

Intergenerational Trauma and Mental Health in Asian American Immigrant Families

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1. Introduction

Asian Americans have long been an underserved and understudied group in mental health services and research. Asian Americans tend to underuse mental health services compared to the general population, with only 28% of Asian Americans with a probable diagnosis seeking mental health treatment compared to 54% of the general population (Le Meyer, Zane, Cho, & Takeuchi, 2009). Asian Americans face many barriers to accessing adequate care, including language, cultural competency of the care providers, cultural stigma around mental health, and lack of knowledge about resources and Western conceptions of mental health care (Abe-Kim et al., 2007; Sue, Cheng, Saad, & Chu, 2012). Asian Americans are also generally less satisfied with their medical care than white Americans, though use of and satisfaction with care increases with generational status, i.e. the number of generations an individual's family has been in the U.S. (Abe-Kim et al., 2007). Research and statistics on Asian Americans are often of inadequate depth because they consider Asian Americans of all backgrounds as a single monolithic group, despite their marked heterogeneity in ethnicity, language, socioeconomic status, and immigration/citizenship status. Asian Americans are also often neglected in policy considerations because of their racialization as a "model minority" (Abe-Kim et al., 2007; Hune, 2002; Sue, Cheng, Saad, & Chu, 2012).

Some studies have suggested that Asian Americans have a lower prevalence of psychological disorders than other groups. However, this generalization of Asian Americans as a "low risk group" may be influenced by the model minority myth as well as the Western perspective that dominates psychology, which may culturally bias diagnostic criteria and exclude culturally-specific manifestations of symptoms or disorders (Sue, Cheng, Saad, & Chu, 2012). For example, Asian Americans tend to report more somatic symptoms of psychological distress

and seek general medical care or non-professional support rather than services related specifically to mental health (US Department of Health and Human Services, 2001; Chu, Hsieh, & Tokars, 2011). Help-seeking and which services are used (if any) are also related to factors such as immigration status and English-language proficiency (Le Meyer, Zane, Cho, & Takeuchi, 2009). This points to a need for treatments that consider cultural differences and the unique experiences of people of color. Prevalence of mental health issues among Asian Americans may also be skewed by under-sampling of higher-risk Asian American groups and other methodological concerns (Sue, Cheng, Saad, & Chu, 2012). More research is clearly needed to address mental health disparities for the Asian American population in access to care, identification of mental health problems, and factors that influence Asian American mental health.

Research on Asian American mental health has focused primarily on factors related to cultural and racial identity. Particular focus has been given to the role of acculturation, or the adaptation of Asian Americans to mainstream U.S. culture, in Asian American mental health. Though researchers have some disagreement on the exact conceptualization and mechanisms of acculturation, studies have found that stress related to acculturation is associated with mental health issues among Asian Americans and interacts with other factors such as gender and generational status (Hwang & Ting, 2008; Chung, 2001; Miller, Yang, Farrell, & Lin, 2011). Acculturation is of special concern in the context of relationships between Asian American parents, who are often immigrants, and their children. Children typically acculturate much faster than their parents, which can cause parents and children to develop different expectations about family and parenting, for example concerning how much control parents should have over their children. Acculturative gaps between parents and children produce conflicts that are correlated

with depressive symptoms in East and Southeast Asian adolescents and young adults (Tsai-Chae & Nagata, 2008; Huang, Syed, & Takagi, 2007; Ying & Han, 2007). Indeed, the most common problem Asian American college students seeking counseling present with is parent-child conflict. This conflict often persists into young adulthood (Lee, Su, & Yoshida, 2005). Asian Americans also must cope with being excluded from mainstream U.S. culture and facing racial discrimination in the U.S., which creates additional stress for minority groups (Miller, Yang, Farrell, & Lin, 2011).

Racial and cultural identity are clearly important considerations for a population that includes so many immigrants. In 2010 the Asian American population was 59% foreign-born and Asian Americans have comprised a significant portion of immigrants to the U.S. since the 1960s. Asian American immigrants have a range of experiences, some of which include extremely stressful and potentially traumatic events. Many of these immigrants arrived as refugees, including 1.2 million immigrants from Southeast Asia following the Vietnam War, U.S. bombing of neighboring countries, and the Cambodian Genocide (Hune, 2002; Lee, 2015). Even beginning in the 1950s, many Chinese immigrants arrived in the U.S. as refugees fleeing the newly established People's Republic of China and the political violence associated with it (Hsu, 2015). With widespread war, political instability, and poverty across Asia in recent decades, many of Asian immigrant parents likely have experienced potentially traumatic events before arriving in the U.S. (Lee & Lu, 1989).

Despite the prevalence of immigrants in the Asian American population and their range of potentially traumatic experiences, little attention has been given to the intergenerational effect of family history before arrival in the United States on Asian American mental health. Previous research has examined the psychological aspects of Asian immigration in terms of acculturation

once immigrants arrive in the U.S. but not in terms of the conditions immigrants experienced in their home countries that drove them to immigrate. Upheavals like the Cambodian Genocide and the Korean War continue to haunt Asian American immigrants and have impacts on their health and family communication (Wycoff, Tinagon, & Dickson, 2011; Field, Muong, & Sochanvimean, 2013; Liem, 2007). Indeed, pre-immigration trauma is associated with higher levels of psychological stress, but there have been few studies on trauma in Asian American immigrants as a group, and none on the impacts of this trauma on subsequent generations of Asian Americans (Li & Anderson, 2015). Given the stressful and potentially traumatic circumstances that often motivate immigration, examining this aspect of Asian American identity could provide vital insight into the unique mental health needs of Asian American young adults as well as immigrant families.

