# PATHWAYS TO WELL-BEING DURING THE CULTURAL TRANSITION PROCESS: THE DAILY EXPERIENCES OF CHINESE INTERNATIONAL STUDENTS

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A DISSERTATION

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

Psychology – Doctor of Philosophy

2017

ABSTRACT

PATHWAYS TO WELL-BEING DURING THE CULTURAL TRANSITION PROCESS: THE DAILY EXPERIENCES OF CHINESE INTERNATIONAL STUDENTS

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The current study aims to increase knowledge and awareness of first-year Chinese international students' daily experiences of stress, coping, and psychological well-being. More specifically, the current study seeks to (1) gather data about the daily experiences of stress among Chinese international students at Michigan State University (MSU), (2) examine how appraisals of stress and coping affect their psychological well-being, and (3) investigate how trait mindfulness promotes their psychological well-being by influencing appraisals of stress and coping. Research suggests that the cultural adjustment process can be particularly isolating and stressful experience for international students that hail from countries that are dissimilar to the U.S. (e.g., those from eastern cultures, such as China, compared to those from similar cultures, such as England). Despite the dramatic increase in Chinese international students at MSU and similar institutions, empirical information regarding Chinese international student experiences and needs is sparse, which hinders efforts to provide culturally sensitive and appropriate mental health counseling and student programming.

Grounded in stress and coping theory (e.g., Berry, Kim, Minde, & Mok, 1987; Lazarus & Folkman, 1984), the current study examines how perceived stress and coping strategies relate to psychological well-being. Specifically, the role of emotion- and problem-focused coping strategies was assessed. Building upon existing literature that underscores the psychological benefits of trait mindfulness, the current study also examine how trait mindfulness influences perceived stress, coping, and psychological well-being. Towards these goals, 30 Chinese

international students from MSU completed an online survey on mindfulness, and psychological well-being, and then engage in a two-week daily diary about their experiences of stress and coping as well as their daily affect. A mixed methods approach was used to analyze the qualitative and quantitative data gathered from the study. Specifically, thematic analysis was used to analyze qualitative data in order to reveal themes related to reported stressors. Additionally, multilevel structural equation modeling (MSEM) was used to test hypotheses related to stress, coping, trait mindfulness, and psychological well-being in a cross-cultural context.

# ACKNOWLEDGEMENTS

Over the past seven years I have received guidance, support, and encouragement from a number of individuals. Dr. NiCole Buchanan has been a wonderful mentor and colleague who has provided unwavering guidance and support through academic and personal struggles. I would also like to thank my master's and dissertation committee members Drs. Isis Settles, Desiree Qin, Frederick Leong, Jason Moser, and Lee June whose invaluable input has not only helped me move ideas to completed studies, but also the development of multiple manuscripts.

Thank you to a number of organizations that have provided support. The Asian American Psychological Association (AAPA) and Multiple Intersecting Identities lab (MII) have both been a source of inspiration and a safe-haven for me throughout graduate school. I would also like to thank the Office of International Students and Scholars (OISS) for helping me recruit participants for my dissertation and their whole-hearted dedication to supporting international students at MSU. Thank you to the friends and colleagues I have made at the Center for Statistical Training and Consulting (CSTAT) for helping refine and build up my statistical knowledge. A special thanks to Dr. Steven Pierce for not only helping me understand a wide array of statistical procedures, but also sharpening my analytical thinking.

Thank you to Dr. Kevin Chun, who inspired me to begin this journey as an undergraduate junior in college. Without his mentorship I would not have developed the vision to use the tools and skills learned in academia to give voice to underrepresented populations.

Thank you to the numerous friends I have made throughout this journey. Your friendship has been invaluable. I will forever cherish the fun weekends, long work nights, and deep conversations we had together.

Thank you to my family for patiently supporting me throughout this academic journey. Your stories are an inspiration for hard work and determination in the face of hardship.

Thank you to my partner, Shikha Bista, for opening my eyes to thinking sociologically and critically about social institutions and ideas. More importantly, thank you for the emotional support through difficult times and the frequent reminders about the important things in life.

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# CHAPTER 1: Introduction

## Background

The psychological well-being of international students is a growing area of study, largely because of the unique psychosocial stressors they experience while adjusting to a new cultural environment. Compared to their American counterparts, international students are more likely to experience discrimination, and feel lonely and isolated (Klineberg & Hull, 1979; Korobova & Starobin, 2015). As a result these stressors, they express significant concerns about depression and anxiety (Poyrazli, 2015). Moreover, studies show that international students, compared to their American counterparts, are less aware of and use fewer institutional resources such as campus counseling centers (Han, Han, Luo, Jacobs, & Jean-Baptiste, 2013; Yorgason, Linville, & Zitzman, 2008). Recent data from 2010-11 showed that the number of international students in the U.S. has increased 32% since 2000-01 making the total number of international students residing in the US over 723,277 (IIE, 2010) and increasing universities' responsibility to appropriately address their unique cultural adjustment and mental health and needs.

Globally and across U.S. college campuses, students studying abroad from China are the largest group of international students (approximately 25%, representing nearly 194,000 students; Institute of International Education, 2006). Their increased enrollment results in an increasing number of students who will encounter a host of unique stressors that place them at risk for mental health problems. Psychological well-being is a large concern given that depression and anxiety has been shown to relate to lower GPA scores and dropping out of college (Eisenberg, Golberstein, & Hun, 2009). Thus, greater attention towards the psychological well-being of Chinese international students is tantamount to their academic success and retention. At Michigan State University (MSU), the number of international undergraduate

students from China has risen dramatically from 92 in 2006 to 3,458 in 2013 (OISS Statistical Report, 2014). Their increased enrollment contributes significant tuition to MSU and approximately $273 million to the Lansing economy (OISS, 2014). As such, greater knowledge about the daily experiences of Chinese international students can promote culturally sensitive programming and interventions that facilitate the adjustment process, which benefits these students, MSU community, and the larger local economy.

Based on theories of stress and coping in cross-cultural contexts (e.g., Berry, Kim, Minde, & Mok, 1987; Lazarus & Folkman, 1984) and research on the psychological benefits of trait mindfulness (i.e., tendency towards present moment awareness and non-judgmental attitudes), the current study has three aims:

1. Gain knowledge about the daily experiences of stress among Chinese international students.
2. Examine how appraisals of stress and coping affect psychological well-being among Chinese international students.
3. Investigate how trait mindfulness promotes psychological well-being by influencing appraisals of stress and coping among Chinese international students.

An experiential sampling study with daily diary methodology (Mehl & Conner, 2012) using both qualitative and quantitative measures was used to obtain idiographic data that minimizes retrospective response bias (Iida, Shrout, Laurenceau, & Bolger, 2012). The study hypotheses were tested using multilevel structural equation modeling. Knowledge gained from the study can aid counselors, clinicians, and university administrators in directing resources towards implementing culturally sensitive and appropriate treatment, programming, and community-based interventions.

## CHAPTER 2: Literature Review

### Introduction

In this literature review I will present the rationale for studying the effects of stress, coping, and trait mindfulness on the psychological well-being of first-year Chinese international students. The theoretical framework will build upon models of general stress and coping (Lazarus & Folkman, 1984) and briefly review stressors sojourners – temporary residents in a new country – might experience in the cross-cultural context (Berry, Kim, Minde, & Mok, 1987). I will expand upon the stress and coping review to consider the psychological benefits of trait mindfulness. Therefore, the review will be conducted in three parts. First, I will provide a brief review of the literature on acculturation with sojourners to contextualize contemporary theory on stress in cross-cultural settings. Next, I will review the existing literature on stress and coping as it relates to Chinese international students. Finally, my analysis of the past literature will be used to examine how trait mindfulness can promote psychological well-being by influencing perceptions of stress and use of coping strategies during a sojourn (temporary travel to a new country).

### Stress, acculturation, and psychological well-being

The current study draws upon acculturation theory (Berry et al., 1987) to contextualize the daily experiences of stress among Chinese international students. Acculturation is defined as the process of adaptation and adjustment to new cultural environments. It has been widely studied among anthropologists, sociologists, and psychologists. Early views of acculturation described immigrants as learning and gaining the cultural mores of the dominant culture while losing aspects of their heritage culture as they spent more time in the new country (Thurnwald, 1932). This unidimensional view perceived immigrants as losing their heritage culture, while

learning the new dominant culture over time. However, contemporary views have adopted a bi-dimensional view of acculturation wherein immigrants actively engage in both maintaining their own heritage and learning the dominant culture (Berry et al., 1989). However, the cultural adjustment process can be difficult and can present a set of unique challenges.

The increase in globalization and international travel in the mid-20th century sparked an interest in the experiences of sojourners (Lysgaard, 1955; Watson & Lippitt, 1955). However, initial studies of international students focused on adjustment during the sojourn and lacked strong theoretical foundations, which limited hypothesis testing and predictive modeling. These early studies were exploratory and attempted to describe "culture shock" or the initial difficulties of adjusting to a new cultural climate. Various theories described the sojourner experience as progressing through stages in the shape of a U-curve such that upon arrival sojourners would experience a "honeymoon" period marked by excitement. This period was followed by disillusionment due to adjustment difficulties. Finally, at the end of the sojourn, theory suggested that students would come to accept their difficulties (Adler, 1975; Oberg, 1960). However, these models have not been supported by empirical evidence (Becker, 1968; Klineberg & Hull, 1979; Selby & Woods, 1966).

Other acculturation theories focused on the development of personality typologies to describe groups of sojourners (Sewell & Davidesen, 1956). These theories described the adjustment process as a function of the cultural differences one experienced between their culture of origin and the host culture (Babiker, Cox, & Miller, 1980; Ward & Chang, 1997). Since the early "culture shock" studies, development and theory shifted towards contextual factors of the destination setting such as national attitudes towards immigration (Bourhis, Moise, Perreault, & Senecal, 1997), congruence between immigrant and dominant attitudes towards

adjustment (Piontkowski, Rohmann, & Florack, 2002; Berry, 2006), and personality differences between international and domestic students (Babiker, Cox, & Miller, 1980; Ward & Chang, 1997). A common theme in this area of study has been to describe the factors that cause negative psychological well-being – commonly referred to as "acculturative stress" in contemporary theory.

Theoretical development related to the effects of the cultural adjustment process on psychological well-being among sojourners drew upon well-established theories of stress and coping. An often cited term relating stress to the adjustment process is acculturative stress (Berry et al., 1987). Based on theories of stress and coping (Lazarus & Folkman, 1984), acculturative stress is defined as the experience of negative outcomes when the demands for change outweigh the resources to cope (Balls Organista, Marin, & Chun, 2010; Berry, 2006) and vary depending on whether the traveler seeks permanent or temporary residency (Berry et al., 1987). For example, international students may experience acculturative stressors such as difficulties related to English language proficiency, discrimination, and lack of social support and connectedness (Constantine, Okazaki, & Utsey, 2004; Lee, Koeske, & Sales, 2004; Poyrazli, Kavanaugh, Baker, & Al-Timimi, 2004; Smith & Khwaja, 2011; Wang, & Mallinckrodt, 2006; Yeh & Inose, 2003). Further, these stressors have been linked to poor psychological well-being (Nguyen & Benet-Martinez, 2013) over and above perceived general stress (Hwang & Ting, 2008).

The proliferation of acculturative stress studies has led to a number of criticisms in the field that may be remedied by a mixed methods design. Notably, critics question the conceptual and construct validity of current acculturative stress measures (see Rudmin, 2009, for a review). First, acculturative stress measures include items related to mental health (e.g., symptoms of depression, anxiety), socioeconomic status, and discrimination (e.g., Arends-Toth & van de

Vijver, 2006; Cabassa, 2003; Rudmin, 2009). As a result, acculturative stress is confounded with psychological well-being, class, and negative interpersonal interactions. Second, acculturative stress is strongly correlated with general stress ($r$ = .46; Hwang & Ting, 2008; Joiner & Walker, 2002). Despite findings pointing to the incremental effects of acculturative stress on psychological well-being over and above general stress, the strong correlation with general stress measures raise questions about discriminant validity. Succinctly stated by Rudmin (2009), "acculturative stress has become a catch-all concept for every kind of problem that minorities might encounter however remotely related to second-culture acquisition" (p. 116). One remedy may be to draw upon idiographic approaches that allow participants to not only identify stressors, but also the extent to which they believe the stressor is related to cultural adjustment. Thus, the current study used a mixed methods design to provide a more accurate picture of the stressors experienced in the first semester when international students struggle most (e.g., Wang et al., 2012; Wang, Wei, & Chen, 2015; Ying, 2005).

Despite growing research on Chinese international students, few studies use methods that capture daily stressors, such as experiential sampling with daily diaries. Further, such methods have been used to investigate some types of stressful events, but have generally been limited to experiences of racial discrimination and have not focused specifically on first-year Chinese international student populations. For instance, reports of racial discrimination and micro-aggressions among Asian American college students in the US range from once a week to multiple times daily (Dang, 2012; Ong, Burrow, Fuller-Rowell, Ja, & Sue, 2013). Among other racial/ethnic groups, reports reveal rates ranging from once a week to 4-5 days a week among Latino high-school students with higher rates among adults and those living in rural areas (Potochnick, Perreira, & Fuligni, 2012; Torres & Ong, 2010). Comparatively, other studies find

that Black/African American university students reported experiencing discrimination 3-4 days a week, often with more than one incident a day (Burrow & Ong, 2010; Ong, Fuller-Rowell, & Burrow, 2009). Unsurprisingly, studies consistently find that greater reports of discrimination are related to worse psychological well-being. These rates, however, may underestimate the daily stressors experienced by first-year Chinese international students given that only racial/ethnic discrimination was assessed. Thus, the current study uses experience sampling to gather in depth data on a wide range of daily stressors.

**Coping with stress**

The second aim of the study is to better understand how Chinese international students appraise and manage daily stressors and how these stressors affect psychological well-being. The current study draws upon the transactional model of stress and coping framework (Lazarus & Folkman, 1984), which proposes that individuals engage in two appraisal processes after encountering a stressor. Initially, primary appraisal assesses the potential harm, threat, or challenge presented by the stressor, then the individual evaluates his/her ability to cope and options for coping with the stressor during secondary appraisal. Once appraising the situation and resources for coping, the individual utilizes coping strategies broadly categorized as problem- or emotion-focused coping. Problem-focused coping strategies refer to externally focused methods of dealing with stressors such as directly handling the situation by seeking authoritative figures for help or changing one's behavior. In contrast, emotion-focused strategies are defined as internally focused methods of dealing with stressors such as actively trying to forget about the incident or changing one's thoughts – two methods that can be considered emotional suppression and cognitive reappraisal, respectively (Compas, 2009).

A growing area builds upon existing western theories of stress and coping to incorporate situational aspects related to culture. For instance, investigators have begun to consider how interpretations of stress and resulting coping strategies function as a result of the traveler's cross-cultural knowledge in the new environment, contextual factors of the society of origin and settlement, and deeply entrenched cultural values of the sending context (Cheng, Lo, and Chio, 2010; Berry, 1997; Slavin, Rainer, McCreary & Gowda, 1999; Wong, 1993; Wong, Reker, & Peacock, 2006). Building upon the extant theory development, there continues to be a greater need for research with specific populations such as first-year Chinese international students in cross-cultural settings.

Notably, studies using predominantly western samples conclude that problem-, compared to emotion-focused, coping strategies relate to better psychological well-being (Endler & Parker, 1994). Cross-cultural scholars argue that western cultures emphasizing individualism encourage more problem-focused coping, whereas eastern cultures emphasizing collectivism encourage more emotion-focused coping (Cross, 1995). Indeed, findings show that Asians are more likely to engage in inwardly directed emotion-focused coping (see Cheng, Lo, Chio, 2010, for review). Ostensibly, withholding one's opinion or staying silent in the face of adversity may be perceived as meek or docile from the standpoint of someone living in an individualistic culture. However, the opposite may be true in collectivistic contexts where self-control and inhibition are highly valued. Indigenous psychologists assert that the use of emotion-related coping reflects alternative perceptions of self-control (Cheng, Lo, Chio, 2010). By unburdening the group to maintain harmony (Wei, Su, Carrera, Lin, & Yi, 2013), emotion-focused coping may function to increase a person's social capital and increase the likelihood of receiving support during times of stress (e.g., Spector et al., 2004). However, with these perspectives in mind, people often deploy both

problem- and emotion-focused coping styles (Gerdes & Ping, 1994). Therefore, further inquiry into the role of both emotion- and problem-focused coping in cross-cultural settings is needed.

The effectiveness of emotion-focused coping during the cultural adjustment process is mixed. This likely reflects the possibility that some emotion-focused coping strategies are more effective than others. For instance, cognitive re-appraisals such as acceptance, reframing, and striving have been related to better psychological well-being among Chinese international students (Pan, Wong, Chan, & Joubert, 2008; Wang et al., 2012) and Asian refugees (Noh, Beiser, Kaspar, Hou, & Rummens, 1999). In contrast, emotional suppression and forebearance coping (i.e., withholding one's distress to unburden others) have been found to exacerbate the negative effects of high levels of perceived discrimination and acculturative stress (e.g, Noh & Kaspar, 2003; Wei, Ku, Russell, Mallinckrodt, & Liao, 2008; Wei, Liao, Heppner, Chao, & Ku, 2012). Thus, the current study seeks to clarify the role of emotion-focused coping in the stress and psychological well-being relationship among first-year Chinese international students.

An alternative way of coping with stress is to directly address the situation using problem-focused coping strategies. However, the current research on problem-focused coping among Chinese international students is limited. For instance, one area focuses on social support. Chinese international students who perceive greater social support or connectedness with other students experience fewer social difficulties and better psychological well-being (Ye, 2006; Wei, Wang, Heppner, & Du, 2012; Yan & Berliner, 2011). Another area gaining attention is problem solving coping or the ability to follow through a plan in a stressful situation. Previous studies with Asian international students suggest that problem solving predicts positive psychological well-being (e.g., Yang & Clum, 1994; Wei, Wang, Heppner, & Du, 2012). However, this strategy may only be beneficial if the person experiences few stressors such as low levels of

racial discrimination (Yoo & Lee, 2005). Thus, the current study also examines the role of problem-focused coping along with emotion-focused coping among first-year Chinese international students.

**Mindfulness**

The third aim of the current study is to examine how trait mindfulness promotes psychological well-being by influencing appraisals of stress and coping. Rooted in eastern philosophy, mindfulness has garnered significant attention in the U.S. since the 1990's (see Wilson, 2014, for history). A recent 2007 National Institute of Health report showed that Americans spent about $4 billion on mindfulness-based treatments in 2009 (as referenced in Pickert, 2014). Psychotherapy treatments that use mindfulness include Acceptance and Commitment therapy (ACT; Hayes, Strosahl, & Wilson, 1999), mindfulness-based stress reduction (MBSR; Kabat-Zinn, 1982), mindfulness-based cognitive behavior therapy (MCBT; Segal, Williams, & Teasdale, 2002), and Dialectical Behavior Therapy (Linehan, 2014). Across the various therapies, mindfulness techniques are used to increase self-awareness, encourage emotion regulation, clarify values, and, ultimately, promote psychological well-being.

The current study defines mindfulness as the tendency towards actively paying attention to internal and external events in the present moment with purpose and nonjudgment (Kabat-Zinn, 1994; Bishop et al., 2004). Researchers generally agree that mindfulness incorporates two primary components, attentional control and quality of attention (Sauer et al., 2013). Attentional control refers to the ability to redirect attention to present moment experiences often based on the five senses (e.g., hearing, smelling, seeing, touching, and tasting), and quality of attention refers to the person's attitude towards present moment experiences (e.g., acceptance and compassion). Analayo's (2003) discourse on the Sattipattana Sutta, a foundational text on mindfulness

practice, highlights the importance of cultivating present moment awareness (i.e., "sati") and guarding against desires and discontent while practicing sati. The importance of these two aspects have been linked to contemporary psychological theories such as the theory of planned behavior (Chatzisarantis & Hagger, 2007), theories related to control, awareness, and consciousness (Brown & Ryan, 2003), and relational frame theory (Fletcher & Hayes, 2005).

Researchers continue to debate whether mindfulness is a state or trait. Conceptualized as a state, mindfulness is a momentary event when an individual attends to the present moment with open awareness. Bishop and colleagues (2004) argue that mindfulness is "much closer to a state than a trait because we believe that its evocation and maintenance is dependent on the regulation of attention while cultivating an open orientation to experience" (p.234). In contrast, a trait conceptualization views mindfulness as an inherent ability or individual difference that does not vary significantly without intervention. Recent data suggest that trait mindfulness increases with mindfulness-based training (Kiken, Garland, Bluth, Palsson, & Gaylord, 2015) and is associated with activation in the prefrontal cortex and amygdala during a labeling task (Creswell, Way, Eisenberger, & Lieberman, 2007). Because trait mindfulness it is more amenable to intervention and change, and to be consistent with similar studies examining mindfulness among ethnic minority populations (e.g., Brown-Iannuzzi, Adair, Payne, Richman, & Fredrickson, 2014; Graham, West, & Roemer, 2013), the current study is centered on a trait conceptualization of mindfulness as a preliminary investigation into the role of mindfulness among first-year Chinese international students.

The flexibility of the construct has generated a wide array of measures with the conceptualization and measurement of mindfulness varying across study goals. Investigators have noted limitations in current mindfulness self-report scales (e.g., Chiesa, Serretti, &

Jakobson, 2013; Bergomi, Tschacher, & Kupper, 2013; Davidson, 2010; Grossman & van Dam, 2011); nevertheless, an extensive body of research on mindfulness as a state, trait, and skill, has led to self-report measures that demonstrate adequate reliability and validity (see Bergomi et al., 2013 for review). Combining psychometrically strong items from previous measures, the FFMQ has received significant attention and validation. Research using the Five-Facet Mindfulness Questionnaire (FFMQ; Baer, Smith, Hopkins, Krietmeyer, & Toney, 2006) proposes the following five trait facets: (1) *describe* (using words to label experiences), (2) *acting with awareness* (attention to the present moment), (3) *non-judgment* (non-evaluative stance towards one's experience), (4) *non-reactance* (not getting carried away by inner experience), and (5) *observe* (noticing inner and outer experiences). This conceptualization views mindfulness as a trait compared to others viewing mindfulness as a state (i.e., a momentary event of mindfulness) or skill (i.e., an ability that can be trained) (Carlson, 2013). Thus, the current study uses the FFMQ given its strong psychometric properties and consistent factor structure across a range of samples and cultures (e.g., Baer et al., 2008; Bohlmeijer, Peter, Fledderus, Veehof, & Baer, 2011; Deng, Liu, Rodriguez, & Xia, 2011; Hou et al., 2014; Van Damn, Earleywine, & Danoff-Burg, 2009).

The psychological benefits of mindfulness are well-established in large systematic reviews and meta-analyses of mindfulness-based interventions (MBI's) – therapeutic modalities that incorporate mindfulness techniques. Reviews show that people engaging in MBI's will experience greater relationship quality, fewer symptoms of psychopathology (i.e., anxiety and negative emotions), better attentional awareness, and better emotion regulation ($n$ = 10, Chiesa & Serretti, 2009; $n$ = 47, Goyal et al., 2014; $n$ = 209, Khoury et al., 2013; $n$ = 39, Hoffman, Sawyer, Witt, & Oh, 2010; $n$ = 163, Sedlmeier et al., 2012). The benefits of MBI's also seem to

effectively prevent relapse among individuals with a past history of major depressive disorder (*n* = 6; Piet & Hougaard, 2011). Although it is still unclear if MBI's increment other treatment modalities (e.g., CBT, other behavioral therapies, pharmacotherapy, exercise, or progressive muscle relaxation; Chiesa & Serretti, 2009; Goyal et al., 2014; Khoury et al., 2013), a large area of study has moved towards understanding how mindfulness promotes psychological well-being.

Investigators have theorized that mindfulness enhances psychological well-being because it encourages tolerating aversive emotions and feelings, engaging in meta-cognition, disrupting automatic processes such as rumination, and deploying adaptive coping strategies such as self-compassion and acceptance (e.g., Baer, 2003; Chiesa, Anselmi, & Serretti, 2014; van der Velden et al., 2015). Based on neuropsychological studies, Hölzel and colleagues (2011) proposed four mechanisms of trait mindfulness: (1) attention regulation, (2) emotion regulation, (3) body awareness, and (4) changes in perspective of the self. Supporting these assertions, a recent meta-analysis of mediation studies showed that improvement in mindfulness skills, levels of self-compassion, cognitive and emotional reactivity, psychological flexibility, and a decrease in repetitive negative thinking accounted for the beneficial effects of MBI's (*n* = 20; Gu, Strauss, Bond, & Cavanaugh, 2015). Building on these theoretical advances, studies have turned towards advanced methodologies, such as experience sampling, to gain ecological validity.

Emerging research seeking to examine the daily effects of trait mindfulness provide a more detailed analysis of the potential mechanisms of change. Studies using daily diary methods find that trait mindfulness buffers against neuroticism (Oken et al., 2014; Wenzel, von Versen, Hirschmuller, & Kubiak, 2015), predicts greater self-directed behavior (Brown & Ryan, 2003; Levesque & Brown, 2007) and emotion regulation (Hill & Updegraff, 2012), and perceptions of less stress (Weinstein, Brown, & Ryan, 2009). Other benefits include improved psychological

well-being by increasing sustained attention and present moment awareness (Huffziger et al., 2013; Killingsworth & Gilbert, 2010; Mrazek, Smallwood, & Schooler, 2012). Across studies using experience sampling methodology, findings were consistent with theories of mechanisms of change. Questions, however, remaining to be explored include: how and which aspects of trait mindfulness affect the stress and coping process? Do the reviewed findings generalize to first-year Chinese international students?

How trait mindfulness affects one's coping response during a stressful event is not well-known. Conceptually, it is important to note that while mindfulness overlaps with emotion regulation in that both capture an aspect of attending to emotions, mindfulness is distinguished by the quality of attention and present moment awareness it requires (Coffey, Hartman, & Frerickson, 2010). That is, mindfulness promotes a quality of awareness that broadens an individual's ability to attend to specific cues in the environment allowing for improved emotion regulation (Roemer, Williston, & Rollins, 2015). Two mechanisms identified by Hölzel and colleagues (2011) are attention and emotion regulation – constructs related to perceived stress and coping strategy. A person with high levels of mindfulness may regulate her/his attention to tolerate and openly experience a stressful event. As follows, s/he may report lower levels of perceived stress. Further, s/he may be able to regulate her/his emotions effectively with adaptive coping strategies. In short, trait mindfulness may promote top-down emotion regulation (see Chiesa et al., 2013, for discussion related to mindfulness practice). Supporting these notions, findings from a four-part study showed that those with higher levels of trait mindfulness perceived less stress, and used more approach (and less avoidant) coping strategies (Weinstein, Brown & Ryan, 2009). As a result, those with higher levels of trait mindfulness enjoyed better psychological well-being. However, because the Mindful Attention Awareness Scale (MAAS;

Brown & Ryan, 2003) was used – a uni-dimensional measure of poor attentional awareness (Grossman, 2011) – less is known about the other aspects of trait mindfulness (i.e., describe, observe, non-reactance, and non-judgment).

A paucity of research examines the role of trait mindfulness in buffering against stressors during the cultural adjustment process. Cross-cultural counseling and clinical psychologists suggest that mindfulness and acceptance-based therapies with roots in eastern philosophy may be culturally syntonic approaches to psychotherapy for Asian and Asian American populations (Hall, Hong, Zane, & Meyer, 2011; Hayes, Muto, & Masuda, 2011; Hwang, 2012; Muto, Hayes, & Jeffcoat, 2011). Thus, trait mindfulness among non-clinical populations might serve as an individual level characteristic that facilitates cultural adjustment. Emerging evidence has shown that trait mindfulness predicted better psychological well-being among Asian American college students (Masuda, Wendell, Chou, & Feinstein, 2010; Masuda, Mandavia, & Tully, 2014; Wu & Buchanan, 2015). However, the extent to which mechanisms proposed using predominantly White/European American samples generalize to a cross-cultural setting remains to be explored. It is possible that the mechanisms may be similar, but different in quality. For instance, trait mindfulness may encourage coping strategies that are culturally appropriate for one's cultural background.

**Summary**

The current study builds upon the past literature on stress, coping, and trait mindfulness in the following ways. First, few studies focus on the experiences of Chinese international students. Research among ethnic minorities tend to combine various ethnic minority groups (e.g., collapsing Japanese, Chinese, and Hmong participants into the category of "Asian") to increase sample size. This procedure leads to inferences that assume individuals are homogenous within

the group. Although important research has emerged from studies that broadly defined the target population in these ways, increased sophistication in this body of research requires that the field move toward disaggregating groups and empirically establish whether or not the theories continue to be applicable. Further, the current study seeks to bring greater attention to Chinese international students and focuses on their first year studying in the US given the stress experienced during this transition. Greater knowledge about their experiences can inform early interventions leading to increased retention and better psychological adjustment.

