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**PERFECTIONISM AND FAMILY EXPECTATIONS IN ASIAN INDIANS: HOW
THESE VARIABLES RELATE TO ACCULTURATION AND MENTAL HEALTH**

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by

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Abstract

This study sought to examine the effects of perceived Individual Discrepancy, as measured by the APS-R, Family Discrepancy, as measured by the APS-F and Adherence to Asian Values, as measured by the AVS, on the mental health among Asian Indians living in the United States. The interaction of Discrepancy (both individual and family) and Adherence to Asian Values, in addition to generation status and the relationship to mental health were also examined.

Hierarchical multiple regression analysis was chosen as the method for analysis because it allows the researcher to include main effect terms in the first model, and any other terms in the second model to explain the variance over and above that already explained by the main effect terms (Tabachnick & Fidell, 2001). Thus, Individual Discrepancy, Family Discrepancy, and Adherence to Asian Values were put in the first block, and the interactions and generation status were put in the second block. As hypothesized, both Individual and Family Discrepancy were significant predictors of depression and anxiety. Only Individual Discrepancy was predictive of self-esteem. Adherence to Asian Values did not predict self-esteem, anxiety, or depression. Generation status, and the interactions between Individual Discrepancy and Adherence to Asian Values, and Family Discrepancy and Adherence to Asian Values were not significant predictors of self-esteem, depression or anxiety.

This study provided additional support for the Discrepancy scale of the Almost Perfect Scale-Revised and the Almost Perfect Scale-Family (APS-R, APS-F). The results overall provided support for past studies which indicate that Individual Discrepancy is negatively related to mental health. Moreover, the perception that participants were not meeting family expectations was also negatively related to mental health. Understanding Asian Indians' self-

expectations and family expectations can help mental health professionals gain more insight into the needs and issues of Asian Indians. Limitations of this study and directions for future studies are presented and discussed.

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Chapter 1

Introduction

As the number of immigrants coming to the United States grows, mental health professionals are faced with the responsibility of addressing their needs (Rogler, Malgady & Rodriguez, 1989). Studies have shown that immigrants face more mental health disturbances because they have the difficulty of maintaining old values and beliefs while adjusting to American values and beliefs (Gil, 1999). Although addressing the needs of ethnic minorities is a challenge that mental health professionals continue to face, (Sue, Ivey & Pederson, 1996), little research has focused on the concerns of ethnic minorities and a smaller amount of research has focused on the needs of Asian Indians (Farver, Narang & Bhadha, 2002). The importance placed on the family and expectations for high achievement are common aspects of the Asian Indian culture (Inman, Ladany, Constantine & Morano, 1999). Asian Indians often experience significant stress from themselves and their families to be highly competent and successful (Almeida, 1996). Thus, it seems relevant to understand the construct of perfectionism (Flett & Hewitt, 2002; Slaney, Rice, Mobley, Trippi, & Ashby, 2001) and influences from the family as they relate to Asian Indians.

Another significant issue for Asian Indians living in the United States is the construct of acculturation. Acculturation has been used to explain psychological distress among immigrants and ethnic minorities (Berry, 1990, Uba, 1994; Ying 1998). Asian Indians face the challenge of successful psychosocial adjustment to the new social environment. They are expected to value and maintain their heritage and, at the same time, to learn another language quickly and adapt to the host society. Asian parents tend to emphasize obedience with parental expectations but self-assertion for the academic success of their children (Rhee, 1996). These two expectations within

the family and acculturative stress can have a significant impact on the psychological well-being of Asian Indians. The current study attempts to examine how acculturation and family expectations, along with an individual's perfectionistic tendencies, influence his/her mental health.

Research on perfectionism has changed with time. The conceptualization of perfectionism has changed from being unidimensional to multidimensional (Burns, 1991; Hewitt & Flett, 1991). In order to study the construct of perfectionism, including both its positive and negative traits the Almost Perfect Scale-Revised was developed (Slaney, Mobley, Trippi, Ashby, & Johnson, 1996). The Discrepancy Subscale measures the perceived difference between the standards one has set for one's own behavior and actual performance (Slaney & Ashby, 1996). The other two subscales are High Standards, which measures the standards one sets for performance, and Order, which measures the tendency to value a sense of order and organization. Based on the three subscales of the APS-R, three types of perfectionists have been classified, maladaptive perfectionists, adaptive perfectionists, and non-perfectionists. Although, research consistently indicates that maladaptive perfectionists have lower self-esteem, more depressive symptoms and more anxiety (Rice, Ashby, & Slaney, 1998; Suddarth & Slaney, 2001; Rice & Slaney, 2002), these samples have been predominantly Caucasian Americans.

The limited literature that exists suggests that Asian-Americans reported higher scores on several negative dimensions of perfectionism when compared to Caucasian-Americans (Castro & Rice, 2003; Chang, 1998) and African-Americans (Castro & Rice, 2003). These results indicate that perfectionism may negatively affect Asian Americans more than other ethnic groups. Slaney, Chadha, Mobley, and Kennedy (2000) studied Asian Indians and perfectionism using the Almost Perfect Scale (APS; Slaney & Johnson, 1992). Slaney and colleagues (2000) found that

the results for the Asian Indian sample were similar to the results found for university students in the United States. Moreover, they found that the discrepancy between high standards and actual performance was seen as a defining negative aspect of perfectionism. Even though individuals reported having high standards they also perceived themselves as consistently failing to meet their standards. In addition, many of the participants in this study experienced distress when they were unable to meet their own standards.

In an attempt to study the relationship between acculturation and eating disorders, Davis and Katzman (1999) studied 197 Chinese university students in the United States (104 men, 93 women). They used the Perfectionism subscale of the EDI to measure perfectionism. Acculturation was measured by the Suinn-Lew Acculturation Scale (SL-ASIA; Suinn, Richard-Figueroa, Lew, & Vigil, 1987). Higher levels of acculturation for males and females were associated with higher levels of perfectionism. This study suggests that there may be a relationship between an individual's acculturation level and perfectionistic tendencies. Therefore, it seems that in addition to understanding perfectionism, it may be relevant to examine how perfectionism is influenced by the family and the acculturation process

Finally, other possible causes of distress for Asian Indians in the United States are the high standards and expectations to succeed academically and vocationally held by individuals and their families. High academic achievement is expected in Asian Indian children by parents and the community (Segal, 1991). Asian Indians are expected to bring pride and honor to the family at the cost of their own personal sacrifices and freedom (Sandhu, 1997). Discrepancies between parent's and children's standards are understood to be significant predictors of psychological distress. Tomiki (2001) found a positive significant correlation between anxiety and depression and parental pressures in Asian Americans. A study conducted by Crystal, Chen,

Fulgini, Stevenson, Hsu, and Ko (1994) found that parental pressures were significantly correlated with somatic complaints, academic anxiety, and depression in Japanese and Chinese students, however, this issue needs to be addressed with Asian Indians.

Present Study and Research Questions

The main purpose of this study was to explore the concepts of perfectionism, individual and family, and adherence to Asian values. Research suggests that there is a difference between Asian Indians living in the United States and those living in India (Methikalam et al., 2005). Thus, it would be beneficial to examine the concept of acculturation with Asian Indians as a likely source of such differences. Moreover, the construct of perfectionism (Flett & Hewitt, 2002; Slaney, Rice, Mobley, Trippi & Ashby, 2001) seems relevant to Asian Indian students who typically have high aspirations and standards for achievement (Peng & Wright, 1994). Asian Indian students often experience considerable pressure, from themselves and their families, to perform at high levels of competence, often while adjusting to a very different culture (Almeida, 1996). This study examined how individual perfectionism, family perfectionism, and acculturation are related to self-esteem, anxiety and depression for Asian Indians.

Chapter 2

Literature Review

This chapter presents a literature review that will formulate the conceptual framework for the current study. The first part of this section will emphasize research on perfectionism. The construct of perfectionism, the influence of perfectionism on mental health, and the familial influences on perfectionism will be discussed. A review of perfectionism research on Asians will also be incorporated to explore cultural influences on perfectionism. Finally, the literature on familial influences and acculturation will also be reviewed in detail.

Perfectionism

Defining Perfectionism

Perfectionism is a construct that has been getting increased attention in recent times (Rice & Slaney, 2002; Mobley, Slaney & Rice, 2005; Wang, Slaney, & Rice, 2007). Merriam-Webster's dictionary (2003) defines perfectionism as the "disposition to regard anything short of perfection as unacceptable." Burns (1980) described perfectionists as "those whose standards are high beyond reach or reason" and stated that their drive to excel was only "self-defeating" (p. 34). Perfectionism is identified as affecting an individual's mental health as in, for example, depression (Castro & Rice, 2003; Hewitt & Dyck, 1986; Hewitt & Flett) and anxiety (Johnson & Slaney, 1996). Perfectionism has been identified as a predictor of suicide (Segal, 1999) and Hewitt, Flett, and Weber (1994), found that socially prescribed perfectionism was associated with suicidal ideation. Additionally, Tyrka, Waldron, Graber, and Brooks-Gunn (2002) found that perfectionism was one of the few predictors of anorexia in young adults. Given the seriousness of the aforementioned findings it seems necessary to learn more about this construct and its relationship to mental health.

The most prominent current researchers studying perfectionism take a multidimensional approach to studying and understanding perfectionism. Frost, Marten, Lahart, and Rosenblate (1990) suggested that perfectionism is multidimensional and is characterized by (a) high personal standards, (b) high parental expectations, (c) doubts about the effectiveness of one's actions, (d) a preference for organization and order, (e) excessive concerns about making mistakes, and (f) parental criticism. Frost and his colleagues, along with other theorists (Pacht, 1984; Hewitt & Flett, 1991) emphasize that perfectionists are often concerned with meeting the expectations of parents' and/or other individuals in their lives.

Hewitt and Flett (1991) created the Multidimensional Perfectionism Scale. Its three subscales are the Other-Oriented, Self-Oriented, and the Socially Prescribed subscales. The Self-Oriented subscale focuses on the standards individuals have for themselves, and the self blame displayed if they do not meet those expectations. The Other Oriented subscale focuses on the expectations one has for others to be perfect and live up to their high standards. Finally, the Socially Prescribed subscale identifies expectations that are perceived as being imposed on an individual by a significant other or others. Hewitt and Flett (1991) found that socially prescribed perfectionists believe others "have unrealistic standards for them, evaluate them stringently, and exert pressure on them to be perfect" (p. 457). Although the Socially Prescribed subscale addresses the perception of others' views of the individual's actions, it does not directly address the influence of the family's role in expecting high standards from the individual. While these scales focus on the negative aspects of perfectionism, researchers have found that perfectionism has positive or adaptive traits, as well as negative or maladaptive traits (Frost et al., 1990, Suddarth & Slaney, 2001; Rice & Slaney, 2002).

In an effort to measure both the positive and negative aspects of perfectionism, Slaney, Mobley, Trippi, Ashby, and Johnson, (1996) revised the Almost Perfect Scale (Slaney & Johnson, 1992). This revision involved inclusion of the items measuring High Standards and Order from the original APS and the development of the Discrepancy scale to measure the perceived difference between one's standards and one's performance. Qualitative studies had suggested that self-identified perfectionists described the discrepancy between the standards they set for themselves and their actual performance as the distressing or negative aspect of perfectionism (Slaney & Ashby, 1996; Slaney, Chadha, Mobley, & Kennedy, 2000).

Perfectionism and Mental Health

Beck (1967) stated that individuals experience depression when they have negative self-evaluations which result from having excessively high personal standards. Similarly, Rehn (1977) stated that depressed individuals set strict personal goals. Thus, it appears that holding excessively high personal standards can make the individual more vulnerable to depression, anxiety, and low self-esteem. The exacerbation of these stressors as a result of perfectionism has been studied empirically, and the following section will discuss specific studies.

