Protective factors of Asian international students stress and outcome*

Principal Investigator: *So Rin Kim*

      Telephone Number: *(814) 862-8479*
      Faculty Advisor: *Dr. Carlos Zalaquett*
      Faculty Advisor Telephone Number: *(814) 867-6252*
      You are being invited to volunteer to participate in a research study. This summary explains information about this research.

- The purpose of this study is to find out the role of resilience as a protective factor between stressors and psychological outcomes among Asian international students.
- You will be asked to respond to a set of questions about stressors, psychological wellbeing, and resilience. The questionnaire will be presented using Qualtrics.
- There is a risk of loss of confidentiality if your information or your identity is obtained by someone other than the investigators, but precautions will be taken to prevent this from happening. The confidentiality of your electronic data created by you or by the researchers will be maintained as required by applicable law and to the degree permitted by the technology used. Absolute confidentiality cannot be guaranteed.
- Efforts will be made to limit the use and sharing of your personal research information to people who have a need to review this information. Reasonable efforts will be made to keep the personal information in your research record private. However, absolute confidentiality cannot be guaranteed.
- In the event of any publication or presentation resulting from the research, no personally identifiable information will be shared.
- We will do our best to keep your participation in this research study confidential to the extent permitted by law.
- Information collected in this project may be shared with other researchers, but we will not share any information that could identify you.

      If you have questions, complaints, or concerns about the research, you should contact So Rin Kim at sxk682@psu.edu or Dr. Carlos Zalaquett at cpz1@psu.edu. If you have questions regarding your rights as a research subject or concerns regarding your privacy, you may contact the Office for Research Protections at 814-865-1775.

Your participation is voluntary and you may decide to stop at any time. You do not have to answer any questions that you do not want to answer.
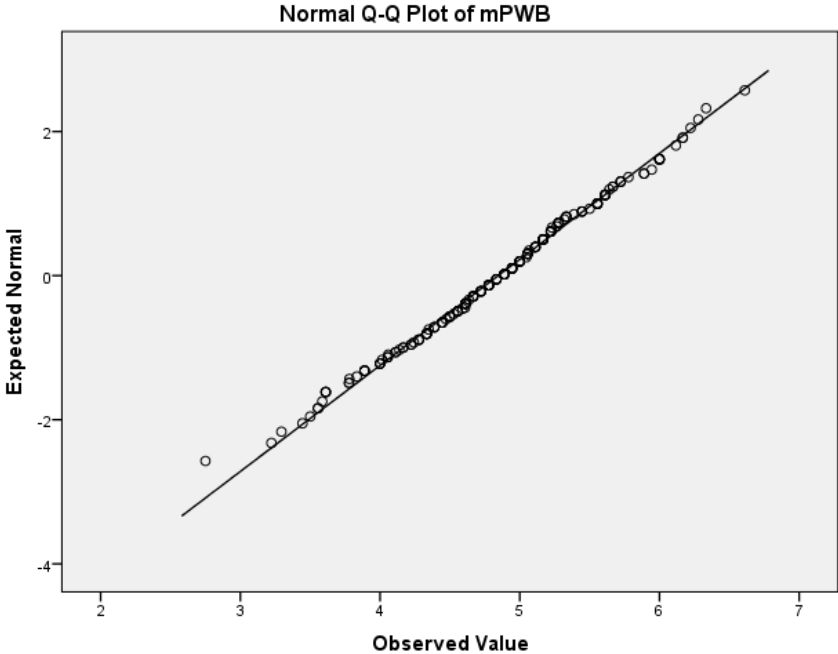
      Your participation implies your voluntary consent to participate in the research.