Intergenerational trauma (also called historical trauma) may provide a useful framework for examining this aspect of Asian American mental health. Intergenerational trauma describes trauma that a community sharing a common social identity experiences collectively and passes on to their descendants (Evans-Campbell, 2008). Studies of Holocaust survivors and their families comprise the bulk of intergenerational trauma literature (Danieli, 1998). The effects of the trauma on the survivors impact relations with the next generation, who continue processing the trauma their parents experienced. Auerhan & Laub (1998) describe how the survivors' worldview is fundamentally shaped by the trauma and how they may perceive events in the present as reflecting their traumatic experiences. For example, survivor parents may fear that any separation from their children may be final, as was often the case in concentration camps. Thus the survivors' children may experience a "vicarious traumatization" by sensing their parents' traumas and defenses and normalizing their parents' perception of the world. Felson (1998) finds

that parents transmit their trauma to their children through direct and indirect mechanisms. Direct transmission involves the children developing similar psychological issues to their parents relating to feelings such as guilt, anxiety, depression, and aggression, though these problems are not necessarily pathological. Indirect transmission takes place primarily through parenting, for example problems the traumatized parents have with meeting the children's emotional needs and communicating with their children. For example, Yehuda, Halligan, & Grossman (2001) reported that adult children of Holocaust survivors experienced higher levels of childhood trauma with regards to emotional abuse and neglect, but not physical abuse. These differences from comparison populations were attributable to parents' PTSD. Survivors' children were also more likely to develop PTSD despite no difference from comparison populations in the other trauma they experienced in their lives.

Other research has examined intergenerational trauma specific to racial and ethnic minorities in the U.S., including African Americans descended from slaves, Native American communities living in a colonized homeland, Japanese Americans whose families experienced internment during World War II, and Cambodian Americans whose families survived the Khmer Rouge regime (see Danieli, 1998). These studies have identified several possible mechanisms for transmission of intergenerational trauma between parents and children and reflect findings also documented in the Holocaust survivor literature. Communication is a common problem in families with traumatized parents, as the parents are often reluctant to discuss their pasts with their children and may communicate in ways that convey fear, shame, and sadness around the unexplored past, or in ways that induce guilt in the non-survivor children. This can create a sense of lost or incomplete personal history and identity among the children (Liem, 2007; Nagata, 1998; Nagata, Kim, & Nguyen, 2015). Parenting practices may also be negatively impacted by

trauma and any resulting mental health disorders or symptoms the parents have, which then creates hardship for the children (Wycoff, Tinagon, & Dickson, 2011). Many traumatized parents cannot adequately meet their children's emotional needs, which can result in emotional abuse or neglect. Anxiety among daughters of Cambodian survivors correlated positively with their mothers' PTSD symptoms, and the mothers' role-reversing parenting mediated the relationship between mothers' and daughters' symptoms (Field, Muong, & Sochanvimean, 2013). For some traumatized parents, problems may escalate to the point of domestic violence or parents abandoning the family (Kinzie, Boehnlein, & Sack, 1998).

Parenting thus plays an important role in intergenerational trauma transmission. Asian American parenting practices have been studied, often in the context of model minority stereotypes of Asian parents, for example that of the overbearing "tiger parent" popularized by self-proclaimed "tiger mom" Amy Chua (Lau & Fung, 2013). Compared to their white counterparts, Asian Americans do tend to show less verbal affection to their children and more often employ an authoritarian parenting style, wherein the parents are strict and emotionally detached, as opposed to an authoritative style, in which parents are firm but warm and flexible, which has been traditionally considered to produce better outcomes for children. However, cultural and acculturative factors play an important role in what parenting styles parents use and the impacts they have on the children (Choi, Kim, Kim, & Park, 2013; Park, Kim, Chiang, & Ju, 2010). Asian cultural values typically emphasize obligation to the family, interdependence, deference to elders, and humility, and parents are expected to be more involved in their children's lives than is typical in Western societies (Farver, Xu, Bhadha, Narang, & Lieber, 2007; Choi, Kim, Kim, & Park, 2013). Park, Kim, Chiang, & Ju (2010) found that authoritarian parenting was associated with parents' adherence to Asian values. However, parenting

dimensions generally considered to have a negative impact on children's development in white American families, such as parent control, do not seem to produce similar negative outcomes in Asian American families. This suggests that the outcomes of different parenting styles may be at least partially contingent on cultural context. Moreover, parenting profiles conceptualized in a Western framework may not be well-suited to describe parenting in non-white families (Lau & Fung, 2013). For Asian American immigrant families, it is important to consider cultural factors along with circumstances related to immigration and pre-immigration trauma (Farver, Xu, Bhadha, Narang, & Lieber, 2007).

This study will provide another perspective on already-documented issues in Asian American mental health, such as immigration and family conflict, that have been thus far examined primarily through the lenses of culture. Previous research has highlighted important tensions Asian American immigrants experience once they settle in the U.S., but does not account for the lives immigrants had before they crossed the Pacific and the experiences that undoubtedly followed them to America. Continued Asian immigration to the U.S. in large numbers has not been considered together with the recent history of widespread conflict in Asia in relation to Asian American mental health, though the intergenerational trauma literature suggests these common pre-immigration stressors would impact Asian American mental health. The aims of the present study are therefore to assess the prevalence of trauma and related mental health issues among parents and children in Asian American immigrant families and to investigate the relationship between parents' trauma, children's perceptions of and relationships with their parents, and children's mental health. By examining this dimension of Asian American mental health and family life, this project seeks to provide new insight into the unique

experiences of Asian Americans that can help address the mental health needs of this underserved and often neglected population.

2. Methods

2.1 Design overview

This study involved two linked components presented in a cross-sectional survey open to Asian undergraduate students at two neighboring New England colleges. The first portion of the survey sought to examine mental health, communication, and relationships in Asian American immigrant families. The second portion consisted of an experimental manipulation that tested whether or not prompting participants to think about their parents in different ways would have an effect on their attitudes towards their parents.