Suddarth and Slaney (2001) examined whether the three measures of perfectionism would be able to predict three variables that measure emotional functioning; locus of control, anxiety, and psychopathology. The MPS, FMSP and the APS-R were used to measure perfectionism. The Rotter Internal-External Locus of Control (Rotter, 1966) was used to measure whether individuals believe that what happens in their lives is based on their own behavior. Psychopathology was measured using the Brief Symptom Inventory (Derogatis & Spencer, 1982) and the State-Trait Anxiety Scale-Trait subscale (Form Y; Spielberger, Gorsuch, Luschene, Vagg, & Jacobs, 1983) measured anxiety. Suddarth and Slaney used a sample of 196

undergraduates (41 men, 151 women, 4 missing information). A principle-components factor analysis was conducted on the 12 subscales of the three perfectionism scales, and three factors exceeded the criterion eigenvalue of 1.00. The first factor had an eigenvalue of 4.27 and accounted for 35.5% of the variance. This factor consisted of Concern Over Mistakes, Parental Expectations, Parental Criticism, and Doubts About Actions from the MPS, the Socially Prescribed subscale from the FMPS and the Discrepancy subscale from the APS-R. The second factor had an eigenvalue of 2.61 and accounted for 21.8% of the variance. This factor consisted of the Personal Standards subscale from the MPS, and the Self-Oriented and Other Oriented subscales of the FMPS, and High Standards from the APS-R. Finally, the third factor had an eigenvalue of 1.27 and accounted for 10.6% of the variance. This factor consisted of the Organization subscale from the FMPS and Order from the APS-R. Multiple regression analyses showed that the three factors served as predictors for locus of control, $F(3, 188)=7.24, p < .001$, psychological distress, $F(3, 188)=26.67, p < .001$, and trait anxiety, $F(3, 188) = 42.15, p < .001$.

Rice, Ashby, and Slaney (1998) studied the relationship between perfectionism and psychological distress, specifically, self-esteem, and depression. Their study had 464 undergraduates (342 women and 122 men). Perfectionism was measured by the FMPS (Frost et al, 1990) and the APS (Slaney & Johnson, 1992). Self-esteem was measured by the RSES and depression was measured by the BDI. The researchers hypothesized that adaptive perfectionism would be negatively associated with depression, and maladaptive perfectionism would be positively associated with depression. Rice et al. used structural equation modeling to examine the relationship between perfectionism and depression and self-esteem. There was a significant path coefficient from Maladaptive Perfectionism to Self-Esteem ($-.63$) and Depression ($.52$). However, there was a nonsignificant path from Adaptive Perfectionism to Self-Esteem ($.12$) and

to Depression ($-.07$). These results showed that Adaptive Perfectionism was not significantly related to either Self-Esteem or Depression.

In order to further understand the different types of perfectionists and psychological distress, Rice and Slaney (2002) studied two groups of university students using the Almost Perfect Scale-Revised (APS-R; Slaney, Rice, Mobley, Trippi, Ashby, & Johnson, 1996). They found three groups in both studies that were classified as adaptive and maladaptive perfectionists and non-perfectionists. The first study consisted of 258 undergraduate students and the second study consisted of 375 undergraduate students. The perfectionist groups were based on their APS-R subscale scores. Measures included the APS-R, Center for Epidemiologic Studies Depression Scale (CES-D) to measure depression, State Trait Anxiety Inventory (STAI) to measure anxiety, and Self-Esteem Inventory to measure self-esteem. A cluster analysis yielded three clusters. The first cluster was comprised of adaptive perfectionists, the second cluster maladaptive perfectionists, and the third cluster contained the non-perfectionist group. In both studies the maladaptive perfectionists differed from the adaptive perfectionists on the basis of their higher Discrepancy subscale scores. Nonperfectionists had lower scores on the High Standards and Order subscales in comparison to the other two groups of perfectionists. Discrepancy scores for the non-perfectionists were between those scores for the adaptive and maladaptive perfectionists. Maladaptive perfectionists reported higher scores than the two other groups on the, Negative Affect Scale of the Positive and Negative Affect Schedule (PANAS), CES-D Depressed Affect subscale, the CES-D Somatic and Vegetative Activity subscale, and both the STAI Trait and State Anxiety subscales. Adaptive perfectionists reported higher self-esteem score on the Rosenberg Self-Esteem Scale (RSES) higher scores on the Positive Affect Scale of the PANAS, and higher GPAs than the other two groups. Maladaptive perfectionists

reported significantly lower scores on the RSES than adaptive and non-perfectionists. Grzegorek et al. (2004) also conducted a cluster analysis using the APS-R, using 273 college students, and found three groups that fit the adaptive and maladaptive perfectionist and nonperfectionist classifications. The adaptive perfectionists had significantly lower scores than the maladaptive perfectionists on the Self-Criticism scale of the Depressive Experiences Questionnaire (Blatt, D'Afflitti, & Quinlan, 1976). The adaptive perfectionists had significantly higher self-esteem scores than the maladaptive perfectionists and nonperfectionists.

Ashby and Rice (2002) studied the relationship between adaptive and maladaptive perfectionism and self-esteem. They used 262 undergraduates (82 men, 180 women). Additionally, they used the APS-R High Standards and Order subscales to measure adaptive perfectionism, while the APS-R Discrepancy subscale and the DAS Self-Criticism subscales were used to measure maladaptive perfectionism. Self-esteem was measured by the RSES. The High Standards subscale was a significant positive predictor ($\beta=.28, p<.05$) of Self-Esteem. Order was not a significant predictor of self-esteem. Discrepancy ($\beta=-.31, p<.05$) and DAS Self-Criticism ($\beta=-.43, p<.05$) were negative predictors of Self-Esteem.

In another study, Rice and Lopez (2004) examined the relationships between perfectionism, adult attachment, self-esteem, and depression. Two hundred and eleven college students (51 men, 152 women, 8 missing gender information) participated in this study. The researchers used the FMPS to measure perfectionism, the RSES to measure self-esteem; the CES-D to measure depression; and the Adult Attachment Questionnaire (AAQ; Simpson, Rholes, & Nelligan, 1992) to measure adult attachment security. AAQ served as a moderator in the relationship between maladaptive perfectionism and self-esteem. For individuals who had higher scores on the AAQ, maladaptive perfectionism had a less negative effect on self-esteem.

In contrast, for, individuals with lower scores on the AAQ, maladaptive perfectionism had a stronger relationship to low self-esteem.

Additionally, Wei, Mallinckrodt, Russell, and Abraham (2004) studied the relationship between maladaptive perfectionism, attachment, and depression among 310 college students. The APS-R Discrepancy subscale, FMPS Concern Over Mistakes, and FMPS Doubts About Action subscales measured maladaptive perfectionism in this study. Maladaptive perfectionism partially mediated the relationship between attachment anxiety and depressive mood, and fully mediated the relation between attachment avoidance and depressive mood. Depression and hopelessness were significantly and positively associated with attachment anxiety, but high levels of depressive mood and attachment anxiety were greater for maladaptive perfectionism. In another study by Wei and her colleagues (Wei, Heppner, Russell, & Young, 2006), maladaptive perfectionism was also found to be a mediator, along with ineffective coping, of future depression as measured by the CES-D.

Summary

Overall, the literature indicates that there are statistically significant relationships between perfectionism and psychological distress. The literature highlights that there are statistically significant relationships between perfectionism, anxiety, self-esteem, and depression. The APS-R will be used in the current study because as the research indicates, it examines the essential nature of perfectionism, and highlights both the positive and negative aspects of perfectionism. Moreover, it classifies participants into three categories: adaptive perfectionists, maladaptive perfectionists, and non-perfectionists. Maladaptive perfectionism is positively related to depression, and anxiety, but negatively related to self-esteem. Rice and Lopez (2004) and Ashby and Rice (2002) found that High Standards was a significant and

positive predictor of self esteem. However, most of studies on perfectionism have used majority samples of Caucasians. The following section will expound upon the cross-cultural research on perfectionism.

Cross-Cultural Studies on Perfectionism

A limited number of studies have examined the relationship of perfectionism and the psychological distress of minorities, specifically Asians. The following section will address the empirical studies that have focused on ethnic minorities and perfectionism.

Mobley, Slaney, and Rice (2005) studied perfectionism in a sample of 251 African-American undergraduate students (173 women and 77 men). The APS-R was used to measure perfectionism, the RSES was used to measure self-esteem, the BDI measured depression, and the STAI was used to measure anxiety. Mobley et al. (2005) conducted a confirmatory factor analysis to examine the factor structure of the APS-R with the African American population. This study offered support for the three subscales of the APS-R for African American participants. A cluster analysis was conducted and yielded three groups of perfectionists. These groups were then compared using measures of depression, anxiety, and self-esteem as dependent variables. Adaptive perfectionists reported significantly lower scores on the BDI and STAI Trait Anxiety scales than the maladaptive perfectionists and the nonperfectionists. Adaptive perfectionists also reported significantly higher scores on RSES Self-Esteem than maladaptive perfectionists and nonperfectionists. No significant differences were found between maladaptive perfectionists and nonperfectionists on the BDI, STAI, and SRES.

Few studies using the APS-R have examined perfectionism in Asian Indians. Methikalam, Wang and Slaney (2006) examined the impact of perfectionism on the mental health of Asian Indian college students in India. One hundred eight students (i.e., 89 men, 18

women, and 1 missing gender information) comprised the sample from the prestigious India Institute of Technology-Delhi. The APS-R was used to measure perfectionism and the BDI was used to measure depression. Principle-axis factor analysis with promax rotation was performed on the 23 items of the APS-R scores. Results were similar to past U.S. samples with some minor variations, indicating a suitable APS-R factor structure fit for this Indian sample.

Intercorrelations between variables were examined. High Standards scores were significantly and positively correlated with Order (.40) and Discrepancy (.27) scores. Discrepancy scores were significantly and positively correlated with Depression scores (.52). A two step cluster analysis procedure using hierarchical and nonhierarchical analyses was performed with a three-cluster solution chosen. The k-means cluster analysis placed 51 participants in the adaptive perfectionist group, 45 participants in the maladaptive perfectionist group, and 12 participants in the nonperfectionist group. The ANOVA results of comparing depression scores across perfectionist types indicated significant differences on depression. Maladaptive perfectionists had statistically significantly higher scores on depression than adaptive perfectionists and nonperfectionists who did not differ from each other. The results of this study are consistent with findings from previous studies (Grzegorek et al., 2004; Mobley et al., 2005, 2002; Rice & Slaney, 2002) that indicated that maladaptive perfectionists experience more distress and depression than adaptive perfectionists and non-perfectionists.

In an attempt to further understand perfectionism with Asian Indian groups, Methikalam, Wang, and Slaney (2007) compared the construct of perfectionism with Asian Indian university students in the U.S. and in India. One hundred twenty students (i.e., 89 men, 31 women) comprised the Penn State (PSU) sample and 188 students (i.e., 83 men, 105 women) comprised the University of Delhi sample. The purpose of the study was to compare the differences in sex

roles and perfectionism among university students in India and the United States. In both groups, the Sex-Role Egalitarianism Scale (SRES; Beere, King, Beere, & King; 1984) was used to measure sex roles and the APS-R was used to measure perfectionism. For each of the two samples, data analysis included three steps. First, the APS-R factor structure for each sample was validated. Second, cluster analyses were used to identify groups of perfectionists and nonperfectionists based on the participants' scores on the APS-R. Finally, 2x3 factorial design ANOVAs were conducted to compare sex role scores on gender and perfectionism for each sample.

Principle-axis factor analyses with promax rotations were performed on the 23 items of the APS-R on both samples. Results were similar to the past U.S. samples; indicating a suitable APS-R factor structure fit for these two Indian samples. A two step cluster analysis procedure using hierarchical and nonhierarchical analyses was performed for each sample with three-cluster solutions chosen. For the Delhi sample, the k-means cluster analysis placed 72 participants in the adaptive perfectionist group, 72 participants in the maladaptive perfectionist group, and 44 participants in the nonperfectionist group. For the PSU sample, the k-means cluster analysis placed 38 participants in the adaptive perfectionist group, 36 participants in the maladaptive perfectionist group, and 43 participants in the nonperfectionist group. Finally, a factorial design ANOVA comparing sex role scores across gender by perfectionism indicated that there were statistically significant differences between the two Indian samples. For the PSU sample, gender was the only variable that was statistically significant ($F = 12.98, p < .001$). Women had statistically significant higher mean SRES scores than men. For the Delhi sample, there was a statistically significant interaction effect. Women had higher sex role scores than men in each of the perfectionist groups. For adaptive perfectionists, there was no significant

difference on SRES scores between men and women ($F = 2.59, p = .112$), while there were significant gender differences for maladaptive perfectionists ($F = 26.90, p < .001$) and nonperfectionists ($F = 33.89, p < .001$). For women, there were no significant differences on sex role scores among perfectionist groups ($F = .70, p = .501$). For men, adaptive perfectionists had significantly higher sex role scores than maladaptive perfectionists and nonperfectionists ($F = 14.68, p < .001$). These findings suggest that there are differences in perfectionism cross-culturally that are related to gender and perhaps acculturation; there appears to be a need to understand how specific factors may influence perfectionism in different cultural groups.