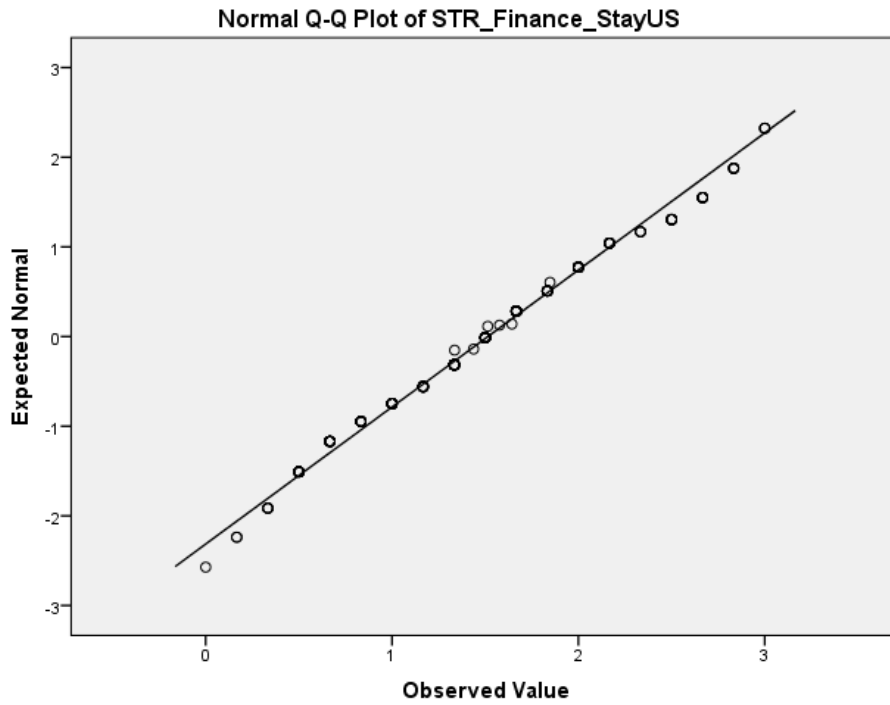**Appendix G: Normal Probability Plots and Scatterplots**