Second, technological advances in survey methodology and computing power allow for more sophisticated analyses and novel research designs. Perceived stress, coping, and cultural adjustment are complex processes that are best suited for longitudinal designs. Naturally, people use various coping strategies depending on the situational demands – a phenomenon difficult to capture using cross-sectional designs. Thus, the current study uses daily diary methods to allow for a finer grain analysis of the variability in perceived stress, coping, and psychological well-being.

Third, many studies continue to use only qualitative or quantitative methods to assess stress and coping among international students. A mixed methods design will offer greater insight into the daily experiences of Chinese international students. Thus, the current study leverages the advantages of qualitative assessments to gain rich detail on the daily experiences of stress and coping. Further, quantitative data will build upon the qualitative findings to test how daily perceived stress, coping, and trait mindfulness affect psychological well-being.

## CHAPTER 3: Current Study

The cultural adjustment process can be isolating and stressful for Chinese international students. Given the dramatic increase in Chinese international students at MSU and globally, greater knowledge of their stress and coping experiences is needed to enhance culturally sensitive psychotherapy and effective university programming. Drawing upon multiple theories to address this need, the current study asserts that Chinese international students may experience a host of stressors during the cultural adjustment process (Berry et al., 1987) and deploy a range of coping strategies (Lazarus & Folkman, 1984). Furthermore, trait mindfulness – a characteristic marked by greater present moment attention and non-judgment – may promote psychological well-being by decreasing perceptions of stress and encouraging adaptive coping strategies. To this end, the current study aims to: (1) gain knowledge about the daily experiences of stress among first-year Chinese international students, (2) examine how appraisals of stress and coping affect psychological well-being, and (3) investigate how trait mindfulness promotes psychological well-being by influencing perceived stress and coping strategies.

### Study Aim 1. Examine daily experiences of stress.

The first aim of the study is to increase knowledge about the daily experiences of stress among Chinese international students. Although past studies have focused on acculturative stressors with this population, few assess stress more broadly. For instance, studies on Asian students highlight the importance of acculturative stressors and daily experiences of discrimination; however few use assessment strategies that broadly capture daily stressors. Thus, the current study used open-ended assessments of stress that allowed Chinese international students to ideographically identify stressors they experience during the day, thereby capturing a range of stressors.

**Study Aim 2. Understand how experiences of stress and coping affect psychological well-being among Chinese international students.**

The second aim of the current study is to better understand how experiences of stress and coping affect psychological well-being among Chinese international students. First, the first year of college represents an important transition year for international students and universities. For many international students, the first year can be a pivotal developmental milestone as it may represent the first time they have spent significant time away from family. For universities, the first year is an important window of time for early intervention and prevention programming to mitigate mental health problems and aid in the adjustment process. Building on past studies that combine Chinese international students across various developmental stages (e.g., graduate and undergraduate students; Pan, Wong, Chan, & Joubert, 2008; Wang et al., 2012; Wei, Liao, Heppner, Chao, & Ku, 2012; Wei, Su, Carrera, Lin, & Yi, 2013; Wei, Ku, Russell, Mallinckrodt, & Liao, 2008), the current study specifies the population of interest as first-year Chinese international students.

Second, the stress, coping, and mental health process is inherently dynamic and unfolds over time, which lends itself to longitudinal research designs. Therefore, the current study examines changes in positive and negative affect as a consequence of changes in stress and coping responses over time. Daily assessments of affect provide a finer grain assessment of well-being than existing measures of mental health disorders. For instance, many measures tapping into DSM-IV mental health disorders (e.g., Beck Depression Inventory; Beck, Steer, & Brown, 1996; Patient Health Questionnaire-9; Spitzer, Kroenke, & Williams, 1999) assess symptoms across the past week, two weeks, or month. Measures designed to assess mental health over these time periods miss day-to-day fluctuations in well-being. Thus, assessing changes in positive and

negative affect provides an alternative method for studying the relationship between daily stress and well-being because affect is variability within a day and across a week (Augustine & Larsen, 2011; Finan, Zautra, & Wershba, 2011) allowing researchers to capture the link between daily experiences of stress and psychological well-being. Furthermore, daily fluctuations in affect are related to psychopathology. Notably, Myin-Germeys and colleagues (2009) reviewed experience sampling studies of psychopathology and noted that affect instability and daily fluctuations were strong predictors of affective, anxiety, and eating disorders.

Lastly, a daily diary method is used because measures of general tendencies in coping can bias results and overlook nuanced daily variations in coping (Lazarus, 1999). For instance, studies suggest that problem-focused coping may be more consistent across individuals and situations, whereas social support may be more situationally-based (e.g., Lazarus, 1999; Roesch et al., 2010). Longitudinal methods allow for the study of intra-individual variability in coping strategies (e.g., Cheng, 2001). Thus, it remains unclear how often and to what extent different types of coping are deployed among first-year Chinese international students.

**Study Aim 3. Examine effects of mindfulness on stress, coping, and psychological well-being.**

The third aim of the current study is to better understand how trait mindfulness affects stress, coping, and psychological well-being among Chinese international students. The current study builds upon past studies showing positive relationship between mindfulness and psychological well-being among Asian American students (e.g., (Masuda, Wendell, Chou, & Feinstein, 2010; Masuda, Mandavia, & Tully, 2014) by seeking to replicate findings among first-year Chinese international students early in the cultural adjustment process. Furthermore, results of the current study will also contribute to how various aspects of trait mindfulness relate to

stress and coping. Given that past studies in this area use the MAAS – a measure of inattention – the study extends current research by using a multifaceted measure of mindfulness (i.e., Five-Facet Mindfulness Questionnaire; Baer et al., 2006).

# CHAPTER 4: Method

## Sample and Procedure

Chinese International undergraduates ($n$ = 38) were recruited to complete the two-week daily diary study. Eight students were removed from the final data set because they only completed the initial survey. The retained sample ($n$ = 30) was primarily female (85.6%), ranging from 18-20 years old ($M$ = 18.67, $SD$ = .89). They all indicated that Chinese was their first language and originated from various cities in China. Eleven originated from municipalities (e.q., Beijing, Chongqing, and Tianjin; 31.4%), 11 from provinces (e.g., Guangdong and Anhui; 40.0%), and eight from prefecture-level cities (e.g., Huizhou and Xiangtan; 28.6%). Students also reported a wide range of majors including psychology, accounting, business, math, neuroscience, finance, biochemistry, education, pharmacy, art, food science and nutrition, economics, advertising, and undecided.

**Recruitment**. Students were recruited through face-to-face canvassing across campus (e.g., dorms, international center, library, and classrooms), snowballing, social media (e.g., WeChat) and flyers. Students were offered a $20 Amazon gift card for completing the two-week study and an additional $5 if they completed all daily diary questionnaires. Three Chinese international student undergraduate research assistants actively engaged with the participants by sending and reminding participants' daily questionnaires, answering questions, and checking responses.

**Procedure.** Participants were sent a link directing them to a consent form that described the nature of the study, ensured confidentiality, and outlined compensation. Students who provided consent were asked to provide their mobile phone number or WeChat screen name for contact in the case of technical difficulties or reminder calls, and their MSU email address for

which links to the daily diary and reward were sent. During the two-week study, the self-report questionnaires included demographic information and measures of interest described below. During the daily diary portion of the study, a fixed time schedule was used for data collection where participants were sent a link to complete the questionnaire at 8:00pm and a reminder text message to complete the survey between 8:00pm-midnight. The link directed participants to a short daily self-report survey (less than 10 minutes as recommended by Gunthert & Wenze, 2012) related to stressful experiences during the day, their response, and affect. Daily diary reports continued for a two-week period.

Bolger and Laurenceau (2013) categorize intensive longitudinal designs into two categories: time-based designs and event-based designs. Time-based designs specify the timing of assessments based on intervals (e.g., regular range of times during the day) or signals (e.g., prompts by researcher to complete assessments), whereas event-based designs ask participants to complete assessments whenever a specified event occurs. The current study uses a daily diary approach – an interval-contingent design that asks participants to complete an assessment at regular time intervals across the study period.

Assessments occurred once-a-day at the end of the day to balance participant burden, while minimizing retrospective bias. To this end, qualitative accounts of stressors and coping were obtained along with quantitative data. This design is a modified version of the Day Reconstruction Method (DRM; Kahneman, Krueger, Schkade, Schwarz, & Stone, 2004) – an interval-contingent design that asks participants to reconstruct the previous day's events based on qualitative descriptors to minimize memory bias and anchor memory recall on specific accounts. This method has been used in an earlier study conducted by Cheng (2001), where Hong Kong residents were asked to describe all stressors experienced during the day along with appraisals of

control and stress. Results showed variability in perceptions of controllability, and deployment of emotion- and problem-focused across six days.

## Measures

### Initial and final questionnaire

The following measures were administered in Chinese at the beginning and end of the study period (see Appendix A for both the Chinese and English versions of the measures). Higher scores represented greater levels of the construct of interest unless otherwise specified.

***Mindfulness***. Mindfulness was measured using the short form version of the Chinese Five Facet Mindfulness Questionnaire (FFMQ-SF; Hou et al., 2014). The 20-item short form version (FFMQ-SF) includes the following five facets of mindfulness: observing (4-items; e.g., "When I'm walking, I deliberately notice the sensations of my body moving"), describing (4-items; e.g., "I'm good at finding words to describe my feelings"), acting with awareness (4-items; e.g., "When I do things, my mind wanders off and I'm easily distracted"), non-judging (4-items; e.g., "I criticize myself for having irrational or inappropriate emotions"), and non-reacting (4-items; e.g., "I perceive my feelings and emotions without having to react to them"). Items are rated on a 5-point Likert scale ranging from 1 (*never* or *very rarely true*) to 5 (*very often* or *always true*). Confirmatory factor analyses (CFA) demonstrated high correlation between the FFMQ-SF and the full-scale FFMQ Chinese version ($r$ = .96) and adequate fit in a correlated CFA model (RMSEA = .071; CFA = .93; SRMR = .080). In the current study, the FFMQ subscales demonstrated acceptable reliability estimates (Cronbach's $\alpha_{observe}$ = .82; $\alpha_{describe}$ = .78, $\alpha_{awareness}$ = .80, $\alpha_{nonjudgment}$ = .69, $\alpha_{nonreactance}$ = .67).

***Psychological Well-being***. The Chinese Bilingual version of the Patient Health Questionnaire-9 (CB-PHQ-9; Yeung et al., 2008) for depression screening was used to measure

symptoms of depression experienced in the past two weeks. The instrument has demonstrated adequate internal consistency across Chinese and Asian samples (see Kalibatseva, Wu, & Leong, 2013 for a review). This measure was used to assess baseline levels of depression and serve as a control in subsequent analyses. The CB-PHQ-9 demonstrated adequate reliability in the current study (Cronbach's $\alpha_{cb\text{-}phq9} = .82$).

A Chinese version of the State-Trait Anxiety Inventory (C-STAI; Tsoi, Ho, & Mak, 1986) was used to measure levels of state anxiety at the initial questionnaire. The 20-item instrument has demonstrated adequate internal consistency among Chinese and Asian samples (Shek, 1993) and in the current study (Cronbach's $\alpha_{C\text{-}STAI} = .82$). The measure was used to assess baseline levels of state anxiety and serve as a control in subsequent analyses.

**Daily questionnaire**

The daily diary questionnaire was based on the Day Reconstruction Method (Kahneman et al., 2004), the Coping Flexibility Questionnaire (Cheng, 2001), and an experience sampling study conducted by Weinstein, Brown, and Ryan (2009) (see Appendix B for daily questionnaire). First, an open-ended stimulus-based approach (Kamarck, Shiffman, & Wethington, 2010) was used to capture qualitative experiences of stressful events during the day (i.e., "Please describe three bothersome events/thoughts/issues that occurred today related to friends, family, or being Chinese at MSU or America."). Next, participants rated perceived stress (i.e., "How stressful was the event at the time?"; range 0-100), positive/negative affect (Likert scale 1-5; Hamid & Cheng, 1996), and state mindfulness (e.g., "I found it difficult to stay focused on what was happening in the moment.") for the most bothersome event. Lastly, participants listed up to four coping strategies that they used in response to the most bothersome event and then rated on a 7-point Likert scale the extent to which they agreed/disagreed with the

coping response, “Changed thoughts, feelings, and/or behaviors associated with the problem” or “Avoided making changes in the problem and in oneself.”

***Positive/negative affect***. Based on Likert scale ratings (1 = “Strongly Disagree”; 7 = “Strongly Agree”), mean positive and negative composite scores were calculated such that higher scores reflected higher levels of positive or negative affect during the most bothersome event. Using items with the highest factor loadings in the Hamid and Cheng (1996) study, the five negative affect items were feeling Helpless, Bitter, Annoyed, Depressed, and Disappointed. In the current study, reliability estimates across the 14 daily measurements ranged from .86 to .94 for negative affect ($M_{\text{Cronbach }\alpha}$ = .91, $SD_{\text{Cronbach }\alpha}$ = .03). The four positive affect items were feeling Contented, Happy, Joyful, and Relaxed. Reliability estimates across the 14 daily measurements of positive affect ranged from .88 to .98 ($M_{\text{Cronbach }\alpha}$ = .94, $SD_{\text{Cronbach }\alpha}$ = .03).

***Coping strategy***. For the most stressful event, students were prompted with an open-ended question asking about their coping response. Students were allowed to submit up to four coping strategies. For each coping strategy, students rated the extent to which it was related to emotion suppression (i.e., “I suppressed or avoided my thoughts or feeling”), cognitive reappraisal (i.e., “I changed my thoughts or feelings”), or problem solving coping (i.e., “I directly handled the problem”) on 7-point Likert scale (1 = “Strongly Disagree”; 7 = “Strongly Agree”). For each day, the average score of each coping strategy was constructed by dividing the sum of the ratings for each coping strategy by the number of coping strategies reported.

## CHAPTER 5: Data analytic strategy

### Research Question 1 (RQ1): What are the types of stressors Chinese international students experience at the daily level?

RQ1 is exploratory in nature, and therefore, does not propose any hypotheses. Open-ended responses were used to elicit up to three stressful events per day, for a maximum of 42 distinct stressors per respondent over the course of the study period (see Table 1 for a summary of extracted themes and sample responses).

**Translation**. Participants provided responses in their native language (i.e., Chinese). Chinese responses were forward-back translated (Chapman & Carter, 1979) from Chinese to English, and then English back to Chinese. This procedure ensures conceptual equivalence between the original (i.e., Chinese) and new translation (i.e., English; Chen & Boore, 2010). Three undergraduate senior Chinese international student research assistants, fluent in Chinese and English, translated the data. Forward and back-translated statements were randomly assigned to each of the three research assistants to minimize translator by statement effects. Once completed, the research assistants and I reviewed each of the statements for clarity. Unclear or conceptually non-equivalent translations were reviewed, discussed between the research group, and retranslated amongst the group until the original and new translation reached conceptual equivalence (Chapman & Carter, 1979; Chen & Boore, 2010).

**Coding**. Thematic analysis was used to form categories emerging from the data set of stressful events. Thematic analysis is defined as "a method for identifying, analyzing, and reporting patterns (themes) within data" (Braun & Clarke, 2006, p.6) and is useful because it not only organizes the data, but also facilitates rich, detailed description of the data. Thematic analysis is a standalone technique subsumed under dominant epistemological qualitative analyses

such as grounded theory, content analysis, or narrative analysis. Braun and Clarke (2006) recommend clarifying the approach to theme development by specifying how the themes emerged (e.g., inductive or deductive), at what level (e.g., semantic or latent), and through what epistemological lens (e.g., essentialist/realist or constructivist). The goal of RQ1 is to identify stress themes emerging from the data, making the current approach ideal because it: (1) allows themes to emerge from the data without imposing a theoretical lens (e.g., is inductive, "bottom up"), (2) focuses on the direct meaning of statements (i.e., focuses on semantics), and (3) assumes that participant reports reflect their intrapsychic experience (i.e., reflects an essentialist/realist epistemology).

Thematic analysis has six phases outlined by Braun and Clarke (2006). First, the researcher familiarizes him/herself with the data through "repeated reading" of participant reports. Second, the researcher generates initial codes by identifying basic elements of the data. Third, the researcher searches for higher order themes by combining codes. Fourth, the researcher reviews the themes to combine or segment themes. Fifth, the researcher defines and names the themes by providing a name and operational definition for each theme. Last, the researcher produces a report of the findings.

Following the Braun and Clarke's (2006) guidelines, I approached the data in the following manner. Prior to engaging in coding, each statement was reviewed multiple times to develop familiarity with the data. Next, I iteratively reviewed the statements again while making notes on potential codes. Once a pattern of codes emerged from my notes, I began a process of coding the statements starting with the most frequently observed code. When possible, codes were selected using direct words or phrases from participant's statements. Statements that were incomprehensible or seemingly unrelated to stress were temporarily coded as "remove." Later,

these statements were recoded with an existing code or maintained the "remove" code as appropriate. Once all frequently identified codes were assigned to statements, the remaining statements were read and reread, while additional notes were made to identify additional codes. This process of reading statements, taking notes, and assigning codes based on popularity/frequency continued until all statements received a code.

In the next stage, each code was operationally defined to increase clarity. Definitions were based on the statements within each code. Next, codes were grouped into larger themes based on their theoretical and definitional closeness. For example, the code "Control," defined as "negative perceived ability to deploy internal resources to control behaviors towards a goal," and "Self-Concept," defined as "negative self-perceptions related to personality or body-image" were combined based on theoretical similarity within the theme, "Problems with Self-Concept." Themes were then operationally defined based on the codes. Once themes were developed, a Ph.D. graduate student with expertise in qualitative methods and I recoded the statements based on the themes. A Cohen's Kappa statistic was then computed to assess inter-rater reliability (see Results section for reliability estimates).

**Quality and trustworthiness**. Following Morrow's (2005) guidelines for qualitative research, each step of the qualitative analysis attempted to ensure *credibility*, *transferability*, *dependability*, and *confirmability*. Credibility refers to the internal consistency or rigor in the process of qualitative research. The current study ensured credibility by using multiple observations from each individual, engaging research assistants that had shared experiences with the population of interest (i.e., Chinese international student research assistants), and an iterative process of checking the fit between source data and emerging codes/themes. Transferability refers to the generalizability of the findings to similar populations. Transferability was ensured

by providing a detailed description of the analytic process and individuals involved, thorough discussion of sample characteristics and recruitment, and by discussion of how the instruments were developed and translated to allow readers to determine how results may transfer to their own contexts. Finally, dependability and confirmability refer to using rigorous, reflexive, and transparent methodology to ensure results representing the lived experiences of the sample. Dependability and confirmability were ensured by reflexively discussing the qualitative process with another qualitative coder, maintaining rigorous notes during the coding stages of analysis, and managing my subjective interpretations by following Braun and Clark's (2006) description of thematic analysis (see "Coding" section above).

**Research Question 2 and 3: What is the relationship between trait mindfulness, stress, coping and psychological well-being?**

Research questions 2 and 3 are quantitative in nature. Table 1 and 2 outline the hypotheses for each research question. To test these hypotheses, multilevel structural equation modeling was used.

**Multilevel Structural Equation Modeling (MSEM)**. MSEM can be considered a general framework for generalized linear models (e.g., OLS regression). Typically, linear mixed models (LME) or multilevel models (MLM) are a popular choice for analyzing longitudinal data because of the flexibility. First, OLS regression does not allow for the addition of random effects MLM allows. That is, variance in the slope between a predictor and response can be modeled as a random effect, where the slopes are allowed to vary across individuals. Second, an important assumption in OLS regression is the non-independence of data, which is violated with longitudinal data given that a person's report on the first day will be naturally correlated with reports on subsequent days. MLM allows auto-correlation within data to be modeled.

Considering these two points in mind, MLM can be conducted using reliable and efficient software that allows for the estimation of missing data. For example, Mplus will automatically use full-information maximum likelihood (FIML) imputation for missing data – a method which estimates a likelihood function for individuals based on available data.

The current study also tests multilevel mediation using Muthen and Asparouhov's (2008) MSEM as outlined by Preacher, Zyphur, and Zhang (2010). This approach extends latent variable modeling to allow parameters to vary across clusters. Carrying out the analyses in Mplus version 7.4 (Muthen & Muthen), all level-1 variables are decomposed into within- and between-variance and level-2 variables remain at the between-level. Mediation is tested by examining the 95% bootstrapped estimates of the indirect effects (i.e., product of paths a and b) using the R package RMediation (Tofighi & MacKinnon, 2011). If zero lies within the range of possible values, then the test fails to reject the null hypothesis.

## CHAPTER 6: Results

Descriptive statistics and correlations are presented in Table 4.

### Research Question 1 (RQ1): What types of daily stressors do Chinese international students experience?

A total of 902 statements were collected from the daily diaries. Thirty statements (3.3% of all statements) were removed due to interpretation difficulties (e.g., "Horror movie," "Playing game, ADC is beginner," "I'm too handsome") or self-reported lack of stress (e.g., "Can't think of stressful event," "None"). Fourteen statements (1.6% of overall statements) across seven participants indicated lack of stress. Removed codes were reviewed to determine if there were any patterns of responses that might imply problems with translation or participants' understanding of the task. Given the absence of any systematic bias in the responses or among participants who had removed codes, the removed codes were excluded from further analyses. The final data set included 872 stressful statements, with an average of 2.50 (*SD* = .61) statements per day per person, suggesting that students typically entered two or three stressful experiences each day. Across the two-week study period, each student reported an average of 30.07 stressful events (*SD* = 11.91; *range* = 4-42).

In order of frequency, the following themes emerged: (1) academic stressors, (2) fulfilling basic needs, (3) interpersonal problems, (4) time pressure, (5) environmental or situational stressors, (6) future goal-oriented behaviors, (7) problems with self-concept, and (8) cultural adjustment-related difficulties. Table 3 displays the themes that emerged and examples of the stresses reported. Cohen's Kappa's ranged from .83 to .94 and demonstrated acceptable inter-rater reliability.

Academic stressors included pressures related to coursework, classes, exams, maintaining or attaining grade point averages (GPA), homework, studying or enrolling in classes. This theme was noted the most frequently (total = 329 stressful events, 37.77% of total stressful events). All 30 students reported at least one academic stressor (*M* = 10.97, *SD* = 7.49, *range* = 1-30). Not surprisingly, upcoming exams, homework assignments, and poor class grades were the most common daily stressor reported. Students reported not finishing or knowing how to complete assignments (e.g., "don't know how to do CSE homework"), difficulty understanding classes (e.g., "do not understand biology course"), and trouble completing writing assignments (e.g., "Don't know how to structure an essay"). Stress related to exams are captured well by one student who reported, "Finals exams are coming up and I feel lots of pressure. I feel tired every day and do not have the motivation to study hard – so anxious." Another student expressed concerns about scheduling classes for the upcoming semester,

> I have some problems about next semester's class. I don't know how to schedule the courses properly. I don't want to take too many hard classes at the same time because this will affect my GPA, which will prevent me from applying for the major I want.

Ten days later the same student received advising, yet worries about successfully enrolling in the classes persisted, "Finally got to talk to advisor about applying to enter college and enroll in class problems. The next step is to worry if I can get the class I want or not. There are eight days left for me to enroll course, but I don't know if I can enroll in all the classes that already put in the schedule builder."

Stressors related to basic needs were defined as concerns about current physical health, financial resources, sleep disturbances, hunger, and the availability of food. Eighty percent of the participants (*n* = 24) reported at least one stressor related to basic needs (*M* = 6.17, *SD* = 4.32,

*range* = 1-14), which was comprised of 148 stressful events representing 16.97% of the overall stressful events. Students reported physical health-related problems such as stomachaches, menstruation, illness, and general body pains. Limited financial resources also caused stress. For instance, one student stated, “I don't have money, I can't afford tuition, I can't afford a car loan or a housing loan. One word: I am poor!” In addition, students reported problems overeating (e.g., “binge eating”), not eating enough (e.g., “did not eat enough for dinner”) or feeling hungry (e.g., “very hungry.”) Lastly, sleep disturbances were a source of stress. For instance, students reported feeling tired, sleeping late, or not sleeping enough (e.g., “Did not sleep enough - hard to focus”). A few students noted that “time is short and [I] don’t have time to sleep” or the desire “to sleep, but [the] need to study.”

Interpersonal problems were defined as personal conflicts with others. This theme was comprised of 113 stressful events representing 12.96% of the overall stressful events. Eighty percent of the students ($n$ = 24) reported at least one interpersonal problem ($M$ = 4.71, $SD$ = 2.94, *range* = 1-9). Students reported problems with roommates (e.g., “My roommate is really slovenly. I can't tolerate it, but I don't want to make the relationship worse with her”) or coworkers (e.g., “Both of my working partners were not doing anything. I don’t want to work the shift on Monday anymore.”). Others reported problems forming friendships (e.g., “Cannot find true friends over here”; “Don’t have enough friends, spend a lot of time alone”), or maintaining friendships (e.g., “Had an argument with friend and we’re no longer friends”). Problems with romantic relationships were also commonly reported. Students either reported wanting to find a romantic partner or complained about their partner’s negative attributes (e.g., “Boyfriend is too dumb”; “Girlfriend is boring”).

Stressors related to time pressures were defined as concerns, worries, or feeling overwhelmed due to perceiving time as a limited resource. This theme was comprised of 91 stressful events representing 10.44% of the overall stressful events. Seventy-three percent of the students (*n* = 22) reported at least one stressor related to time pressures (*M* = 4.14, *SD* = 3.75, *range* = 1-14). Often students reported feeling overwhelmed with many tasks to complete (e.g., "There is nothing for me to do but feel like many things I haven't done"), possibly due to problems managing time effectively (e.g., Time management is too tight, no resting time for me") or procrastinating (e.g., "Final is coming, cannot focus, always want to prepare finals but lazy and procrastinating.")

Environmental or situational stressors were defined as frustrating environmental demands or practical problems that disrupt daily routines. This theme was comprised of 82 stressful events representing 9.40% of the overall stressful events. Seventy-three percent of the students (*n* = 22) reported at least one stressor related to environmental or situational pressures (*M* = 3.83, *SD* = 2.71, *range* = 1-9). Some students reported a general sense of malaise (e.g., "Not happy but don't know why") or dissatisfaction with a particular non-academic related outcome (e.g., "Cannot win at Mahjong"; "Flight delay"). Other students reported difficulties with daily logistical hassles (e.g., "Laptop is broken"; "lost my stuff") or problems with obtaining a driver's license (e.g., "Didn't pass the road test"; "Preparing for driving license test.").

Future goal-oriented stressors were defined as concerns about future plans including career, family, and logistics for leisure activities (e.g., travel). This theme was comprised of 79 stressful events representing 9.06% of the overall stressful events. Sixty percent of the students (*n* = 18) reported at least one stressor related to future goal-oriented pressures (*M* = 4.39, *SD* = 4.25, *range* = 1-19). Students reported worrying about wide range of future events from

upcoming trips (e.g., “I still don't know the plan for winter break, airplane ticket has become more and more expensive.”) to job searching (e.g., “Interview makes me feel pressure/stress”) and family life (e.g., “Worried about future family.”)

Problems with self-concept were defined as intra-individual stressors stemming from negative self-perceptions related to self-efficacy, self-esteem, ability to control one’s behavior, or discrepancy between ideal and actual self. This theme was comprised of 79 stressful events representing 9.05% of the overall stressful events. Sixty-seven percent of the students (*n* = 20) reported at least one stressor related to problems with self-concept (*M* = 3.95, *SD* = 3.19, *range* = 1-11). The types of self-concept problems ranged from physical appearance (e.g., “Ugly”; “My girlfriend always said I am ugly”) to low self-esteem or self-concept (e.g., “Very lazy, I cannot persevere on many of things, I cannot successfully finish or follow the plan that I already scheduled. I just want to be lazy and lay in bed every day. I want to make some change but it’s hard because it's already become a habit.”) One student felt inadequate compared to his classmates, “All my classmate are excellent, I feel unconfident or even low self-esteem when I am with them. Right now I'm scared of going to this class. I feel depressed before class starts.” Another perceived a problem reaching out for help, “I have a personality problem. I’m not good at asking others for help.”

Lastly, cultural adjustment-related stressors were defined as statements that specifically referred to difficulties that arose as a result of living in the U.S., meaning that only statements that overtly referred to “America,” “U.S.,” or similar variants were included in this code. This theme was comprised of 29 stressful events representing 3.32% of the overall stressful events. Forty-three percent of the students (*n* = 13) reported at least one stressor related to cultural adjustment (*M* = 2.23, *SD* = 2.09, *range* = 1-8). These problems often overlapped with the

previous themes and included problems with American food, homesickness, relationships and language. Compared to other themes, stressful events reported in this theme were richer and often gave a narrative glimpse into the student's cultural struggles. One student described difficulties with being an international student in a liberal arts course,

> The thing that keep annoying me is about an elective class in this semester. Liberal arts is harder compare to science course for international students. Liberal arts not only tested on memories, but also the ability of understanding and applying. Due to language difference, it is hard to understand some concepts of it. So even though I remembered all of the concepts but it is still hard to apply and use them correctly while doing the problem sets.