Family Expectations and Influences on Perfectionism

None of the scales or studies mentioned above directly address the role of the family's expectations on the individual's perfectionism. Researchers (Frost, et al., 1990; Hewitt & Flett, 1991) have stated that high parental expectations are possibly predictive of maladaptive perfectionism. Maladaptive perfectionism, in turn, is understood to be a predictor of a number of psychological problems such as depression (Castro & Rice, 2003; Hewitt & Flett, 1991) anxiety (Johnson & Slaney, 1996) and low self esteem (Ashby & Rice, 2002; Rice & Slaney, 2002; Grzegorek, et al, 2004; Mobley et al, 2005). Therefore, it is pertinent to examine the role of parental expectations on the psychological functioning of their progeny and its relation to perfectionism

Rice, Lopez, and Vergara (2005) speculated that parental influences played a role in the development of perfectionism. Therefore, it makes sense that there may be a perceived discrepancy for individuals between the standards set by their families and their actual performance. Moreover, individuals whose parents have very high standards for their achievement may in turn have high standards for themselves. In contrast, individuals who do not

perceive their parents as having high expectations for them, might possibly have low perceived discrepancies between what their family wants and their actual performance. The present study will address this issue by revising the items of the APS-R to create a scale which examines an individual's understanding about her or his family's expectations in terms of perfectionism.

Summary

In sum, cross-cultural studies on perfectionism indicate that there is a difference between Asian Indians living in the United States and those residing in India, with samples residing in India having a higher number of maladaptive perfectionists than found in U.S. samples. Moreover, Castro and Rice (2003) state that Asian American college students may feel pressure to meet parental expectations for success. These pressures may be a source of stress for the individual, and possibly the family, if success is not obtained. The following sections will explore in detail the idea of family expectations, how family expectations relate to mental health, and how family expectations relate to the Asian Indian community.

Family Expectations

Family Influences

Many researchers have supported the idea that Asians are collectivistic due to the importance placed on the family and the community (Farver et al, 2002; Hui, 1988; Triandis & Gelfand, 1998). Triandis (1989) explained that collectivism pertains to the perception that the individual is integrated into a group. There is an overlap between goals for oneself and one's group. This is applicable to Asian Indians because family is a central element of Asian Indian culture. Extended families are important, but nuclear families take precedence (Ramisetty-Mikler, 1993). Parents are expected to be honored and revered. There are clearly defined roles within the family for father, mother and, children. The primary role of children is to bring honor

to their families through achievements (Durvasula & Mylvaganam, 1994). Family is the main source of emotional support (Pedersen, 1981) and is central in making major decisions. Asian Indians are to de-emphasize developing a sense of self separate from the family (Inman, et al, 2001). Actions of the individual affect the family and the community.

Asian Indians are expected to bring pride and honor to the family at the cost of their own personal sacrifices and freedom (Sandhu, 1997). Having to choose between the family's expectations and the individual's expectations can possibly lead to conflict within the family and the individual. This can change as a part of the acculturation process because in American culture the focus is on the differentiation of self and less emphasis is placed on family involvement (Inman, et al, 2001). Therefore, the Asian Indian family can be seen as a source of strength as well as distress (Das & Kemp, 1997).

Parents and families are considered to have significant influence over the mental, emotional and social development of children (Wang & Heppner, 2002). Carter and McGoldrick (1980) acknowledged that family influences have a major impact on students regardless of the geographical distance between the family members. However, Wang and Heppner (2002) suggest that most developmental textbooks and research neglect the importance of family expectations. In a 2002 study, Walker and Sattewhite analyzed two hundred and twelve undergraduates on measures of parental support and expectations. They used an eighty item questionnaire that measured family constructs such as cohesion, spirituality, and parental support and expectations. Walker and Sattewhite found that 63% of Caucasians and 43% of African Americans felt pressured by their parents to succeed. Additionally, participants who reported higher levels of family cohesion also reported higher levels of parental support and expectations; the correlation for African Americans was $r(75) = .36, p = .001$; and for European

Americans, $r(103) = .43, p = .000$. Moreover, students who reported higher levels of parental support and expectations also indicated that they felt more pressure from their parents to succeed; African Americans, $r(82) = .27, p = .014$; European Americans, $r(108) = .44, p = .000$. Results also suggested that parental expectations for academic achievement were negatively correlated with GPA for both Caucasians $r(89) = -.34, p = .001$ and for African Americans $r(82) = -.23, p = .04$. This suggests that individuals who experienced high parental expectations from parents tended to have lower GPAs. The authors concluded that family expectations were related to academic performance.

Similarly, Smetana (1989) conducted a study of 102 adolescents and their parents to explore causes for conflict in families. Families were recruited through the Brighton school district in Rochester, New York. Each family participated in a 2 to 3 hour interview in which they were asked to discuss issues of conflict and disagreements. Girls reported more conflicts with their mothers than did boys. Smetana found that conflicts typically occurred over parental expectations about homework, physical appearances, and interpersonal relationships, rather than rules. These empirical findings suggest that family expectations are an important factor in understanding stress and achievement.

Rice, Lopez and Vergara (2005) developed and tested a model for predicting insecure adult attachment orientation, which included indices of parental expectations and criticism with measures of adaptive and maladaptive perfectionism. Two hundred forty-one students from a public institution in the South participated in this study (43 men and 198 women).

Approximately 65% of the sample was European American, 10% was African American, 11% was Asian American and 11% was Latino. Participants were recruited from general psychology courses. Perfectionism was measured using three different measures, F-MPS (Frost et al., 1990),

Multidimensional Perfectionism Scale (MPS; Hewitt, et al, 1991), and the APS-R, (Slaney, et al., 1996). Adult attachment orientation was measured using the brief form of the Experiences in Close Relationships measure (ECR, Brennan, Clark, & Shaver, 1998). Rice et al. (2005) acknowledged that the expectations individuals had for themselves and the perceived criticism from parents differed for those individuals who were adaptive or maladaptive perfectionists. Parental/social variables accounted for significant variation in each of the two dimensions of perfectionism, $r=.10$ for Adaptive Perfectionism and $r=.34$ for Maladaptive Perfectionism, $p < .001$. High scores on the Parental Expectations subscale (and low scores on Parental Criticism subscale) were positively associated with Adaptive Perfectionism. Low scores on the Parental Expectations subscale and high scores of the Parental Criticism explained significant variance in Maladaptive Perfectionism. Furthermore, students with low scores on the Parental Criticism subscale displayed lower attachment anxiety. Maladaptive perfectionism was found to be a mediator for parental and social expectations. Adaptive perfectionism was not found to mediate parental and social expectations. This study indicates that perfectionistic tendencies could develop as a result of parental and social relationships.

Family Expectations and Psychological Distress

Sue (1981) stated that individuals with strong ties to the family may suffer from guilt and shame if they violate family rules. Archer and Lamnin (1985) studied a sample of 893 undergraduate students who stated that parental conflict and expectations were a source of stress. The researchers used a one page survey with two open ended questions. Participants were asked to describe two situations that they found to be most stressful in both personal and academic situations. Twenty nine percent of participants listed parental conflicts and expectations as personal stressors. Anderson and Yuenger (1987) found similar results. They analyzed 425 case

studies of students seen at a university counseling center. Twenty- four percent reported that stressors from the family were a major area of concern. These findings support the notion that families play a significant role in the mental health of students. However, little research has been conducted on the psychological effects of family expectations, particularly in cultures that emphasize the importance of family piety (Wang & Heppner, 2002).

Wang (1997) developed the Discrepancy of Parental Expectation Inventory (DPEI) to measure the discrepancies between the Perceived Parental Expectations (PPE) and the Perceived Self-Performance (PSP) in Taiwanese college students. Based on interviews and factor analyses, Wang expected the parental expectations construct to be multidimensional. Through factor analyses she identified three factors for the DPEI: Academic Achievement, Personal Maturity, and Dating Concerns. Wang (1997) examined the construct validity of the DPEI, the PPE, and the PSP by correlating the subscales with a Chinese version of the State-Trait Anxiety Inventory (STAI-C; Spielberger, Gorsuch, & Lushene, 1970), the State-Trait Anger Expression Inventory (STAX-C; Spielberger, Jacobs, Russell, & Crane, 1983), and the Beck Depression Inventory (BDI-C; Beck, 1967). No significant correlations were found between the scores of BDI-C, STAI-C, STAX-C and the three factors of PPE (i.e., Academic Achievement, Dating Concerns, and Personal Maturity). However, the difference between the PPE and the PSP for all three factors (i.e., Academic Achievement, Dating Concerns, and Personal Maturity) were significantly and positively correlated with BDI-C scores. Academic Achievement and Personal Maturity were also significantly correlated with STAI-C scores. Wang estimated that perceived discrepancy between parental expectations and self-performance has an impact on the psychological well-being of Taiwanese students. The results indicated that students reported higher depression and anxiety when there was a higher discrepancy between perceived parental

expectation and perceived self-performance on their academic achievement. Thus, Wang concluded that DPE factors served as better predictors of emotional distress than Parental Expectations. What is noteworthy is that the Personal Maturity factor for all the subscales (i.e., meet parental expectations through an individual's good manner such as obedience, self-control, and politeness) was associated with depression, anxiety, and anger. Even after social desirability was removed, the Personal Maturity factor was still associated with anxiety and depression.

Furthering the research on parental expectations, Wang and Heppner (2002) studied the impact of parental expectations on the distress of Taiwanese college students. Two separate studies were conducted. Wang and Heppner developed and validated the Living up to Parental Expectations scale in the first study. This is a 62-item scale that is divided into 5 domains: dating/marriage, character training, academic achievement, responsibility towards parents, and responsibility towards family. An exploratory factor analysis indicated that there were three factors, Perceived Parental Expectations (PPE), Perceived Self Performance (PSP), and Living up to Parental Expectations (LPE). Each factor had three subscales, Personal Maturity, Academic Achievement, and Dating Concerns. The internal consistencies for the three subscales under PPE were .91, .85, and .85 respectively. The internal consistencies for the subscales in the second factor, PSP, were .87, .81, and .76 respectively. Finally, the internal consistencies for the subscales in the third factor, LPE were .89, .84 and .74 respectively. In the second study, the researchers included the State-Trait Anxiety Inventory (STAI-C anxiety; STAXI-C trait anger) and the BDI. Participants were asked to respond to the measures a second time after four weeks. The authors found that scores on the LPE, rather than the actual PPE were better predictors of psychological distress, as measured by the BDI and the STAI. These results suggest that living up to parents' expectations was moderately associated ($r_s = -.33$ to $-.46$,

$p < .001$) with all three indicators of psychological distress, anxiety and depression. Therefore, the less an individual perceives him or her self as living up parental expectations, the more psychological distress he or she is experiencing. Moreover, the four- week retest results suggested that not living up to parents' expectations may lead to depression over a period of time. The LPE was reversed scored, so the lower the score the higher the individual felt they were not living up to parental expectations. Scores on the Living up to Parental Expectation subscale was associated ($r = -.41$ for zero order and $-.37$ for partial correlation, $p < .001$) with the BDI scores. These findings support the importance of understanding the role parental expectations play in the mental health of students. Moreover, parental expectations were seen to not only be applicable to academic achievement, but also to personal maturity and dating concerns (Wang & Heppner, 2002). Specifically, living up to parents' academic achievement expectations was correlated with anxiety ($r = -.40$, $p < .001$) and dating concerns as measured by the subscale of the LPE scale was correlated with depression ($r = -.38$, $p < .001$). Therefore, lower scores on the LPE around dating concerns, and academic achievement can lead to more psychological distress. In summary, Wang and Heppner (2002) acknowledged that individuals who perceived that there was a discrepancy between expectations from their parents and their actual self-performance experienced more psychological distress.