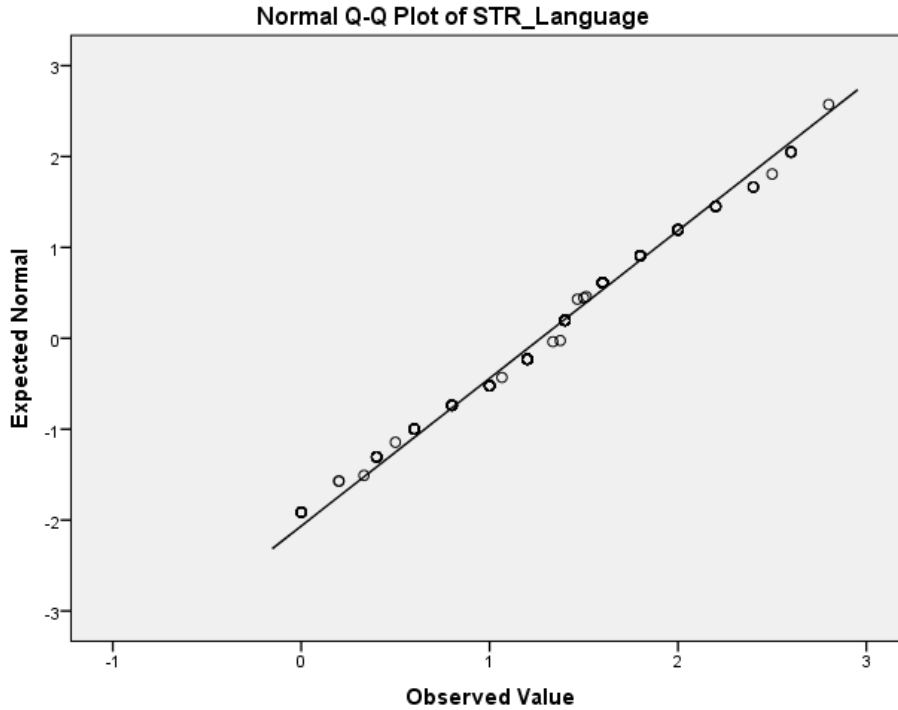Normality was determined by reviewing the normal Q-Q plots of variables.
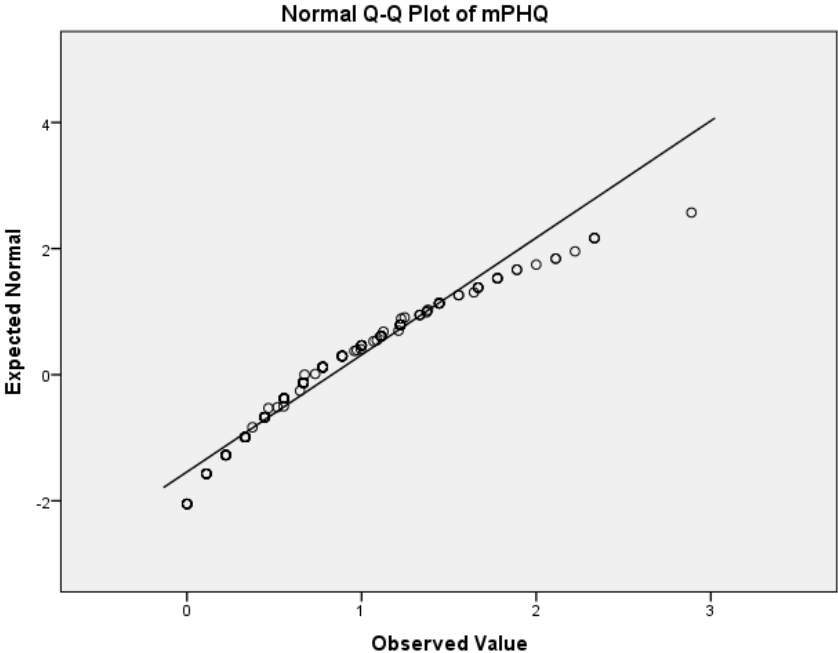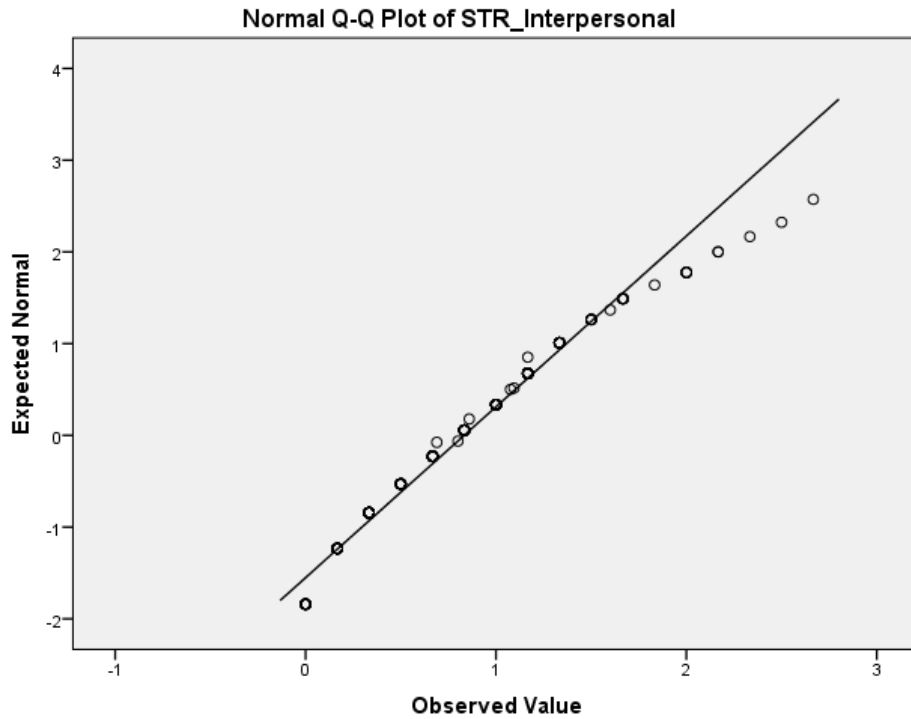