2.2 Participants

Participants were eligible for this study if they identified as Asian American (i.e. were of East, South, or Southeast Asian heritage), had at least one Asian parent who immigrated to the U.S. from a home country in Asia, and were enrolled in one of the two colleges. Participants were recruited through flyers posted around campus, visits to university courses pertaining to Asian American experiences, posts in university social media groups, and emails to Asian American student organization members. Individuals interested in the study were instructed to access the survey through a link included in all advertisements. Of the 214 people who initiated the survey, approximately 100 completed the survey through the final question. N=158 subjects were included for the data analyses.

2.3 Procedures

The survey was administered online through Qualtrics survey software. The survey took approximately 45 minutes to complete and was given in English. The first screen of the survey consisted of a consent form on which participants indicated that they consented to participate in the project, after which they proceeded to the rest of the survey. As the surveys were completed electronically, participants were free to complete the survey at the time and place of their choosing. The survey was launched on October 5, 2016 and closed on December 31, 2016. To incentivize completion, all participants who completed the survey could enter a lottery for one of three \$50 Amazon gift cards. Three participants were randomly selected after the survey closing to receive the gift cards by email.

2.4 Survey Measures

Demographics. Participants self-reported their age, sex assigned at birth, gender, ethnic and racial identities, sexual orientation, birthplace, age at immigration to the U.S. (if applicable), socioeconomic background, religious affiliation, and number of siblings.

Mental health history. Subjects completed three measures of mental health. The first was the K6 screening scale, a 6-item measure for psychological distress (Kessler et al., 2010). This measure has been validated in the U.S. as well as several other countries. Participants responded to questions such as “During the past 30 days, how often did you feel nervous?” on a 4-point scale from “none of the time” to “all of the time.” They then completed the Center for Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977), a 20-item measure of depression symptoms experienced in the past week. Participants rated items (e.g. “I felt that everything I did was an effort”) on a 4-point scale from “not at all” to “a lot.” Finally, subjects

completed the short form of the Revised Children's Manifest Anxiety Scale (RCMAS; Reynolds & Richmond, 1985), a measure to assess anxiety symptoms in the past month. One item was removed because it was redundant and inapplicable to college students ("I fear other kids will laugh at me in class"; another item read "I fear other people will laugh at me"). Participants answered each item "yes" or "no."

Trauma exposure. Participants completed the Trauma History Questionnaire (THQ; Hooper, Stockton, & Green, 2011), which was slightly modified for length and to include an item concerning emotional abuse ("Has anyone (e.g. a parent or romantic partner) ever used threats, insults, put-downs, constant monitoring, humiliation, intimidation, isolation, or stalking to make you consistently fearful or self-doubting?"). The THQ was designed to measure exposure to events that could be traumatic and has been shown to be reliable and valid for clinical and non-clinical populations. For the 23 items, participants indicated whether or not the described event happened to them ("yes" or "no"). For events that did occur, participants entered how many times it occurred and the approximate ages of the occurrences.

Family conflict. Participants completed the Asian American Family Conflicts Scale to assess conflicts due to acculturative differences between parents and children (Lee, Choe, Kim, & Ngo, 2000). The scale has been shown to be reliable and valid with Asian American college students. Participants rated 10 statements describing common conflicts in Asian American families (e.g. "Your parents argue that they show you love by housing, feeding, and educating you, but you wish they would show more physical and verbal signs of affection"). After reading each item, participants responded on two 5-point scales: Likelihood of the item ("almost never" to "almost always") and Seriousness of the item ("not at all" to "extremely"). These two measures were highly correlated for each item ($r = 0.840, p < 0.01$), and thus both the likelihood

and seriousness responses for each item were averaged to form one composite family conflict score for analysis.

Parent demographics. Participants reported their parents' marital status, age, gender, race/ethnicity, religious affiliation, birth country, year of immigration, education level, and occupation at three time points: before immigration, immediately after immigration, and currently.

Parents' communication about pre-immigration experiences. Based on a section from Nagata (1993), this section assessed participants' perceptions of their parents' communication about the past. First, participants rated the frequency their parents' communication about past personal events (e.g. "How often do your parents tell a story about or discuss their indirect experience with a regionally significant event?"). Participants then answered questions about their interest in parents' pasts, how often and how long parents would discuss their pasts, who would bring up the subject, which parent discussed their past more frequently, and how comfortable participants were discussing their family's past or the histories of their parents' home countries with their parents, relatives, other Asian Americans, and other social groups.

Using a measure based on Field, Muong, & Sochanvimean (2013), participants reported their parents' pre-immigration trauma exposure. Items included torture, poverty, forced relocation, witnessing violence, and living through a major regional upheaval such as war. Participants indicated whether Parent 1, Parent 2, or neither parent had experienced each item or answered "unsure/don't know."

Participants then completed a measure assessing barriers to communication with their parents about the past. Participants rated how much they agreed with twenty-two statements, including ones from another section of Nagata (1993) (e.g. "My parents do not seem to want to

talk about their pasts”) as well as some added items (e.g. “There is a language barrier between me and my parents.”). These questions reflected how participants felt about their parents’ communication, their knowledge of their parents’ pasts, and how these issues related to their sense of identity.

Parenting styles. Subjects completed the Parental Bonding Instrument (PBI; Parker, Tupling, & Brown, 1979) and the Relationship with Parents Scale (RPS; Alexander, 2003) to measure overprotective and rejecting parenting and role-reversing parenting respectively. The PBI measures parenting styles over the first 16 years of life. It consists of 25 items (12 for rejecting parenting and 13 for overprotective parenting) for each parent (e.g. “My parent tried to make me feel dependent on them”). Each item was rated on a 4-point scale from “very uncharacteristic” to “very characteristic.” The RPS is comprised of 21 items (e.g. “My parent confided in me more than they did in anyone else”) rated on a 5-point scale from “strongly disagree” to “strongly agree.” Participants rated each parent separately for each item, and were instructed to answer according to their childhood and adolescence experiences (approximately ages 0-18 years). Due to high correlations (overprotective parenting: $r = 0.578, p < 0.01$; rejecting parenting: $r = 0.455, p < 0.01$; role-reversing parenting: $r = 0.696, p < 0.01$), responses for Parent 1 and Parent 2 were averaged into composite scores for each parenting style.