In order to examine the discrepancy between parental expectations and children's achievement, Oishi and Sullivan (2005) conducted two studies which examined the role of perceived fulfillment of parental expectations on the subjective well being of college students. In the first study they used 77 Japanese college students and 114 American college students (82 European Americans, 16 Asian Americans, 5 Hispanic, and 4 African Americans). In the second study they used 37 European Americans and 37 Asian Americans. In the first study, the

researchers found that American participants' ratings indicated that they perceived themselves as fulfilling their parents' expectations to a higher degree than did Japanese participants, $t(187) = 9.04, p < .01$. Thus, these results indicated a clear difference between the two groups. Moreover, higher perceived fulfillment of parental expectations was positively linked to higher self-esteem, $\beta = .37, p < .01$ for both groups. The second study yielded similar results. Similar to the first study, higher self-esteem $\beta = .40, p < .01$, and life satisfaction, $\beta = .54, p < .05$ were related to perceived fulfillment of parental expectations for both groups. A within group comparison showed that European American participants felt that they fulfilled parental expectations more than did Asian American participants, $F(1,69) = 8.44, p < .01$. Asian American participants felt that their parents' expectations were more specific than did European Americans, $F(1, 69) = 4.95, p < .05$. These results highlighted that Asian Americans had lower levels of life satisfaction and self-esteem when compared to their American counterparts. Overall, Oishi and Sullivan (2005) found in both studies that perceived fulfillment of parental expectations by children was related to higher life satisfaction and higher self-esteem.

Fuligni (1997) studied the academic achievement of adolescents from immigrant families. One thousand one hundred and ten adolescents participated in the study. Two hundred seventy four were first generation, 468 were second generation and 358 were third generation. The majority of the sample consisted of Filipinos ($N=392$), followed by Europeans ($N=264$), then Latinos ($N=249$) and East Asians ($N=195$). Students' academic achievement was measured by obtaining their school records. Perceived parental attitudes were measured by creating a 5-point Likert-type Parents' Value of Academic Success Scale. Parental expectations were measured by the High Parental Expectations Scale, which was created specifically for this study. Based on the results of the High Parental Expectations Scale, East Asian students reported

having higher parental expectations, $M = 3.38$, $p < .01$ and educational aspirations, $M = 4.48$, $p < .01$ than other ethnic groups. Moreover, children of East Asians had higher aspirations and educational expectations, compared to children of Latino parents or European American parents. The authors attributed this emphasis on educational aspirations to East Asian parents having high expectations for their children's performance and high hopes for their educational achievement.

Castro and Rice (2003) state that Asian Americans may feel pressured to meet family expectations, and experience distress if these expectations are not met. Castro and Rice examined the relationship between perfectionism, emotional adjustment, and academic achievement among 59 Asian American, 65 African American, and 65 Caucasian American undergraduate students from two public universities in the northern region of the United States. Measures included the FMPS (Frost et al., 1990) to measure perfectionism, the Center for Epidemiologic Studies Depression Scale (CES-D Scale; Radloff, 1977) to measure emotional adjustment, and Grade Point Average (GPA) to measure academic achievement. Analyses showed that scores on the Concern Over Mistakes, Parental Criticism, and Doubts About Actions subscales were significantly higher for Asian Americans than students of other ethnicities ($F(2, 186) = 7.47$, $p = .005$ $F(2, 186) = 10.00$, $p = .01$ $F(2, 186) = 4.61$, $p < .05$). Both Asian Americans and African Americans scored significantly higher on the Parental Expectations subscale than did Caucasian Americans ($F(2, 186) = 6.36$, $p < .05$). Higher scores on Concern Over Mistakes, Parental Criticism, and Doubts About Actions subscales were significantly and positively correlated with depression for all three ethnic groups. The correlation between Parental Expectations and depression scores was not significant. A multiple regression analysis for each ethnic group and for each criterion variable was conducted. The FMPS subscales accounted for variation in the CES-D scores for both Asian and Caucasian

Americans ($R^2 = .51$ and $.29$), but not for African Americans. An analysis based on sex was not conducted. Rice and Castro's results suggest that Asian American students may tend to be more cautious about making mistakes. The relationships between FMPS subscales and depression were comparable for Asian Americans and Caucasian Americans, indicating that the negative aspects of perfectionism affect both Asian American and Caucasian American mental health.

High achievement is a common expectation for children in Asian families (Sue & Okasaki, 1990). Moreover, many Asian parents instill guilt about parental sacrifices and the need to fulfill the obligation to succeed, be respectful, and obedient (Peng & Wright, 1994). Caudill and Plath (1966) were the first to draw attention to the differing parenting styles of Japanese and American parents. Since then researchers have shown that while American parents encourage the development of social skills and self-expression, Japanese parents encourage emotional restraint and conformity (Azuma, Kashiwagi, & Hess, 1981). Moreover, Oishi and Sullivan (2005) stated that European Americans reported higher perceived fulfillment of parental expectations than Asian Americans reported. Dennis, Zahn-Waxler, and Mizuta (2002) found that, compared to Asian parents, European American parents emphasized successes rather than failures. Steinberg, Dornbusch, and Brown (1992) stated that Asian American students reported that their parents became angry if they came home with a grade less than A-.

According to Sue and Sue (1999), Asians have higher levels of academic achievement, and fear of academic failure compared to Caucasians. "Asian American students generally have higher academic achievement than other ethnic minority students," (Peng & Wright, 1994, p. 346). Peng and Wright (1994) conducted a longitudinal study of 25,000 eighth graders and their parents through the National Center for Education Statistics. They explored whether the home

environments and educational activities of Asian Americans account for the differences in achievement between Asian Americans and other racial groups. The authors stated that Asian American parents have the highest educational expectations for their children, with an average of 16.7 years of education expected. Further analysis revealed that 80% of Asian parents expected their children to receive at least a bachelor's degree, which was higher than the educational expectations for other racial groups. Moreover, Asian Americans were expected to attend more lessons outside of regular academic lessons than other minority students. Peng and Wright found that Asian Americans had higher academic achievement than other minority groups. However, the difference between Asian Americans and Caucasians on academic achievement was not statistically significant at the .01 alpha level.

Aldwin and Greenberger (1987) developed a scale that measured pressure from parents for achievement and the disparity between the children's personal achievement standards. They used a sample of Korean (N= 61) and Caucasian American college students (N = 69). Achievement pressure was measured using a 7-point scale that addressed the degree of pressure children felt they were receiving (1 = none to 7 = a great deal of pressure). For disparity in achievement standards, respondents were asked to indicate the GPA that would indicate to their parents that they were doing well in college, and the GPA the students themselves would consider as an indication they were doing well. The results from the ANOVA showed that the Korean students felt significantly more parental pressures than did Caucasian students. The Korean students also perceived significantly greater disparities between their parents' and their ideas of good academic performance. Achievement pressure and disparity in achievement standards were modestly correlated ($r = .33$, $p < .01$ for Koreans; $r = .21$, $p < .05$ for Caucasians).

Chang (1998) compared Asian American (N = 89) and Caucasian American (N = 96) college students on perfectionism, suicidal risk, and social problem solving. Participants were given the Social Problem Solving Inventory-Revised (D'Zurilla, Nezu, & Maydeu-Olivares 1996), FMPS, (Frost et al, 1990), the Beck Hopelessness Scale (HS, Beck, Weissman, Lester, & Trexler, 1974) and the Suicidal Probability Scale (SPS, Cull & Gill, 1982). T-tests on the FMPS indicated that Asians had higher scores on the Concerns about Making Mistakes, $M = 24.81$, $p < .001$, Parental Expectations, $M = 17.26$, $p < .004$, Parental Criticism, $M = 11.16$, $p < .001$, and Doubts About Actions, $M = 11.52$, $p < .0008$ scales of the FMPS than the Caucasian American students. Asian Americans were significantly higher in their negative problem orientation, which is a dysfunctional set of attitudes related to problem-solving ability, than Caucasians, $M = 18.33$, $p < .004$. This cross-cultural difference indicates that ethnicity could be a potential influence related to perfectionistic tendencies. However, Chang, as well the other aforementioned studies reviewed did not include Asian Indians, nor was generational status or acculturation level reported. This information would be useful in understanding the potential relationship between acculturation and perfectionism.

Segal (1991) collected data from four studies focusing on teenage-parent seminars with Asian Indians dealing with parent-child communication and conflict that were held in May 1985 in a large city (N=60 teenagers; N=110 parents) and February 1987 in a Midwestern city (N=27 teenagers; N=23 parents). The participants discussed the reasons for parent-child conflicts and if conflicts were better understood based on the cultural and value differences of immigrant Indian families. The seminars lasted three hours, with two mental health professionals as facilitators. The facilitators began by discussing the importance of open communication, struggles during adolescence, and difficulties immigrant families experience. After the initial discussion the

participants were divided into two groups where they were asked to react to the initial discussion. Issues such as parental expectations of excellence consistently emerged as causing emotional difficulty. Segal (1991) suggests that success is an expectation in the Asian Indian community because “All Indians do well.” However, children were not as achievement oriented as their parents. Because perfection and excellence were expected, those individuals who were average tended to perceive themselves as failures, and as a result had low self-esteem.

Summary

In summary, family expectations may be of particular importance in Asian Indian families because of the cultural importance placed on obedience and filial piety (Farver, Narang, & Bhadha, 2002). Parents in Asian families have high expectation for their children to succeed. Booth, Cronter, and Lansdale (as cited in Farver, et al, 2002) state that psychological adjustment is influenced by various factors, many of which are based on the central role of the family. There is, however, a lack of research that discusses the experiences of Asian Indians in relation to familial expectations and mental health. The influence of family expectations on Asian Indian mental health seems particularly relevant given the importance of family and the related high aspirations and standards for achievement. Moreover, Asian Indian students experience considerable pressure from themselves and their families to perform at high levels and this pressure can lead to psychological distress. This study will investigate the importance of perceived family influences of perfectionism on the mental health of Asian Indians. For Asian Indians in the US it also seems logical to understand how cross-cultural influences and acculturation may relate to perfectionism.

Acculturation

Defining Acculturation

Acculturation is defined as the “culture change that is initiated by the conjunction of two or more autonomous cultural systems” (Berry, 1990, p. 233). Acculturation is the way in which an individual is able to incorporate the values from the host culture (culture of contact) and the values already attained from the culture of origin (national culture) (Yeh, 2003). Pederson (as cited in Zhang & Dixon, 2003) suggests that the greater the cultural difference, the more difficult the adjustment for the individual. Acculturation is a key issue for immigrants because they are in contact with another culture that has discrepant beliefs, practices, behaviors and values (Lieber, Chin, Nihira, & Mink, 2001). Dealing with the complex process of incorporating multiple cultures is an integral part of living in a pluralistic society like the United States (Abouguendia & Noels, 2001).

According to Olmedo and Padilla (1978) acculturation levels as measured by the Suinn-Lew Asian Self-Identity Acculturation scale (SL-ASIA) should show a relationship to generation differences. Of the 59 subjects, 14 were first generation, 15 were second, 18 were third, 8 were fourth, and 4 were fifth generation. An analysis of variance indicated that the differences between generations were statistically significant ($F= 7.20, p <.0001$). The results, consistent with the theory of acculturation, revealed that first-generation Asian Americans were less acculturated than second-generation Asian Americans. The SL-ASIA acculturation scores for the four generations were first generation, 2.96; second generation, 3.57; third generation, 3.78; and fourth generation, 3.85. Olmedo and Padilla (1978) also found a relationship between acculturation and length of residence in the U.S. Once again, an analysis of variance indicated that the longer individuals had been in the United States, the more acculturated they were.

Berry (1990) describes four dimensions of acculturation: assimilation, rejection, marginalization, and integration. Assimilation occurs when one's cultural origin is rejected and the host culture is accepted. According to Kim and Omizo (2005) assimilated individuals are highly acculturated and maintain cultural values that are important in the American culture. Moreover, these individuals function better when engaged in American society rather than, for example, in Asian American communities. Rejection or separation involves the refusal of the host culture and acceptance of the culture of origin. These individuals are considered to have low acculturation, but high enculturation. Enculturation is the process of socialization to the norms of one's native culture. Individuals who are enculturated are not interested in learning or adapting to the values and beliefs of American culture. These individuals function well in Asian American communities rather than in the American culture. Marginalization is the rejection of both cultures. Marginalized individuals are neither acculturated nor enculturated. Finally, integration or biculturalism occurs when both cultural origins and host cultures are accepted. Integration is considered to be the healthiest of the four dimensions (Berry & Kim, 1988; Kim & Omizo, 2005). LaFromboise (1993) states that biculturalism is the ability to meet the demands of two different cultures. She suggests that in order to achieve bicultural competence, individuals must have knowledge of the cultural beliefs and values of both cultures. They also must have the self-belief that they can live in both cultures, positive attitudes for both groups, the ability to communicate in both cultures, the ability to be culturally appropriate in both cultures, and finally, a sense of belonging in both cultures (Berry & Kim, 1988). Kim and Omizo (2005) state that when Asian Americans maintain the values of the two cultures, they function better psychologically, particularly in regard to culturally specific problems. Therefore, it is important to understand an individual's acculturation level in order to understand his or her mental health.