*Note.* PHQ = Depression

Note. PWB = Psychological wellbeing

Normal Q-Q Plot of STR_Finance_StayUS

Note. STR_Finance = Stressor: Concerns about finance and staying in US

Normal Q-Q Plot of STR_Language

Note. STR_Language = Stressor: Languange difficulty

111

Normal Q-Q Plot of STR_Interpersonal

Note. STR_Interpersonal = Stressor: Interpersonal stress

Normal Q-Q Plot of STR_NewCulture
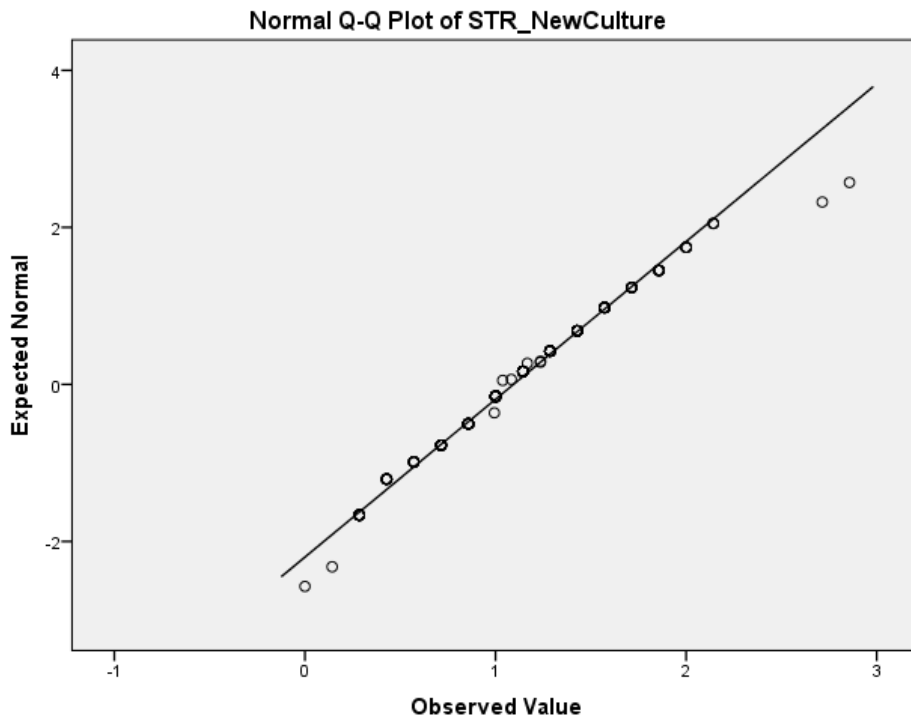
Note. STR_NewCulture = Stressor: Cultural adjustment

Normal Q-Q Plot of STR_AcademicPressure
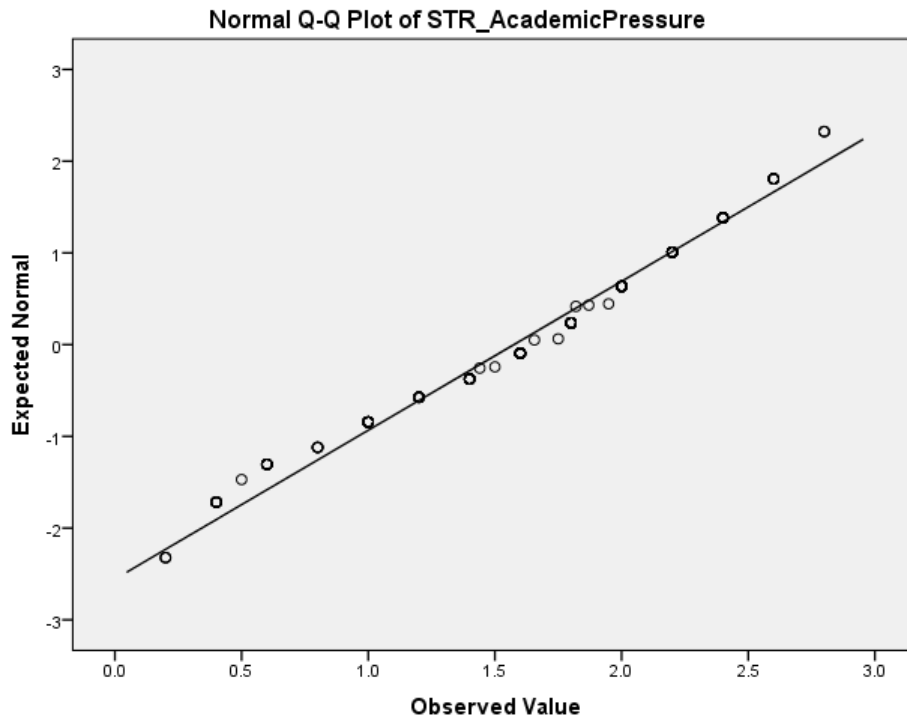
Note. STR_AcademicPressure = Stressor: Academic pressure