Positivity exercise. In the final part of the survey, participants completed a “three good things” activity to reduce any negative emotions they may have experienced from answering the survey questions (The Greater Good Science Center, 2017). Participants were instructed to list three good things that had happened to them recently, which could be anything from small pleasures to major events, and then write how and why these things occurred and what role other people played in them. This was designed to improve the participants’ moods and foster a sense

of positive connection to others after such extensive reflection on potentially negative relationships or interactions with their parents. At the completion of the survey, participants were shown a page that listed several on- and off-campus resources they could use if they needed additional support.

2.5 Experimental manipulation

As noted, this study comprised two linked components. An experimental manipulation was embedded into survey and was designed to examine whether or not priming participants to think of their parents in a sympathetic or antagonistic context would lead to different assessments about the quality of their parents' communication with them. To manipulate the independent variable, participants were randomly assigned by the survey software program to answer one of two free response questions. One question asked subjects to write down everything they knew about their parents' lives before they immigrated to the U.S., while the other asked subjects to recall all the major conflicts they had had with their parents. After taking a few minutes to write their responses, subjects rated how confident they were recalling the information and then completed the Parent-Adolescent Communication Scale (Barnes & Olson, 1982). The scale is comprised of 21 items concerning openness of communication (e.g. "My parent is always a good listener") and problems in communication (e.g. "I am sometimes afraid to ask my parent for what I want"). Participants rated each item on a 5-point scale from "strongly disagree" to "strongly agree." It was hypothesized that participants primed to think of their parents in a sympathetic way would rate their parents more favorably in the parent-child communication measure. Conversely, it was hypothesized that participants who were primed to think of their parents in an antagonistic way would rate their parents less favorably on this measure.

3. Results

3.1 Participant characteristics

Table 1 shows the demographic characteristics of N=158 study participants. The mean age was 19.34 years (SD=1.374), with all participants being between 17 and 25 years old. Participants were divided into four mutually exclusive groups based on ethnicity: South Asian (8.9%), Southeast Asian (19.0%), East Asian (56.3%), and multiethnic Asian (15.8%). Overall, 11.4% of participants were multiracial. The majority of subjects (82.9%) were born in the U.S. Most participants were also women (69.0%), while 22.8% identified as men and 3.8% identified as agender, genderfluid, nonbinary, or gender questioning. In terms of sexual orientation, 36.1% of participants identified as LGBTQA+ (lesbian, gay, bisexual, queer/questioning, asexual, and other non-heterosexual orientations). Just over half (51.9%) of participants reported their socioeconomic status growing up as upper middle class, while 4.4%, 13.3%, 20.2%, and 7.0% reported being poverty class, working class, lower middle class, and upper class respectively. Based on validated cutoffs, the depression and psychological distress variables were dichotomized to indicate whether participants met criteria for high psychological distress or risk of depression. Almost a quarter of participants (23.4%) scored as experiencing high psychological distress and almost two thirds (65.8%) were at risk for depression.

3.2 Bivariate correlates of depression and psychological distress

Table 1 also presents bivariate correlates of psychological distress and risk of depression, both of which were categorized into dichotomous variables (high vs. low) based on validated cut-off scores (≥ 13 for psychological distress and ≥ 16 for depression; Kessler et al., 2010; Radloff, 1977). Two of nine variables were significantly associated with depression:

psychological distress and sexual orientation. Specifically, being at risk of depression was correlated with high psychological distress and being LGBTQA+. Four of nine variables were significantly associated with psychological distress: depression, sexual orientation, gender, and socioeconomic status. Specifically, high psychological distress was correlated with being at risk of depression, being LGBTQA+, being agender, genderfluid, nonbinary, or questioning, and having a poverty class background.

3.3 Correlations among the variables

Table 2 shows the intercorrelations among all key variables examined in this analysis. All four psychological outcome measures (psychological distress, anxiety, depression, and trauma) had significant positive correlations with each other. In addition, psychological distress was associated with higher levels of overprotective parenting, role-reversing parenting, family conflict, barriers to communication with parents about the past, and sexual orientation, and lower levels of parent care. Anxiety was associated with higher levels of overprotective parenting, role-reversing parenting, family conflict, barriers to communication, and sexual orientation. Depression was positively associated with overprotective parenting, role-reversing parenting, family conflict, barriers to communication with parents about the past, and sexual orientation, and negatively correlated with parent care. Trauma was positively correlated with overprotective parenting, role-reversing parenting, family conflict, barriers to communication with parents about the past, sexual orientation, and parent trauma, and negatively correlated with parent care.

In addition to the correlations found with the four mental health outcome measures for the participants, parents' trauma exposure was positively correlated with parent overprotection, family conflict, barriers to communication, and the child's age, and negatively correlated with

parent care and socioeconomic status. It was not significantly correlated with role-reversing parenting. Overprotective parenting and role-reversing parenting were positively correlated with each other as well as with family conflict and barriers to communication, and were both negatively correlated with parent care. Parent care was negatively correlated with family conflict, barriers to communication, and the child's sexual orientation, and positively correlated with socioeconomic status.