Acculturation and Mental Health

Studies have shown that immigrants face more mental health disturbances because they have the difficulty of maintaining old values and beliefs while adhering to American values and beliefs (Gil, 1996; Nwadiora & McAdoo, 1996). Berry and Annis (1974) refer to the stress that results from the acculturation process as acculturative stress. Acculturative stress can affect an individual's interaction with family, work, school and other social interactions.

Liu, Pope-Davis, Nevitt, and Toporek, (1999) investigated the prejudicial attitudes of two hundred eighty nine college students (e.g., Asian American and White American). They hypothesized that acculturation into the dominant society would result in higher prejudicial attitudes. The participants were given the Asian Anglo Acculturation Scale (AAAS, 1991), the Quick Discrimination Inventory (QDI 1995) and the Suinn-Lew Asian Self-Identity Acculturation Scale (1987). The AAAS (1991) is a 40- item scale that measures acculturation of Asian and White cultures (as cited in Liu et al, 1999). The QDI (1995) is a 30 item scale that measures racist and sexist attitudes. Low scores are indicative of low sensitivity to race and gender issues. Therefore, low scorers are more likely to reflect more prejudicial and racist responses. On the other hand, high scores reflect sensitivity to race and gender issues and nondiscriminatory responses.

The results indicated that those students who were more integrated into the majority culture, measured by the SL-ASIA, also scored higher on the QDI, $r = .40$, $p < .01$. Furthermore, a higher association with Asian culture based on the AAAS was correlated with higher scores on the QDI, $r = .23$, $p < .01$. These results suggest that individuals who integrate both cultures, may be more likely to reflect non- prejudiced attitudes. As a result of the acculturation process,

many immigrants face a variety of mental health problems such as anxiety, depression, increased psychosomatic symptom level, identity confusion, and feelings of alienation (Hovey & Magana, 2002). Higher acculturation levels (e.g., integration and assimilation) are associated with higher self-esteem, better mental health, and less need of mental health services (Sandhu, 1997). Berry and Williams (1991) found that rejection and marginalization were associated with negative mental health, such as anxiety, depression, feelings of marginality and heightened psychosomatic symptoms. Sodowsky and Lai (1997) found the lower the acculturation level, the higher the amount of stress experienced by Asians. Hovey (2000) found that acculturative stress significantly predicted depression and suicidal ideation in a sample of 114 Mexican immigrants. He found a variety of factors that were associated with depression. Low levels of religiosity, low income, family dysfunction, lack of social support and high acculturative stress were all positively correlated with higher levels of depression.

Gim (2001) studied how intergenerational conflict was a result of acculturation in Asian American college students. Three hundred forty-two Asian college students participated in this study. These participants ranged from the age of 17 to 31. Chinese Americans, Korean Americans, Japanese Americans, Filipino Americans and Southeast Asians were included in this study. Based on results from the Suinn-Lew Self-Identity Acculturation Scale, 17% of the participants were categorized in the low acculturated group, 85% were bicultural and 10% were in the highly acculturated groups. Gender differences were observed on issues concerning marriage and dating, with girls experiencing more conflict with parents than boys. First generation Asians had low acculturation levels and second generation Asians ranged from bicultural to acculturated. Finally, acculturative stress was positively related to intergenerational conflict.

A model proposed by Berry (1990) states there are two components in understanding the consequences of acculturative stress. First, high levels of acculturative stress can lead to depression and psychological distress. Second, cultural and psychological factors can influence the level of acculturative stress. These factors may include, loss of old community, language barriers, socioeconomic status, support networks, expectations for the future (hopeful vs. non-hopeful), and the degree of acceptance of cultural diversity (multicultural vs. assimilationist) within the larger society. Berry (1990) states that personal expectations are important in understanding acculturative stress. For example, a discrepancy between expectations and reality post-immigration can increase acculturative stress. Therefore, prior expectations are a significant predictor of how individuals and groups will manage the acculturation process (Berry, 1990).

Berry (1990) believes that factors such as age and gender also impact acculturative stress. For example, older individuals and females experience more acculturative stress than adolescents or men. Canino et al. (1987) states that employed married women have higher rates of depressive symptoms than men, possibly due to changes in relationships and gender roles resulting from the migration process. For example, women who migrate to the United States have multiple roles which they need to incorporate as parts of their new identity (Aranda, Castaneda, Lee, & Sobel, 2001). Paige (1990) states that international women from traditional societies take on roles that may cause cultural conflict. Women who were once a part of a patriarchal society become heads of households and join the workforce in the United States.

Acculturating individuals face stressors from severing ties with family and friends in the country of origin (Salgado de Snyder, 1987). Espin (1987) suggests that loss and mourning of the “old country” may lead to depressive symptoms. Vargas-Willis and Cervantes (1987) found

that 93% of Latino women who left their families behind considered that one of the most troublesome aspects of migration. Moreover, these individuals faced challenges once they were in the United States such as, language inadequacy, lack of financial resources, and a sense of anxiety about being in an unfamiliar environment (Hovey, 2000; Salgado de Snyder, 1987).

Gaudet and Clement (2005) suggest that immigrants also face difficulty with social support. According to Stroebe and Stroebe (1996), social support is an important factor in understanding an individual's well being. Previous studies (Espin, 1987; Padilla, Cervantes, Maldonado & Garcia, 1988) have linked the importance of social support to the adjustment process. Clement, Michaud and Noels (1998) found that adjustment was worse when there was no support network from the native culture. This is of relevance to Asians because most Asians identify as collectivistic and use the family structure as a source of support. Sue and Sue (1999) state that Asian culture places emphasis on family and community obligations. Therefore, individuals who have migrated to another country may not only lose their family support, but feel that they are abandoning their families.

Lieber, Chin, Nihira, and Mink (2001) studied acculturation as an aspect of understanding the quality of life for Chinese immigrants. Eighty three Chinese immigrants (i.e. 45 females, 38 males) participated in this study. The Suinn-Lew Asian Self-Identity Scale (SL-ASIA, 1987) was used to assess acculturation. Quality of life was measured using the Quality of Life Scale (Olsen, McCubbin, Barnes, Larsen, Muxen, & Wilson, 1982), which uses a 5-point Likert scale. The Ecocultural Family Interview and Ecocultural Family Interview Questionnaire were developed for this study and used to examine family environment and parenting behavior. The interviewers used 51 items that included questions on daily routines and child care. Finally, household harmony was studied using a Home Quality Rating Scale (Meyers, Mink, & Nihira,

1990). Based on the SL-ASIA, participants fell into one of the four dimensions of acculturation, marginalized (n=21), assimilated (n=21), rejected (n=17), bicultural (n=24). The marginalized individuals reported significantly lower quality of life for finances (M= 2.51, SD= 0.56, $p < .001$), and overall quality (M=2.81, SD =0.37, $p < .001$) than the bicultural individuals, as well as lower quality of life overall than the separated or rejected individuals group (M= 2.81, SD = 0.37, $p < .01$). Also, these analyses revealed that the assimilated group reported significantly lower quality of life related to finances than the bicultural group (M=2.92, SD=0.32, $p < .001$). These results suggest that bicultural individuals, who have moved furthest in the acculturation process, could be expected to experience higher levels of life satisfaction, as opposed to marginalized, assimilated and rejected individuals. The bicultural group emerged as having significantly higher ratings of household harmony than either the marginalized or assimilated individuals (M=28.10, SD = 2.41, $p < .001$), as well as the separated individuals (M= 28.10, SD= 2.41, $p < .05$). Similar to previous results (Solberg, Choi, Ritsma, & Jolly, 1994; Hovey, 2001) these results indicate that those individuals who are able to integrate both cultures into their identity may experience less conflict in the household.

During the interviews the Chinese immigrants varied in their responses about the immigration process and being an immigrant. The marginalized group had responses that involved feelings of anger, disgust, and alienation (Lieber, et al, 2001). The participants who identified as marginalized stated that they felt they were being “isolated from the mainstream because of their cultural background.” Furthermore, they expressed a sense of inability or unwillingness to manage the challenge of reconciling the cultural differences. The assimilated group expressed a more accepting reconciliation to being an immigrant. These individuals stated that migrating was an “inconvenience” because it meant starting over and learning a new culture,

but that it was seen as manageable. Members of the separated or rejected group expressed the most confusion or unfamiliarity with U.S. culture of the four groups. Finally, the bicultural group members were able to clearly express that there were differences that were tolerable, as well as others that were more difficult. One participant, according to Lieber and colleagues (2001), said, "Whether it's food, shelter, clothing, transportation there are some differences, but you just have to try to adjust . . . of course, I admit that there are a lot of things that I still cannot adjust to" (p. 258) for example, the Asian Chinese culture being more family oriented than Western culture. However, these studies focused on the acculturation of East Asians. The following section will review literature that discussed the impact of acculturation on Asian Indians.

Asian Indians and Acculturation

Abouguenda and Noels (2001) mention three main acculturation stressors faced by South Asian immigrants: perceived discrimination, language barriers, and family conflict. Rumbaut (1994) studied the effect of perceived discrimination on 5000 immigrant children. The data were gathered from children of immigrants from San Diego and Miami in eighth and ninth grades of local schools. The sample was split evenly by gender and nativity (e.g. half were U.S. born and half were foreign born). Participants included Latinos, Asians, and West Indians. Rumbaut (1994) found that perceived discrimination was related to higher levels of depression. Berry (1990), states that "the acceptance of the prestige of one's group" is a vital factor in determining acculturative stress. For example, he states that those groups that are less acceptable to the majority culture experience more discrimination which can lead to marginalization. Aside from managing perceived prejudice, many Asian Indians also cope with language barriers (Abouguenda & Noels, 2001).

First generation Asian Indians may face the difficulty of acquiring a new language. They may face mockery because of their lack of proficiency in the English language (Abouguenda & Noels, 2001). On the other hand, second generation individuals may have to deal with the pressures placed by family to maintain the heritage language (Abouguenda & Noels, 2001). Lack of fluency in the heritage language may mean rejection from family and friends. Noels and Clement (1996) found that greater perceived ability in a second language was related to a higher level of self esteem and a lower level of stress.

Finally, family conflict is a third stressor that is associated with acculturation. Lay and Nguyen (1998) state that second generation Asians may face conflict because their parents' values differ with those of the mainstream culture. Children of immigrant parents are reported to acculturate faster into the host culture than their parents (Farver et al, 2002). Asian American children are faced with adopting Western values and beliefs which they learn from school and peers. However, Lee and Yoshida (2005) state that Asian immigrant parents expect children to maintain traditional cultures and beliefs. This challenge of integrating both cultures can lead to family conflict and psychological distress for the children (Farver, et al, 2002). Recent studies have suggested that Asian families experience more psychological distress when compared to other ethnic minority families (Rumbaut, 1994; Uba, 1994).

Aycan and Kanungo (1998) studied Indo-Canadian parents and children and found that parents were more marginalized than the second generation children. The sample consisted of 558 individuals, 154 fathers, 176 mothers, 96 male children and 132 female children. Participants were given a four section questionnaire. The first section requested demographic information. The second section had 60 items that assessed acculturation attitudes based on Berry's four dimensions of acculturation. The third section had 28 items that assessed

socialization beliefs (e.g. religious observances, career choices, general attitudes toward parenting). Finally, the fourth section assessed behavior (e.g. food preference, clothing preference, etc...). Children in this study scored higher in assimilation than their parents, $t(104) = 5.88, p < .001$. Parents scored higher on marginalization $t(104) = 7.40, p < .001$, and separation, $t(104) = 8.99, p < .001$.