Normal Q-Q Plot of R_Individual_Assets
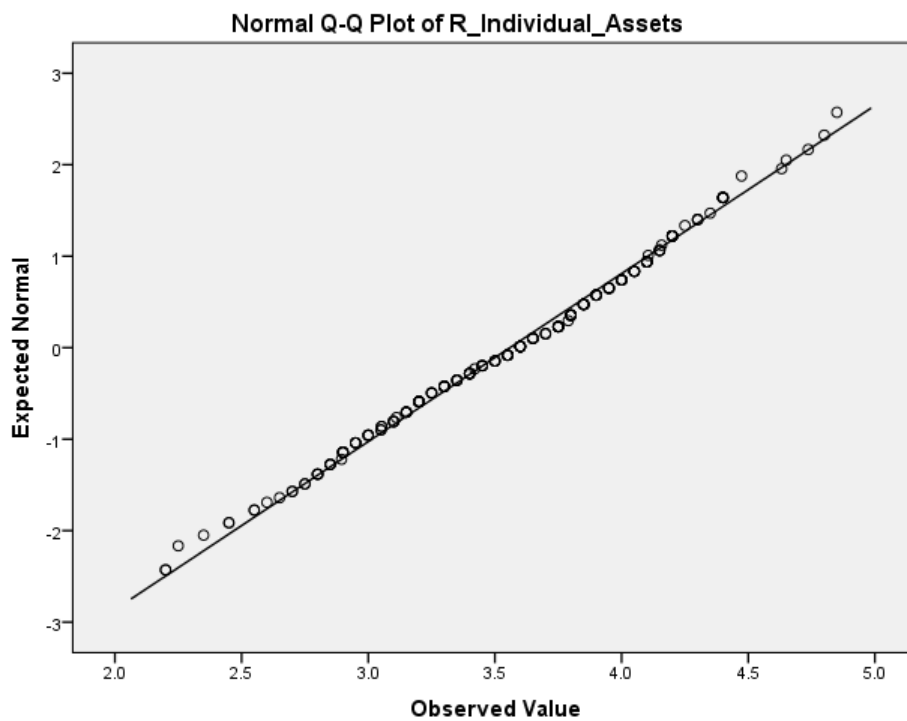
Note. R_Individual_Assets = Resilience: Individual assets

Normal Q-Q Plot of R_Resources
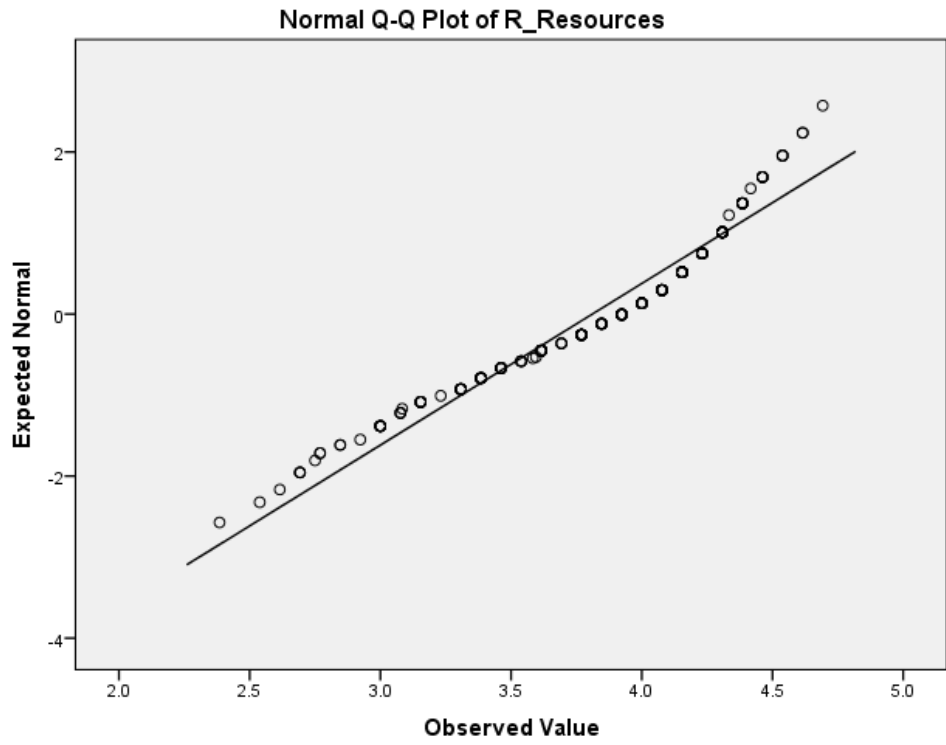
Note. R_Resources = Resilience: Resources