3.4 Correlates of psychological distress, anxiety, depression, and trauma

Tables 3-6 present multivariate correlates of each of the four psychological outcome variables—psychological distress, anxiety, depression, and trauma—based on OLS regression. Variables that had a bivariate association with each outcome at the $p < 0.05$ level were entered into the respective regression model (Hosmer & Lemeshow, 2013). Each table presents the variables that were entered into each model (based on a bivariate association with the respective outcome), and the model fit statistics. Table 3 presents the OLS regression model predicting psychological distress ($R^2 = 0.251$). Of four variables entered into the model, only sexual orientation was significant ($\beta = 0.28, p < 0.001$), adjusting for all other co-variables in the model. However, overprotecting parenting was marginally significant ($\beta = 0.112, p = 0.07$). Table 4 presents the OLS regression model predicting anxiety ($R^2 = 0.208$). Of the four variables entered into the model, role-reversing parenting was significant ($\beta = 0.032, p = 0.04$) and sexual orientation ($\beta = 0.572, p = 0.07$) was marginally significant. Table 5 shows the OLS regression model predicting depression ($R^2 = 0.471$). Of the five variables entered into the model, being male (as compared to being agender, genderfluid, nonbinary, or questioning) was significant, ($\beta = -0.513, p = 0.01$), while overprotective parenting was marginally significant ($\beta = 0.478, p =$

0.07). Finally, Table 6 shows the OLS regression model for trauma exposure ($R^2 = 0.378$). Of the six variables entered into the model, three were significant: parent care ($\beta = -0.231, p = 0.03$), parents' trauma ($\beta = 0.202, p = 0.02$), and role-reversing parenting ($\beta = 0.239, p = 0.02$). Family conflict was marginally significant ($\beta = 0.063, p = 0.09$).

3.5 Experimental manipulation: Effects on parent-child communication scores

A t-test was conducted to determine if there were differences between priming participants to think about their parents' pre-immigration pasts (versus asking them to remember their communication conflicts) on the Parent-Adolescent Communication Scale. The mean score on the measure for participants in the immigration priming condition was 64.91 (SD = 18.88) for Parent 1 and 62.26 (SD = 16.06), while the mean score for participants in the conflict priming condition was 64.76 (SD = 16.71) for Parent 1 and 65.42 (SD = 13.78) for Parent 2. As shown in Table 7, there was no significant difference between scores for either parent in the two groups.

4. Discussion

This study sought to investigate intergenerational trauma in Asian American immigrant families by examining parent-child relationships and communication about the past, parent trauma, and children's mental health. Participants showed high rates of high psychological distress (23.4%) and risk for depression (65.8%), pointing to significant and likely unaddressed mental health issues among Asian American college students. Overall, the findings showed support for intergenerational transmission of trauma, as there was a significant relationship between parents' trauma exposure and participants' trauma exposure over and above other parenting factors. However, other parenting factors were also independently associated with participants' trauma exposure, including parent care (an inverse measure of rejecting parenting),

and parent role reversal. All the variables in the participant trauma exposure model were parent-related and together these factors explained 37.8% of the variance in participant trauma exposure, suggesting a link between parent trauma, parenting, and children's trauma. In addition to parenting factors, independent correlates of psychological distress and depression included demographic characteristics such as sexual orientation and gender, respectively, indicating that risk for mental health issues is greater for Asian Americans who also hold other marginalized identities (e.g. non-heterosexual orientations and non-cisgender identities).

Parents' trauma exposure was shown to be very related to parent-child relational factors. Parent trauma was positively correlated with overprotective parenting, family conflict, and barriers to communication, and negatively correlated with parent care (rejecting parenting). No correlation was found between parent trauma and role-reversing parenting. This is unlike the findings in Field, Muong, & Sochanvimean (2013), which indicated a correlation between parent trauma exposure and role reversing parenting, but not overprotective or rejecting parenting for the Cambodian sample and no significant correlations between parent trauma exposure and parenting styles in the Cambodian American sample. Field et al. (2013)'s analysis, however, found strong correlations between parents' PTSD symptom scores and role reversing and rejecting parenting, and that role-reversing parenting mediated the effect of parents' PTSD symptoms on the child's mental health. Together, these data suggest that different aspects of trauma (exposure to traumatic events versus post-traumatic symptomology) may have different effects on parenting and relating to one's children. Perhaps exposure to traumatic events creates a general sense of danger in the world and encourages overprotective parenting while experiencing post-traumatic stress symptoms has psychological and emotional impacts that encourage role-reversing parenting. Further research should investigate these nuances.

Parent trauma was shown to be independently correlated with the participants' trauma, pointing to an intergenerational linking of trauma experiences. This parent-child correspondence of trauma is noteworthy because this study used measures of trauma exposure as opposed to post-traumatic symptoms, and both measures were reported by the participant. That is, in the present study there was an independent correlation between the number of different pre-immigration traumas participants reported that their parents experienced and the number of different traumas the participants self-reported experiencing in their own lives. Previous research has suggested that children of Holocaust survivors are more likely to develop PTSD despite experiencing similar incidence of trauma to comparison populations (Yehuda, Halligan, & Grossman, 2001). The present findings, however, indicate that participants who reported affirmative knowledge of more parental trauma exposure also reported more personal trauma exposure. Perhaps the participant's knowledge of their parents' trauma plays a role in their conceptualization of their own experiences, or puts them at greater risk to be in certain traumatic situations. In accordance with Yehuda, Halligan, & Grossman (2001) and Field et al. (2013), it may be the case that greater parental trauma exposure results in more trauma for the children due to maltreatment by the parents or other difficulties traumatized parents have in relating to and communicating with their children. It is also interesting that parent trauma is also positively associated with the participants' age, despite the narrow age range included in the study, suggesting that the children gain knowledge of their parents' traumatic experiences as they grow older.

Parent care (inverse of rejecting parenting) and role-reversing parenting were also independently correlated with participants' trauma exposure. This further suggests a link between parents and their children's experiences of trauma, which in turn affects the children's

mental health. Rejecting parenting and role-reversing parenting were the two parenting styles Field et al. (2013) identified as playing a role in intergenerational trauma transmission, and in the present study they are shown to be related to the child's trauma exposure, while overprotective parenting is not implicated in either case. The parents' experience of PTSD symptoms may be a missing link not captured in this study, connecting parent trauma exposure, rejecting and role-reversing parenting, and children's trauma exposure. Further research into this intergenerational connection should include reporting from the parents on their trauma exposure and PTSD symptoms to elucidate these connection. It would be important to determine the site of the children's trauma, that is whether the trauma is experienced as a result of the rejecting and role-reversing parenting or other parenting issues, or if children are more at risk in other ways. Previous research on intergenerational trauma in Asian American subgroups point to issues in parent-child communication and relationships as potential sites of transmitted trauma (Nagata, 1993; Nagata, 1998; Nagata, Kim, & Nguyen, 2014; Field, Muong, & Sochanvimean, 2013; Wycoff, Tinagon, & Dickson, 2011; Kinzie, Boehnlein, & Sack, 1998). Problems in parent-child relationships stemming from parent trauma may be further aggravated by acculturative issues, such as differing cultural expectations between parents and children of how parents should show affection and how much control parents should have (Farver, Xu, Bhadha, Narang, & Lieber, 2007; Choi, Kim, Kim, & Park, 2013; Park, Kim, Chiang, & Ju, 2010).