Krishnan and Berry (1992) studied 76 Asian Indian immigrants living in the United States. Acculturation attitudes and acculturative stress were measured using scales which were validated by Berry, Kim, Minde, and Mok (1987). Acculturative stress was measured by a 20 item measure, which was responded to by answering “yes” or “no” to the questions. Ten of the 20 items referred to psychological distress and the remaining 10 denoted psychosomatic distress. Acculturation was measured using a 17- item integration scale, a 20 item assimilation scale, a 20 item separation scale, and a 15 item marginalization scale. The items were rated on a 5-point Likert scale, with 1 = strongly disagree, and 5 = “strongly agree.” A higher score on one of the scales indicated a stronger relationship with that particular acculturation dimension. Further information about the measures was not provided. Stepwise multiple regression analyses were conducted with each of the acculturation attitudes and various variables (e.g. birthplace and participation in Indian organizations) as predictors. Krishnan and Berry (1992) found that those individuals born in India preferred integration into American culture more when compared to those Asian Indians born in the United States, $R = .209, p < .016$. Moreover, they found that integration was negatively correlated with acculturative stress, $r = -.34, p < .001$. There was a positive relationship between marginalization, $r = .24, p < .05$, and separation, $r = .25, p < .05$ with acculturative stress. The correlation between assimilation and acculturative stress was not statistically significant. Krishnan and Berry (1992) also looked at other variables that correlated

with acculturative stress. Females experienced more acculturative stress than males; individuals with lower educational levels experienced more acculturative stress. However, Krishnan and Berry did not explain how educational level was operationalized, nor did they provide the correlation coefficients. These findings, however, show that the more an individual is able to integrate both cultures, the lower his or her acculturative stress. In summary, these results indicate that females and those with lower educational levels experience more acculturative stress.

Farver, Narang, and Bhadha (2002) studied 180 Asian Indian adolescents (99 girls, 81 boys) and their parents (149 mothers, and 31 fathers,). They found that parents and children who had different acculturation levels had more conflict with each other. Asian Indian adolescents who had integrated or assimilated acculturation styles, measured by the Acculturation Rating Scale for Mexican Americans (Cueller, Arnold, & Maldonado, 1995; adapted for use with Asian Indians), reported higher self-esteem and less anxiety.

The results of a number of studies indicate that Asian Indians maintain traditional values associated with sex roles, but adopt “pragmatic values” such as Western attire (Inman, Ladany, Constantine & Morano, 1999; Sodowsky & Lai, 1997). Phinney, Chavira and Williamson (1992) found that individuals who identified both with their culture and the host culture reported more positive self-esteem. Contrary to these findings, Gurung and Mehta (2001) conducted a study on 150 Asian Indian medical trainees. Eighty seven percent of these individuals were born in the United States. Participants were given the Multigroup Ethnic Identity Measure (Phinney, 1992), the Suinn Lew Asian Self Identity Scale (Suinn, et al, 1992), Rosenberg’s Self Esteem Scale (Rosenberg, 1979), the Self-Clarity Scale (Campbell, 1996), and the Minority Providers’ Attitude Questionnaire (Gurung & Mehta, 2001). Clarity of self-concept was defined as the

extent to which an individual's self-concept was clearly and confidently defined, as well as internally consistent (Gurung & Mehta, 2001). Their results showed that those individuals who identified themselves as “more Indian” on the acculturation measure also reported more clarity (as described by the authors of the study) in regards to their self -concept, $r(150) = .21, p < .05$ and higher self-esteem, $r(150) = .20, p < .01$. F tests showed that the women reported a higher level of ethnic identity achievement ($p < .01$). Furthermore, women's total ethnic identity scores were significantly higher than the men's ($p < .001$).

Summary

In summary, the empirical studies reviewed support the contention that acculturation is an important concept that needs to be addressed when understanding Asians, specifically Asian Indians. Acculturation is seen as an indicator of psychological adjustment, self-esteem, feelings of personal worth as well as a sense of group belonging (Gaudet & Clement, 2005). Furthermore, research on acculturation has indicated that individuals who were able to manage the two cultural contexts had higher levels of self-esteem (Castro, 2003). Acculturation is understood to be a complex phenomenon that can affect many aspects of an individual's life, such as mental health, academic achievement, and familial interaction. Thus, it is an important concept to understand for immigrants, specifically Asian Indians, who have been underrepresented in the acculturation literature.

The main purpose of this study is to explore the concept of perfectionism, individual and family, and acculturation. Previous research has examined perfectionism as an individualistic attribute, however, the influence of familial expectations is important to groups like Asian Indians. Therefore, this study will examine perfectionism from both an individual perspective but also from a perceived family perspective. The hypotheses for this study are:

Hypothesis 1: High Individual Discrepancy as measured by the APS-R, High Family Discrepancy as measured by the APS-F, Adherence to Asian Values as measured by the AVS-R, the interaction of Individual Discrepancy and Adherence to Asian Values, and the interaction of Family Discrepancy and Adherence to Asian Values will be predictive of higher levels of depression.

Hypothesis 2: High Individual Discrepancy as measured by the APS-R, High Family Discrepancy as measured by the APS-F, Adherence to Asian Values as measured by the AVS-R, the interaction of Individual Discrepancy and Adherence to Asian Values, and the interaction of Family Discrepancy and Adherence to Asian Values will be predictive of higher levels of anxiety.

Hypothesis 3: High Individual Discrepancy as measured by the APS-R, High Family Discrepancy as measured by the APS-F, Adherence to Asian Values as measured by the AVS-R, the interaction of Individual Discrepancy and Adherence to Asian Values, and the interaction of Family Discrepancy and Adherence to Asian Values will be predictive of lower levels of self-esteem.

Chapter 3

Method

This chapter provides an overview of participant demographics, how participants were recruited, and the procedures for the study. All the measures involved in this study are also described.

Participants

A total of 228 people participated in this study. Fifty-seven participants completed less than 50% of the survey and these participants were removed from the study. Those who left questions blank in the demographic questionnaire section were included in the analysis. One individual was an outlier and was also removed from the sample. Thus, the total sample consists of 170 male and female participants of Asian Indian descent. Not all demographic variables total 170 because participants sometimes left certain demographic questions blank. Participants' ages ranged from 18 to 52. Sixty-one percent of the sample was female ($n = 103$); 35% of the sample was male ($n = 59$); and eight did not respond to this question. Forty percent were born in the U.S. and 56% were not with 7 people leaving this question blank. Eighteen percent of individuals were born in India. Most of the participants identified themselves as first- (57%) and second-generation (37%), followed by several students who were third generation (2%). The majority of the sample identified themselves ethnically as Indian (55%) and Indian American (35%), followed by American (5%). The majority of the sample completed graduate or professional school (59%) followed by completion of college (20%), with 8% completing some graduate school, 7% completing some college, and 1% completing high school. Eight individuals left the education question blank. Most of the participants were single (67%) followed by 27% of participants who were married and 1% who were separated or widowed.

Finally, 49% of the participants identified as Hindu, 30% identified as Christian, followed by Sikh (5%), Jain (3%), Muslim (2%), and Buddhist (1%). Six percent identified as other, which participants specified as agnostic, atheist, or open to all religions.

Procedures

Recruitment Procedures

Approval was obtained from the Pennsylvania State University Institutional Review Board. After research approval was granted participants were recruited from different settings using electronic mailings and flyers. Requirements for voluntary participation in this study included being 18 years of age or older, a U.S. citizen, a permanent U.S. resident, or international student of Asian Indian descent (e.g., either or both parents had immigrated to the United States, the individual has immigrated to the United States from India, or either or both grandparents have immigrated to the United States from India). Recruitment notices were sent out to the Indian Graduate Student Association, and the Indian Student Association. In addition, a recruitment notice was sent via the office of International Student Services to all registered Indian students at the Pennsylvania State University. The following listserves also sent out recruitment notices, The Asian American Psychological Association, South Asian Psychological Network, South Asian American Leaders of Tomorrow, and South Asian Lesbian and Gay Association. The recruitment notice sent via listserves inviting people to participate in the survey can be found in Appendix A. Follow up emails were sent to these organizations 3 weeks after the initial email, and 2 weeks after that. The notice explained the purpose of the study, the length of the survey, ensured confidentiality, and asked for voluntary participation. The notice also provided students with a link to psychdata.com, and the survey number to be entered, if they decided to participate. Students were also informed that for each completed survey \$.25 would

be donated to the South Asian Youth Action Association in New York City. Recruitment flyers were also posted on the Penn State campus. Please see Appendix B for the recruitment flyer. Similar to the email notices, the flyers stated the purpose of the study, and asked for voluntary participation. Potential participants were allowed to detach a slip of paper from the flyer with the research website information on it and the survey number to be entered.

Data collection procedures.

I used www.psychdata.com to collect my data. Six measures and a demographic questionnaire were uploaded onto the website for potential participants to complete. Prior to collecting data, the website questionnaires were piloted with four individuals who varied in their familiarity with the use of computers to check for the length of time it took to complete the survey and to check for clarity and flow of the survey. The survey took between 15-20 minutes. The participants from the pilot study reported that the survey was clear and easy to follow.

The survey started with an informed consent form, which provided participants with information on the nature of the study, confidentiality, length of the study, and a voluntary informed consent statement. Participants were also informed that they could withdraw at any time, and that only the primary investigator and the participants would have access to the individual surveys. They were also reminded that the principal investigator would donate \$.25 to the South Asian Youth Action Association, in New York City, for every completed survey. They agreed to participate in the study by clicking on the “continue” button which took them to the six measures and demographic questionnaire. The informed consent can be found in Appendix C.

Measures

Demographic Information

The demographic questionnaire gathered the following information: participants' age, gender, number of years in the United States, religion, educational level, generation status, biological sex, and marital status. Please see Appendix D for the Demographic form.

The Asian Values Scale (AVS; Kim, Atkinson, & Yang, 1999)

The AVS was used to measure acculturation. This scale was chosen, instead of other acculturation scales, because many acculturation scales only measure the behavioral aspects of acculturation, such as food preference, and language use (Cueller, Arnold, & Maldonado, 1995), however, the AVS addresses the values aspect of acculturation. Factors that are fundamental to the AVS, such as collectivism, conformity to norms, emotional self-control, and family recognition through achievement, are believed by some researchers to be particularly important in Asian cultures (Kim et al., 1999). Understanding an individual's affinity to Asian values is a necessary factor in understanding his/her acculturation. LaFromboise, Coleman, and Gerton (1993) state that "individuals will learn the behaviors needed to survive in a new culture before they acquire the values of the majority group" (p. 398). Therefore, if an individual's ancestral values differ from the values of the host country, conflict can arise (Kim et al., 1999). The AVS suggests that the level of affinity the participants have to their Asian culture is related to how acculturated they are. The AVS is a 36-item multiple-choice scale that assesses adherence to Asian values using a 7-point Likert-type scale ranging from (1) "strongly disagree" to (7) "strongly agree." To obtain the AVS score, all 36 items are summed together and divided by 36. Higher scores indicate greater adherence to Asian cultural values.

Four studies were conducted by Kim and colleagues to examine the validity and reliability of the AVS. The first study included a total of 303 Asian Americans and 63 European Americans from two universities, one in California and one in Hawaii. This study consisted of three separate analyses. Ratings for the original 112 items were examined using t-tests to compare those items that were endorsed by European Americans and first generation Asian Americans, which helped determine the cultural values that are illustrative of Asian culture rather than European American culture. Results from the t-tests, based on an alpha level set at .05, yielded the 36 items of the AVS. These items were those on which first generation Asian Americans scored significantly higher than European Americans. The second analysis utilized an exploratory factor analysis to examine the structural validity of the AVS and yielded six factors representing Asian values: emotional self-control, collectivism, humility, family recognition through achievement, conformity to norms, and filial piety (Kim et al., 1999). The third set of analyses computed coefficient alphas for the overall score of the AVS and for each of the six factors. The coefficient alpha for the overall AVS was .81. The coefficient alphas for the six factors were .77 for Conformity to Norms, .72 for Family Recognition Through Achievement, .52 for Emotional Self-Control, .56 for Collectivism, .55 for Humility, and .44 for Filial Piety. The second study was to confirm the internal consistency. Three hundred ninety nine Asian American college students (159 men and 240 women) from two universities in California participated in this study. The coefficient alpha for the entire AVS was .82. However, the internal consistencies for the individual subscales were found to be low, with alphas ranging from .38 to .69. Therefore, the authors recommended using the total AVS score. The third study looked at concurrent and discriminant validity of the AVS using a confirmatory factor analysis. Kim et al. also conducted a confirmatory factor analysis on other Asian

acculturation measures, such as the SL-ASIA, and the INCOL, to test a two-factor model of Asian acculturation. Factor I, consisted of Asian Values Acculturation and Factor II, consisted of Asian Behavioral Acculturation. The Asian Values Acculturation Factor was measured by the AVS and the Individual Collectivism-Vertical Collectivism (INDCOL VC) and Individual Collectivism - Horizontal Collectivism (INDCOL HC) of the Individualism-Collectivism Scale (Triandis, 1995). The Asian Behavioral Acculturation Factor was measured by the Suinn-Lew Asian Self-Identity Acculturation Scale (SL-ASIA; Suinn, Rickard-Figueroa, Lew, & Vigil, 1987), which was split into three 7- item parcels. A confirmatory factor analysis yielded a Goodness-of-Fit Index (GFI; Jöreskog & Sorbom, 1984) equal to .97, a Comparative Fit Index (CFI; Bentler, 1990) equal to .97, and a Bentler-Bonett Normed Fit Index (NFI; Bentler & Bonett, 1980) equal to .96, indicating evidence of concurrent validity of the AVS (Kim et. al, 1999). Discriminant validity was supported by the low correlation ($r = .15$) between the AVS scores, which reflect values acculturation, and the SL-ASIA scores, which reflects behavioral acculturation (Kim et al., 1999). The fourth and final study looked at reliability. The 2-week test-retest reliability analysis yielded a coefficient of .83 (Kim et al., 1999). Kim and Hong (2004) revised the Asian Values Scale to a shorter 25 item scale. However, because of limited information on the psychometric properties of the AVS-R, this dissertation will use the original AVS. Sample items for the AVS include “*One should not deviate from familial and social norms,*” “*Modesty is an important quality for a person,*” and “*One need not control one's expression of emotions.*” In the current study the alpha for the overall scale was .85.