Struggles with communication often create difficulty integrating into American society ("Can't assimilate into American culture. My speaking is not fluent enough and it makes me afraid to communicate with foreigners") and mistrust with strangers ("…afraid to communicate with foreigners because I've been tricked by strangers before."). One student's tension in making friends with Americans is revealed in multiple reports of stress "meeting with American classmates," yet "Always feels like staying in the Chinese circle…but it is difficult to find a foreign friend." In contrast, even those students who seemed to spend most of their time with other Chinese students reported problems "finding true friends over here" and find out that some like "to hang out instead of study. We don't have the same values." Students also reported negative aspects of living in America related to food (e.g., "Food in America have lots of calories that make me gain a lot of weight. I heard that lots of students have the same problem, I am trying to control, but get fat anyway"), weather (e.g., "Can't adapt to weather in Lansing"),

and people (e.g., “Americans create lots of noise”). It is likely that perceived misfit in the new cultural environment leads to longing to return home,

> I miss my old friend, and feel helpless over here, I am all by myself, no one will help. Also miss people and things in my hometown, it is hard to communicate with other students from different provinces, I like people from my same city.

**Research Question 2 (RQ2): What is the relationship between perceived stress, coping strategy, and psychological well-being during a stressful event?**

Two sets of hypotheses are proposed (see Table 1). The first set of hypotheses relate perceived stress with psychological well-being. More specifically, perceived stress will be positively related to negative affect (H2a.1) and negatively related to positive affect (H2a.2). The second set of hypotheses relate perceived stress, suppression, reappraisal, problem solving coping, and psychological well-being. Specifically, there will be a significant indirect effect of perceived stress on negative affect through emotion suppression (H2b.1), reappraisal (H2b.3), and problem solving coping (H2b.5); and there will be a significant indirect effect of perceived stress on positive affect through emotion suppression (H2b.2), reappraisal (H2b.4), and problem solving coping (H2b.6). The six hypotheses were tested by estimating six independent MSEM to minimize estimated parameters for each hypothesis. Covariates (i.e., age, gender, anxiety, depression) did not significantly predict any of the outcome variables and were left out of the subsequent models (see Table 5).

**Negative and positive affect**. Tables 6-11 display the results for the MSEM for the relationships between stress, coping (suppression, reappraisal, and problem solving), and affect (positive and negative), and Figures 1-6 show the structural model. First, across the six models substantial variability within individuals was revealed by the intraclass correlation for

suppression (ICC = .37), reappraisal (ICC = .36), problem solving (ICC = .39), negative affect (ICC = .47), and positive affect (ICC = .35). That is, 37% of the variability in suppression occurred between individuals and 63% occurred within individuals; 36% of the variability in reappraisal occurred between individuals, and 64% occurred within individuals; 39% of the variability in problem solving coping occurred between individuals, and 61% of the variability occurred within individuals; 47% of the variability in negative affect occurred between individuals, and 53% of the variability occurred within individuals; and 35% of the variability in positive affect occurred between individuals, and 65% of the variability occurred within individuals. The pattern of results suggested significant within-person variability supporting the use of MSEM.

The first model examined the relationships between stress, suppression, and negative affect and revealed a five significant effects (see Table 6 and Figure 1). Model 1 (i.e., stress, suppression, and negative affect) showed that negative affect worsened if an individual reported higher use of suppression ($b$ = .118, $p$ = .044) or perceived stress ($b$ = .013, $p$ < .001) on any given day. Thus, results provided support for H2a.1 (i.e., perceived stress will be positively related to negative psychological well-being). Further, at the between-person level, individuals who reported higher stress tended to use more suppression ($b$ = .012, $p$ = .022) and individuals who reported higher suppression tended to have worse negative affect ($b$ = .779, $p$ = .002). The indirect effect of stress on negative affect through suppression was significant at the between-person level supporting H2b.1 (i.e., the indirect effect of perceived stress on negative affect through emotion suppression will be significant). That is, across individuals and controlling for daily effects, those who experienced more stress were more likely to use suppression, which worsened negative affect.

The second model examined the relationships between stress, suppression, and positive affect and revealed one significant finding (see Table 7 and Figure 2). Specifically, those who experienced greater stress also reported higher levels of suppression ($b$ = .012, $p$ = .023). However, no other effects were significant. As a result, results did not support H2a.2 (i.e., perceived stress will be negatively related to positive psychological well-being) or H2b.2 (i.e., indirect effect of perceived stress on positive affect through emotion suppression will be significant).

The third model examined the relationships between stress, reappraisal, and negative affect and revealed one significant finding (see Table 8 and Figure 3). Specifically, individuals on any given day reporting high levels of stress also reported worsened negative affect ($b$ = .013, $p$ < .001). Thus, results provided further support for H2a.1 (i.e., perceived stress will be positively related to negative psychological well-being). However, no other effects were significant. Results did not support H2b.3 (i.e., indirect effect of perceived stress on negative affect through reappraisal will be significant).

The fourth model examined the relationships between stress, reappraisal, and positive affect and did not reveal any significant findings (see Table 9 and Figure 4). Results did not support H2b.4 (i.e., indirect effect of perceived stress on positive affect through reappraisal will be significant) or H2b.4 (i.e., indirect effect of perceived stress on positive affect through reappraisal will be significant).

The fifth model examined the relationships between stress, problem solving, and negative affect and revealed three significant findings (see Table 10 and Figure 5). First, higher levels of perceived stress during earlier in the day predicted greater negative affect at the end of the day ($b$ = .013, $p$ < .001), and individuals across the two week study period who tended to report higher

levels of stress also reported greater negative affect ($b$ = .015, $p$ = .004). Results provided support for H2a.1 (i.e., perceived stress will be positively related to negative psychological well-being). Further, individuals who tended to report higher problem solving coping also reported less negative affect ($b$ = -.674, $p$ = .037). However, no other significant effects were found. Results did not support H2b.5 (i.e., indirect effect of perceived stress on negative affect through problem solving coping will be significant).

The sixth model examined the relationships between stress, problem solving, and positive affect and did not reveal any significant findings (see Table 11 and Figure 6). Results did not support H2b.4 (i.e., indirect effect of perceived stress on positive affect through reappraisal will be significant) or H2b.6 (i.e., indirect effect of perceived stress on positive affect through problem solving will be significant).

**Coping by Stress Interactions.** Alternative models examining moderation was estimated (Figures 7 and 8). In the moderation model, direct effects of stress, reappraisal, problem solving, and suppression on affect were estimated. The model included two additional parameters estimating the effect of the product between stress and reappraisal (stress*reappraisal), suppression (stress*suppression), and problem solving coping (stress*problem solving) on affect. All effects were estimated at both the within and between level. An independent model was estimated for negative and positive affect. Tables 12 and 13 displays both between and within effects for negative and positive affect, respectively. As shown in the results, no significant main or moderated effects were observed. Thus, suppression, reappraisal, and problem solving coping did not moderate the relationship between stress and negative or positive affect.

**Research Question 3 (RQ3): What is the relationship between trait mindfulness, perceived stress, coping, and psychological well-being?**

Three sets of hypotheses are proposed (see Table 2). In the first set, I examine the relationship between trait mindfulness and affect. More specifically, trait mindfulness facets will be negatively related to negative affect (H3a.1) and positively related to positive affect (H3a.2). In the second set, perceived stress and coping are hypothesized to mediate the relationship between trait mindfulness and psychological well-being. That is, the indirect effect of trait mindfulness facets on negative affect through perceived stress (H3b.1), emotion suppression (H3b.3), reappraisal (H3b.5), and problem solving coping (H3b.7) will be significant; and the indirect effect of trait mindfulness facets on positive affect through perceived stress (H3b.2), emotion suppression (H3b.4), reappraisal (H3b.6), and problem solving coping (H3b.8) will be significant. Lastly, the third set examines how perceived stress and coping will serially mediate the relationship between trait mindfulness and psychological well-being. Specifically, the indirect effect of trait mindfulness on negative affect through perceived stress and emotion suppression (H3c.1), perceived stress and appraisal (H3c.3), and perceived stress and problem solving coping (H3c.5) will be significant; and the indirect effect of trait mindfulness on positive affect through perceived stress and emotion suppression (H3c.2), perceived stress and appraisal (H3c.4), and perceived stress and problem solving coping (H3c.6) will be significant.

A step-wise procedure was used to assess the relationships between trait mindfulness, perceived stress, coping strategy, and affect given the complexity of the model and large number of parameters estimated. Figures 9 and 10 shows a hypothesized final model with all parameters and variables included for both negative and positive affect, respectfully. In step one, four separate models were constructed to examine the direct effects of trait mindfulness facets on

stress, coping, and positive/negative affect (see Table 14). Trait mindfulness facets showing non-significant effects across perceived stress, suppression, reappraisal, and positive/negative affect were removed from subsequent models for parsimony. In step two, models estimating all within- and between-person effects between trait mindfulness, stress, coping, and positive/negative affect were constructed and indirect effects were computed. Non-significant pathways were trimmed to increase parsimony at this stage.

**Direct effects of mindfulness**. In step one, the first model constructed included between-person trait mindfulness facets, and partitioned between- and within-person stress variance (see Table 14; Model 1). Model 1 examined the direct effect of trait mindfulness on stress and results showed one significant effect where higher trait levels of nonjudgment predicted lower levels of stress ($b$ = -17.477, $p$ < .001). Model 2 regressed coping (suppression, reappraisal, and problem solving coping) on trait mindfulness facets at the between-person level. Between- and within-person variances of suppression, reappraisal, and problem solving coping were partitioned similarly to the previous model. Three significant effects for suppression were found. Higher levels of observe ($b$ = -.450, $p$ < .001), awareness ($b$ = -.324, $p$ = .003), and nonjudgment ($b$ = -.407, $p$ = .027) predicted lower levels of suppression. Similarly, three significant effects for problem solving coping were found. Higher levels of observe ($b$ = .387, $p$ = .008) and awareness ($b$ = .263, $p$ = .003) predicted greater problem solving coping, whereas higher levels of describe predicted lower levels of problem solving coping ($b$ = -.259, $p$ = .003). No significant relationships were found between trait mindfulness and reappraisal.

Model 3 examined the effects of trait mindfulness on negative affect and found that the only significant predictor was awareness. That is, higher trait levels of awareness were related to lower levels of negative affect ($b$ = -.362, $p$ = .006). Thus, H3a.1 (i.e., trait mindfulness will be

negatively related to negative affect) was partially supported. Model 4 replacing negative affect with positive affect did not yield any significant effects. Thus, H3a.2 (i.e., trait mindfulness will be negatively related to positive affect) was not supported. As a result of the three models, reappraisal was removed from the final model given no relationship with trait mindfulness, nonreacting was removed from the final model given no significant relationships with any of the variables.

**Full MSEM model**. Those variables that were not significant in the previous analyses (i.e., nonreact and reappraisal) were not included in the full model. Therefore, the final model (Tables 15-18; Step 2) examined the relationships between four facets of mindfulness (i.e., observe, describe, awareness, and nonjudgment), perceived stress, suppression, problem solving coping, and negative and positive affect (see Figures 11-14).

***Mindfulness, stress, and suppression***. Table 15 displays findings for a model examining mindfulness, stress, suppression and negative affect (see Figure 11). Results revealed two significant effects at the within-person level and six significant effects at the between-person level. First, results at the within-person level showed that greater use of suppression ($b$ = .122, $p$ = .044) and higher levels of perceived stress was related to worse negative affect ($b$ = .013, $p$ < .001). Second, results at the between-person level showed that higher levels of trait nonjudgment was related to less stress ($b$ = -17.565, $p$ = .001) and less suppression ($b$ = -.511, $p$ = .021); higher levels of trait observe was related to less suppression ($b$ = -.435, $p$ = .001) and higher negative affect ($b$ = .442, $p$ = .006); and higher levels of trait awareness was related to less suppression ($b$ = -.329, $p$ = .001). Furthermore, higher levels of suppression was related to worse negative affect ($b$ = 1.085, $p$ < .001). Thus, results partially supported H3a.1 (i.e., mindfulness

facets will be negatively related to negative affect). However, counter evidence was revealed for the effect of the mindfulness facet observe.

In addition, two significant indirect effects were observed. First, the indirect effect of mindfulness trait observe on negative affect through suppression was significant (est. = -.472, 95% CI: -0.866, -0.078). That is, individuals who reported higher levels of trait mindfulness observe reported less suppression, which was related to worse negative affect. Second, the indirect effect of mindfulness trait awareness on negative affect through suppression was also significant (est. = -.357, 95% CI: -.617, -.096). That is, individuals who reported higher levels of trait mindfulness awareness reported less suppression, which was related to worse negative affect supporting H3b.3 (i.e., indirect effect of trait mindfulness facets on negative affect through emotion suppression will be significant). However, results did not support H3b.1 (i.e., indirect effect of trait mindfulness facets on negative affect through perceived stress will be significant) or the parallel mediation model (H3c.1; indirect effect of trait mindfulness on negative affect through perceived stress and emotion suppression coping will be significant).

Table 16 displays findings for the model examining mindfulness, stress, suppression, and positive affect (see Figure 12). No significant effects were revealed at the within-person level. However, three significant effects were revealed at the between-person level. Specifically, higher levels of trait nonjudgment were related to less suppression ($b$ = -.498, $p$ = .002), higher levels of trait observe was related to less suppression ($b$ = -.434, $p$ = .002); and higher levels of trait awareness was related to less suppression ($b$ = -.339, $p$ = .001). These results are consistent with the previous model. No significant indirect effects were revealed. Results did not support H3a.2 (i.e., trait mindfulness facets will be positively related to positive affect), H3b.2 (i.e., indirect effect of trait mindfulness facets on positive affect through perceived stress will be significant),

H3b.4 (i.e., indirect effect of trait mindfulness facets on positive affect through emotion suppression will be significant), or H3c.2 (i.e., indirect effect of trait mindfulness on positive affect through perceived stress and emotion suppression coping will be significant).

***Mindfulness, stress, and problem solving coping.*** Table 17 displays findings for the model examining mindfulness, stress, problem solving coping, and negative affect (see Figure 13). Results revealed one significant effect at the within-person level, and seven significant effects at the between-person level. First, higher perceived stress was related to greater negative affect for an individual on any given day ($b$ = .013, $p$ < .001). Second, higher levels of trait observe ($b$ = .460, $p$ < .001) and awareness ($b$ = .324, $p$ = .002) were related to greater use of problem solving coping, whereas higher levels of trait describe was related to lower use of problem solving coping ($b$ = -.250, $p$ = .007). Further, individuals reporting higher levels of perceived stress ($b$ = .019, $p$ < .001) and higher levels of trait observe ($b$ = .498, $p$ < .001) reported worse negative affect, whereas individuals reporting higher levels of problem solving coping reported lower levels of negative affect ($b$ = -.992, $p$ = .003).

Results also revealed four significant indirect effects. First, the indirect effect of trait observe on negative affect through problem solving was significant (est. = -.457, 95% CI: -.809, -.105). That is, individuals reporting higher levels of trait observe reported using greater problem solving, which was related to less negative affect. Second, the indirect effect trait describe on negative affect through problem solving coping was significant (est. = .248, 95% CI: .005, .491). That is, individuals reporting higher levels of trait describe reported less problem solving coping, which was related to less negative affect. Third, the indirect effect of trait awareness on negative affect through perceived stress (est. = -.154, 95% CI: -.296, -.011) and problem solving coping (est. = -.321, 95% CI: -.633, -.010) were significant. That is, individuals reporting greater trait

awareness perceived less stress and used greater problem solving coping, which was related to less negative affect. Results supported H3b.1 (i.e., indirect effect of trait mindfulness facets on negative affect through perceived stress will be significant) and H3b.7 (i.e., indirect effect of trait mindfulness facets on negative affect through problem solving coping will be significant). However, results did not support H3c.5 (i.e., indirect effect of trait mindfulness on negative affect through perceived stress and problem solving coping will be significant).

Table 18 displays findings for the model examining mindfulness, stress, problem solving coping, and positive affect (see Figure 14). No significant effects were revealed at the within-person level. However, six significant effects were revealed at the between-person level. Specifically, higher levels of trait observe ($b$ = -.498, $p$ = .002) and awareness ($b$ = .315, $p$ = .004) was related to greater problem solving coping, whereas greater levels of trait describe were related to lower levels of problem solving coping ($b$ = -.257, $p$ = .004). Furthermore, higher levels of trait observe was related to lower levels of positive affect ($b$ = -.397, $p$ = .009), whereas higher levels of trait describe were related to higher levels of positive affect ($b$ = .457, $p$ = .013). Higher levels of trait awareness was related to less perceived stress ($b$ = -8.224, $p$ = .026). No significant indirect effects were revealed. Results did not support H3b.2 (i.e., indirect effect of trait mindfulness facets on positive affect through perceived stress will be significant), H3b.8 (i.e., indirect effect of trait mindfulness facets on positive affect through problem solving coping will be significant), or H3c.6 (i.e., indirect effect of trait mindfulness on positive affect through perceived stress and problem solving coping will be significant).

***Mindfulness, stress, and reappraisal.*** A model estimating the relationships between mindfulness, stress, and reappraisal was not constructed given the null results found in Table 10 (i.e., Step 1). Thus, H3b.5 (i.e., indirect effect of trait mindfulness facets on negative affect

through reappraisal will be significant), H3b.6 (i.e., indirect effect of trait mindfulness facets on positive affect through reappraisal will be significant), H3c.3 (i.e., indirect effect of trait mindfulness on negative affect through perceived stress and reappraisal coping will be significant.), and H3c.4 (i.e., indirect effect of trait mindfulness on positive affect through perceived stress and reappraisal coping will be significant.) were not supported. Summary. Results from the four models suggested the following. First, pattern of results suggested that higher levels of trait observe and aware were directly related to less emotional suppression and greater problem solving coping. However, higher levels of trait describe were related to less problem solving coping. Second, higher levels of trait observe was related to greater negative affect and less positive affect, whereas higher levels of trait describe was related to higher levels of positive affect. Third, higher levels of trait nonjudgment and awareness was related to lower levels of perceived stress. Fourth, suppression was related to worse negative affect, whereas problem solving coping was related to less negative affect. Fifth, higher levels of perceived stress was related to worse negative affect. Lastly, suppression, problem solving coping, and stress mediated the relationship between trait mindfulness and negative affect. Specifically, higher levels of trait observe were associated with less suppression, and less suppression was related to lower negative affect; and higher levels of trait observe were related to greater levels of problem solving, and greater levels of problem solving were related to less negative affect. Further, problem solving coping mediated the relationships between trait describe, observe, and awareness, such that higher levels of trait describe was related to less problem solving coping, higher levels of trait observe and awareness was related to greater problem solving, and higher levels of problem solving were related to less negative affect. Lastly, higher levels of trait awareness was related to less stress, and less stress was related to less negative affect.

# CHAPTER 7: Discussion

Chinese international students are the largest group of international students globally (Institute of International Education, 2006). Their numbers have increased from 92 in 2006 to 3,458 in 2013 at MSU (OISS Statistical Report, 2014). Given the many stressors of the sojourn, transition to the US, and academic pressures, many may suffer from mental health and consequent academic problems. Studies exploring stressors among Chinese international students are limited in the following ways. First, existing research with this population has mainly focused on acculturative stress (e.g., Yan & Berliner, 2009, 2011) or racial discrimination (e.g., Dang, 2012; Ong, Burrow, Fuller-Rowell, Ja, & Sue, 2013), leaving broader types of stressors to be explored. Second, studies often combine undergraduate and graduate students (e.g., Pan, Wong, Chan, & Joubert, 2008; Wang et al., 2012; Wei, Liao, Heppner, Chao, & Ku, 2012; Wei, Su, Carrera, Lin, & Yi, 2013; Wei, Ku, Russell, Mallinckrodt, & Liao, 2008) limiting generalizability to newly arrived sojourners. Third, few studies among Chinese international students leverage daily diary methodology to understand the relationships between stress, coping, and psychological well-being. Lastly, emerging evidence suggests that mindfulness can be protective factor among Asian groups (e.g., Masuda, Wendell, Chou, & Feinstein, 2010; Masuda, Mandavia, & Tully, 2014; Muto, Hayes, & Jeffcoat, 2011), yet few studies examine mechanisms of mindfulness among individuals in a cross-cultural context. Thus, the current study addresses these limitations by focusing on first-year Chinese international students using a mixed-method longitudinal daily diary design that examines the relationships between trait mindfulness, stress, coping, and psychological well-being.

**Research Question 1. Daily Experiences of Stress among Chinese International Students**

The first research question focused on illuminating the types of daily stressors Chinese international students experience and used thematic analysis to reveal eight themes. In order of frequency, the themes included: (1) academic stressors, (2) fulfilling basic needs, (3) interpersonal problems, (4) time pressure, (5) environmental or situational stressors, (6) future goal-oriented behaviors, (7) problems with self-concept, and (8) cultural adjustment-related difficulties. The following discussion of the themes, grouped based on similarity, will be informed by cultural explanations drawing on a modified social-ecological theoretical framework (Bronfenbrenner & Morris, 2006) to understand each theme's impact on the mental health of the sojourner (Serdarevic & Chronister, 2005). This approach proposes that the sojourner's experience is a result of dynamic interactions between the individual's characteristics, behaviors, and culture with his/her environment. In understanding the origins of the themes, I seek to emphasize how culture plays a role in shaping Chinese international students' stress in a mid-Western American university. The finding that the Cultural Adjustment stressor theme (i.e., difficulties arising due to living in another country) spanned across existing codes and highlighted culturally based problems not otherwise reported lends support for a culturally informed social-ecological framework. Thus, this lens provides a comprehensive story of the transnational migration experience of this sample of Chinese international student.

**Academic Stressors and Time Pressures**. First, the Academic Stressors theme was related to pressures to complete homework assignments, attend classes, perform on upcoming exams, maintain high GPAs, homework assignments, and logistical issues such as enrolling in classes or scheduling classes. The fourth theme, Time Pressures, was similar to the Academic Stressors theme such that it was related to perceiving time as a finite resource and lacking time to

complete all desired tasks, struggling with time management, or feeling overwhelmed. Both academic stressors and time pressures are likely to be significant sources of stress among domestic students. However, the cultural backdrop of Chinese international students may differentially influence how academics and time pressures are experienced. For instance, in traditional Chinese culture, educational goals and aspirations are influenced by Confucian ideology and dictates normative behavior in the classroom. Comparing eastern to western cultural approaches to education, the Confucian-Socratic framework (Tweed & Lehman, 2002) proposes that Socratic reasoning, the dominant approach in western society, emphasizes questioning knowledge and challenging others' beliefs, whereas Confucian learning, the dominant approach in China, emphasizes effortful learning through hard work and pragmatic acquisition of knowledge for civil service jobs. As a result of internalizing the Confucian values in education, newly arrived Chinese international students may experience cultural tensions in the classroom causing difficulties in the learning process. Thus, Chinese international students may mask misunderstandings or difficulties with lecture material to save face for both professor and student, and participate less than American students in critical discussions of lecture material given that challenging credible knowledge sources may not be culturally congruent (Huang & Klinger, 2006). It is also possible that Chinese international students may be more likely to experience these problems in the social sciences where challenging knowledge is encouraged.

**Future Goal Oriented Stressors and Self-Concept Problems**. Following the discussion of academic-related stressors, the transition to a new cultural environment also brings along shifts in expectations regarding the self and future. Future goal oriented stressors were related to concerns about future plans such as career, future family, and logistics for leisure activities; and problems with self-concept were related to negative self-perceptions or cognitive distortions

(e.g., dissatisfaction with self, physical appearance problems, low self-esteem and efficacy, and feeling inadequate compared to others). These shifts in expectations may be linked to their initial motivations to study abroad. Reasons to study abroad among Chinese international students outlined include increasing access to certain positions in China, pursuing personal goals in a more merit-based system within the US, leaving an environment with fewer economic and labor opportunities (see Yan & Berliner, 2011, for greater discussion) or changing life circumstances (Fong, 2011).

Traditional Confucian beliefs also elevate the importance of education and students may experience "exceptional pressure placed on them by their families' and cultural expectations to excel academically…to bring honor to the family… [given that] an American degree is a guarantee of social and economic ascent either in China or in the US" (Yan & Berliner, 2011, p.179). At the individual level, the emphasis on success can be seen in the self-reflective process whereby students periodically monitor their abilities and long-term plans. Thus, a combination of stressors (e.g., expectations to obtain a prestigious degree from an American university, family pressures to succeed, and other acculturative stressors) may increase perfectionistic tendencies (e.g., Wei et al., 2007), leading students to set high expectations for performance and strongly internalize negative feedback. At a structural level, deciding to study abroad often involves a desire for upward social mobility (e.g., improve current socioeconomic status or career prestige), yet the determinants of the outcome depend on the context of reception in the U.S. (Alba & Nee, 2007). As time goes by, international students may grow weary of the many obstacles they need to overcome in order to meet their own personal goals and expectations (e.g. improve their English, express desire to meet and engage with domestic students). This also includes the ability

to successfully demonstrate an ability to eventually cope with the constraints created by their new academic and social environment.

**Basic Needs**. Third, the Basic Needs theme may reflect struggles with meeting the demands of the environment. Problems with basic needs included health and financial problems both of which can be related to the cultural experience of living in the U.S. First, financial problems are not uncommon as students from China must adapt to changes in standards of living. This is particularly salient given that Chinese international students at MSU are sometimes stereotyped for being wealthy and driving expensive cars (e.g., Kozlowski, 2015). Further, increased costs of living may also be related to lifestyle changes. For instance, whereas shared living with many other students is common in China, many conforming to U.S. student norms choose to live alone or with a smaller number of roommates in the U.S., causing greater financial burden (Fong, 2011). That is, living with three or more roommates in a university setting is common among university students in China due to the lack of space in metropolitan areas, whereas university students in the U.S. may live alone, or with only one or two roommates.

This theme also highlighted challenges attending to basic physical demands such as sickness or ailment. An important issue worth considering are manifestations of culturally-based conceptualizations of illness and its difference from U.S.-based healthcare. First, the stressors reported by the students may reflect true illnesses, however, may also reflect somatization of psychological distress. Given that "help-seeking in many cultures is organized around the presentation of bodily complaints rather than explicit mention of emotional disturbance" (Kirmayer, 1984, p.159), it is important to consider that these types of stressors reported by students in this study may reflect culturally appropriate expressions of psychological distress rather than simple bodily complaints (see Mak, Cheung, & Leung, 2012, for greater discussion).

Given their increased likelihood of reporting and seeking treatment for physical, as opposed to psychological, health concerns, including culturally sensitive mental health screenings during medical visits may identify and intervene with distressed students earlier. Second, this highlights the importance of understanding cultural differences in illness treatment between the US and China. For instance, cultural concepts of diabetes among Chinese immigrants include a theme of "hot" and "cold" body temperature dysregulation (Chun & Chesla, 2004). Regulating the hot/cold dynamic included eating specific types of foods, herbs, or medicines that would regulate the hot/cold imbalances. Typically, traditional Chinese medicine is used to treat bodily imbalances through herbal remedies (Kleinman, 1980), which may be difficult to find in surrounding areas at MSU.

**Interpersonal Problems**. Traveling to a new cultural environment can bring along a unique set of interpersonal problems related to conflicts with others, such as roommates, romantic partners, family members, Americans, or friends. It is important to note that many of the stressful events in this category are likely to emerge among any university student (e.g., arguments with friends or a romantic partner). However, for the students in this study, a notable stressor was related to engaging with ethnically similar or dissimilar students. Results highlighted perceived intergroup differences between Chinese and domestic American students. International students who anticipate easily making friends with domestic students may become disappointed when expectations are not met. Not surprisingly, cultural and structural barriers can hinder intergroup contact (Pettigrew & Tropp, 2013), however, structural barriers may be less visible than cultural barriers, which may explain why none of the students reported structural barriers as problematic in making friends with domestic students. Cultural barriers include high cultural distance – or differences between the sojourner's heritage culture and the mainstream

culture of the university setting (Babiker, Cox, & Miller, 1980). Studies suggest that cultural distance impedes intergroup contact but also relates to poor psychological well-being (Wu, Settles, Buchanan, Nnawulezi, & Rogers, *unpublished*). Alternatively, MSU's increased Chinese international student population may also be a protective factor given that strong in-group ties and social connectedness is related to less acculturative stress (Yeh & Inose, 2003). Potential structural barriers such as segregated new student orientations and dorms can also hinder intercultural relationships from developing. It is important to note here that high concentrations of Chinese international students living in a dorm may also serve as a protective factor. Thus, universities are faced with the difficult task of managing structural barriers that might hinder intergroup contact, but also be protective.

**Environmental or Situational Stressors**. Fifth, daily environmental or situational stressors are commonly experienced across both domestic and international students. Environmental or Situational Stressors were related to daily frustrations due practical problems that inhibit goal-directed activities such as a general sense of malaise, logistical problems, or dissatisfaction with non-academic related outcomes. The results suggested that Environmental or Situation Stressors occurred somewhat infrequently compared to other themes. Given that the study design asked students at the end of the day to submit up to three stressful events that occurred during the day, it is possible that specific pressing issues (e.g., upcoming exam, argument with romantic partner etc.) more easily came to mind than daily hassles. Alternatively, students may have habituated to daily hassles leading to lower reported rates. Regardless, the mental health implications of daily hassles cannot be underestimated. During the acculturation process, some studies suggest that general daily stressors predict depressive symptoms above and beyond acculturative stressors for immigrant/minority group members (Lay & Safdar, 2003).