Scatter Plots to test linearity
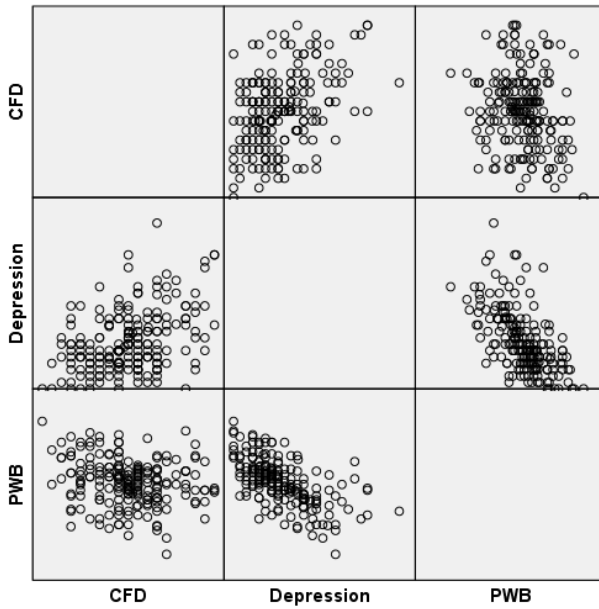
Note. PWB = Psychological wellbeing, CFD = Concerns about finance and desire to stay in the US
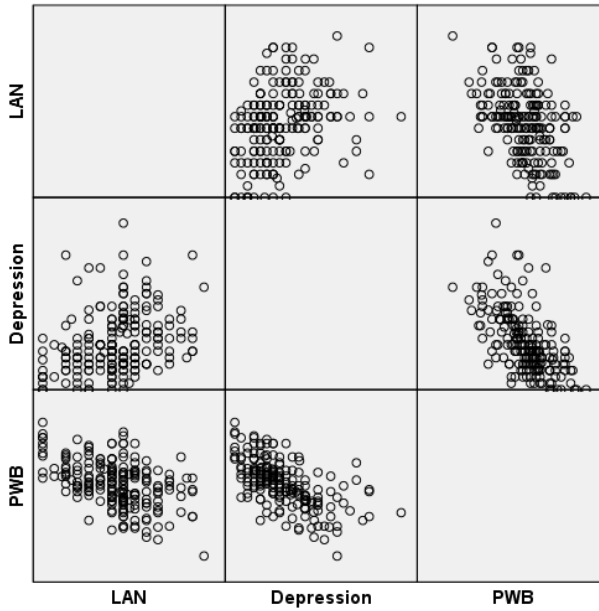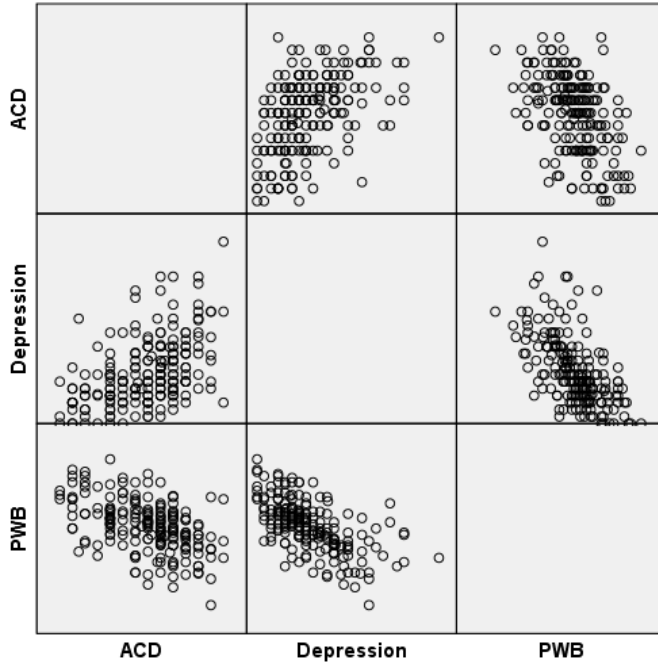