Almost Perfect Scale-Revised (APS-R; Slaney et al., 1996).

The APS-R was used to measure aspects of perfectionism. There are 23 items that are responded to on a 7-point Likert-type scale ranging from (1) “strongly disagree” to (7) “strongly

agree.” Sample items include, “I rarely live up to my high standards,” and, “I expect the best from myself.” The APS-R consists of three subscales: High Standards (7 items), Order (4 items), and Discrepancy (12 items). Studies suggest that the High Standards and Order scales are associated with positive aspects of perfectionism (Rice, Ashby, & Slaney, 1998; Rice & Slaney, 2002; Slaney et al., 2001; Suddarth & Slaney, 2001). The Discrepancy subscale captures the negative aspects of perfectionism and measures the perception that individuals fail to meet the high standards that they set for themselves. Internal consistency coefficients for the subscales of the APS-R ranged from .85 to .92. (Slaney et al, 2001). Suddarth and Slaney (2001) conducted a principal components factor analysis on the APS-R. They found evidence in support of the three subscales, which accounted for a total of 68% of the variance. Concurrent validity for the APS-R was supported by significant correlations between the subscales and other measures of perfectionism. The Discrepancy subscale was significantly correlated with the Concern Over Mistakes ($r = .55$) and Doubts About Actions ($r = .62$) subscales of the FMPS (1990). The High Standards subscale was significantly correlated with the Self Oriented Perfectionism subscale of the HFMP (1991) ($r=.64$). The Order subscale of the APS-R was correlated with the Organization subscale of the FMPS ($r=.88$). The correlation between High Standards and Order was .42, the correlation between High Standards and Discrepancy was -.12, and the correlation between Order and Discrepancy was -.03 (Slaney et al., 2001). Suddarth and Slaney (2002) obtained Cronbach’s alphas of .85 for Order .83 for High Standards and .91 for Discrepancy. Test retest reliability over a 3 week period yielded .72 for High Standards, .83 for Discrepancy, and .80 for Order (Grzegorek et al., 2004). Moreover, in a study on African American college students alpha coefficients were .75 for High Standards, .81 for Order, and .88 for Discrepancy

(Mobley, Slaney, & Rice, 2005). In the current study the alpha was .95 for the Individual Discrepancy subscale.

The Almost Perfect Scale-Family (APS-F; Methikalam, Slaney, & Wang, 2005)

The APS-F was used to measure an individual's perceptions of how he or she is affected by the perfectionism in the family of origin. The APS-F was developed by revising the items of the APS-R to measure the perceived High Standards, Order, and Discrepancy attributed to one's family. It consists of the same three subscales of the APS-R: High Standards, Order, and Discrepancy. The APS-F uses a 7-point Likert scale ranging from 1 = *strongly disagree* through 7 = *strongly agree*. The High Standards subscale measures the perceived degree of high standards for achievement and performance expected by one's family. Sample items include, "*My family has high standards for my performance at work or at school.*" The Order subscale measures the tendency for neatness and orderliness expected by one's family. Sample items for the order subscale includes "*My family expects me to be an orderly person.*" The Discrepancy subscale measures the extent to which individuals perceive themselves as not meeting their family's standards for achievement and performance. Sample items include: "*I often feel frustrated because I can't meet the goals my family has for me.*" Cronbach alphas for the High Standards, Order, and Discrepancy subscales were .85, .82, and .95, respectively in a sample of 184 college students in the U.S. (Methikalam, Slaney, & Wang, 2005). A Chinese version of the APS-F was developed, by translating the English items to Chinese. Wang, Yeh, and Slaney, (2006) tested it on a sample of 348 Chinese college students from Taiwan. Cronbach's coefficient alphas for the High Standards, Order, and Discrepancy subscales were .80, .78, and .92, respectively. Structure coefficients of a confirmatory factor analysis ranged from .39 to .82

for High Standards, .56 to .76 for Order, and .36 to .89 for Discrepancy. In the current study the alpha was .95 for the Family Discrepancy subscale.

Center for Epidemiologic Studies-Depression Scale

The CES-D Scale (Radloff, 1977) was used to assess depression. The CES-D is a 20 item self-report measure that asks participants to indicate the frequency and duration of depressive symptoms. Responses range from 0 (rarely or none of the time/1 day) to 3 (all of the time/5-7 days). Overall scores range from 0 to 60, with higher scores indicating higher levels of depressive symptoms. Radloff (1977) suggests that the CES-D scores differentiate clinically depressed and non-depressed groups. The CES-D was validated in household interview surveys, as well as in psychiatric settings (Rahman & Rollack, 2004). The household interview surveys were conducted in two different communities, at three different points in time, and contained over 300 structured items (in the first interview), in addition to the CES-D scale. The internal consistency is reported to be .85 in the general population and .90 in the clinical population (Radloff, 1977). Test-retest reliabilities ranged from .51 to .67 with a 2 to 8 week interval (Radloff, 1977). This scale is widely used across ethnically diverse populations (Rahman & Rollack, 2004). A Cronbach's alpha of .91 was obtained from a sample of 320 Asian, African and Latin American international students (Constantine, Okasaki, & Utsey, 2004). It has been used in previous research studies on Asians and yielded alpha coefficients ranging from .88 to .90 (Wing, Lee & Tsai, 2004). The CES-D is reported to have high internal consistency reliability (.85-.91) and good construct validity in college, clinical and community samples (Cervantes, Salgado de Snyder, & Padilla, 1989; Hovey, 1999; Constantine, Okasaki, & Utsey, 2004). In the current study the alpha was .90.

State-Trait Anxiety Scale

The State Anxiety Scale (Form Y-1) (Spielberger, Gorsuch, Luchene, Vagg, & Jacobs, 1983) is a subscale of the State-Trait Anxiety Inventory. This 20-item scale was used to assess anxiety at the current moment. Participants are required to respond based on their thoughts and feelings about anxiety. Participants respond using a 4-point Likert scale ranging from 1 (not at all) to 4 (very much so) indicating how they feel. The score ranges from 20 to 80. Higher scores indicate greater levels of anxiety. The internal consistency reliability coefficient is reported to be between .73 and .84 (Spielberger et al, 1970). Concurrent validity with the Manifest Anxiety Scale was .80, and convergent validity with the Psychasthenia subscale of the MMPI was .79 (Spielberger et al, 1983). In the current study the alpha was .95.

Rosenberg's Self-Esteem Scale, (RSES; Rosenberg, 1979)

The RSES was used to measure self-esteem. This is a 10-item scale and participants respond on a 4-point Likert scale ranging from 1 (almost never) to 4 (almost always). Sample items include: "I feel that I am a person of worth, at least on an equal plane with others," and "At times I think I am no good at all." The test-retest reliability over two weeks was .85, and correlations with related measures ranged from .56 to .83 (Silber & Tippett, 1965). Crandall (1973) found the test-retest reliability for a 2-week time period to be .85. Demo (1985) found that the RSES correlated with the Coopersmith Self-Esteem Inventory, $r=.55$, $p < .001$. Coefficient alphas ranged from .80 to .89 in previous studies (Lightsey, Burke, Ervin, Henderson, & Yee, 2006). In an Asian-American sample the internal consistency ranged from .85 to .90 (Lee, 2003; Ying et al., 2004). In the current study the alpha was .89.

Chapter 4 Results

Results of the research analyses are presented in this chapter. First, preliminary analyses were conducted prior to all hierarchical multiple regression analyses. Specifically, descriptive and univariate statistics and bivariate correlations were used to check for missing values, accuracy of data entry, and assumptions required for regression analysis. These preliminary analyses were followed by three separate hierarchical multiple regression analyses. Additional analyses such as t-tests, ANOVAs were done to examine differences between demographic variables.

Preliminary Analysis

First, survey data were downloaded from www.psychdata.com. According to Tabachnick and Fidell (2001) the following calculation: $N > 104 + m$, where m equals the number of predictor variables, is suggested for use to ensure the number of participants recruited is sufficient to obtain a medium effect size. There are three predictor variables in the present study. Therefore, it was necessary to have a minimum of 107 individuals for the regression analyses to detect a medium effect size. Missing data were examined with regard to the scales (excluding the demographics) as discussed by Tabachnick and Fidell (2001). A total of 228 people participated in the survey. Fifty-seven participants completed less than 50% of the survey and were subsequently removed from the study. Missing data points from the demographic scale were not changed nor included in analyses. For example, if a participant did not indicate his or her generation, it did not make sense to estimate it, and thus this participant was not included when looking at generational differences. Eight individuals did not complete the STAI and RSES, however, these individuals were not deleted. They were not included in the regression analyses. For 171 participants, with six scales totaling 25,308 items (# of items x # of

participants), there were 145 (0.6%) cases of missing data for all items. Tabachnick and Fidell (2001) state that there are no firm guidelines about how to handle missing data. They state that if there is a large data set with few missing data points, one can proceed with traditional methods of dealing with missing data. According to Tabachnick and Fidell (2001), mean substitution is considered an appropriate method to estimate missing values. Thus, scale means were calculated from complete cases and inserted in place of missing data points.

Prior to conducting statistical analyses, data were checked for input accuracy by examining out-of-range values, plausible means and standard deviations, and univariate outliers (Tabachnick & Fidell, 2001). The means and standard deviations of each scale and the demographics were found to be within appropriate ranges as were the minimum and maximum values of each scale.

Next, univariate outliers were examined using box plots of each scale. Four points looked like outliers, particularly one on the AVS and three on the CES-D. After visual examination, participant 145 was identified as having responded with extreme scores. However, the other three participants seemed to have responded to the AVS, CES-D, APS-F, APS-R, and demographic responses in a reasonable manner. Thus, these participants were included in the analyses because their responses were within range and plausible. A final examination of Mahalanobis distances, commonly used to check for multivariate outliers, was conducted to determine the use of participant 145. One outlier was identified, participant 145, and deleted from the data set. Thus, there were a total of 170 participants (75% of total participants).

Tabachnick and Fidell (2007) state that the data must be reviewed to see if all the assumptions for regression analyses are met. These assumptions include multivariate normality, linearity, homogeneity of variance, and multicollinearity and singularity.

The means, SD, range, skewness and kurtosis for each variable were examined to check for normality. Skewness values greater than 2 or less than -2 should be transformed, however, none of the current study variables needed to be transformed. Table 1 shows the skewness and kurtosis for each variable. When the assumption of multivariate normality is met, the relationships between variables are homoscedastic and the criteria for linearity are met. Heteroscedasticity and nonlinearity can be caused by non-normality of data (Tabachnick & Fidell, 2001). Thus homoscedasticity and linearity were assumed because all the variables were normally distributed and conditions for skewness and kurtosis were met.