Conversely, other studies find larger effects of acculturative stress, compared to non-specific daily hassles, on mental health (Lay & Nguyen, 1998). The mixed findings likely point towards the importance of both constructs and the difficulty assessing each. It is possible that daily environmental or situational stressors additively increase the likelihood of Chinese international students experiencing mental health problems.

**Summary**. The identified themes are consistent with the existing qualitative and quantitative studies among international and domestic students, yet contribute to the literature in a number of ways. First, the results converge with stressors domestic students' experiences (Hurst, Baranik, & Daniel, 2013), while illuminating cultural nuances about the stressors that Chinese international students experience. Differences between Eastern and Western learning styles (e.g., Tweed & Lehman, 2002) can impact how Chinese international students internalize negative feedback (e.g., poor grades) and experience learning in the classroom. These academic stressors are exacerbated by increased pressure to succeed based on situations in the homeland and motivations to study abroad (Yan & Berliner, 2011). All the while, Chinese international students must adapt to changing economic conditions upon their arrival. The cumulative stressors and daily hassles serve as additional problems that negatively influence mental and physical health, which may manifest as physical ailments (Mak, Cheung, & Leung, 2012).

Second, the Cultural Adjustment stressor theme was comprised of codes categorized in other themes and included only those stressors that specifically mentioned difficulties related to living in the US. It likely that coding the data in this manner resulted in a significant underreporting of the true frequency of acculturative stressors, particularly given the fact that the open-ended nature of the question did not directly cue participants to report acculturative stressors. It is also likely that some of the statements referred to stress due to living in the US,

but did not explicitly identify them as such, and as a result, were not included under the Cultural Adjustment theme. Extensions of this research will benefit from a direct assessment of cultural adjustment for this population.

Third, the results suggest that the daily diary method can be a relatively fast and efficient method of gaining rich information similar to that found in longer qualitative interviews and quantitative self-report questionnaires. For instance, results corroborated with findings from qualitative studies highlighting problems with academics, language expression, and intergroup contact (Berry, 1987; Sandhu & Asrabadi, 1994; Smith & Khawaja, 2011; Yan & Berliner, 2009; Yan & Berliner, 2011; Yan & Berliner, 2013). Further, stressful events in the Problems with Cultural Adjustment theme were consistent with validated acculturative stress measures for Asians and Asian Americans, which identify challenges related to homesickness, problems with American food, relationships with American domestic students, and language problems as critical acculturative stressors for this population (e.g., Benet-Martinez & Haritatos, 2005; Miller, Kim, & Benet-Martinez, 2011; Sandhu & Asrabadi, 1998; Ying, 2005).

**Research Questions 2 and 3. The Relationships between Trait Mindfulness and Daily Experiences of Stress, Coping, and Psychological Well-Being.**

The aims of Research Questions 2 and 3 were to better understand the relationships between trait mindfulness, stress, coping, and psychological well-being. Given the ample evidence supporting the psychological benefits of mindfulness practice (Chiesa & Serretti, 2009; Goyal et al., 2014; Khoury et al., 2013; Hoffman, Sawyer, Witt, & Oh, 2010; Sedlmeier et al., 2012) and trait mindfulness (Brown & Ryan, 2003; Hill & Updegraff, 2012; Levesque & Brown, 2007; Oken et al., 2014; Weinstein, Brown, & Ryan, 2009; Wenzel, von Versen, Hirschmuller, & Kubiak, 2015), investigators propose multiple explanatory mechanisms that account for the

relationship between mindfulness and psychological well-being. In the face of adversity, mindfulness may increase emotion regulation and attention regulation to help deploy effective coping strategies (Baer, 2003; Chiesa, Anselmi, & Serretti, 2014; Hölzel et al., 2011; van der Velden et al., 2015). However, few studies examine how trait mindfulness relates to coping strategies and far fewer examine this among individuals in a new cultural environment who experience acculturative stress. Therefore, the study sought to examine the adaptive coping strategies used and how trait mindfulness influences the stress-coping process among first-year Chinese international students.

**Stress, coping, and affect**. The first set of hypotheses aimed to examine the relationship between stress and psychological well-being (H2a). Results suggested that higher perceived stress was related to increased negative affect. In particular, within-person results suggested that high levels of perceived stress during the most stressful event of the day predicted end of day negative affect. This finding is particularly important given that greater daily negative affect predicts higher levels of daily cortisol (Stawski, Cichy, Piazza, & Almeida, 2013) – a hormone released during times of stress and can lead to detrimental health effects when stress is chronic – and even symptoms of affective disorders 10 years later (Charles, Piazza, Mogle, Sliwinski, & Almeida, 2013). The cumulative effects of seemingly innocuous daily stress can have long term health consequences.

I hypothesized that coping would mediate the relationship between stress and affect (H2b) and found that one coping response, emotional suppression, did mediate the relationship between stress and negative affect. That is, individuals who perceived higher levels of stress tended to use more suppression, which led to increased negative affect (H2b.1). This finding is consistent with the transactional model of coping and stress, which proposes a temporal sequence

of events whereby perceived stress would lead to engaging in coping strategies and influence resulting psychological well-being (Lazarus & Folkman, 1984). It is important to note that emotional suppression was the only coping mechanism that mediated this relationship, and was positively related to negative affect – consistent with previous research (e.g., Park, Sulaiman, Schwartz, Kim, Ham, & Zamboanga, 2011). Thus, emotion suppression may not be a particularly effective coping strategy for the individual (Richard & Gross, 1999) despite it being a culturally syntonic approach to coping aimed at maintaining social harmony (Butler, Lee & Gross, 2007; Murata, Moser, & Kitayama, 2013; Wei, Su, Carrera, Lin, & Yi, 2013). The implications of this finding are important within the Western clinical context where direct and problem-solving coping strategies are reinforced. Clinicians unaware of this culturally-based coping strategy may recommend culturally dystonic approaches to coping with the risk of causing iatrogenic effects for the individual and his/her immediate social network. For instance, asking a Chinese international student client to directly approach a friend or supervisor with feedback may be counter to saving face and maintaining social harmony.

Results also suggested that problem solving coping was related to less negative affect, although problem solving coping did not mediate the relationship between stress and affect. The finding contributes to results suggesting that problem solving coping is adaptive among Chinese (Chan, 1992; Chan, 1995) and Hong Kong adolescents (Liu, Tein, & Zhao, 2004). However, it is possible that problem solving coping is most effective when stressors are generally low. For instance, problem solving coping was effective in buffering low levels of racial discrimination (Yoo & Lee, 2005) and family conflict (Lee, Su, & Yoshida, 2005) among Asian American college students. Further, it is important to note that the problem focused coping deployed among collectivistic, compared to individualistic, oriented individuals may look different. For instance,

Confucian influences on relationship dynamics in China promote indirect modes of communication (Yum, 1988). Thus, indirect routes to resolve a stressor will emphasize the locus of preferred activity (e.g., in what ways to exert control) over locus of control (e.g., whether or not one has control over the outcome of a situation) (Noh et al., 1999).

Lastly, the null findings regarding reappraisal point to interesting cultural explanations. One explanation stems from how individuals from different cultures regulate their emotions. Preferred emotion regulation strategies differ across cultures, which can be linked to personality differences across countries. For instance, extraversion, a personality trait strongly related to reappraisal, is higher in the United States than in Japan (Matsumoto, 2006). Thus, Chinese students' cultural and personality profiles may lend towards more emotion suppression and similar types of coping strategies rather than reappraisal (Matsumoto et al., 2008).

**Mindfulness and affect**. Hypotheses relating mindfulness with affect were partially supported (H3a). Results suggested differential effects of mindfulness on affect (see Table 15). In particular, individuals with higher levels of acting with awareness experienced less negative affect controlling for other mindfulness facets. No other direct effects of mindfulness facets on affect were observed. Acting with awareness can be understood as acting with intention, and contrasted with "autopilot mode." Individuals who are more in tune with their behaviors and engaged in present moment activities experience greater psychological well-being (Killingsworth & Gilber, 2010). The significant direct effect of acting with awareness on negative affect is consistent with previous research (Brown & Ryan, 2003). In particular, it may be that one's tendency to be more engaged in the present moment best predicts one's tendency to experience less negative affect.

The effects of two mindfulness facets, describe and non-react, on positive affect approached significance (see Table 15; Model 4; $p < .10$). The sign of the regression coefficients suggested that higher levels of describe and non-react were related to higher levels of positive affect, which is consistent with previous research (Brown & Ryan, 2013). The mindfulness facet, describe, relates to the ability to put words to thoughts and experiences. The ability to put words to thoughts and differentiate between discrete emotions can improve psychological well-being (Hill & Updegraff, 2012). Interventions asking participants to write expressively about their emotions decreases depressive symptoms and rumination (Gortner, Rude, & Pennebaker, 2006) and may promote positive emotions. Similarly, the mindfulness facet non-react refers to maintaining level-headedness during psychological distress. Individuals who demonstrate higher levels of non-reactance to internal experiences report lower trait neuroticism (Hollis-Walker & Colosimo, 2011) and likely experience greater positive emotionality. These effects likely only approached significance due to the limited sample size at the between-person level ($n = 30$). However, the findings highlight the importance of increasing positive affect in light of the broaden-and-build theory that proposes positive emotions beget further positive emotions (Fredrickson, 2001).

Interestingly, results suggested that the trait mindfulness facet, observe, may be related to worse negative affect and less positive affect when controlling for other mindfulness facets, perceived stress, and coping (see Table 16). This finding is consistent with two studies identifying the same pattern of findings suggesting that the mindfulness construct, observe, may function differentially between meditators and non-meditators (Baer et al., 2008; de Bruin et al., 2012). The authors contend that through mindfulness training meditators learn to observe their experiences in a non-biased manner. Because non-meditators lack this training, they may be

selectively attending to unpleasant or threatening internal and external cues. Furthermore, meditators may be more likely to engage in multiple aspects of mindfulness simultaneously and flexibly attend to a wide range of experiences rather than narrowing focus on a particular experience.

**Mindfulness, coping, and affect**. Hypotheses relating mindfulness, coping, and affect were partially supported (H3b). Results from the current study found varying relationships between mindfulness trait facets and coping responses. Interestingly, emotion suppression and problem solving coping both mediated the relationships between awareness and negative affect. Specifically, individuals with higher levels of awareness used more problem solving coping and less emotion suppression, which was related to less negative affect. Thus, the tendency to act with intention and awareness promotes adaptive coping strategies that lead to less negative affect.

The implications of the pattern of results with the describe facet are less clear. Although individuals with higher levels of trait describe reported higher levels of positive affect, they also used less problem solving coping, and less problem solving coping was related to higher negative affect. One explanation might be that individuals with higher levels of the describe facet in general experience greater positive affect at the end of the day mediated by alternative coping strategies not assessed. For instance, individuals who are better able to put words to their thoughts may also be engaging in positive self-talk when faced with difficulties that promotes positive affect. An alternative explanation might be that individuals with higher levels of describe may not deploy problem solving coping strategies when appropriate, leading to greater negative affect. Because describe was not associated with suppression or reappraisal, in the face of significant stress, individuals high on this facet may tend to engage in maladaptive coping

strategies such as ruminative thinking. These potentially opposing theories are worth future investigation.

Similar to describe, the pattern of results for the observe facet are also less clear. The direct effect of observe on negative and positive affect controlling for other facets was not significant. However, when the model included stress and problem solving, a positive direct effect between observe and negative affect was revealed along with a negative indirect effect ($\alpha\beta$). This pattern of opposite signs between the direct effect and indirect effect is evidence of suppression (MacKinnon, Krull, & Lockwood, 2000). Simply, suppression describes how the introduction of a third variable (i.e., mediator) may artificially strengthen the relationship between two other variables. This pattern of results related to greater negative affect and lower positive affect is consistent with previous studies (e.g., Baer et al., 2008; de Bruin et al., 2012) discussed earlier. However, the mediating relationships suggest that individuals with higher levels of observe reported greater problem solving coping, which was related to less negative affect; and individuals with higher levels of observe reported less suppression, which was related to less negative affect. Thus, the mediating results suggest while observe may be directly related to worse psychological well-being, it may also act upon adaptive coping strategies.

The pattern of mediation results contribute to the current literature by highlighting the importance of disaggregating mindfulness into its component facets. Many studies using the FFMQ compute full scale scores to tap into the construct of mindfulness unintentionally masking important facet level effects. Consistent with previous studies (Sears & Kraus, 2009; Weinstein, Brown, & Ryan, 2009) perceived stress and coping strategy mediated the relationship between mindfulness and negative affect. The variable effects of mindfulness facets on coping strategy may reflect differential effects of mindfulness among somewhat stressed individuals (Josefsson,

Lindwall, & Broberg, 2014). That is, mindfulness training may enhance more adaptive coping for only individuals experiencing high levels of stress as those experience lower levels of stress benefit more from relaxation aspects of mindfulness (Donald & Atkins, 2016).

**Mindfulness, stress, and affect**. Hypotheses relating mindfulness, stress, and affect were also partially supported (H3b). Results showed that two mindfulness facets were related to perceived stress. Specifically, individuals with higher levels of nonjudgment and awareness experienced less perceived stress during the most stressful event during the day. Furthermore, stress mediated the relationship between awareness and negative affect. First, the pattern of results is consistent with studies suggesting higher levels of mindfulness predict less perceived stress (Baer, Carmody, & Hunsinger, 2012; Garland, Gaylord, & Fredrickson, 2011; Weinstein, Brown, & Ryan, 2009). However, the contribution of the current findings relates specific facets to perceived stress, whereas the aforementioned studies use mindfulness as a full scale. Thus, it may be nonjudgment and acting with awareness that significantly reduces perceived stress. Second, by incorporating all mindfulness facets in the analysis, results showed that perceived stress only mediated the relationship between acting with awareness and negative affect. From the perspective of stress reduction, perhaps acting with awareness is the active ingredient in mindfulness. In a sample of 1,000 individuals from Sweden, acting with awareness was consistently the strongest predictor of depression, anxiety, positive states of mind, and perceived health after controlling for other facets (Bränström, Duncan, & Moskowitz, 2011).

**Summary**. These results support the transactional model of stress and coping proposing that stress leads to coping, which influences psychological well-being (Lazarus & Folkman, 1984). First, the coping strategies predicted affect. In particular, higher levels of suppression was related to greater negative affect, whereas higher levels of problem solving coping was related to

less negative affect. Second, higher levels of perceived stress was related to greater use of suppression, which was related to greater negative affect. Results corroborate with previous findings highlighting the detrimental effects of emotional suppression (Park, Sulaiman, Schwartz, Kim, Ham, & Zamboanga, 2011) and benefits of problem solving coping among Asians (Chan, 1992; Chan, 1995; Liu, Tein, & Zhao, 2004). Thus, it is possible that first-year Chinese international students are more likely to use emotional suppression to bear the burden of stress to maintain social harmony (Butler, Lee & Gross, 2007; Wei, Su, Carrera, Lin, & Yi, 2013).

Results also supported the two mechanism theory for mindfulness highlighting the importance of attentional and emotional control (Hölzel et al., 2011). First, the mindfulness facet acting with awareness was related to less negative affect, whereas the effect of describe and non-react on positive affect approached significance. Second, emotional suppression mediated the relationship between observe and acting with awareness on negative affect; and problem solving coping mediated the effect of describe, observe, and aware on negative affect. Lastly, perceived stress mediated the effect of acting with awareness on negative affect. The results support the psychological benefits of mindfulness among Asian students (Masuda, Wendell, Chou, & Feinstein, 2010; Masuda, Mandavia, & Tully, 2014; Wu & Buchanan, 2015) as well as the effect of trait mindfulness on adaptive coping strategies (Weinstein, Brown & Ryan, 2009).

Lastly, the results showed differential results for positive and negative affect such that a majority of the significant findings were related to negative affect. It is possible that the relationships reflect cultural expressions of emotion among Chinese international students. For instance, studies suggest that East Asian populations tend to experience less positive affect than White/European American samples due to cultural differences in how emotion is expressed and

regulated (see Mesquita & Leu, 2007). Thus, the Chinese students in this sample may moderate expressions of positive affect leading to less variance in positive affect scores and null findings. The pattern of results may also reflect the independent nature of positive and negative affect evidenced by an individual's long term experiences of negative affect not predicting long term experiences of positive affect (see Diener, Suh, Lucas, & Smith, 1999 for a review). As such, we might not expect symmetric results for positive and negative affect. However, this argument has been contested by scholars who argue that positive and negative affect represent two ends of the affect spectrum (Russell & Carroll, 1999).

**Clinical Implications**

Chinese international students are the largest group of international students in the US, representing 30% of all international students globally (IIE, 2012). This trend places greater pressure on universities and clinicians to provide culturally sensitive programming and interventions. First, the results highlight the importance of a host of daily stressors. Notably, cultural differences between the sending nation and context of reception in the US can manifest in academic problems, interpersonal problems, daily hassles, and plans for the future as found in the current study. Clinicians working with first-year Chinese international students should inquire about the domains found in the current study. Psychoeducation around the adjustment process due to cultural differences between the US and China may facilitate the acculturation process (e.g., Lin & Yi, 1997). This approach can also encourage cultural empathy and flexibility, which has been related to better adjustment among international students (Kağnıcı, 2012; Oudenhoven & Van der Zee, 2002; Suanet & Van de Vijver, 2009).

Second, these results highlight the complexities in the daily difficulties Chinese international students may experience. Thus, greater import is placed on the clinician's cultural

sensitivity and awareness of working with this particular group (Yakunina, Weigold, Weigold, Hercegovac, & Elsayed, 2012). Clinicians should be aware of cultural differences between the US and China with regards to domains such as academic achievement, illness expression and stigma, and adjustment-related difficulties. The importance of clinician cultural competence cannot be understated given its potential to decrease ethnic minority health disparities (Brach & Fraserirector, 2000). Counseling centers and training programs should consider mandating cultural sensitivity trainings and implement cultural competency guidelines outlined by the American Psychological Association (APA; American Psychological Association, 2003, 2012; Lowman, 2013).

Third, the results suggest that clinicians should not overly pathologize coping strategies by viewing them through a western cultural perspective. For instance, emotion suppression was related to worse psychological well-being in the current study; however, clinicians must consider the cultural significance of emotion suppression as a way of maintaining group harmony. During the clinical interview, clinicians should consider the function of emotion suppression within the client's immediate social group and avoid recommending potentially culturally inappropriate coping strategies such as directly confronting others.

Fourth, the results suggest mindfulness as a potentially culturally appropriate intervention for Chinese international students. Mindfulness and acceptance-based psychotherapies may be culturally congruent approaches to working with Asian clients (Hall, Hong, Zane, & Meyer, 2011). Preliminary evidence in the current study suggests that clinicians may consider mindfulness-based interventions as a way to increase acting with awareness and observing internal and external experiences to encourage more adaptive daily coping strategies. For

instance, online intervention programs aimed to increase self-compassion and mindfulness are available for clinicians to use with Chinese speaking clients (e.g.,http://www.livingwithheart.hk).

Fifth, it is recommended that clinicians examine how students may internalize oppression with greater exposure to discrimination and microaggressions in various ways. For instance, clinicians can focus on ways to empower clients in a culturally congruent way (e.g., Chin, 2007), developing multidisciplinary teams that use health promotion outreach techniques to sidestep mental health stigma (Kim & Park, 2009), and explore structural and societal inequities that (Ibrahim & Heuer, 2016).

**Institutional Implications**

The results of the current study can also inform recommendations for universities. Acknowledging that institutional resources are often limited and administrators and service providers are often overburdened, the following recommendations are suggested as free or low-cost solutions to facilitate adjustment. It is likely that these recommendations will increase international student enrollment rates, retention, and life satisfaction.

First, it is recommended that institutions consider starting student orientation prior to arrival in the U.S. For instance, the Office of International Students and Scholars (OISS) at MSU has implemented an online pre-departure orientation program where international students are required to complete a set of checklists and view orientation videos related to cultural adjustment and academics at MSU. The aim of the program is to facilitate cultural adjustment and modify new international students' expectations prior to arriving in the U.S.

Second, institutions should assess factors that influence intercultural contact between international and domestic students. Because close relationships are developed in the first few months of college, it is unclear how the separate international and domestic student orientations

at MSU influence the development of intercultural social networks. One strategy to increase intercultural dialogue and exchange may be to provide greater support for student led organizations geared towards cultural inclusion. Greater institutional support and recognition may serve to: (1) highlight the importance of intercultural dialogue/exchange and increase domestic student involvement, (2) promote intercultural learning, and (3) increase the reputation of university as a culturally diverse and inclusive environment. Furthermore, institutionally recognized programming may also be attractive for those students who anticipate becoming friends with domestic student.

Third, institutions should consider increasing ethnic minority representation in university counseling centers. Although research shows that client-therapist racial/ethnic match does not significantly influence treatment outcome, racial/ethnic minorities have a strong preference for therapists of their own race/ethnicity (Cabral & Smith, 2011). Thus, greater representation and visibility of racial/ethnic minority counselors may increase the likelihood that Chinese international students seek help for mental health problems. In addition, institutions may consider having representatives from the counseling center spend part of their time at the International Center. Increased mental health professional representation in frequently visited offices may serve to promote mental health awareness and increase mental health service use among international students.

Fourth, institutions should consider a formal mechanism that allows international students to acknowledge particularly helpful professors. For instance, awards and recognition through university organizations such as the Office of International Students and Scholars (OISS) or Office of Cultural and Academic Transitions (OCAT) may allow professors who excel at working with international students to be recognized for their contribution. This type of formal

recognition will also allow faculty members to demonstrate service in their portfolios, CV, and tenure review applications (Sherry, Thomas, & Chui, 2010).

Fifth, institutions should consider training faculty and staff about the unique difficulties international students experience during the cultural adjustment process. For instance, training faculty about the special circumstances and cultural difficulties international students experience in the classroom may facilitate adjustment (Poyrazli & Grahame, 2007). Further, institutions should consider developing specialty programs that reach out to international students to help them with writing. For instance the MSU English Language Center provides a service called the ESL Lab (elc.msu.edu/esl-lab/) that helps international students with their writing. Writing consultants trained to work with international students might be more aware of common writing mistakes seen among international students.

**Limitations and Future Directions**

The current study's limitations have implications for future development. First, the study was conducted during the second semester of the first year. It is possible that stressors experienced during the second semester may differ from those experienced during the first semester – the moment they arrive in the US. Students may develop compensatory coping strategies to mitigate stress. Future studies should consider conducting daily diary assessments across two stages – during the first semester when they arrive to the MSU campus, and then at the end of their first year. This allows for researchers to control for effects due to changes in the season or semester. Second, the sample size included 30 participants who were predominantly female. Thus, findings may not generalize to the entire Chinese international student population. Further, given the relatively small sample size (n = 30), findings may be underpowered at the second level. Thus, future studies should consider recruiting a more balanced sample of men and

women as well as increasing the sample size. Third, the study was conducted at a mid-western university. A number of environmental factors may limit the generalizability of the findings. For instance, MSU has one of the most Chinese international students in the nation. Students may experience less stress due to the relatively strong Chinese international student presence. Thus, future studies should consider sampling across various universities to control for unique effects due to the university settings. Fourth, the study of how mindfulness influences coping and psychological well-being was correlational. Although findings suggested that higher levels of mindfulness were related to less stress and more adaptive coping strategies, future studies building off these findings should consider conducting intervention studies with Chinese international students. Existing intervention studies with ethnic minorities suggest that mindfulness based interventions do change trait mindfulness; however, no studies to date have examined the effect of mindfulness based interventions among Chinese international students. Fifth, the current study of coping was limited to emotion suppression, reappraisal, and problem solving coping. Additional culture specific coping strategies were not examined. For instance, a non-Western perspective on coping drawing upon collectivistic coping theory may investigate alternative coping strategies such as forbearance, fatalism, and family support (Yeh, Arora, & Wu, 2006).

## Conclusion

Chinese international students are the largest group of international students globally and across U.S. college campuses (IIE, 2006). As universities look to accommodate this growing population, more research is needed about daily stressors experienced among first-year Chinese students acclimating to new cultural and learning environments. The current study addresses this research gap by using a novel mixed method two-week daily diary approach and found that first-

year Chinese students experience daily stress across multiple domains, and use various emotion regulation strategies in response to the stress. Interestingly, study findings suggest that specific aspects of trait mindfulness are related to decreased levels of stress and deployment of more effective coping strategies. Implications of this study highlight the importance of cultural competence among clinicians, the feasibility of using mindfulness-based approaches in reducing stress among acculturating first-year Chinese international students, the need for greater institutional resources directed towards training clinicians, staff, and faculty about the unique stressors facing Chinese international students, and the ways in which innovative programming that allows for greater intercultural dialogue and contact among international and U.S.-born students can improve outcomes more broadly.

# APPENDICES

APPENDIX A: Figures and Tables.

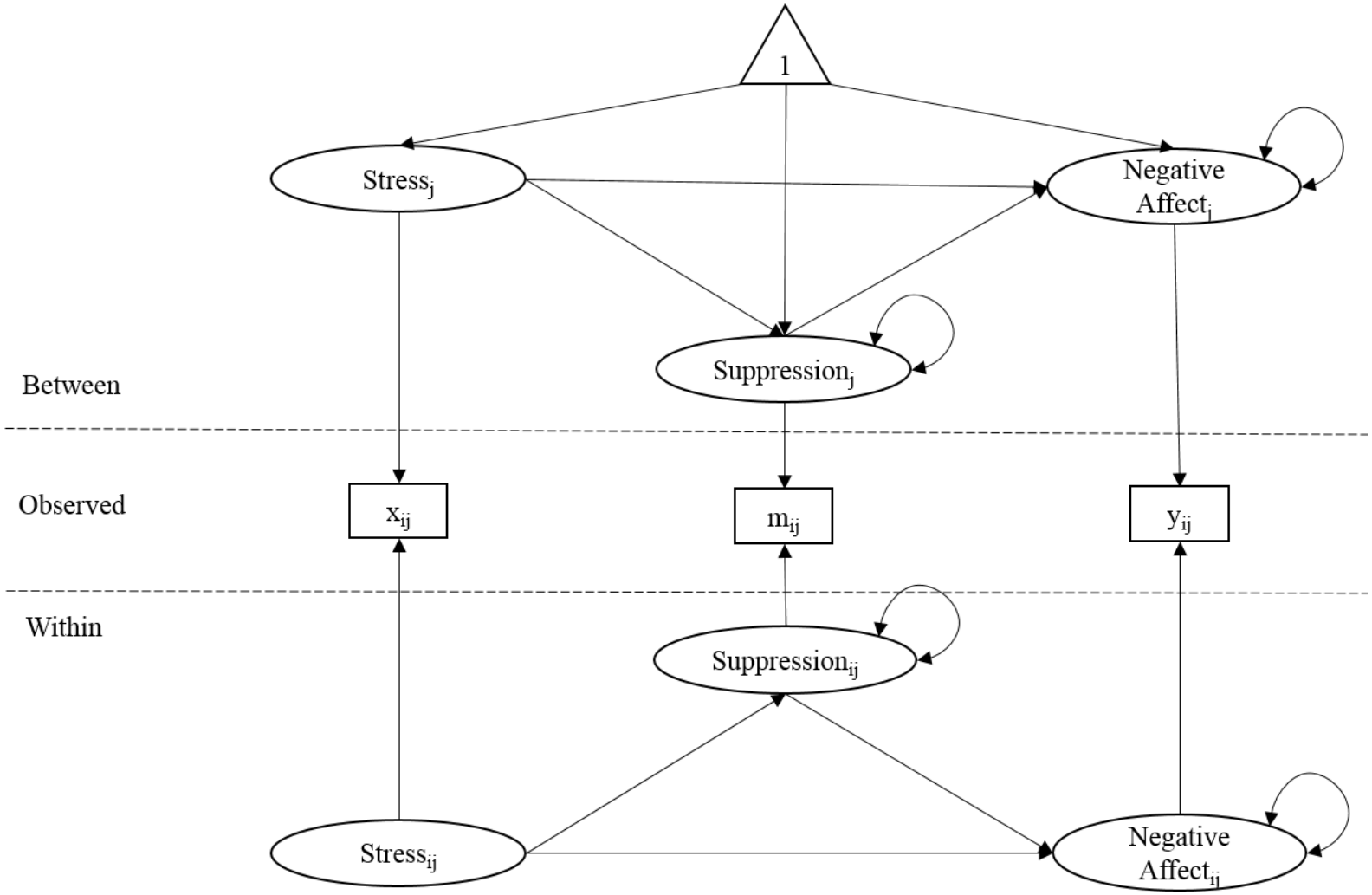


Figure 1: Hypothesized model for stress, suppression, and negative affect.