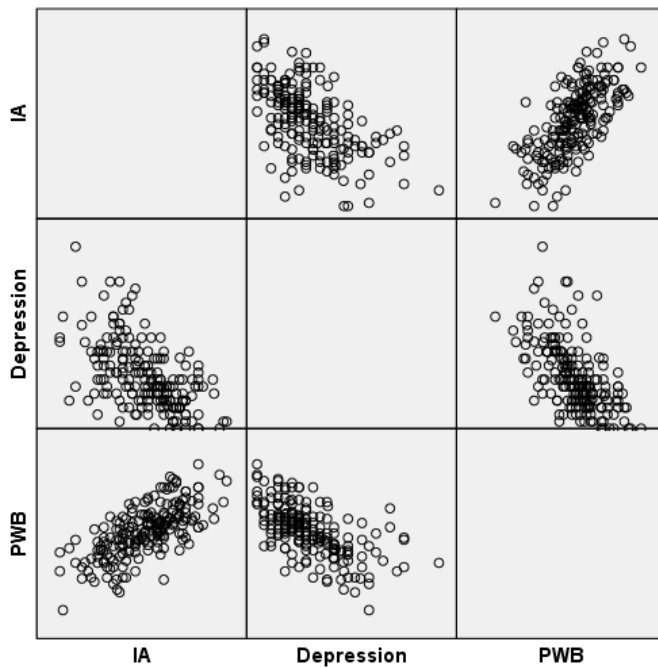Note. PWB = Psychological wellbeing, LAN = Language difficulty
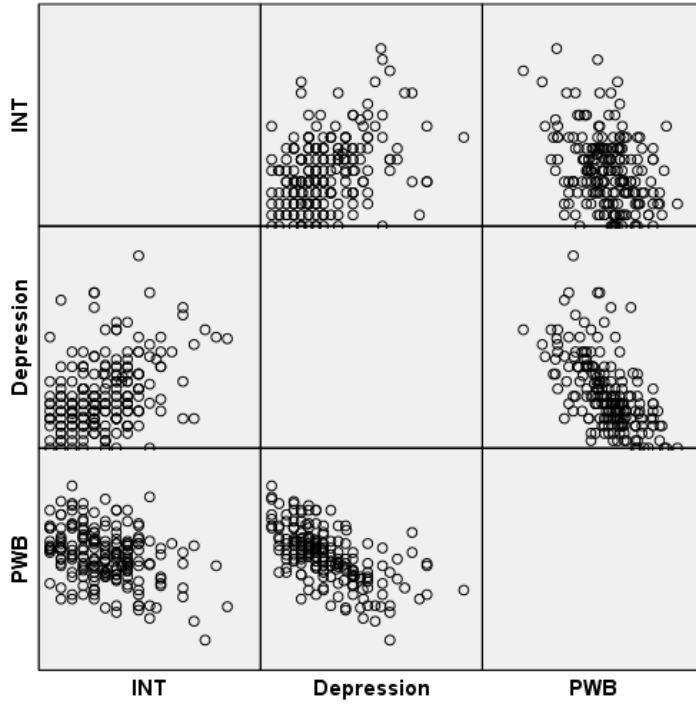
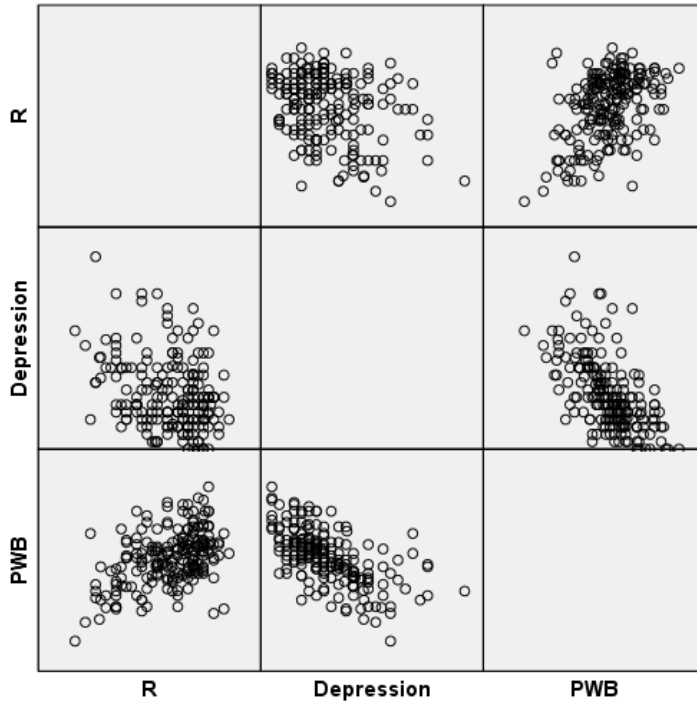Note. PWB = Psychological wellbeing, INT = Interpersonal stress
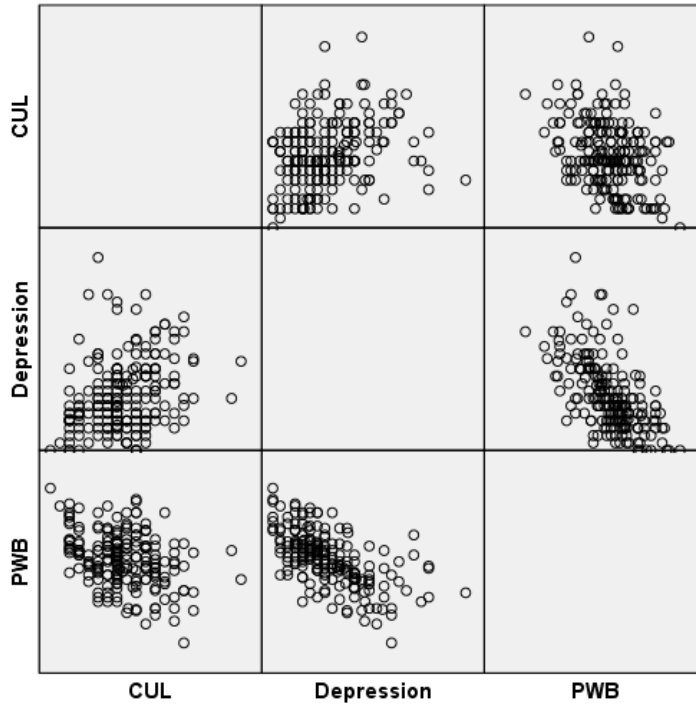
Note. PWB = Psychological wellbeing, CUL = Cultural adjustment