For the experimental manipulation, it was hypothesized that participants primed to think of their parents sympathetically (in the context of their parents' immigration experiences) would score their parents more positively on the Parent Adolescent Communication Scale than participants who were primed to think of their parents antagonistically (in terms of their conflicts with their parents). The data did not support the hypothesis, as there was no difference found

between the scores of the immigration priming group and the conflict priming group. This may indicate that the manipulation was not strong enough, or may have been less effective because of its placement at the end of the survey, at which point the participants' fatigue may have dampened the emotional impact of the writing exercise. Alternatively, this could indicate that thinking about their parents' immigrant experiences and thinking about their conflicts with their parents made the participants feel similarly about the quality of their communication with their parents., which would suggest that thinking about their parents' immigration experiences did not necessarily make children feel more positively about their parents. Further research could examine how changing children's perspectives on their parents may affect their evaluation of their parents' communication or overall parenting, and what the clinical implications of these effects may be.

This study has several limitations. All subjects were students at highly selective institutions of higher education, placing certain demographic restrictions on the sample. Students at elite universities are more likely to be of a higher socioeconomic background and have parents who are professionals, which may have limited the subject pool to a more narrow range of immigrant experiences. In the present study, there was a negative correlation between parent trauma and socioeconomic status and experiencing high psychological distress was associated with being of a lower socioeconomic status, suggesting that class is an important demographic consideration in Asian American mental health. The study also only included participants of a narrow age range (17-25 years), limiting the developmental scope and historical context for the experiences included. The sample was also predominantly women (69.0%) and East Asian (56.3%, not including multiethnic East Asians). These demographics are thus not likely reflective of the Asian American population more generally, or even of Asian American college

students. The larger body of research on Asian Americans is also focused largely on East Asians and Southeast Asians. Moving forward it will be important to be inclusive of all Asian Americans along ethnic and socioeconomic lines in order to get a more complete picture of Asian American experiences.

The survey was cross-sectional, so temporal and causal relationships cannot be inferred, and the survey relied solely on self-reports by participants. Self-reports may present problems, particularly in terms of measuring mental health issues, as they are vulnerable to recall bias or subjective states at the time the measure was completed. They may have also been subject to desirability issues with regards to reporting on their parents in that participants may have been reluctant to represent their parents in negative ways. There are also self-selection issues; i.e. individuals who had experienced issues with mental health or family relationships were likely more inclined to participate in this study. The sample was also predominately women, and Asian American women may be at greater risk for mental health issues like suicidal ideation than Asian American men (Sue, Cheng, Saad, & Chu, 2012). Since the survey relied solely on the reports of the participants, measures pertaining to the parents also only included the children's perspectives and knowledge. As previously noted, future research should include participation by the parents for more direct measures of parents' experiences and health. The mental health measures used in the survey also were developed primarily for white American populations and thus may not be adequately sensitive to manifestations of mental health issues in Asian American populations (Sue, Cheng, Saad, & Chu, 2012).

These findings raise further questions in Asian American mental health research, particularly in terms of the intergenerational effects of trauma. As previously noted, future research should investigate the nuances of how different aspects of parent trauma (i.e. trauma

exposure and post-traumatic stress symptoms) relate to children's trauma and mental health as well as parenting styles and communication. The present study suggests that parent trauma exposure as reported by the child has some bearing on the child's own trauma exposure, whereas previous research such as Field et al. (2013) and Yehuda et al. (2001) has emphasized the role of parents' experience of PTSD symptoms. However, the present study also suggests a linkage between parent trauma exposure and parent PTSD symptoms, as children's trauma exposure was independently correlated with parent trauma exposure as well as the two parenting styles (rejecting and role-reversing parenting) Field et al. (2013) identified as related to mothers' PTSD symptoms and their impact on their children's mental health. Participant trauma exposure was also independently correlated with barriers to communication with parents about the past, pointing to parent-child communication as a potential site for intergenerational trauma transmission tied to parenting. As Field et al. (2013) suggest, the manner in which parents communicate with their children about their experiences may be an important part of how these different parenting styles manifest and impact children's mental health; for example, disclosing past traumas to the child for the purposes of seeking emotional support from the child may constitute role-reversing parenting, whereas trauma disclosure for the purposes of educating the child about their history would facilitate better adjustment. Future research could take further steps to illuminate the mechanisms of intergenerational trauma transmission through parenting and communication.

This project suggests that the framework of intergenerational trauma can indeed be applied Asian American immigrant families overall, but as Asian Americans are very diverse it will also be important to examine Asian American subgroups individually to capture the historical specificities of these events and how they impacted individuals and families. Future

research could also consider intergenerational effects of historical events past the second generation. Many historical upheavals in Asia took place during the World War II and Cold War eras. For many of the participants of this study, it might therefore be their grandparents rather than their parents who experienced events like the Cultural Revolution, the India/Pakistan Partition, or the Korean War (Hsu, 2015; Zamindar, 2007; Liem, 2007; Lee, 2015).