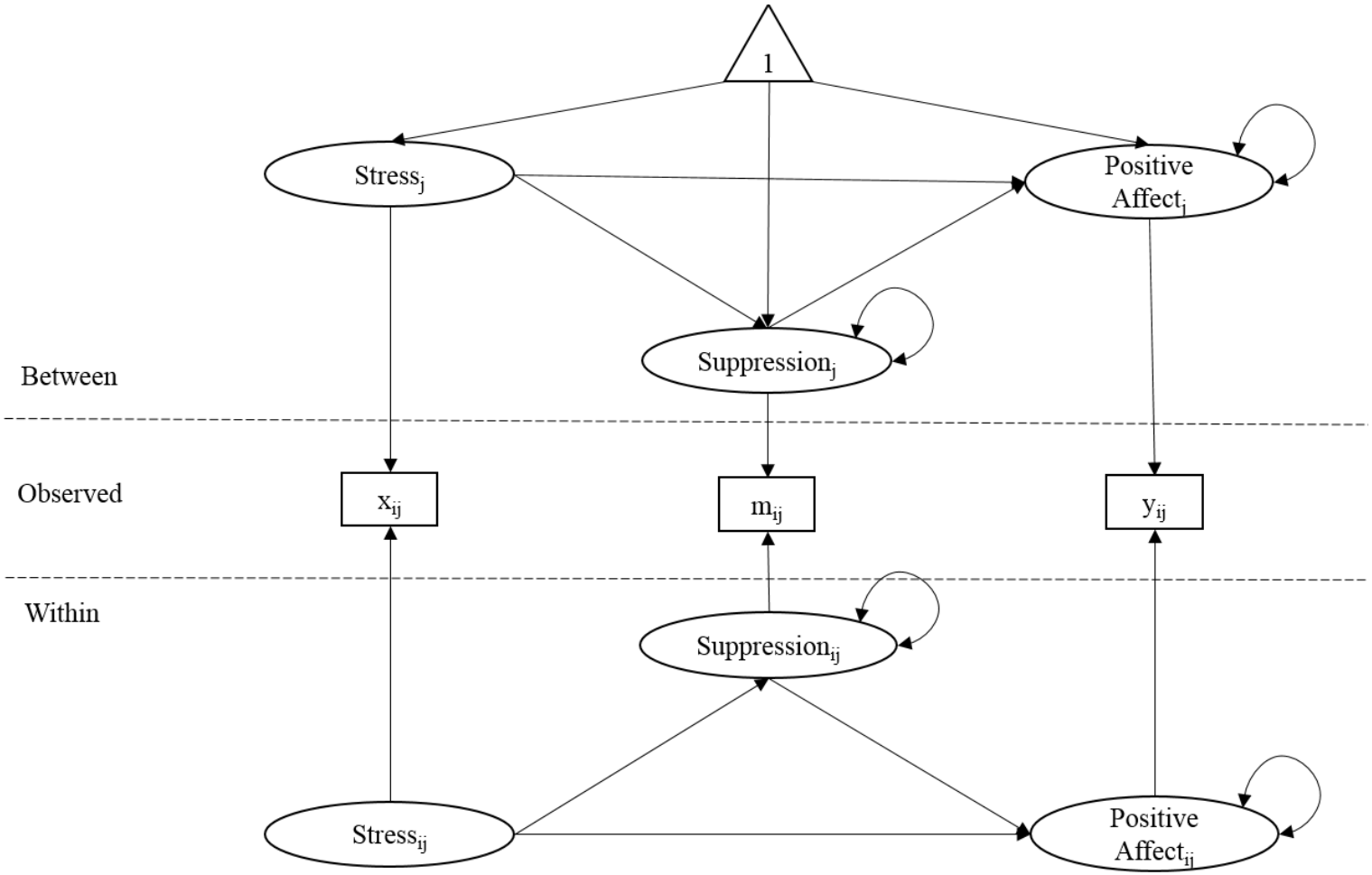


Figure 2: Hypothesized model for stress, suppression, and positive affect.

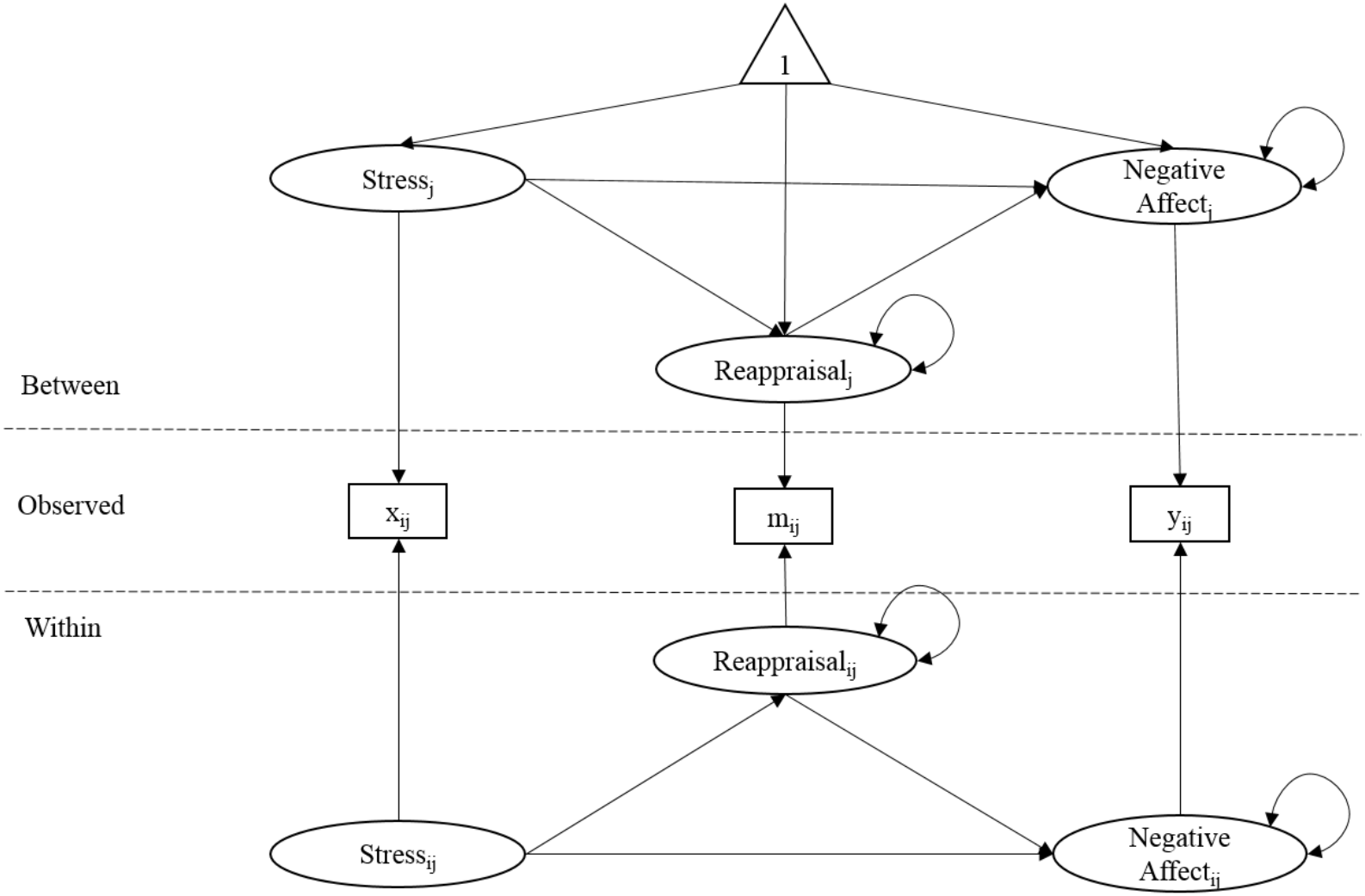


Figure 3: Hypothesized model for stress, reappraisal, and negative affect.

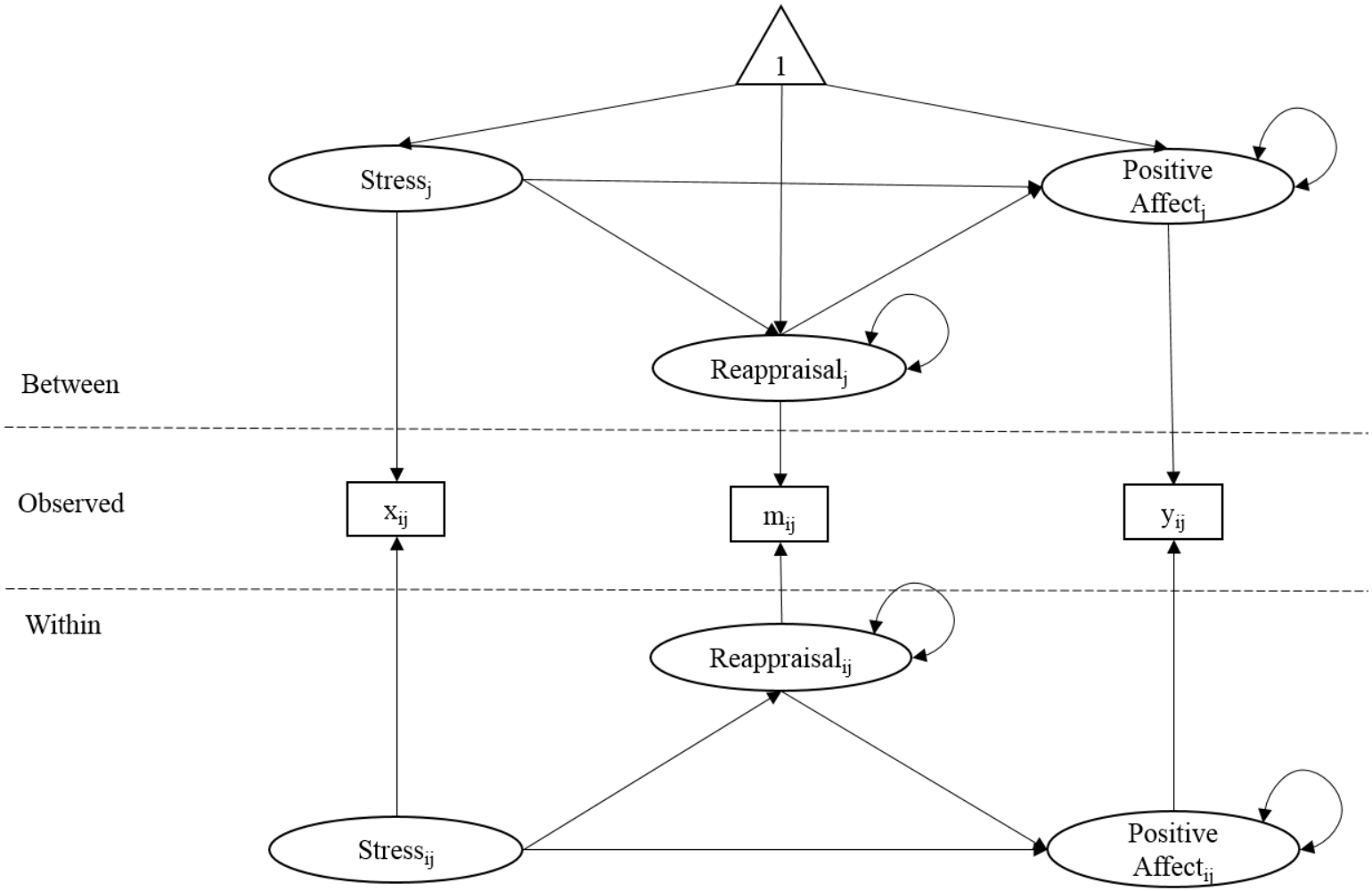


Figure 4: Hypothesized model for stress, reappraisal, and positive affect.

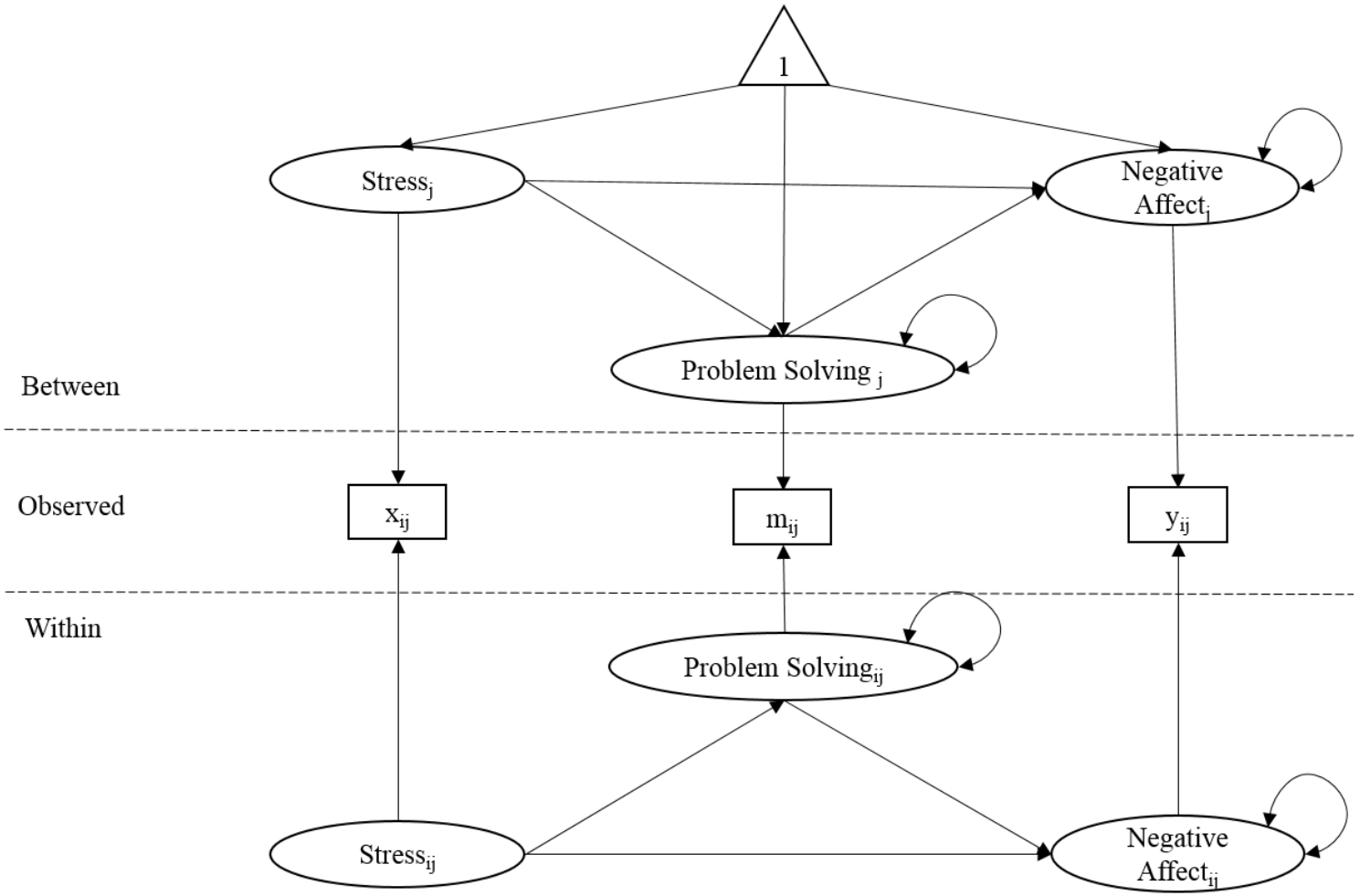


Figure 5: Hypothesized model for stress, problem solving, and negative affect.

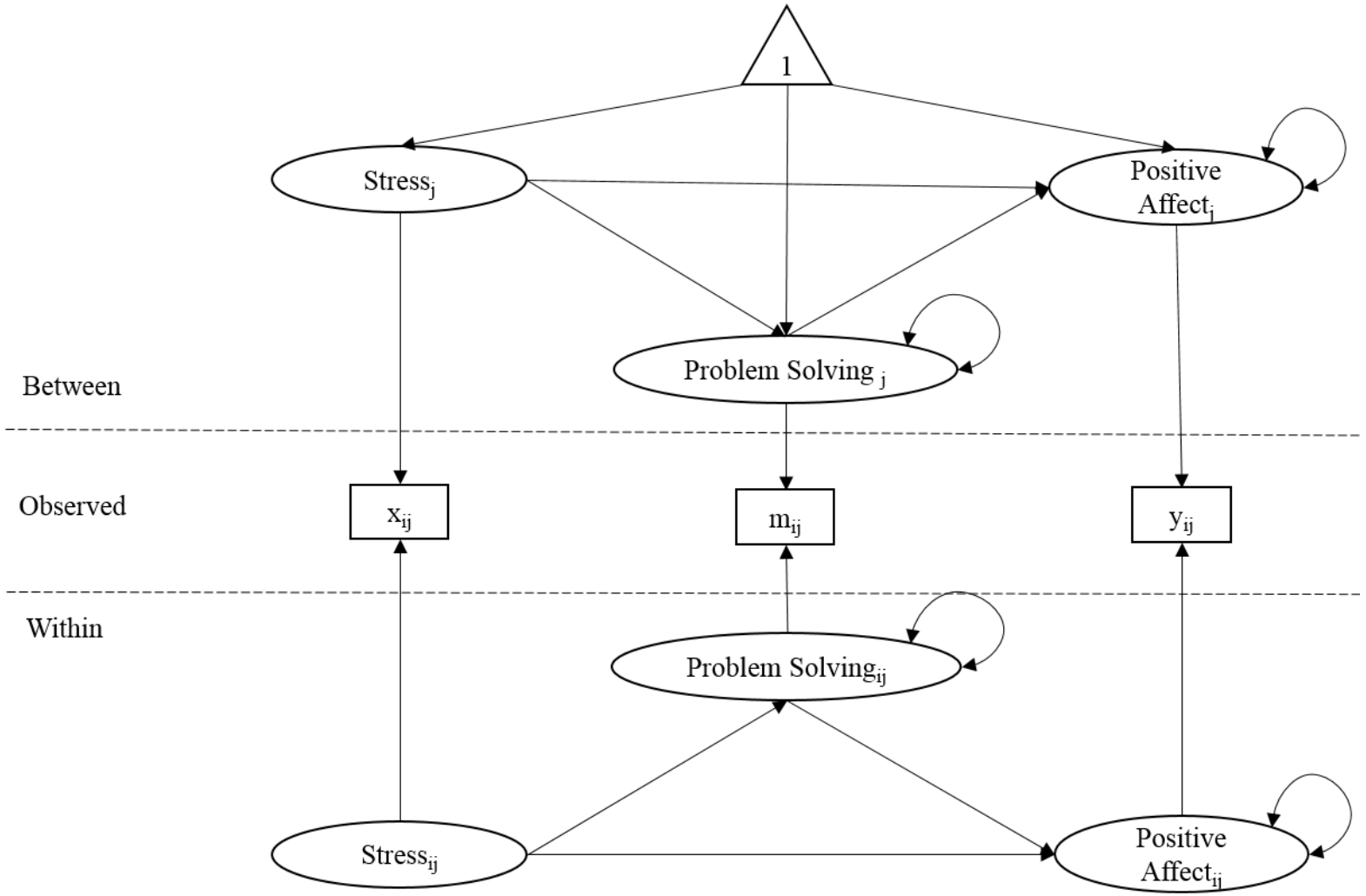


Figure 6: Hypothesized model for stress, problem solving, and positive affect.

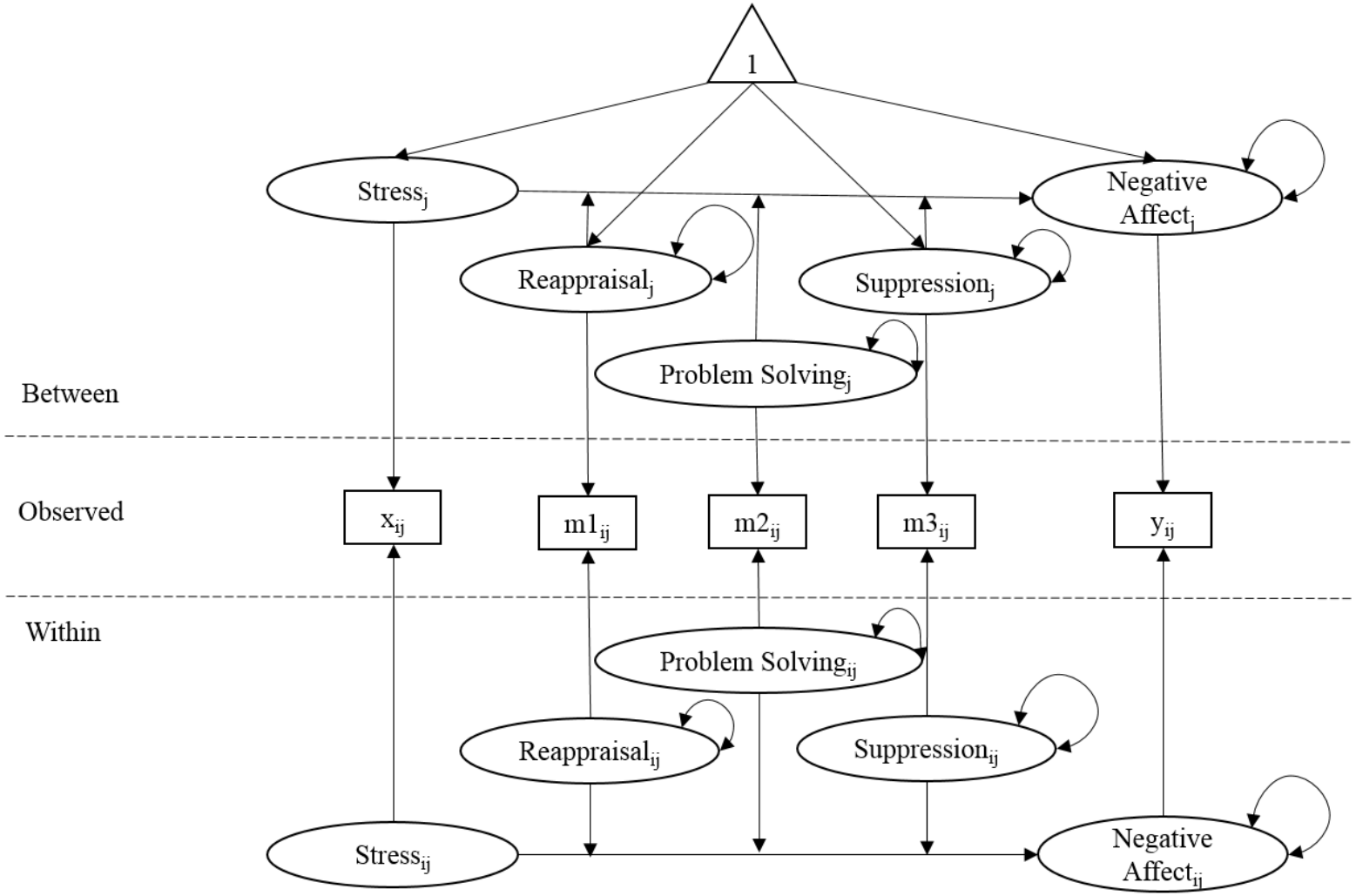


Figure 7: Moderated structural model for stress, coping (reappraisal, problem solving, and suppression), and negative affect.

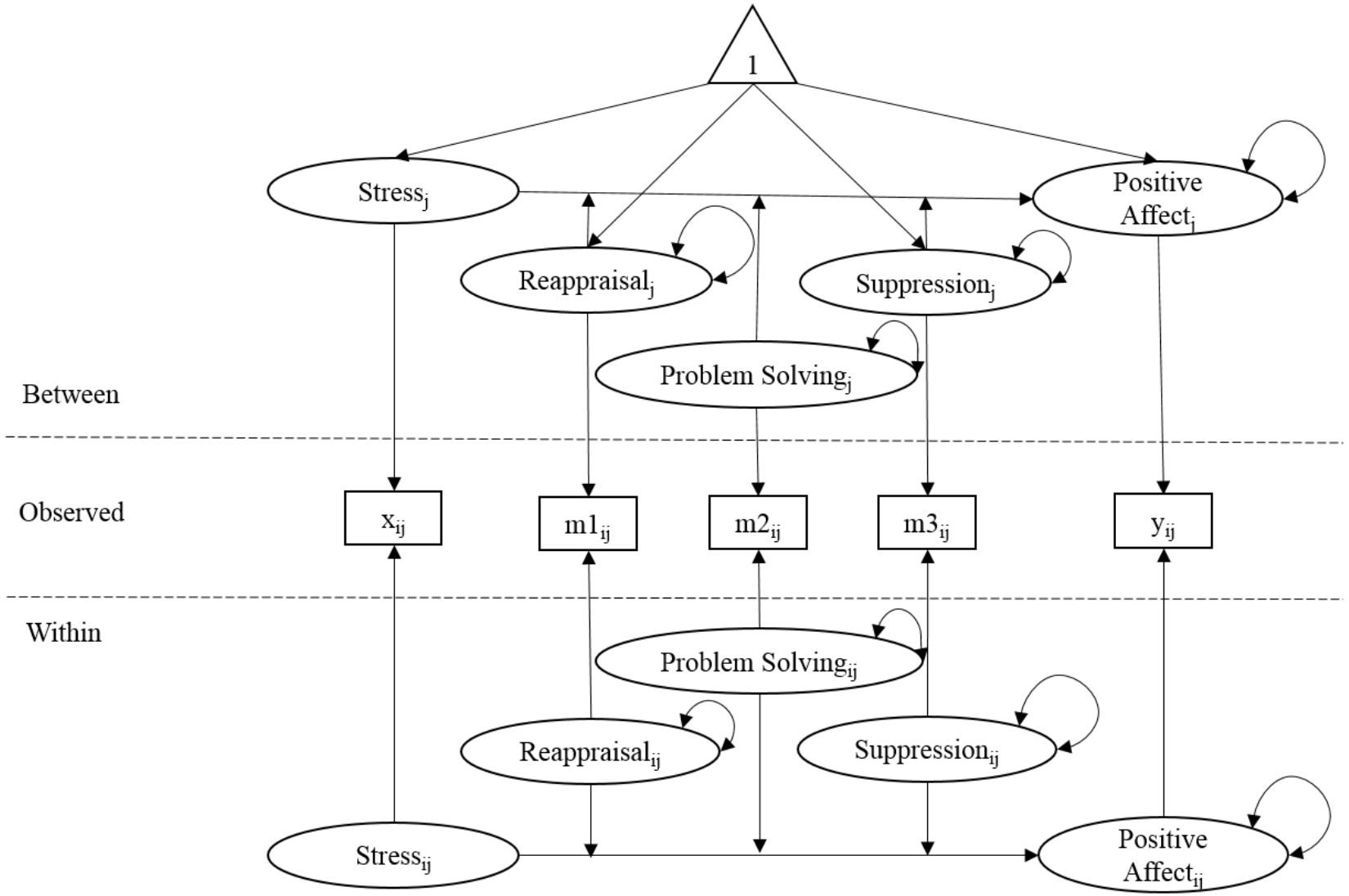


Figure 8: Moderated structural model for stress, coping (reappraisal, problem solving, and suppression), and positive affect.