Note. PWB = Psychological wellbeing, ACD = Academic pressure

Note. PWB = Psychological wellbeing, IA = Individual assets

Note. PWB = Psychological wellbeing, R = Resources

VITA
SO RIN KIM

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Ph. D Counselor Education and Supervision, The Pennsylvania State University, August 2020
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M.A. Education with double majoring in English Education, Korea University, February 2012

Professional Experience
Counselor, Career Services at The Pennsylvania State University, University Park, PA., 2019-
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Research Assistant, Counselor Education program, The Pennsylvania State University,
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Doctoral-level Supervisor, Herr Clinic, The Pennsylvania State University, University Park, PA.,
    2018-2019
Counselor, Herr Clinic, The Pennsylvania State University, University Park, PA., Aug. – Dec.
    2016
Counselor, Counseling and Psychological Services, Soongsil University, Seoul, Korea, 2014-
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Selected Publication
Ulupinar, D., Zalaquett, C., Kim, S. R., & Kulikowich, J. M. (in press). Performance of Mental
    Health Counselors in Integrated Care. *Journal of Counseling & Development.*
Beeson, E, Kim, S. R., Zalaquett, C. & Fonseca, F. (2019). Neuroscience attitudes, exposure,
    myths, and knowledge among counselors. *Teaching and Supervision in Counseling, 1*(2), 1-
    19. https://doi.org/10.7290/tsc010201
Kim, S. R., & Zalaquett, C. (2019). An exploratory study of prevalence and predictors of
    neuromyths among potential mental health counselors. *Journal of Mental Health Counseling,
    21*(2), 173-187. https://doi.org/10.17744/mehc.41.2.06
Kim, S. R., & Lee, S. M. (2017). Resilient college students in school-to-work transition.
    International Journal of Stress Management, 25(2), 195-207.
    http://dx.doi.org/10.1037/str0000060

Selected Conference Presentations
Kim, S. R. (2019, November). *Working with Asian International Students: The Role of
    Resilience.* Poster presentation at the 51st annual Pennsylvania Counseling Association
    (PCA) Conference. State College, PA.
Kim, S. R., Fonseca, F., Ivey, A., & Banerjee, R. (2019, October). *Truth or Myth? Neuromyths
    among Counselors and Suggestions for Counselor Educators.* Educational session at the
    Association for Counselor Education and Supervision (ACES) Conference. Seattle, CA.
Ulupinar, D., Zalaquett, C., Kim, S. R., & Pierce, L. K. (2019, October). *Similarities and
    Differences in the Performance of Professional Counselors and Counselors in Training:
    Effectiveness, Efficiency, and Drop-out Rates.* Proposal accepted for educational session at
    the Association for Counselor Education and Supervision (ACES) Conference. Seattle, CA.
Kim, S. R. (2017, March). *Characteristics of Resilient College Students and Counseling
    Suggestions.* Poster Presentation at the American Counseling Association (ACA) Annual
    Conference. San Francisco, CA