Intergenerational trauma research on groups such as Native Americans show that trauma continues to compound and affect communities over hundreds of years (Duran, Duran, Yellow Horse Brave Heart, & Yellow Horse-Davis, 1998; Evans-Campbell, 2008). It would be revealing to look at individual family histories in more detail to examine how the transmission of intergenerational trauma shifts over successive generations and trace how these events become incorporated into people's identities across generations. Inclusion of the immigrant parents in future studies would also help in this regard, as they would also be able to provide insight into how their own parents' experiences in their homelands affected them and their relationships with their parents.

This study points to the importance of considering intergenerational trauma and parent-child relationships in assessment and treatment of mental health issues in Asian American populations. The data suggest that issues in parent-child relationships and more specifically communication play an important role in Asian American mental health. This study also demonstrates that these parent-child relational factors are tied to intergenerational trauma, as parent trauma exposure was independently associated with the participants' own trauma exposure and was positively correlated with overprotective parenting, rejecting parenting, family conflict, and barriers to communication with parents. Clinicians should be mindful of how these issues may relate to the family situations of their young Asian American clients. These findings

also suggest that support for parents may be important for the health of Asian American immigrant families, as parenting styles and the nature of parent-child communication, particularly about the past, may be major interrelated mechanisms for intergenerational trauma transmission. As suggested by other researchers, it may be helpful to facilitate public and family dialogue around traumatic historical events to address the psychological consequences of maintaining silence about trauma or communicating about trauma ineffectively (Liem, 2007; Nagata, 1998; Nagata, Kim, & Nguyen, 2015). Overall, this study demonstrates the importance of a more holistic approach to Asian American mental health that considers not only general cultural and social factors but also shared and individual family histories that reach beyond the borders of the United States.

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Table 1. Participant characteristics (n=158)

| Characteristic | % | (n) | Depression 65.8% (n=158) | | Psychological Distress 23.4% (n=158) | |
|---|------|-------|-----------------------------|------|---|------|
| | | | % | (n) | % | (n) |
| Depression | | | | | | |
| Not depressed | 34.2 | (54) | — | — | 0.0 | (0) |
| Risk of depression | 65.8 | (104) | — | — | 35.6 | (37) |
| Psychological distress | | | | | | |
| Low psychological distress | 76.6 | (121) | 55.4 | (67) | — | — |
| High psychological distress | 23.4 | (37) | 100.0 | (37) | — | — |
| Age (M, SD = 19.34, 1.374) | | | | | | |
| 17-18 | 36.1 | (57) | 59.6 | (34) | 22.8 | (13) |
| 19 | 22.8 | (36) | 69.4 | (25) | 19.4 | (7) |
| 20 | 19.6 | (31) | 71.0 | (22) | 29.0 | (9) |
| 21-25 | 21.5 | (34) | 67.6 | (23) | 23.5 | (8) |
| Ethnicity | | | | | | |
| South Asian | 8.9 | (14) | 78.6 | (11) | 21.4 | (3) |
| Southeast Asian | 19.0 | (30) | 73.3 | (22) | 30.0 | (9) |
| East Asian | 56.3 | (89) | 61.8 | (55) | 21.3 | (19) |
| Multiethnic | 15.8 | (25) | 64.0 | (16) | 24.0 | (6) |
| Multiracial | | | | | | |
| No | 88.6 | (140) | 65.7 | (92) | 24.3 | (34) |
| Yes | 11.4 | (18) | 66.7 | (12) | 16.7 | (3) |
| Sexual orientation | | | | | | |
| Heterosexual | 63.9 | (101) | 54.5 | (55) | 15.8 | (16) |
| LGBQA+ | 36.1 | (57) | 86.0 | (49) | 36.8 | (21) |
| Gender n=151 | | | | | | |
| Agender/genderfluid/nonbinary/questioning | 3.8 | (6) | 100.0 | (6) | 66.7 | (4) |
| Female/woman | 69.0 | (109) | 67.9 | (74) | 22.0 | (24) |
| Male/man | 22.8 | (36) | 55.6 | (20) | 19.4 | (7) |
| Sex assigned at birth | | | | | | |
| Male | 24.7 | (39) | 53.8 | (21) | 17.9 | (7) |
| Female | 75.3 | (119) | 69.7 | (84) | 25.2 | (30) |
| Socioeconomic status n=156 | | | | | | |
| Poverty class | 4.4 | (7) | 71.4 | (5) | 57.1 | (4) |
| Working class | 13.3 | (21) | 61.9 | (13) | 23.8 | (5) |
| Lower middle class | 20.2 | (32) | 68.8 | (22) | 34.4 | (11) |
| Upper middle class | 51.9 | (82) | 65.9 | (54) | 19.5 | (16) |
| Upper class | 7.0 | (11) | 63.6 | (7) | 0.0 | (0) |
| Unsure | 1.9 | (3) | 66.7 | (2) | 0.0 | (0) |
| Born in the United States | | | | | | |
| No | 17.1 | (27) | 74.1 | (20) | 22.2 | (6) |
| Yes | 82.9 | (131) | 64.1 | (84) | 23.7 | (31) |

Notes: South Asian included Bangladeshi, Bhutanese, Indian, Maldivian, Nepalese, Pakistani and Sri Lankan ethnicities; Southeast Asian included Burmese, Cambodian, Filipino, Hmong, Indonesian, Laotian, Malaysian, Singaporean, Thai, and Vietnamese ethnicities; and East Asian included Chinese, Japanese, Korean, Mongolian, Okinawan, Taiwanese, and Tibetan ethnicities. Multiethnic included any participants who indicated being of more than one ethnicity.

Depression was measured with the Center for Epidemiologic Studies Depression Scale and dichotomized using its cutoff score of ≥ 16 indicating risk for depression.

Psychological distress was measured with the K6 screening scale and dichotomized using the cutoff score of ≥ 13 indicating high psychological distress.