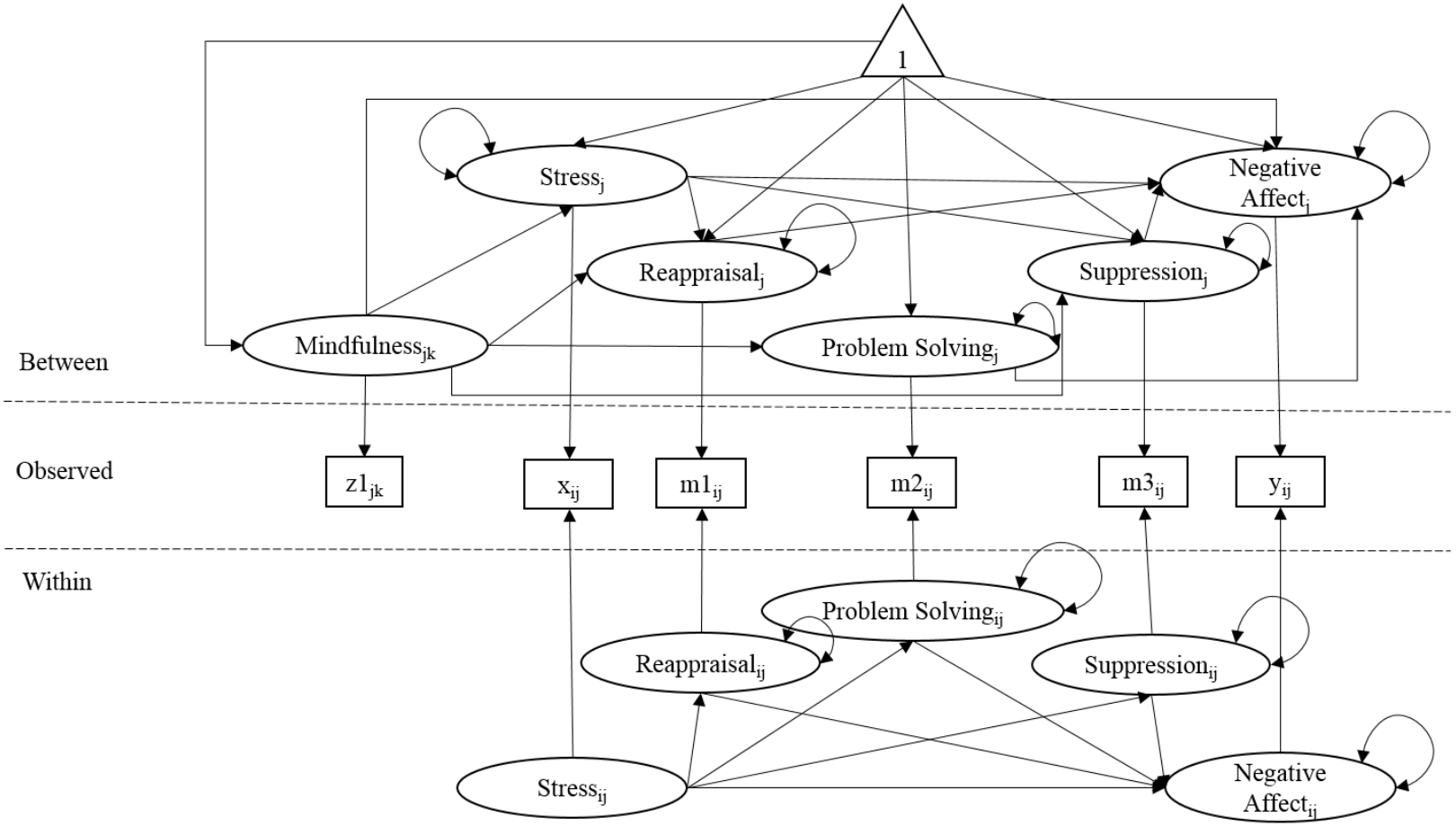


Figure 9: Hypothesized model for mindfulness, stress, coping (reappraisal, problem solving, and suppression), and negative affect.

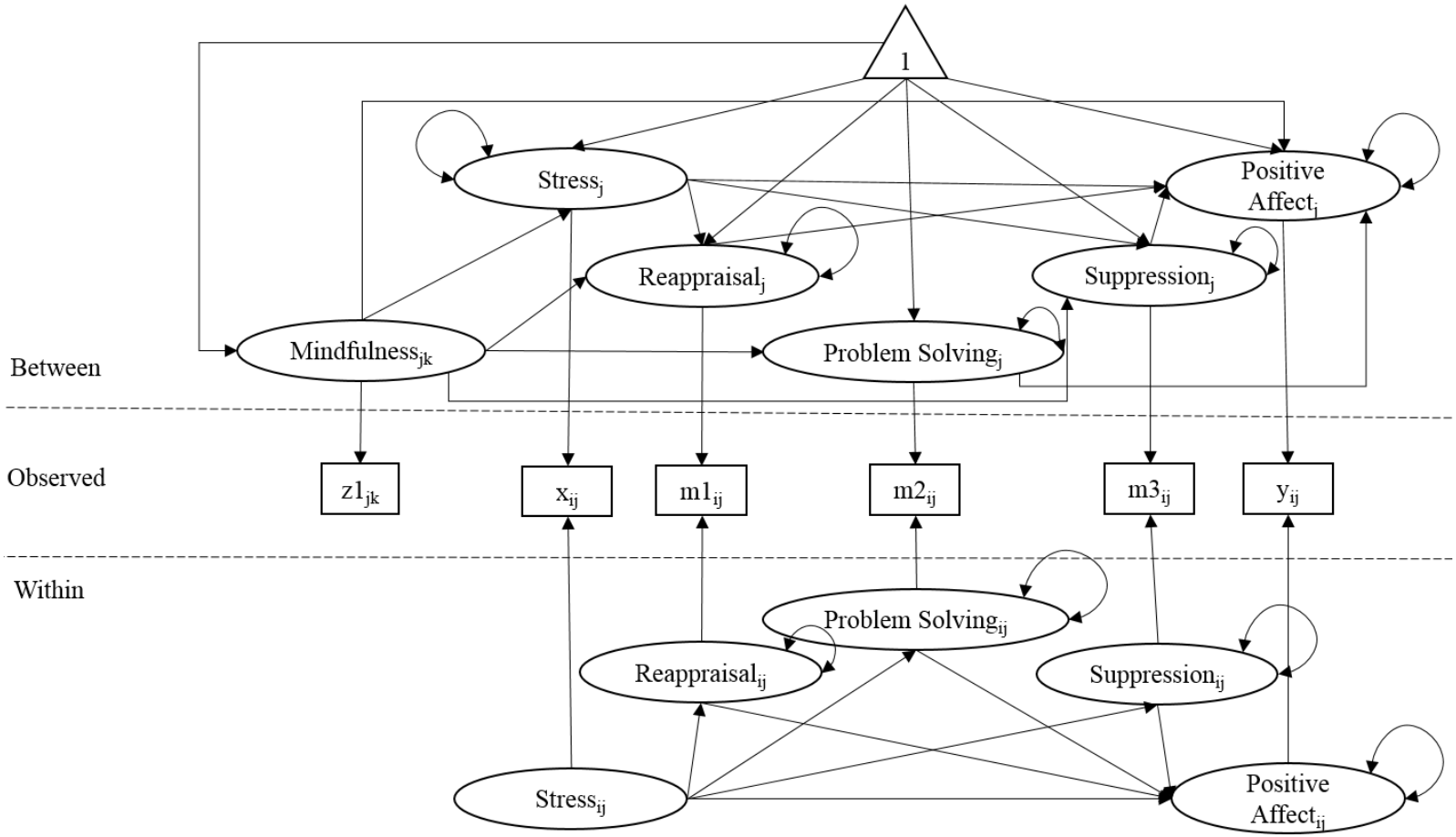


Figure 10: Hypothesized model for mindfulness, stress, coping (reappraisal, problem solving, and suppression), and positive affect.

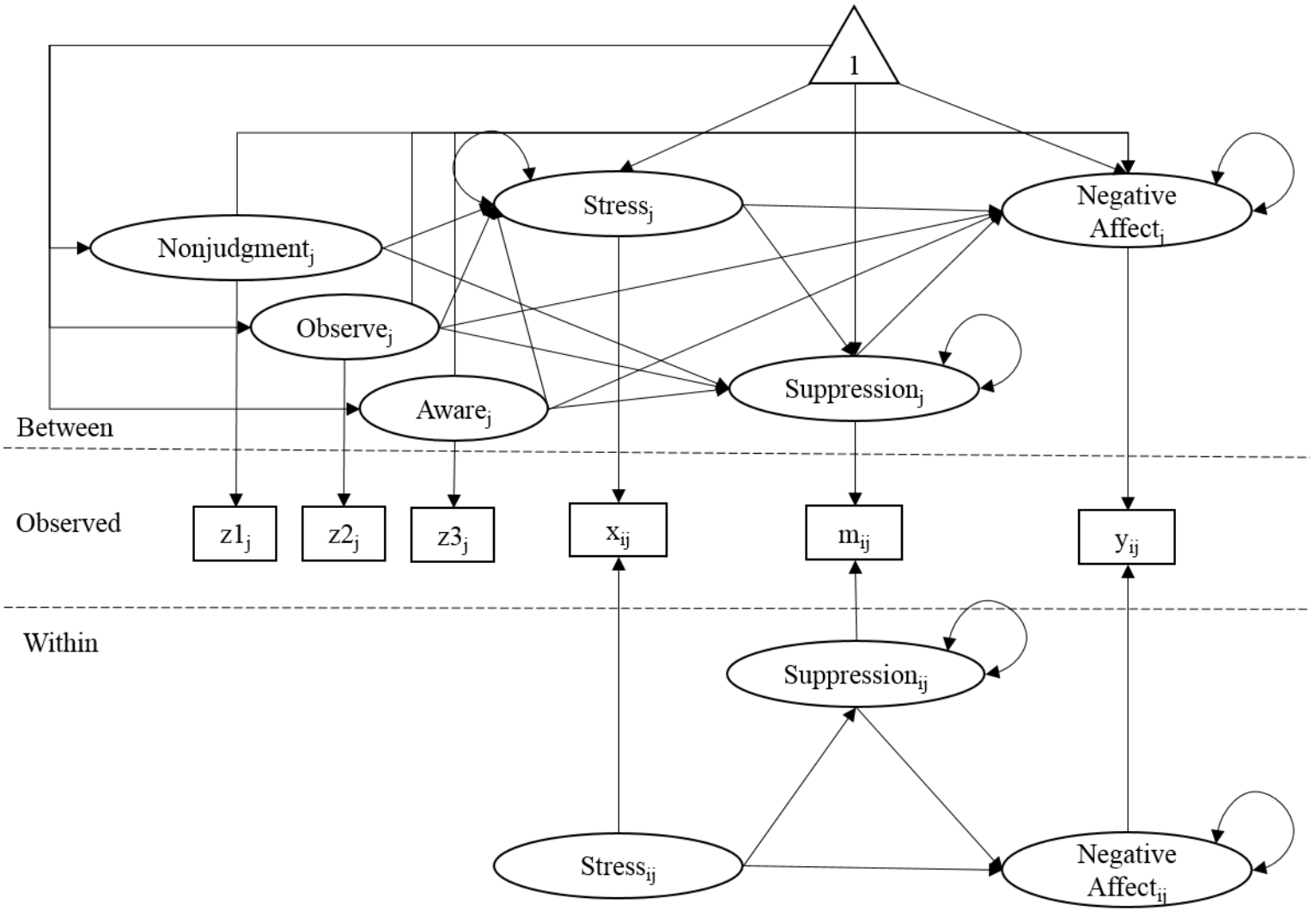


Figure 11: Final estimated model for mindfulness (nonjudgment, observe, and aware), suppression, and negative affect.

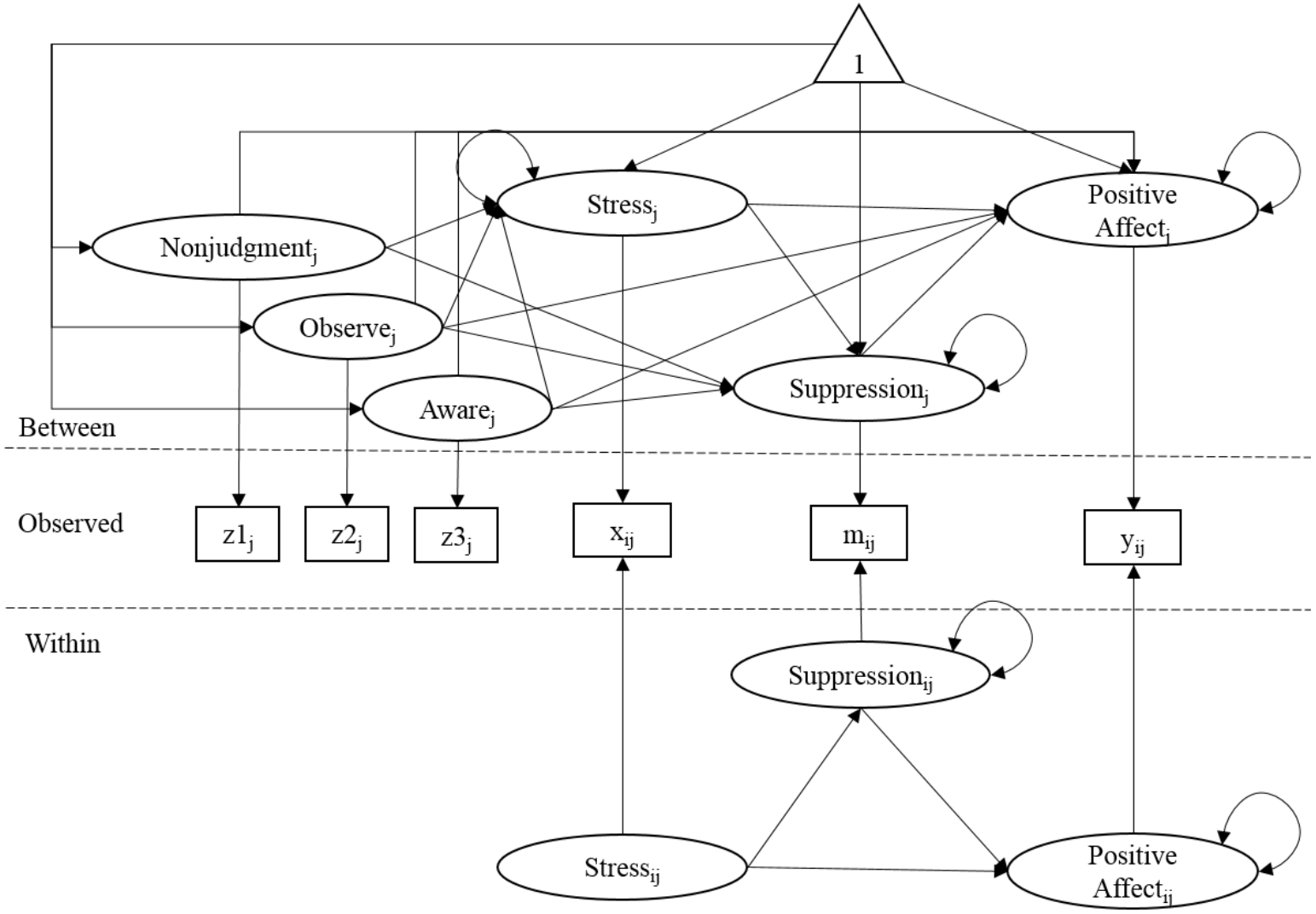


Figure 12: Final estimated model for mindfulness (nonjudgment, observe, and aware), suppression, and positive affect.

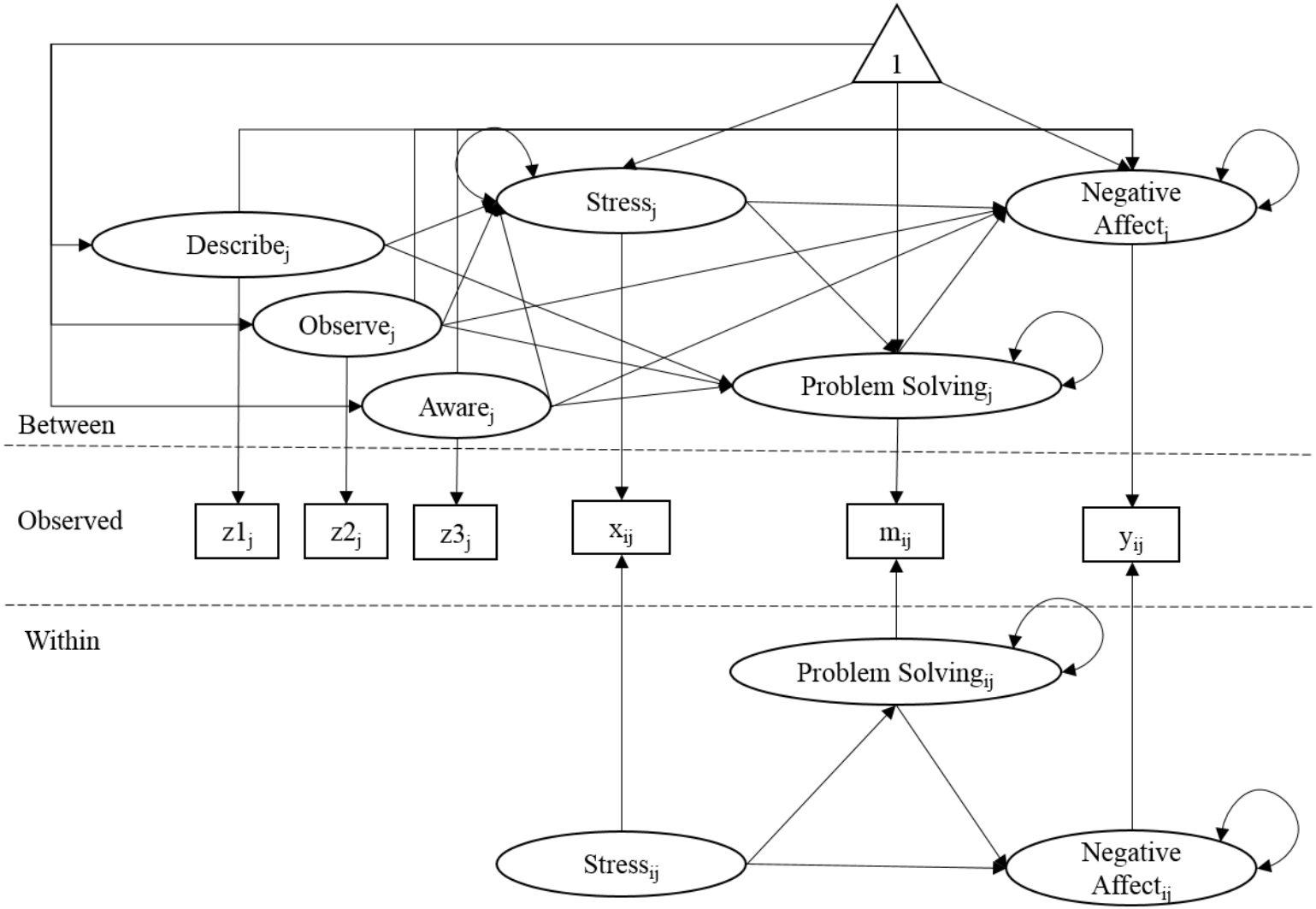


Figure 13: Final estimated model for mindfulness (describe, observe, and aware), problem solving, and negative affect.

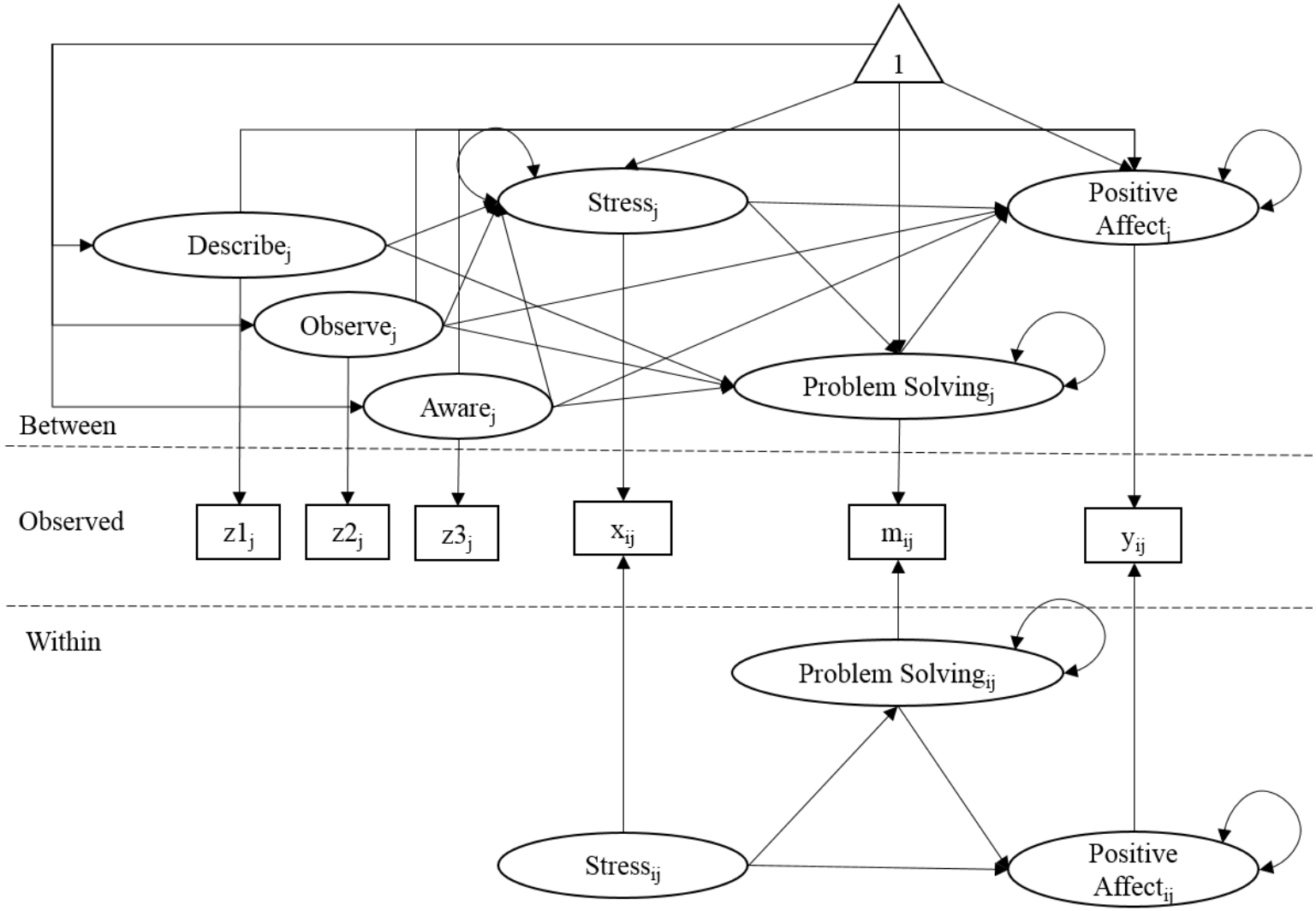


Figure 14: Final estimated model for mindfulness (describe, observe, and aware), problem solving, and positive affect.

Table 1: Proposed research questions and hypotheses (RQ1 and RQ2).

| | |
|---|---|
| **RQ1** | **What are the types of stressors Chinese international students experience at the daily level?** |
| **H1** | **Chinese international students will report both acculturative and general stress-related events.** |
| **RQ2** | **What is the relationship between perceived stress, coping strategy, and psychological well-being during a stressful event?** |
| **H2a** | **Perceived stress will be related to psychological well-being** |
| H2a.1 | Perceived stress will be positively related to negative affect |
| H2a.2 | Perceived stress will be negatively related to positive affect |
| **H2b** | **Coping will mediate the relationship between perceived stress and psychological well-being** |
| H2b.1 | The indirect effect of perceived stress on negative affect through emotion suppression will be significant |
| H2b.2 | The indirect effect of perceived stress on positive affect through emotion suppression will be significant |
| H2b.3 | The indirect effect of perceived stress on negative affect through reappraisal will be significant |
| H2b.4 | The indirect effect of perceived stress on positive affect through reappraisal will be significant |
| H2b.5 | The indirect effect of perceived stress on negative affect through problem solving coping will be significant |
| H2b.6 | The indirect effect of perceived stress on positive affect through problem solving coping will be significant |

Table 2: Proposed research questions and hypotheses (RQ3).

| **RQ3** | **What is the relationship between trait mindfulness, perceived stress, coping, and psychological well-being?** |
|---|---|
| **H3a** | **Trait mindfulness will be related to affect** |
| H3a.1 | Trait mindfulness facets will be negatively related to negative affect |
| H3a.2 | Trait mindfulness facets will be positively related to positive affect |
| **H3b** | **Perceived stress and coping will mediate the relationship between trait mindfulness and psychological well-being** |
| H3b.1 | The indirect effect of trait mindfulness facets on negative affect through perceived stress will be significant |
| H3b.2 | The indirect effect of trait mindfulness facets on positive affect through perceived stress will be significant |
| H3b.3 | The indirect effect of trait mindfulness facets on negative affect through emotion suppression will be significant |
| H3b.4 | The indirect effect of trait mindfulness facets on positive affect through emotion suppression will be significant |
| H3b.5 | The indirect effect of trait mindfulness facets on negative affect through reappraisal will be significant |
| H3b.6 | The indirect effect of trait mindfulness facets on positive affect through reappraisal will be significant |
| H3b.7 | The indirect effect of trait mindfulness facets on negative affect through problem solving coping will be significant |
| H3b.8 | The indirect effect of trait mindfulness facets on positive affect through problem solving coping will be significant |

Table 2: (cont'd).

| **H3c** | **Perceived stress and coping will serially mediate the relationship between trait mindfulness and psychological well-being** |
|---|---|
| H3c.1 | The indirect effect of trait mindfulness on negative affect through perceived stress and emotion suppression coping will be significant. |
| H3c.2 | The indirect effect of trait mindfulness on positive affect through perceived stress and emotion suppression coping will be significant. |
| H3c.3 | The indirect effect of trait mindfulness on negative affect through perceived stress and reappraisal coping will be significant. |
| H3c.4 | The indirect effect of trait mindfulness on positive affect through perceived stress and reappraisal coping will be significant. |
| H3c.5 | The indirect effect of trait mindfulness on negative affect through perceived stress and problem solving coping will be significant. |
| H3c.6 | The indirect effect of trait mindfulness on positive affect through perceived stress and problem solving coping will be significant. |

Table 3: Qualitative themes, codes, and example quotations.

| Theme | Operational Definition | Representative Quotes |
|---|---|---|
| Academic stressors | Pressures related to coursework, classes, exams, GPA, homework, studying or enrolling in class | - I don’t know how to choose classes for next semester. Still haven’t decided my major yet, and major requirement courses are hard so I cannot hastily make the decision.<br>- There is a Quiz for CSE tomorrow. I didn't have a good score last semester, so I am retaking the class this semester. So far so good, but I don't know if I can keep this status, otherwise I will be wasting my time and money.<br>- The results of math exam came out and I didn’t do well on the test due to careless –I got some questions wrong, I am depressed right now.<br>- I’m worried that my grade will influence applying to better graduate schools. |
| Basic needs | Concerns about current physical health, financial resources, availability of food or hunger, and sleep disturbances | - I don't have money, I can't afford tuition, I can't afford car loan or house loan. One word: I am poor!<br>- Dysmenorrhea<br>- No time to sleep – very tired.<br>- I feel hungry. |
| Interpersonal problems | Conflicts with others, relationship problems, desire for more meaningful relationships | - My boyfriend and I are in a long distance relationship and he came visit me; however he is leaving today. |

Table 3: (cont'd).

| | | |
|---|---|---|
| | | - I want to meet more students who are working hard, I think they will inspire me.<br>- If people around me are lazy, I will be easily distracted and get lazy too. There are a lot of students wasting their time, not focus on learning, My roommate is one of them – she disturbs my life and learning severely.<br>- My girlfriend and I had a small argument with her friend. I said something wrong so she got angry.<br>- Almost finished with the first freshman semester. To be honest I have no real good friend. Relationships only up to certain level, but don't go further. |
| Time pressure | Concerns, worries, or feeling overwhelmed due to perceiving time as a limited resource or problems with time management | - Finals exams are coming up and I feel a lot of pressure. I feel tired every day and do not have motivation to study hard, so I'm anxious.<br>- Always need more time. I want to study but I can't, and can't finish my homework.<br>- I feel very busy everyday but do not know what I have done.<br>- I want to read a novel, but I don't have time. |
| Environmental or situational stressors | Frustrating environmental demands or practical problems that disrupt daily routines | - I didn't pass the road test.<br>- I messed up the painting for my friend and it's a bad looking painting. I don't know how to fix it.<br>- I do not want to do anything because the weather is too cold.<br>- The line is too long for beef noodles in Brody. |

Table 3: (cont'd).

| | | |
|---|---|---|
| Future goal-oriented stressors | Concerns about future plans including career, family, immigration status, and logistics for leisure activities (e.g., travel) | - Applying for a visa is complicated.<br>- Having no idea how to deal with tomorrow's interview. I've prepared some questions and practiced how to answer them by myself. However, I'm still very nervous, I don't know if I can pass or not.<br>- Applying for Business college.<br>- I feel so lost for my future and I don't know if I should double major or not. |
| Self-concept | Intra-individual stressors stemming from negative self-perceptions related to self-efficacy, self-esteem, ability to control one's behavior, or discrepancy between ideal and actual self | - Due to Thanksgiving sales, I spent too much money buying the things that are unnecessary. I feel so bad for my parents.<br>- I feel my EQ is getting lower.<br>- Very lazy, cannot persevere on many of things. I cannot successful finish or follow the plan that I have scheduled. I just want to be lazy and lie in bed every day. I want to make some changes, but it's hard because it's already become a habit.<br>- Low self-esteem. I do not have confidence in myself no matter what aspect. |
| Cultural adjustment stressors | Difficulties due to living in another country | - Food in America has lots of calories that make me gain a lot of weight. I heard that lots of students have the same problem, I am trying to control, but get fat anyway. |

Table 3: (cont'd).

| | |
|---|---|
| | - If the professor has an accent, I can't learn anything at all. I have to learn on my own after that.<br>- I've become uglier after coming to America.<br>- I can't fuse into American culture. My speaking is not fluent enough and I'm afraid to communicate with foreigners. Sometimes I can't understand the course. |

Table 4: Bivariate relationships, means, standard deviations, and ranges.

| | | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|---|
| 1 | Observe (FFMQ) | | | | | | |
| 2 | Describe (FFMQ) | .48** | | | | | |
| 3 | Aware (FFMQ) | -.10* | -.20** | | | | |
| 4 | Nonjudgment (FFMQ) | -.43** | -.35** | .46** | | | |
| 5 | Nonreact (FFMQ) | .41** | .26** | -.11* | -.22** | | |
| 6 | Stress_gm | -.03 | .02 | -.36** | -.48** | -.12* | |
| 7 | Reappraise_gm | .23** | -.05 | -.27** | -.19** | .20** | .19** |
| 8 | Suppress_gm | -.36** | .07 | -.57** | -.36** | -.16** | .32** |
| 9 | Direct_gm | .45** | -.07 | .35** | -.02 | .34** | .04 |
| 10 | Depression | -.12* | -.13** | -.34** | -.22** | -.02 | .31** |
| 11 | Neg. Affect_gm | .09 | .12* | -.52** | -.44** | -.12* | .40** |
| 12 | Pos. Affect_gm | -.03 | .22** | .06 | .20** | .23** | .03 |
| 13 | Age | -.15** | .06 | .21** | .10* | .05 | -.51** |
| 14 | Gender | -.03 | -.11* | .31** | .08 | .16** | -.42** |
| | Mean | 3.57 | 3.53 | 2.97 | 2.44 | 3.17 | 62.64 |
| | SD | 0.89 | 0.79 | 0.85 | 0.59 | 0.50 | 18.89 |
| | Range | 2.00-5.00 | 2.00-5.00 | 1.00-4.25 | 1.00-3.50 | 2.25-4.25 | 20.29-98.00 |

Note: * = $p < .05$; ** = $p < .01$. FFMQ = Five Facet Mindfulness Questionnaire; gender coded as 1 = men, 0 = women; gm = group mean centered across 14 days of measurement.

Table 4: (cont'd).

| | | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
|---|---|---|---|---|---|---|---|---|
| 7 | Reappraise_gm | | | | | | | |
| 8 | Suppress_gm | .07 | | | | | | |
| 9 | Direct_gm | -.02 | -.72** | | | | | |
| 10 | Depression | .36** | .40** | -.11* | | | | |
| 11 | Neg. Affect_gm | .19** | .64** | -.41** | .41** | | | |
| 12 | Pos. Affect_gm | .04 | -.16** | .15** | -.27** | -.43** | | |
| 13 | Age | -.30** | .09 | -.05 | -.25** | -.20** | -.06 | |
| 14 | Gender | -.11* | .05 | -.10* | -.11* | -.05 | -.18** | .47** |
| | Mean | 3.07 | 3.07 | 3.48 | 2.43 | 3.36 | 2.10 | 18.62 |
| | SD | 0.56 | 0.63 | 0.63 | 0.96 | 0.73 | 0.64 | 0.98 |
| | Range | 1.71-3.90 | 1.10-3.75 | 2.06-5.00 | 0.00-4.33 | 1.29-4.63 | 1.06-3.63 | 18-20 |

Note: * = $p < .05$; ** = $p < .01$. FFMQ = Five Facet Mindfulness Questionnaire; gm = group mean centered across 14 days of measurement; gender coded as "1" = man, and "0" = woman,

Table 5: Piece-wise models estimating direct effects of covariates on stress, coping, and affect.

| Model 1: Between effects of covariates on stress | | | |
|---|---|---|---|
| Predictor | *b* | *SE* | *p-value* |
| Age | -7.142 | 3.812 | .061 |
| Gender | -12.592 | 14.304 | .379 |
| State Anxiety | -.172 | 1.731 | .921 |
| Depression symptoms | 5.068 | 5.280 | .337 |
| Model 2: Between effects of covariates on Suppression and Reappraisal | | | |
| Outcome: Suppression | | | |
| | *b* | *SE* | *p-value* |
| Age | .183 | .150 | .657 |
| Gender | -.124 | .280 | .165 |
| State Anxiety | .099 | .071 | .165 |
| Depression symptoms | .168 | .141 | .233 |
| Outcome: Reappraisal | | | |
| | *b* | *SE* | *P-value* |
| Age | -.101 | .106 | .341 |
| Gender | -.018 | .200 | .929 |
| State Anxiety | .042 | .061 | .491 |
| Depression symptoms | .122 | .119 | .305 |
| Outcome: Problem Solving | | | |
| | *b* | *SE* | *p-value* |
| Age | -.053 | .143 | .713 |
| Gender | -.115 | .237 | .626 |
| State Anxiety | -.056 | .078 | .474 |
| Depression symptoms | -.012 | .138 | .931 |
| Model 3: Between effects of covariates on affect | | | |
| Outcome: Negative Affect | | | |
| | *B* | *SE* | *p-value* |
| Age | -.090 | .202 | .657 |
| Gender | .059 | .395 | .881 |
| State Anxiety | .022 | .108 | .839 |
| Depression symptoms | .268 | .197 | .174 |
| Outcome: Positive Affect | | | |
| | *B* | *SE* | *p-value* |
| Age | .041 | .157 | .791 |
| Gender | -.464 | .269 | .085 |
| State Anxiety | .069 | .073 | .344 |
| Depression symptoms | -.030 | .097 | .502 |

Table 6: Model 1: Mediation model for H2 (Stress → Suppression → Negative Affect).

| **Within-person** | | | | | | |
|---|---|---|---|---|---|---|
| Predictor | Outcome | *b* | *SE* | *p-value* | Mediating Effect | 95% CI |
| Stress | Suppression | .002 | .002 | .249 | .000 | [.000, .001] |
| Suppression | Negative Affect | .118 | .059 | .044 | | |
| Stress | Negative Affect | .013 | .003 | .000 | | |
| **Between-person** | | | | | | |
| Predictor | Outcome | *b* | *SE* | *p-value* | Mediating Effect | 95% CI |
| Stress | Suppression | .012 | .005 | .022 | .009 | [.002, .019] |
| Suppression | Negative Affect | .779 | .254 | .002 | | |
| Stress | Negative Affect | .006 | .007 | .443 | | |

Note: Mediated effect is based on a Monte Carlo simulation method calculated by rMediation (Tofighi & MacKinnon, 2011).

Table 7: Model 2: Mediation model for H2 (Stress → Suppression → Positive Affect).

| **Within-person** | | | | | | |
|---|---|---|---|---|---|---|
| Predictor | Outcome | *b* | *SE* | *p-value* | Mediating Effect | 95% CI |
| Stress | Suppression | .002 | .002 | .249 | .000 | [.000, .000] |
| Suppression | Positive Affect | -.041 | .055 | .456 | | |
| Stress | Positive Affect | -.006 | .003 | .072 | | |
| **Between-person** | | | | | | |
| Predictor | Outcome | *b* | *SE* | *p-value* | Mediating Effect | 95% CI |
| Stress | Suppression | .012 | .005 | .023 | -.002 | [-.010, .004] |
| Suppression | Positive Affect | -.194 | .304 | .522 | | |
| Stress | Positive Affect | .004 | .007 | .592 | | |

Note: Mediated effect is based on a Monte Carlo simulation method calculated by rMediation (Tofighi & MacKinnon, 2011).

Table 8: Model 3: Mediation model for H2 (Stress → Reappraisal → Negative Affect).

| **Within-person** | | | | | | |
|---|---|---|---|---|---|---|
| Predictor | Outcome | *b* | *SE* | *p-value* | Mediating Effect | 95% CI |
| Stress | Reappraisal | .004 | .002 | .077 | .000 | [.000, .001] |
| Reappraisal | Negative Affect | .068 | .074 | .357 | | |
| Stress | Negative Affect | .013 | .002 | .000 | | |
| **Between-person** | | | | | | |
| Predictor | Outcome | *b* | *SE* | *p-value* | Mediating Effect | 95% CI |
| Stress | Reappraisal | .005 | .005 | .331 | .001 | [-.003, .005] |
| Reappraisal | Negative Affect | .132 | .333 | .692 | | |
| Stress | Negative Affect | .014 | .008 | .056 | | |

Note: Mediated effect is based on a Monte Carlo simulation method calculated by rMediation (Tofighi & MacKinnon, 2011).

Table 9: Model 4: Mediation model for H2 (Stress → Reappraisal → Positive Affect).

| **Within-person** | | | | | | |
|---|---|---|---|---|---|---|
| Predictor | Outcome | *b* | *SE* | *p-value* | Mediating Effect | 95% CI |
| Stress | Suppression | .004 | .002 | .077 | .000 | [.000, .000] |
| Reappraisal | Positive Affect | .052 | .071 | .463 | | |
| Stress | Positive Affect | -.006 | .003 | .052 | | |
| **Between-person** | | | | | | |
| Predictor | Outcome | *b* | *SE* | *p-value* | Mediating Effect | 95% CI |
| Stress | Suppression | .005 | .005 | .329 | .000 | [-.003, .004] |
| Reappraisal | Positive Affect | .054 | .310 | .863 | | |
| Stress | Positive Affect | .001 | .008 | .883 | | |

Note: Mediated effect is based on a Monte Carlo simulation method calculated by rMediation (Tofighi & MacKinnon, 2011).

Table 10: Model 5: Mediation model for H2 (Stress → Problem Solving → Negative Affect).

| **Within-person** | | | | | | |
|---|---|---|---|---|---|---|
| Predictor | Outcome | *b* | *SE* | *p-value* | Mediating Effect | 95% CI |
| Stress | Problem Solving | .001 | .002 | .812 | .000 | [.000, .000] |
| Problem Solving | Negative Affect | -.015 | .055 | .783 | | |
| Stress | Negative Affect | .013 | .003 | .000 | | |
| **Between-person** | | | | | | |
| Predictor | Outcome | *b* | *SE* | *p-value* | Mediating Effect | 95% CI |
| Stress | Problem Solving | .001 | .005 | .901 | -.001 | [-.007, .005] |
| Problem Solving | Negative Affect | -.674 | .323 | .037 | | |
| Stress | Negative Affect | .015 | .005 | .004 | | |

Note: Mediated effect is based on a Monte Carlo simulation method calculated by rMediation (Tofighi & MacKinnon, 2011).

Table 11: Model 6: Mediation model for H2 (Stress → Problem Solving → Positive Affect).

| **Within-person** | | | | | | |
|---|---|---|---|---|---|---|
| Predictor | Outcome | *b* | *SE* | *p-value* | Mediating Effect | 95% CI |
| Stress | Problem Solving | .001 | .002 | .810 | .000 | [.000, .000] |
| Problem Solving | Positive Affect | .028 | .063 | .662 | | |
| Stress | Positive Affect | -.006 | .003 | .068 | | |
| **Between-person** | | | | | | |
| Predictor | Outcome | *b* | *SE* | *p-value* | Mediating Effect | 95% CI |
| Stress | Problem Solving | .001 | .005 | .896 | .000 | [.000, .000] |
| Problem Solving | Positive Affect | .201 | .292 | .492 | | |
| Stress | Positive Affect | .001 | .006 | .837 | | |

Note: Mediated effect is based on a Monte Carlo simulation method calculated by rMediation (Tofighi & MacKinnon, 2011).

Table 12: Model testing effects of stress, coping, and interaction (stress*coping) effects on negative affect.

| Within Effects | *B* | *SE* | *p-value* |
|---|---|---|---|
| Stress | .009 | .018 | .607 |
| Suppression | .159 | .160 | .319 |
| Reappraisal | -.031 | .223 | .891 |
| Problem solving | -.056 | .159 | .727 |
| Stress*Suppression | -.001 | .003 | .742 |
| Stress*Reappraisal | .001 | .003 | .770 |
| Stress*Problem Solving | .001 | .002 | .647 |
| Between Effects | *B* | *SE* | *p-value* |
| Stress | -.005 | .029 | .858 |
| Suppression | .706 | .937 | .451 |
| Reappraisal | .442 | .588 | .452 |
| Problem solving | -.157 | .741 | .833 |
| Stress*Suppression | .002 | .009 | .779 |
| Stress*Reappraisal | -.005 | .009 | .591 |
| Stress*Problem Solving | .005 | .011 | .664 |

Table 13: Model testing effects of stress, coping, and interaction (stress*coping) effects on positive affect.

| Within Effects | *B* | *SE* | *p-value* |
|---|---|---|---|
| Stress | -.015 | .012 | .214 |
| Suppression | -.157 | .099 | .114 |
| Reappraisal | .027 | .254 | .914 |
| Problem solving | -.046 | .173 | .790 |
| Stress*Suppression | .002 | .001 | .280 |
| Stress*Reappraisal | .001 | .004 | .809 |
| Stress*Problem Solving | .001 | .003 | .850 |
| **Between Effects** | ***B*** | ***SE*** | ***p-value*** |
| Stress | .010 | .031 | .761 |
| Suppression | .070 | 1.436 | .961 |
| Reappraisal | .744 | .860 | .387 |
| Problem solving | .853 | 1.485 | .566 |
| Stress*Suppression | .007 | .011 | .513 |
| Stress*Reappraisal | -.009 | .013 | .499 |
| Stress*Problem Solving | -.003 | .011 | .785 |

Table 14: Piece-meal models estimating direct effects of mindfulness facets on stress, coping, and affect.

| Model 1: Between effects of trait mindfulness on stress | | | |
|---|---|---|---|
| Predictor | *b* | *SE* | *p* |
| Observe | -3.990 | 4.12 | 0.330 |
| Describe | -1.408 | 3.302 | 0.670 |
| Aware | -3.712 | 3.522 | 0.292 |
| Nonjudgment | -17.477* | 4.958 | 0.000 |
| Nonreact | -6.583 | 6.665 | 0.323 |
| Model 2: Between effects of trait mindfulness on Suppression and Reappraisal | | | |
| Outcome: Suppression | | | |
| | *B* | *SE* | *p* |
| Observe | -0.450* | 0.118 | 0.000 |
| Describe | 0.150 | 0.107 | 0.161 |
| Aware | -0.324* | 0.108 | 0.003 |
| Nonjudgment | -0.407* | 0.182 | 0.027 |
| Nonreact | -0.120 | 0.163 | 0.462 |
| Outcome: Reappraisal | | | |
| | *b* | *SE* | *p* |
| Observe | 0.173 | 0.156 | 0.267 |
| Describe | -0.197 | 0.129 | 0.127 |
| Aware | -0.182 | 0.098 | 0.064 |
| Nonjudgment | -0.009 | 0.203 | 0.964 |
| Nonreact | 0.133 | 0.179 | 0.459 |
| Outcome: Problem Solving | | | |
| | *b* | *SE* | *p* |
| Observe | 0.387 | 0.146 | 0.008 |
| Describe | -0.259 | 0.087 | 0.003 |
| Aware | 0.263 | 0.089 | 0.003 |
| Nonjudgment | -0.008 | 0.167 | 0.961 |
| Nonreact | 0.268 | 0.181 | 0.140 |
| Model 3: Between effects of trait mindfulness on negative affect | | | |
| | *b* | *SE* | *p* |
| Observe | 0.020 | 0.161 | 0.899 |
| Describe | -0.004 | 0.119 | 0.975 |
| Aware | -0.362* | 0.133 | 0.006 |
| Nonjudgment | -0.352 | 0.245 | 0.150 |
| Nonreact | -0.365 | 0.256 | 0.155 |

Table 14 (cont'd).

| Model 4: Between effects of trait mindfulness on positive affect | | | |
|---|---|---|---|
| | *b* | *SE* | *p* |
| Observe | -0.154 | 0.161 | 0.338 |
| Describe | 0.311 | 0.178 | 0.080 |
| Aware | -0.004 | 0.129 | 0.974 |
| Nonjudgment | 0.324 | 0.229 | 0.157 |
| Nonreact | 0.342 | 0.207 | 0.098 |
| Note: * $p < .05$ | | | |

Table 15: Full model testing mediation for mindfulness, stress, suppression, and negative affect.

| **Within-person (Stress → Suppression → Negative Affect)** | | | | |
|---|---|---|---|---|
| Predictor | Outcome | *b* | *SE* | *p-value* |
| Stress | Suppression | .002 | .002 | .229 |
| | Negative affect | .013 | .003 | .000 |
| Suppression | Negative affect | .122 | .060 | .044 |
| | *Indirect effect* | *Estimate* | | *95% CI* |
| Stress -> Suppression -> Negative Affect | | .000 | | [.000, .001] |
| **Between-Person (Mindfulness → Stress → Suppression → Negative Affect)** | | | | |
| Predictor | Outcome | *b* | *SE* | *p-value* |
| Nonjudgment | Stress | -17.565 | 5.090 | .001 |
| | Suppression | -.511 | .222 | .021 |
| | Negative affect | .312 | .215 | .147 |
| Observe | Stress | -6.303 | 3.415 | .065 |
| | Suppression | -.435 | .137 | .001 |
| | Negative affect | .442 | .161 | .006 |
| Awareness | Stress | -3.235 | 3.415 | .065 |
| | Suppression | -.329 | .101 | .001 |
| Stress | Suppression | -.004 | .005 | .472 |
| | Negative affect | .009 | .007 | .204 |
| Suppression | Negative affect | 1.085 | .237 | .000 |
| | *Indirect effects* | *Estimate* | *95% CI* | |
| Nonjudgment -> Stress -> Negative Affect | | -.163 | [-0.409, 0.082] | |
| Nonjudgment -> Suppression -> Negative Affect | | -.555 | [-1.144, 0.035] | |
| Nonjudgment -> Stress -> Suppression -> Negative Affect | | .069 | [-0.112, 0.250] | |
| Observe -> Stress -> Negative Affect | | -.059 | [-0.152, 0.0350] | |
| Observe -> Suppression -> Negative Affect | | -.472 | [-0.866, -0.078] | |
| Observe -> Stress -> Suppression -> Negative Affect | | .025 | [-0.050, 0.100] | |
| Awareness -> Stress -> Negative Affect | | -.030 | [-0.111, 0.051] | |
| Awareness -> Suppression -> Negative Affect | | -.357 | [-0.617, -0.096] | |
| Awareness -> Stress -> Suppression -> Negative Affect | | .013 | [-0.040, 0.065] | |
| Model fit: Chi-square (3) = 12.397, $p < .01$; RMSEA = .09; CFI = .91. | | | | |

Table 16: Full model testing mediation for mindfulness, stress, suppression, and positive affect.

| **Within-person (Stress → Suppression → Positive Affect)** | | | | |
|---|---|---|---|---|
| Predictor | Outcome | *b* | *SE* | *p-value* |
| Stress | Suppression | .002 | .002 | .242 |
| | Positive affect | -.006 | .003 | .074 |
| Suppression | Positive affect | -.040 | .055 | .464 |
| | *Indirect effect* | *Estimate* | *95% CI* | |
| Stress -> Suppression -> Positive affect | | .000 | [.000, .000] | |
| **Between-Person (Mindfulness → Stress → Suppression → Positive Affect)** | | | | |
| Predictor | Outcome | *b* | *SE* | *p-value* |
| Nonjudgment | Stress | -17.116 | 3.434 | .069 |
| | Suppression | -.498 | .139 | .002 |
| | Positive affect | .261 | .309 | .398 |
| Observe | Stress | -6.239 | 3.434 | .069 |
| | Suppression | -.434 | .139 | .002 |
| | Positive affect | .019 | .194 | .923 |
| Awareness | Stress | -3.601 | 3.428 | .307 |
| | Suppression | -.339 | .106 | .001 |
| Stress | Suppression | -.004 | .005 | .478 |
| | Positive affect | .007 | .007 | .356 |
| Suppression | Positive affect | -.118 | .343 | .730 |
| | *Indirect effects* | *Estimate* | *95% CI* | |
| Nonjudgment -> Stress -> Positive affect | | -.118 | [-0.397, 0.161] | |
| Nonjudgment -> Suppression -> Positive affect | | .059 | [-0.303, 0.421] | |
| Nonjudgment -> Stress -> Suppression -> Positive affect | | -.007 | [-0.053, 0.039] | |
| Observe -> Stress -> Positive affect | | -.043 | [-0.144, 0.058] | |
| Observe -> Suppression -> Positive affect | | .051 | [-0.260, 0.362] | |
| Observe -> Stress -> Suppression -> Positive affect | | -.003 | [-0.020, 0.015] | |
| Awareness -> Stress -> Positive affect | | -.024 | [-0.087, 0.039] | |
| Awareness -> Suppression -> Positive affect | | .040 | [-0.189, 0.269] | |
| Awareness -> Stress -> Suppression -> Positive affect | | -.001 | [-0.012, 0.009] | |
| Model fit: Chi-square (3) = 12.808, $p < .01$; RMSEA = .09; CFI = .76. | | | | |

Table 17: Full model testing mediation for mindfulness, stress, problem solving, and negative affect.

| **Within-person (Stress → Problem Solving → Negative Affect)** | | | | |
|---|---|---|---|---|
| Predictor | Outcome | *b* | *SE* | *p-value* |
| Stress | Problem Solving | .000 | .002 | .850 |
| | Negative affect | .013 | .003 | .000 |
| Problem Solving | Negative affect | -.022 | .056 | .688 |
| | *Indirect effect* | *Estimate* | *95% CI* | |
| Stress -> Problem Solving -> Negative Affect | | .000 | [.000, .000] | |
| **Between-Person (Mindfulness → Stress → Problem Solving → Negative Affect)** | | | | |
| Predictor | Outcome | *b* | *SE* | *p-value* |
| Observe | Stress | -2.046 | 4.299 | .634 |
| | Problem Solving | .460 | .105 | .000 |
| | Negative affect | .498 | .122 | .000 |
| Describe | Stress | .009 | .005 | .087 |
| | Problem Solving | -.250 | .092 | .007 |
| | Negative affect | -.234 | .157 | .135 |
| Awareness | Stress | -8.240 | 3.721 | .027 |
| | Problem Solving | .324 | .106 | .002 |
| Stress | Problem Solving | .009 | .005 | .087 |
| | Negative affect | .019 | .005 | .000 |
| Problem Solving | Negative affect | -.992 | .330 | .003 |
| | *Indirect effects* | *Estimate* | *95% CI* | |
| Observe -> Stress -> Negative Affect | | -.038 | [-0.196, 0.120] | |
| Observe -> Problem Solving -> Negative Affect | | -.457 | [-0.809, -0.105] | |
| Observe -> Stress -> Problem Solving -> Negative Affect | | .018 | [-0.066, 0.101] | |
| Describe -> Stress -> Negative Affect | | .003 | [-0.154, 0.161] | |
| Describe -> Problem Solving -> Negative Affect | | .248 | [0.005, 0.491] | |
| Describe -> Stress -> Problem Solving -> Negative Affect | | -.001 | [-0.074, 0.071] | |
| Awareness -> Stress -> Negative Affect | | -.154 | [-0.296, -0.011] | |
| Awareness -> Problem Solving -> Negative Affect | | -.321 | [-0.633, -0.010] | |
| Awareness -> Stress -> Problem Solving -> Negative Affect | | .071 | [-0.061, 0.203] | |
| Model fit: Chi-square (4) = 9.518, $p < .05$; RMSEA = .06; CFI = .93. | | | | |

Table 18: Full model testing mediation for mindfulness, stress, problem solving, and positive affect.

| **Within-person (Stress → Problem Solving → Positive Affect)** | | | | |
|---|---|---|---|---|
| Predictor | Outcome | *b* | *SE* | *p-value* |
| Stress | Problem Solving | .001 | .002 | .811 |
| | Positive affect | -.006 | .003 | .068 |
| Problem Solving | Positive affect | .027 | .064 | .676 |
| | *Indirect effect* | *Estimate* | | *95% CI* |
| Stress -> Problem Solving -> Positive affect | | .000 | | [.000, .000] |
| **Between-Person (Mindfulness → Stress → Problem Solving → Positive Affect)** | | | | |
| Predictor | Outcome | *b* | *SE* | *p-value* |
| Observe | Stress | -2.206 | 4.257 | .604 |
| | Problem Solving | .465 | .105 | .000 |
| | Positive affect | -.397 | .153 | .009 |
| Describe | Stress | .348 | 4.240 | .935 |
| | Problem Solving | -.257 | .090 | .004 |
| | Positive affect | .457 | .185 | .013 |
| Awareness | Stress | -8.224 | 3.699 | .026 |
| | Problem Solving | .315 | .110 | .004 |
| Stress | Problem Solving | .009 | .005 | .093 |
| | Positive affect | -.001 | .006 | .803 |
| Problem Solving | Positive affect | .488 | .294 | .097 |
| | *Indirect effects* | *Estimate* | | *95% CI* |
| Observe -> Stress -> Positive affect | | .003 | | [-0.023, 0.029] |
| Observe -> Problem Solving -> Positive affect | | .227 | | [-0.074, 0.528] |
| Observe -> Stress -> Problem Solving -> Positive affect | | -.009 | | [-0.052, 0.034] |
| Describe -> Stress -> Positive affect | | -.125 | | [-0.284, 0.033] |
| Describe -> Problem Solving -> Positive affect | | .000 | | [-0.012, 0.011] |
| Describe -> Stress -> Problem Solving -> Positive affect | | .001 | | [-0.033, 0.036] |
| Awareness -> Stress -> Positive affect | | .011 | | [-0.075, 0.098] |
| Awareness -> Problem Solving -> Positive affect | | .154 | | [-0.070, 0.378] |
| Awareness -> Stress -> Problem Solving -> Positive affect | | -.034 | | [-0.109, 0.040] |
| Model fit: Chi-square (3) = 9.137, $p < .05$; RMSEA = .06; CFI = .79. | | | | |

APPENDIX B: Informed consent (Chinese).

**知情同意书**

您好！我们邀请您参与密歇根州立大学 2015 中国留学生调查。首先，感谢您参与这份密歇根州立大学的问卷调查，本次调查的负责人是估学聪博士生(Ivan Wu)。估学聪是临床心理学专业的在读博士生, 这份研究将是估学聪的毕业论文。

这个研究是用来探索关于您的文化，经历过的压力，情感健康以及思维觉察力。当您决定参与，您需要先花 30 分钟完成一份在线问卷。在此之后两周，您将需要在每天晚上 8-12 点之间完成一份五分钟的问卷。您可以在您的手机上完成调查问卷，但是您的手机必须能够连接网络， 而且我们需要您提供您的电话号码。您也可以选择用您的电脑完成问卷， 这时我们需要您提供您的电子邮箱地址。在两周结束时，您将需要完成与第一份相似的问卷。请您认真诚实的回答每个问题。这里没有正确或错误答案。

当您完成研究，您会获得亚马逊礼品卡。当您完成每天问卷，您将收到$ 1 亚马逊礼品卡， 当您完成最初和最后问卷时，每个问卷您会收到$ 3 亚马逊礼品卡。完成所有的问卷，您将获得额外的$5 亚马逊礼品卡。每一个认真，真实完成此次调查问卷的学生填完问卷总共会得到$25 亚马逊礼品卡。

参与此次问卷调查并无任何已知风险。此调查仅限于了解您的日常生活，以及您对如何适应密歇根州立大学学习与生活的观点和看法.

您的隐私将会在法律允许的最大范围内受到保护。您的所有回答将会受到严格的保护。研究数据将会在有密码保护的电脑上存档。电脑放置在估学聪的办公室，位于 316 Physics Rm 26, East Lansing, 48824。问卷上所有跟个人相关的信息将会被移除，这些信息将会保存在另一个单独的文档中。研究数据会在此研究项目完成后存放五年。您的参与是自愿的。您可以在任何时候拒绝参与或退出此研究，并不会受到任何处罚。同时，您有权利选择跳过或拒绝回答任何您不想回答的问题。为了确保我们数据的可用性，如果你没有完成整个调查的 80％以上或者没有认真填写每一个问题，您可能得不到$25 gift card. 您的参与或退出并不会影响您在学校或在任何附属机构享有的服务。

如果您对您作为研究参与者的角色和权利有任何疑虑，或希望获取或提供相关信息，或希望对此研究项目进行投诉，您可以通过以下方式，实名或匿名联系密歇根州立大学人类研究保护项目：电话：517-355-2180, 邮箱：irb@msu.edu，或寄信到 408 W. Circle Drive, 207 Olds Hall, MSU, East Lansing, MI 48824.

如果您对此研究项目有任何问题或疑虑，例如对研究方法的疑问，对如何完成此研究项目的疑问，或上报在参与过程中受到的损害（包括生理、心理、社交、金钱、或其他方面的损害），请通过以下方式与研究人员 Ivan Wu 联系：316 Physics Rm 26, East Lansing, MI 48824, wuivan@msu.edu , (970)984-8266。

通过在下列选择“同意并自愿参与提交此问卷调查”，您表示您已年满 18 岁，已了解上述信息，并决定参与此研究项目。

**Ivan's information:**

**Name: 估学聪 Ivan Wu, M.A.**
**Office: Psychology Building, 316 Physics Room 26, East Lansing**
**Email: wuivan@msu.edu**
**Phone number: (970) 984-8266**

APPENDIX C: Survey flyer (Chinese).