Table 2. Correlation matrix of included variables

| | Psychological distress | Anxiety | Depression | Trauma | Parent overprotection | Parent care | Parent trauma | Parent role-reversal | Family conflict | Barriers to communication | US-born | Age | Sexual orientation | Socioeconomic status |
|---------------------------|------------------------|---------|------------|---------|-----------------------|-------------|---------------|----------------------|-----------------|---------------------------|---------|--------|--------------------|----------------------|
| Psychological distress | — | .534** | .803** | .276** | .348** | -.305** | 0.127 | .237* | .375** | .212* | 0.031 | 0.004 | .330** | -0.158 |
| Anxiety | .534** | — | .571** | .309** | .320** | -0.09 | 0.015 | .374** | .310** | .210* | -0.055 | -0.059 | .209** | -0.016 |
| Depression | .803** | .571** | — | .333** | .310** | -.294** | 0.062 | .208* | .369** | .200* | -0.031 | 0.053 | .322** | -0.085 |
| Trauma | .276** | .309** | .333** | — | .263** | -.520** | .222** | .477** | .534** | .334** | -0.023 | 0.074 | .253** | -0.133 |
| Parent overprotection | .348** | .320** | .310** | .263** | — | -.279** | .220* | .365** | .621** | .279** | 0.101 | 0.135 | 0.122 | 0.03 |
| Parent care | -.305** | -0.09 | -.294** | -.520** | -.279** | — | -.226* | -.418** | -.557** | -.482** | 0.047 | -0.178 | -.260** | .279** |
| Parent trauma | 0.127 | 0.015 | 0.062 | .222** | .220* | -.226* | — | 0.167 | .201* | .243** | -0.055 | .262** | 0.003 | -.284** |
| Parent role-reversal | .237* | .374** | .208* | .477** | .365** | -.418** | 0.167 | — | .534** | .317** | 0.065 | -0.005 | 0.128 | -.349** |
| Family conflict | .375** | .310** | .369** | .534** | .621** | -.557** | .201* | .534** | — | .384** | -0.042 | 0.063 | 0.106 | -0.17 |
| Barriers to communication | .212* | .210* | .200* | .334** | .279** | -.482** | .243** | .317** | .384** | — | -0.166 | 0.057 | 0.119 | -.291** |
| US-born | 0.031 | -0.055 | -0.031 | -0.023 | 0.101 | 0.047 | -0.055 | 0.065 | -0.042 | -0.166 | — | -0.114 | 0.051 | .175* |
| Age | 0.004 | -0.059 | 0.053 | 0.074 | 0.135 | -0.178 | .262** | -0.005 | 0.063 | 0.057 | -0.114 | — | -0.061 | -.169* |
| Sexual orientation | .330** | .209** | .322** | .253** | 0.122 | -.260** | 0.003 | 0.128 | 0.106 | 0.119 | 0.051 | -0.061 | — | -0.006 |
| Socioeconomic status | -0.158 | -0.016 | -0.085 | -0.133 | 0.03 | .279** | -.284** | -.349** | -0.17 | -.291** | .175* | -.169* | -0.006 | — |

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Table 3. Independent Correlates of Psychological Distress (K6) in OLS Regression

| <i>Covariates</i> | <i>B</i> | β | <i>p</i> |
|-----------------------|----------|---------|----------------------|
| Parent overprotection | 0.112 | 0.199 | 0.07 ⁺ |
| Parent care | -0.020 | -0.035 | 0.74 |
| Family conflict | 0.091 | 0.190 | 0.134 |
| Sexual orientation | 1.877 | 0.285 | <0.001 ^{**} |

Table 4. Independent Correlates of Anxiety (RCMAS) in OLS Regression

| <i>Covariates</i> | <i>B</i> | β | <i>p</i> |
|-----------------------|----------|---------|-------------------|
| Parent overprotection | 0.071 | 0.236 | 0.13 |
| Parent role-reversal | 0.032 | 0.233 | 0.04 [*] |
| Family conflict | 0.004 | 0.017 | 0.13 |
| Sexual orientation | 0.573 | 0.170 | 0.07 ⁺ |

Table 5. Independent Correlates of Depression (CES-D) in OLS Regression

| <i>Covariates</i> | <i>B</i> | β | <i>p</i> |
|---------------------------|----------|---------|--------------------|
| Parent overprotection | 0.478 | 0.341 | 0.07 ⁺ |
| Parent care | 0.107 | 0.070 | 0.70 |
| Family conflict | 0.153 | 0.111 | 0.56 |
| Sexual orientation | 3.044 | 0.184 | 0.30 |
| Gender: male ^a | -14.190 | -0.513 | 0.01 ^{**} |

^a Reference group = agender/genderfluid/nonbinary/questioning

Table 6. Independent Correlates of Trauma Exposure (THQ) in OLS Regression

| <i>Covariates</i> | <i>B</i> | β | <i>p</i> |
|---------------------------|----------|---------|-------------------|
| Parent overprotection | -0.018 | -0.054 | 0.62 |
| Parent care | -0.077 | -0.231 | 0.03 [*] |
| Parent trauma | 0.151 | 0.202 | 0.02 [*] |
| Parent role-reversal | 0.036 | 0.239 | 0.02 [*] |
| Family conflict | 0.063 | 0.227 | 0.09 ⁺ |
| Barriers to communication | 0.001 | 0.004 | 0.97 |

^{**} Significant at the ≤ 0.01 level

^{*} Significant at the ≤ 0.05 level

⁺ Marginally significant

Table 7. *t*-test for equality of means

| | <i>t</i> | <i>df</i> | <i>p</i> | Mean Score (SD) | Std. Error Difference | 95% Confidence Interval of the Difference | |
|---|----------|-----------|----------|--------------------------------|--------------------------|--|---------|
| | | | | | | Lower | Upper |
| Parent-child communication (Parent 1) | 0.042 | 105 | 0.966 | 64.91 (18.88) 64.76 (16.71) | 3.4602 | -6.71493 | 7.00695 |
| Parent-child communication (Parent 2) | -1.059 | 100 | 0.292 | 62.26 (16.06) 65.42 (13.78) | 2.98207 | -9.07375 | 2.75894 |