MICHIGAN STATE
UNIVERSITY

## 2016 密歇根州立大学中国留学生网上问卷调查

对在 MSU 开展大学生活，你是否也有担忧呢？加入我们的调查吧！此研究项目由 MSU 社会科学学院估学聪博士生(Ivan Wu)主导，对入学的**中国大一新生**进行调查。我们希望了解同学们的生活，还有你们对即将开展的大学生活的感受。

只要你在 ***2015 年秋季***入学就读 MSU，并且***年满 18 岁***，你便符合条件。你需要先花 30 分钟完成一份在线问卷。接下来的每个问卷将花你五分钟，整个实验将花你一个小时的时间。问卷可以通过电脑，iPad，或手机完成。当你决定要参与此调查，将会有研究助理与你联络，告知更多详细内容。

每一个认真，真实完成此次调查问卷的学生填完问卷会得到$25 亚马逊礼品卡。

感兴趣的同学请与我们联系：

**估学聪 Ivan Wu**（社会科学学院 / 密歇根州立大学）

微信号：MSUPSY

邮箱：msu.cis.2015@gmail.com

电话号码：313-883-9349

APPENDIX D: Initial survey (Chinese).

请细心阅读以下有关想法或感觉的句子,并选出最能描述你以下想法或感觉的频繁度

| | 从不 | 很少 | 有時 | 常常 | 经常 |
|---|---|---|---|---|---|
| 1. 我擅于用言语来形容自己的感受 | ❍ | ❍ | ❍ | ❍ | ❍ |
| 2. 当我做事时,我的思绪会游走,而且我很容易分心 | ❍ | ❍ | ❍ | ❍ | ❍ |
| 3. 我能轻易地以言语表达自己的信念、意见和期望 | ❍ | ❍ | ❍ | ❍ | ❍ |
| 4. 我不留心自己正在做的事,因为我在做白日梦,担忧或被其他事情分了心 | ❍ | ❍ | ❍ | ❍ | ❍ |
| 5. 我告诉自己不应该有现在这些感受 | ❍ | ❍ | ❍ | ❍ | ❍ |
| 6. 遇到困难时,我能稍作停顿而不立即作出反应 | ❍ | ❍ | ❍ | ❍ | ❍ |
| 7. 我留心自己身体的感觉,例如风吹过头发或阳光照在脸上的感觉 | ❍ | ❍ | ❍ | ❍ | ❍ |
| 8. 我会判断自己的想法是好或是坏 | ❍ | ❍ | ❍ | ❍ | ❍ |
| 9. 当我有烦恼的想法或影像时,我会「退一步」,并知道那些想法或影像而不被其控制 | ❍ | ❍ | ❍ | ❍ | ❍ |
| 10. 我留心声音,例如时钟滴答声、麻雀声或汽车经过的声音 | ❍ | ❍ | ❍ | ❍ | ❍ |
| 11. 我很容易分心 | ❍ | ❍ | ❍ | ❍ | ❍ |
| 12. 当我有一些困扰的想法或影像时,我很快回复平静 | ❍ | ❍ | ❍ | ❍ | ❍ |
| 13. 我告诉自己,我不应该这样想 | ❍ | ❍ | ❍ | ❍ | ❍ |
| 14. 我注意到事物的气息和香味 | ❍ | ❍ | ❍ | ❍ | ❍ |
| 15. 这个问题请选常常 | ❍ | ❍ | ❍ | ❍ | ❍ |
| 16. 即使我感到非常心烦意乱,我仍有办法用语言来表达 | ❍ | ❍ | ❍ | ❍ | ❍ |
| 17. 我想我有些情绪是坏的,或不恰当的,我不应该感到这样 | ❍ | ❍ | ❍ | ❍ | ❍ |
| 18. 我会留意艺术或大自然等视觉元素,例如:颜色、形状、质地,或光线和阴影的图案 | ❍ | ❍ | ❍ | ❍ | ❍ |
| 19. 我倾向把我的经验化为言语 | ❍ | ❍ | ❍ | ❍ | ❍ |
| 20. 当我有一些困扰的想法或影像时,我只是注意它们,并且不管它们 | ❍ | ❍ | ❍ | ❍ | ❍ |
| 21. 我发觉自己并不专注于正在做的事情 | ❍ | ❍ | ❍ | ❍ | ❍ |

在过去两星期中，你有多经常以下问题困扰？

| | 完全没有 | 几天 | 超过一半或以上的天数 | 几乎每天 |
|---|---|---|---|---|
| 做事缺兴趣或乐趣 | ❍ | ❍ | ❍ | ❍ |
| 感到低落，沮丧，或绝望 | ❍ | ❍ | ❍ | ❍ |
| 难以入睡，容易睡醒，或过度睡眠 | ❍ | ❍ | ❍ | ❍ |
| 感到疲倦和精力不足 | ❍ | ❍ | ❍ | ❍ |
| 食欲不振或过度饮食 | ❍ | ❍ | ❍ | ❍ |
| 觉得自己很差劲，觉得自己是个失败者，使自己和家人失望 | ❍ | ❍ | ❍ | ❍ |
| 难以集中精神，例如阅报和看电视 | ❍ | ❍ | ❍ | ❍ |
| 连别人也察觉得到动作或说话缓慢；或经常徘徊踱步，心绪不宁或坐立不安 | ❍ | ❍ | ❍ | ❍ |
| 有最好死去或以某些方法自残的想法 | ❍ | ❍ | ❍ | ❍ |

说明： 以下是一些人们用以描述自己的句子。 请阅读每一个句子，并在下边最能表明你现在的感受， 也就是选择你此时此刻感受的相应数字。 答案无所谓。 请不要在每个句子上花太多时间，但是要选出最能表达你现在感受的那个答案。

| | 一点也不 | 有点 | 相当 | 非常 |
|---|---|---|---|---|
| 我感到平静 | ❍ | ❍ | ❍ | ❍ |
| 我感到安全 | ❍ | ❍ | ❍ | ❍ |
| 我感到紧张 | ❍ | ❍ | ❍ | ❍ |
| 我感到很累 | ❍ | ❍ | ❍ | ❍ |
| 我感到悠闲舒适 | ❍ | ❍ | ❍ | ❍ |
| 我感到心烦意乱 | ❍ | ❍ | ❍ | ❍ |
| 我感到可能会遇到一些不幸的事情 | ❍ | ❍ | ❍ | ❍ |
| 我感到满意 | ❍ | ❍ | ❍ | ❍ |
| 我感到害怕 | ❍ | ❍ | ❍ | ❍ |
| 我感到舒服 | ❍ | ❍ | ❍ | ❍ |
| 我感到有自信心 | ❍ | ❍ | ❍ | ❍ |
| 我感到忐忑不安 | ❍ | ❍ | ❍ | ❍ |
| 我感到心神不定 | ❍ | ❍ | ❍ | ❍ |
| 我感到犹豫不决 | ❍ | ❍ | ❍ | ❍ |
| 我感到轻松 | ❍ | ❍ | ❍ | ❍ |
| 我感到心满意足 | ❍ | ❍ | ❍ | ❍ |
| 我感到忧心忡忡 | ❍ | ❍ | ❍ | ❍ |
| 我感到迷惑 | ❍ | ❍ | ❍ | ❍ |
| 我感到沉着，镇定 | ❍ | ❍ | ❍ | ❍ |
| 我感到愉快 | ❍ | ❍ | ❍ | ❍ |

请提供您的个人资讯

名字
姓氏
年龄
平均 GPA

性别

- 男性
- 女性
- 其他（请指出）_____

你是来自中国的哪个地区？

- 直辖市 _____
- 省辖市 _____
- 地级市 _____
- 镇县 _____
- 乡村 _____
- 特别行政区 _____

高中在哪里就读？

- 美国
- 中国
- 其他（请指出）_____

您的专业

感谢您参与第一份调查！接下来的两周将在每晚的八点会收到一个链接，请务必在每晚十二点之前完成问卷如有任何问题请 email 联系：wuivan@msu.edu

APPENDIX E: Daily survey (Chinese).

重要信息： 为了信息查询，请输入您的 MSU ID_____@msu.edu

整体而言，我今天觉得：

| | 非常不同意 | 有点不同意 | 不确定 | 有点同意 | 完全同意 |
|---|---|---|---|---|---|
| 我觉得精神振奋而且生机勃勃 | ❍ | ❍ | ❍ | ❍ | ❍ |
| 我觉得无精打采的 | ❍ | ❍ | ❍ | ❍ | ❍ |
| 我有时候过于兴奋，以至于想要发泄出去 | ❍ | ❍ | ❍ | ❍ | ❍ |
| 我觉得精力充沛而且受到鼓舞 | ❍ | ❍ | ❍ | ❍ | ❍ |
| 我对今天充满了期待 | ❍ | ❍ | ❍ | ❍ | ❍ |
| 我感觉头脑清醒而且专注 | ❍ | ❍ | ❍ | ❍ | ❍ |
| 我感觉自己充满了活力 | ❍ | ❍ | ❍ | ❍ | ❍ |

| | 请详述三个对你造成困扰（或持续对你造成困扰的）事件，想法，或者问题。请尽量的举出三个事件 | 我困扰是因为我来到了新的环境 | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | （请尽可能的详细描写） | 非常不同意 | 不同意 | 有点不同意 | 不确定 | 有点同意 | 同意 | 非常同意 |
| 事件/想法/问题1 | | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |
| 事件/想法/问题2 | | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |
| 事件/想法/问题3 | | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |

在你举例的三个事件，想法或问题中， 那个最令你困扰

- ❍ ${q://QID32%231/ChoiceTextEntryValue/1/1}
- ❍ ${q://QID32%231/ChoiceTextEntryValue/2/1}
- ❍ ${q://QID32%231/ChoiceTextEntryValue/3/1}

当 "${q://QID4/ChoiceGroup/SelectedChoices}"，请思考一下问题，并对下列情况做出评价

_____ 我直面问题，并解决了它
_____ 我感到压力很大

请根据下列范围去评价下列状态。 请选择最符合你想法的一个选项。当 "${q://QID4/ChoiceGroup/SelectedChoices}" 发生的时候。.

| | 完全不符合 | 有点不符合 | 有时候符合 | 经常符合 | 完全符合 |
|---|---|---|---|---|---|
| 我（对正在做的事）无法集中注意力，因为我感到担心 | ❍ | ❍ | ❍ | ❍ | ❍ |
| 我会很容易分心 | ❍ | ❍ | ❍ | ❍ | ❍ |
| 我觉得很难对正在发生的事情集中注意力 | ❍ | ❍ | ❍ | ❍ | ❍ |

"${q://QID4/ChoiceGroup/SelectedChoices}" 发生时让我觉得

| | 非常不同意 | 部分不同意 | 不确定 | 部分同意 | 非常同意 |
|---|---|---|---|---|---|
| 感到无助 | ❍ | ❍ | ❍ | ❍ | ❍ |
| 痛苦的 | ❍ | ❍ | ❍ | ❍ | ❍ |
| 烦躁的 | ❍ | ❍ | ❍ | ❍ | ❍ |
| 情绪低落的 | ❍ | ❍ | ❍ | ❍ | ❍ |
| 失望的 | ❍ | ❍ | ❍ | ❍ | ❍ |
| 满足的 | ❍ | ❍ | ❍ | ❍ | ❍ |
| 开心的 | ❍ | ❍ | ❍ | ❍ | ❍ |
| 享受的 | ❍ | ❍ | ❍ | ❍ | ❍ |
| 放松的 | ❍ | ❍ | ❍ | ❍ | ❍ |

请简单的叙述当你面对"${q://QID4/ChoiceGroup/SelectedChoices}" 的时候，你是如何减少压力呢？可以是一种行为， 也可以是一种想法。（我们想知道你如何应对压力，行为或想法，即使有时候无法控制你的压力，但也请写出来。请尽量举出四个例子。 ）

应对方法 1
应对方法 2
应对方法 3
应对方法 4

当 "${q://QID8/ChoiceTextEntryValue/1}" 发生的时候，你觉得：

| | 非常不同意 | 部分不同意 | 不确定 | 部分同意 | 非常同意 |
|---|---|---|---|---|---|
| 我直面问题，并且想要解决它 | ❍ | ❍ | ❍ | ❍ | ❍ |
| 我改变了自己的思想或者感觉 | ❍ | ❍ | ❍ | ❍ | ❍ |
| 我压抑或者避免一些想法或者感觉 | ❍ | ❍ | ❍ | ❍ | ❍ |

你使用这种应对方法的目的是什么？

❍ 直面问题，并且想要解决它
❍ 我改变了自己的思想或者感觉
❍ 我压抑或者避免一些想法或者感觉

当"${q://QID8/ChoiceTextEntryValue/2}"? 发生的时候，我觉得

| | 非常不同意 | 有点不同意 | 不确定 | 部分同意 | 非常同意 |
|---|---|---|---|---|---|
| 我直面问题，并且想要解决它 | ❍ | ❍ | ❍ | ❍ | ❍ |
| 我改变了自己的思想或者感觉 | ❍ | ❍ | ❍ | ❍ | ❍ |
| 我压抑或者避免一些想法或者感觉 | ❍ | ❍ | ❍ | ❍ | ❍ |

你使用这种应对方法的目的是什么？

❍ 我直面问题，并且想要解决它
❍ 我改变了自己的想法或者感觉
❍ 我压抑或者避免一些想法或者感觉

当 "${q://QID8/ChoiceTextEntryValue/3}"?发生的时候，你觉得：

| | 非常不同意 | 部分不同意 | 不确定 | 部分同意 | 非常同意 |
|---|---|---|---|---|---|
| 我直面问题，并且想要解决它 | ❍ | ❍ | ❍ | ❍ | ❍ |
| 我改变了自己的想法或者感觉 | ❍ | ❍ | ❍ | ❍ | ❍ |
| 我压抑或者避免一些想法或者感觉 | ❍ | ❍ | ❍ | ❍ | ❍ |

你使用这种应对方法的目的是什么？

❍ 我直面问题，并解决它
❍ 我改变了自己的想法或者感觉
❍ 我压抑或者避免一些想法或者感觉

当 "${q://QID8/ChoiceTextEntryValue/4}" 发生的时候， 你觉得：

| | 非常不同意 | 部分不同意 | 不确定 | 部分同意 | 非常同意 |
|---|---|---|---|---|---|
| 我直面问题，并解决它 | ❍ | ❍ | ❍ | ❍ | ❍ |
| 我改变了自己的想法或者感觉 | ❍ | ❍ | ❍ | ❍ | ❍ |
| 我压抑或者避免一些想法或者感觉 | ❍ | ❍ | ❍ | ❍ | ❍ |

你最初想如何控制你的压力？

❍ 我直面问题，并解决它
❍ 我改变了自己的想法或者感觉
❍ 我压抑或者避免一些想法或者感觉

非常感谢您完成今天的问卷，您的回答对我们非常重要， 谢谢。

APPENDIX F: Informed Consent (English).

Hello! We invite you to participate in 2015 MSU Chinese student's survey at the. First of all, thank you for participating in this survey led by Ivan Wu, a doctoral student at Michigan State University. He is a doctoral candidate in clinical psychology and this research is part of his dissertation.

The study explores culture, perceptions stress, mental health, and thoughts at MSU. When you decide to participate, you need to take 30 minutes to complete an online questionnaire. For two weeks, you will need complete a five-minute questionnaire every night between 8-12pm. You can complete the questionnaire on your phone, but your phone must be able to connect to the Internet, and we will need you to provide your phone number. You can also choose to use your computer to complete the questionnaires, which we will require you to provide your email address.

At the end of two weeks, you will need to complete similar to the first questionnaire. Please honestly answer each question carefully. There is no right or wrong answers. When you complete the study, you will receive an Amazon gift card. Each daily questionnaire is worth a $1 credit and the final and initial questionnaire is worth a $3 credit. If you complete all questionnaires, you will get an additional $5 Amazon gift card. Students who complete all questionnaires will receive a $25 Amazon gift card.

There is no known risk to participating in this survey. The study is limited to your daily life, how you adapt to the Michigan State University, and your opinions and views of life. Your privacy is protected to the maximum extent permitted by law. All your answers will be strictly protected. Data is on a password-protected archive computer placed in the investigators office, located in 316 Physics Rm 26, East Lansing, 48824. After data collection, personal information will be removed. Data will be stored for five years after the completion of this research project.

Your participation is voluntary. You can participate at any time refuse or withdraw from this study will not be subject to any penalties. Also, you have the right to choose to skip or refuse to answer any questions you want to answer. To ensure the quality of data, if you do not complete at least 80% of all surveys or do not fill in every question, you might not receive the $25 gift card. Your participation or withdrawal does not affect you in school or in the service of any subsidiary bodies. If you have any concerns, or wish to obtain or provide information, or wish to make complaints to this research project, you can use the following methods using your real name or an anonymous contact. MSU human research protection program: phone: 517-355-2180, email: IRB@MSU.edu, or send a letter to the 408 w. Circle Drive, 207 Olds Hall, MSU, East Lansing, MI 48824.

If you have any problem or questions (regarding negative physiological, and psychological effects of the survey), please contact Ivan Wu: 316 Physics Rm 26, East Lansing, MI 48824, wuivan@MSU.edu, (970) 984-8266.

Through the following selection "consent and voluntary participation submitted this a questionnaire", you are indicating that you are 18 years of age and understand the above information, and decided to participate in this research project.

**Ivan's information:**

**Name: 估学聪 Ivan Wu, M.A.**
**Office: Psychology Building, 316 Physics Room 26, East Lansing**
**Email: wuivan@msu.edu**
**Phone number: (970) 984-8266**

APPENDIX G: Survey Flyer (English).

MICHIGAN STATE UNIVERSITY

# 2016 MSU CHINESE INTERNATIONAL STUDENT ONLINE SURVEY

Dear students, for your college life, is there anything bothered you? Come and enjoy our research! This research program which facing Chinese freshmen student was conducted by social science college PHD student Ivan Wu. We want to know more about your life and your feeling of college life.

If you enrolled in Fall semester 2015 and enough 18 years old, you are qualified. You will finish a 30 minutes online questionnaire first. After that, it will cost you five minutes for other questionnaire. Overall, this research will cost you 1 hour to complete. You can answer the questionnaire through computer, iPad or your smart phone. When you decided to engage, there will be a research assistance contact with you and talk more about detail.

Every student who answered the questionnaire honestly and seriously will receive $ 25 Amazon gift card.

Contact information:


估学聪 **Ivan Wu**（social science college/ MSU）

WeChat：MSUPSY

E-mail：msu.cis.2015@gmail.com

Phone number：313-883-9349


APPENDIX H: Initial survey (English).

Five-Facet Mindfulness Questionnaire – Short Form (FFMQ-SF; Hou et al., 2014)

**Description:**
This instrument is based on a factor analytic study of five independently developed mindfulness questionnaires. The analysis yielded five factors that appear to represent elements of mindfulness as it is currently conceptualized. The five facets are observing, describing, acting with awareness, non-judging of inner experience, and non-reactivity to inner experience.

Please rate each of the following statements using the scale provided. Write the number in the blank that best describes your own opinion of what is generally true for you.

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| Never or very rarely true | Rarely true | Sometimes true | Often true | Very often or always true |

_____ 1. I'm good at finding words to describe my feelings.
_____ 2. When I do things, my mind wanders off and I'm easily distracted.
_____ 3. I can easily put my beliefs, opinions, and expectations into words.
_____ 4. I don't pay attention to what I'm doing because I'm daydreaming, worrying, or otherwise distracted.
_____ 5. I tell myself I shouldn't be feeling the way I'm feeling.
_____ 6. I am easily distracted.
_____ 7. I pay attention to sensations, such as the wind in my hair or sun on my face.
_____ 8. I make judgments about whether my thoughts are good or bad.
_____ 9. When I have distressing thoughts or images, I "step back" and am aware of the thought or image without getting taken over by it.
_____ 10. I pay attention to sounds, such as clocks ticking, birds chirping, or cars passing.
_____ 11. In difficult situations, I can pause without immediately reacting.
_____ 12. When I have distressing thoughts or images, I feel calm soon after.
_____ 13. I tell myself that I shouldn't be thinking the way I'm thinking.
_____ 14. I notice the smells and aromas of things.
_____ 15. Even when I'm feeling terribly upset, I can find a way to put it into words.
_____ 16. I think some of my emotions are bad or inappropriate and I shouldn't feel them.
_____ 17. I notice visual elements in art or nature, such as colors, shapes, textures, or patterns of light and shadow.
_____ 18. My natural tendency is to put my experiences into words.
_____ 19. When I have distressing thoughts or images, I just notice them and let them go.
_____ 20. I find myself doing things without paying attention.

Patient Health Questionnaire-9 (PHQ-9; Yeung et al., 2008)

| Over the last *2 weeks*, how often have you been bothered by any of the following problems? *(use "✓" to indicate your answer)* | Not at all | Several days | More than half the days | Nearly every day |
|---|---|---|---|---|
| **1.** Little interest or 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 reading the newspaper or watching television | 0 | 1 | 2 | 3 |
| **8.** Moving or speaking so slowly that other people could have noticed. Or the opposite – being so figety 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 | 0 | 1 | 2 | 3 |

State-Trait Anxiety Questionnaire

DIRECTIONS: A number of statements which people have used to describe themselves are given below. Read each statement and then circle the appropriate number to the right of the statement to indicate how you feel *right now*, that is, *at this moment.* There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe your present feelings best.

| Not At All | Somewhat | Moderately So | Very Much So |
|---|---|---|---|
| 1 | 2 | 3 | 4 |

| | | | | |
|---|---|---|---|---|
| 1. I feel calm | 1 | 2 | 3 | 4 |
| 2. I feel secure | 1 | 2 | 3 | 4 |
| 3. I am tense | 1 | 2 | 3 | 4 |
| 4. I feel strained | 1 | 2 | 3 | 4 |
| 5. I feel at ease | 1 | 2 | 3 | 4 |
| 6. I feel upset | 1 | 2 | 3 | 4 |
| 7. I am presently worrying over possible misfortunes | 1 | 2 | 3 | 4 |
| 8. I feel satisfied | 1 | 2 | 3 | 4 |
| 9. I feel frightened | 1 | 2 | 3 | 4 |
| 10. I feel comfortable | 1 | 2 | 3 | 4 |
| 11. I feel self-confident | 1 | 2 | 3 | 4 |
| 12. I feel nervous | 1 | 2 | 3 | 4 |
| 13. I am jittery | 1 | 2 | 3 | 4 |
| 14. I feel indecisive | 1 | 2 | 3 | 4 |
| 15. I am relaxed | 1 | 2 | 3 | 4 |
| 16. I feel content | 1 | 2 | 3 | 4 |
| 17. I am worried | 1 | 2 | 3 | 4 |
| 18. I feel confused | 1 | 2 | 3 | 4 |
| 19. I feel steady | 1 | 2 | 3 | 4 |
| 20. I feel pleasant | 1 | 2 | 3 | 4 |

APPENDIX I: Daily survey (English).

Right now, I feel...

| | Strongly Disagree (1) | Disagree (2) | Somewhat Disagree (3) | Neither Agree nor Disagree (4) | Somewhat Agree (5) | Agree (6) | Strongly Agree (7) |
|---|---|---|---|---|---|---|---|
| Helpless (1) | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |
| Bitter (2) | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |
| Annoyed (3) | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |
| Depressed (4) | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |
| Disappointed (5) | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |
| Contented (6) | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |
| Happy (7) | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |
| Joyful (8) | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |
| Relaxed (9) | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |

Please describe three events/thoughts/issues that bothered you or continue to bother you today (please be as descriptive as possible)

| | How much of this is related to being in a new cultural environment? | | | | |
|---|---|---|---|---|---|
| | Not at all (1) | A little (2) | Moderately (3) | Mostly (4) | Completely (5) |
| Event/thought/issue #1 (1) | ❍ | ❍ | ❍ | ❍ | ❍ |
| Event/thought/issue #2 (2) | ❍ | ❍ | ❍ | ❍ | ❍ |
| Event/thought/issue #3 (3) | ❍ | ❍ | ❍ | ❍ | ❍ |

Which was the most bothersome?

- ❍ ${q://stressor/ChoiceTextEntryValue/1} (1)
- ❍ ${q://stressor/ChoiceTextEntryValue/2} (2)
- ❍ ${q://stressor/ChoiceTextEntryValue/3} (3)

For "${q://bother/ChoiceGroup/SelectedChoices}", please consider the following questions and rate the extent to which you agree or disagree

| | Strongly Disagree (1) | Disagree (2) | Somewhat Disagree (3) | Neither Agree nor Disagree (4) | Somewhat Agree (5) | Agree (6) | Strongly Agree (7) |
|---|---|---|---|---|---|---|---|
| I was able to control the situation (1) | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |
| I was stressed (2) | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |

How did ${q://bother/ChoiceGroup/SelectedChoices} make you feel at the time?

| | Strongly Disagree (1) | Disagree (2) | Somewhat Disagree (3) | Neither Agree nor Disagree (4) | Somewhat Agree (5) | Agree (6) | Strongly Agree (7) |
|---|---|---|---|---|---|---|---|
| Helpless (1) | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |
| Bitter (2) | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |
| Annoyed (3) | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |
| Depressed (4) | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |
| Disappointed (5) | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |
| Contented (6) | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |
| Happy (7) | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |
| Joyful (8) | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |
| Relaxed (9) | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |

Describe in a few words the different thoughts or behaviors you used to manage (e.g., master, tolerate, reduce, minimize) the stress associated with "${q://bother/ChoiceGroup/SelectedChoices}". We would like to know your actual efforts made, and such thoughts or behaviors NEED NOT be completed or successful

Coping strategy 1 (1)
Coping strategy 2 (2)
Coping strategy 3 (3)
Coping strategy 4 (4)

To what extent do the following statements reflect the goal for "${q://cope/ChoiceTextEntryValue/1}"?

| | Strongly Disagree (1) | Disagree (2) | Somewhat Disagree (3) | Neither Agree nor Disagree (4) | Somewhat Agree (5) | Agree (6) | Strongly Agree (7) |
|---|---|---|---|---|---|---|---|
| I directly handled the problem (1) | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |
| I changed my thoughts or feelings (2) | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |
| I suppressed or avoided my thoughts or feeling (3) | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |

Which was your primary goal?

- ❍ I directly handled the problem (1)
- ❍ I changed my thoughts or feelings (2)
- ❍ I suppressed or avoided my thoughts or feeling (3)

Describe in a few words the different thoughts or behaviors you used to manage (e.g., master, tolerate, reduce, minimize) the stress associated with "${q://QID4/ChoiceGroup/SelectedChoices}".

To what extent do the following statements reflect the goal for "${q://cope/ChoiceTextEntryValue/2}"?

| | Strongly Disagree (1) | Disagree (2) | Somewhat Disagree (3) | Neither Agree nor Disagree (4) | Somewhat Agree (5) | Agree (6) | Strongly Agree (7) |
|---|---|---|---|---|---|---|---|
| I directly handled the problem (1) | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |
| I changed my thoughts or feelings (2) | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |
| I suppressed or avoided my thoughts or feeling (3) | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |

Describe in a few words the different thoughts or behaviors you used to manage (e.g., master, tolerate, reduce, minimize) the stress associated with "${q://QID4/ChoiceGroup/SelectedChoices}".

Which was your primary response?

- ❍ I directly handled the problem (1)
- ❍ I changed my thoughts or feelings (2)
- ❍ I suppressed or avoided my thoughts or feeling (3)

Answer If Describe in a few words the different thoughts or behaviors you used to manage (e.g., master, tolerate, reduce, minimize) the stress associated with "${q://QID4/ChoiceGroup/SelectedChoices}". We wo... Coping strategy 3 Is Not Empty

To what extent do the following statements reflect the goal for "${q://cope/ChoiceTextEntryValue/3}"?

| | Strongly Disagree (1) | Disagree (2) | Somewhat Disagree (3) | Neither Agree nor Disagree (4) | Somewhat Agree (5) | Agree (6) | Strongly Agree (7) |
|---|---|---|---|---|---|---|---|
| I directly handled the problem (1) | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |
| I changed my thoughts or feelings (2) | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |
| I suppressed or avoided my thoughts or feeling (3) | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |

Describe in a few words the different thoughts or behaviors you used to manage (e.g., master, tolerate, reduce, minimize) the stress associated with "${q://QID4/ChoiceGroup/SelectedChoices}".
Which was your primary response?

- ❍ I directly handled the problem (1)
- ❍ I changed my thoughts or feelings (2)
- ❍ I suppressed or avoided my thoughts or feeling (3)

Describe in a few words the different thoughts or behaviors you used to manage (e.g., master, tolerate, reduce, minimize) the stress associated with "${q://QID4/ChoiceGroup/SelectedChoices}".
To what extent do the following statements reflect the goal for "${q://cope/ChoiceTextEntryValue/4}"?

| | Strongly Disagree (1) | Disagree (2) | Somewhat Disagree (3) | Neither Agree nor Disagree (4) | Somewhat Agree (5) | Agree (6) | Strongly Agree (7) |
|---|---|---|---|---|---|---|---|
| I directly handled the problem (1) | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |
| I changed my thoughts or feelings (2) | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |
| I suppressed or avoided my thoughts or feeling (3) | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |

Describe in a few words the different thoughts or behaviors you used to manage (e.g., master, tolerate, reduce, minimize) the stress associated with "${q://QID4/ChoiceGroup/SelectedChoices}".

Which was your primary response?

- ❍ I directly handled the problem (1)
- ❍ I changed my thoughts or feelings (2)
- ❍ I suppressed or avoided my thoughts or feeling (3)

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