Table 1

Skewness and Kurtosis, Mean, Standard Deviation, Maximum and Minimum Values

	Skewness	SE. Skewness	Kurtosis	SE. Kurtosis	Mean	SD	Min	Max
AVS	-.193	.186	-.528	.370	146.51	24.88	89	204
Depression	.486	.186	-.537	.370	18.22	11.64	0	48
Self-Esteem	-.157	.191	-.830	.379	31.05	5.59	17	40
Anxiety	.555	.191	-.408	.379	39.51	12.97	20	73
Ind-Disc	.252	.186	-.885	.370	44.64	17.41	12	83
Fam-Disc	.831	.186	.070	.370	36.99	17.53	13	87

*Note. AVS; -Adherence to Asian Values Scale, **Ind-Disc**- Discrepancy subscale of Almost Perfect Scale Family; **Fam-Disc**-Discrepancy subscale of the Almost Perfect Scale-Family*

Finally, multicollinearity and singularity were also examined. Multicollinearity happens when variables are very highly correlated (.90 and above); singularity refers to the redundancy of the variables (Tabachnick & Fidell, 2001). Multicollinearity was examined by checking the

Variance Inflation Factor and Tolerance. The Variance Inflation Factor must be less than 3 and the tolerance should be greater than .3. These criteria were met. Multicollinearity was also determined by running bivariate correlations between the dependent variables and the independent variables to see if correlations were above .90. None of the correlations was above .90, thus no variables needed to be removed. Table 2 shows the correlations between the different variables.

Correlations

A significant correlation was found between Adherence to Asian Values and self-esteem ($r = -.18$). Other significant correlations were found between Individual Discrepancy of the APS-R and depression ($r = .68$), self-esteem ($r = -.69$) and anxiety ($r = .65$). This indicates that those individuals who cannot meet their individual expectations endorsed more symptoms of depression and anxiety and have lower self-esteem. Finally, there were significant correlations between Family Discrepancy of the APS-F and depression ($r = .41$), self-esteem ($r = -.31$) and anxiety ($r = .39$) revealing that individuals who feel they are not meeting their family's expectations reported higher levels of depression and anxiety and lower self-esteem. There was also a significant correlation between Adherence to Asian Values and Individual Discrepancy ($r = .25$).

Table 2
Bivariate Correlations Between Variables

	1.	2.	3.	4.	5.	6.
1. AVS	—					
2. Depression	.13	—				
3. Self-esteem	-.18**	-.60**	—			
4. Anxiety	.14*	.80**	-.58**	—		
5. Ind-Disc	.25**	.68**	-.69**	.65**	—	
6. Family-Disc	.04	.41**	-.31**	.39**	.42**	—

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

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

Note. **AVS**; =Adherence to Asian Values Scale, **Ind-Disc**= Discrepancy subscale of Almost Perfect Scale; **Fam-Disc**=Discrepancy subscale of the Almost Perfect Scale-Family

Additional Analyses

Three independent sample t-tests were conducted to examine differences in self-esteem, depression, and anxiety between generation 1 and generation 2. In addition, conducting the t-tests helped decide if the generation variable should be included in the regression analyses.

There was a significant difference in anxiety levels between generation 1 (M=38.12, SD=12.93) and generation 2, $t(154) = -2.104$, $p < .001$, with generation 2 having higher levels of anxiety (M= 42.54, SD= 12.61). When comparing depression between the generations, generation 1 (M = 17.17, SD = 11.66) and generation 2 (M = 19.63, SD = 11.61) revealed no significant differences between the groups $t(156) = -1.29$, $p > .05$, . Similarly, when comparing self-esteem between the generations, generation 1 (M = 31.57, SD = 5.46) and generation 2 (M =

30.38, SD = 5.94) revealed no significant differences between the groups $t(154) = 1.28, p > .05$. Because there were significant differences in generation and anxiety levels, generation was included in the regression analyses.

Additionally, three separate ANOVAs were conducted to examine the differences in self-esteem, depression, and anxiety between three of the ethnic identity groups (e.g. Indian, American, and Indian American). No significant differences were found between self-identified ethnic groups and self-esteem $F(3, 157) = .314, p > .05$; depression $F(3, 159) = .602, p > .05$; or anxiety $F(3, 157) = 2.16, p > .05$. Means and standard deviations are presented in Table 3. Therefore, ethnic identity groups were not included in the regression analysis. The following section will discuss the findings from the regression analyses.

Table 3
ANOVA means and standard deviations for ethnicity and mental health

Mental Health	Ethnicity	Mean	S.D.	N
Depression	Indian	17.67	11.53	94
	American	13.36	8.43	8
	Indian American	19.00	12.43	59
Anxiety	Indian	39.28	12.62	92
	American	29.63	8.62	8
	Indian American	41.27	13.67	59
Self-Esteem	Indian	39.89	5.64	92
	American	31.63	5.21	8
	Indian American	31.20	5.70	59

Hierarchical Regression Analyses

Hierarchical regression analysis, also known as sequential regression analysis, allows the researcher to enter variables at different steps to examine the degree to which independent variables predict the outcome variable (Tabachnick & Fidell, 2001).

Variables are entered in the first block of the model based on past research in order of their importance in predicting the outcome variable. Individual discrepancy, family discrepancy, and adherence to Asian values were entered in the first block. The two interaction terms, individual discrepancy and Adherence to Asian Values, family discrepancy and Adherence to Asian Values, in addition to generation status, were entered in the second block. Numerous studies have found a relationship between individual discrepancy, family discrepancy and psychological distress, however few studies have focused on Asian Indians. Therefore, based upon theory, it is appropriate to enter these variables in the first block. However, no research has looked at the interaction of Discrepancy (both individual and family) with Adherence to Asian Values. Because generation status was a demographic variable, it was added in the second block to determine if it predicts depression, self-esteem, and anxiety. Thus, the interactions and generation status were placed in the second block. The following sections will report the findings of the hierarchical regression analyses and are organized by hypothesis. Each hypothesis is noted with the related results to follow.

Hypothesis 1: High Individual Discrepancy as measured by the APS-R, High Family Discrepancy as measured by the APS-F, Adherence to Asian Values as measured by the AVS-R, the interaction of Individual Discrepancy and Adherence to Asian Values, and the interaction of

Family Discrepancy and Adherence to Asian Values will be predictive of higher levels of depression.

Results for Hypothesis 1:

The first block accounted for a significant amount of variance for depression ($R^2 = .475$, $F = 51.65$). Both Individual Discrepancy ($\beta = .618$, $p < .05$) and Family Discrepancy were significant ($\beta = .153$, $p < .05$). The beta coefficients indicated Individual Discrepancy has a positive relationship with depression; the higher the Individual Discrepancy, the higher the scores on depression. Similarly, beta coefficients indicated Family Discrepancy has a positive relationship with depression; the higher the Individual Discrepancy, the higher the scores on depression. Adherence to Asian values revealed no significant relationship with depression, $p > .05$. The second block, the interactions between Individual Discrepancy, Family Discrepancy, Adherence to Asian Values, and generation status revealed no significant relationship with depression. These findings lend support for past literature identifying the higher the Individual and Family Discrepancy the higher the levels of depression. Contrary to the hypothesis, Adherence to Asian Values did not predict depression. See table 4 (p.61) for results.

Hypothesis 2: Individual Discrepancy as measured by the APS-R, Family Discrepancy as measured by the APS-F, Adherence to Asian Values as measured by the AVS-R, the interaction of Individual Discrepancy and Adherence to Asian Values, and the interaction of Family Discrepancy and Adherence to Asian Values will be predictive of higher levels of anxiety.

Results for Hypothesis 2:

In block one Individual Discrepancy, Family Discrepancy, and Adherence to Asian Values accounted for 44% of the variance in the measure of anxiety. Both Individual Discrepancy ($\beta=.590$, $p < .05$) and Family Discrepancy ($\beta=.142$, $p<.05$) were positive significant predictors of anxiety, indicating the higher the Individual Discrepancy, the higher the symptoms of anxiety. Similarly, the higher the Family Discrepancy the higher the symptoms of anxiety. These findings are consistent with previous findings. However, Adherence to Asian Values did not reveal a significant relationship with anxiety ($p > .05$). In block two, the interactions between Individual Discrepancy, Family Discrepancy and Adherence to Asian Values, in addition to generation status, failed to account for a significant amount of variance in anxiety ($R^2=.430$, $F = 20.98$). See Table 5 (p.62) for results.

Hypothesis 3: Individual Discrepancy as measured by the APS-R, Family Discrepancy as measured by the APS-F, Adherence to Asian Values as measured by the AVS-R, the interaction of Individual Discrepancy and Adherence to Asian Values, and the interaction of Family Discrepancy and Adherence to Asian Values will be predictive of lower levels of self-esteem.

Results for Hypothesis 3:

Using all three main effect terms in the first block, 48% of the variance in total self-esteem was explained. Individual Discrepancy, which was entered in the first block had a significant, yet negative relationship with self esteem ($\beta= -.683$, $p<.01$). These findings indicate the higher the Individual Discrepancy, the lower the self- esteem. However, Family Discrepancy and Adherence to Asian Values were not predictive of self-esteem, $p > .05$. Thus, contrary to

expectations, family expectations and Adherence to Asian Values were not significant predictors of self-esteem. The second block, which included the interaction terms and generation status failed to account for a significant amount of variance in self-esteem ($R^2 = .479$, $F = 30.57$). See Table 6 (p.63) for results.

Table 4
Hierarchical Regression Model with Variables Predicting Depression

Variables	Model 1	Model 2
Fam_Disc (β)	.153	.551
Ind_Disc (β)	.618	.165
AVS (β)	-.043	-.081
Fam_Disc*AVS (β)		-.455
Ind_Disc*AVS (β)		.544
Generation (β)		.030
R^2	.475	.480
Adjusted R^2	.465	.460
ΔR^2	.475	.006
Significance of F Change	.000	.644

Note. **AVS**; =Adherence to Asian Values Scale, **Ind-Disc**= Discrepancy subscale of Almost Perfect Scale; **Fam-Disc**=Discrepancy subscale of the Almost Perfect Scale-Family

Table 5
Hierarchical Regression Model with Variables Predicting Anxiety

Variables	Model 1	Model 2
Fam_Disc (β)	.142	.822
Ind_Disc (β)	.590	.013
AVS (β)	-.011	.017
Fam_Disc*AVS (β)		-.780
Ind_Disc*AVS (β)		.707
Generation (β)		.067
R ²	.436	.451
Adjusted R ²	.426	.430
□ R ²	.436	.015
Significance of F Change	.000	.249

Note. **AVS** =Adherence to Asian Values Scale, **Ind-Disc**= Discrepancy subscale of Almost Perfect Scale; **Fam-Disc**=Discrepancy subscale of the Almost Perfect Scale-Family

Table 6
Hierarchical Regression Model with Variables Predicting Self-Esteem

Variables	Model 1	Model 2
Fam_Disc (β)	-.016	.717
Ind_Disc (β)	-.683	-1.24
AVS (β)	-.008	.002
Fam_Disc*AVS (β)		-.793
Ind_Disc*AVS (β)		.675
Generation (β)		-104
R ²	.479	.504
Adjusted R ²	.469	.484
□ R ²	.479	.025
Significance of F Change	.000	.056

Note. **AVS** =Adherence to Asian Values Scale, **Ind-Dis** =- Discrepancy subscale of Almost Perfect Scale; **Fam-Disc**=Discrepancy subscale of the Almost Perfect Scale-Family

Chapter 5

Discussion

This study examined the effects of Individual Discrepancy, as measured by the APS-R, perceived Family Discrepancy, as measured by the APS-F and Adherence to Asian Values, as measured by the AVS, on the mental health of Asian Indians living in the United States. The interaction of Discrepancy (both individual and family) and Adherence to Asian Values, in addition to generation status and the relationship to mental health was also examined. As hypothesized, both Individual and Family Discrepancy were significant predictors of depression and anxiety. Only Individual Discrepancy was predictive of self-esteem. Adherence to Asian Values did not predict self-esteem, anxiety, or depression. Generation status, and the interactions between Individual Discrepancy and Adherence to Asian Values, and Family Discrepancy and Adherence to Asian Values were not significant predictors of self-esteem, depression or anxiety. The data analyses will be discussed in this chapter. Clinical implications of the findings, limitations of this study, and directions for future research will also be discussed.

Individual Discrepancy

Individual Discrepancy was found to have significant positive relationships with depression and anxiety while being negatively related to self-esteem. These findings support previous studies conducted using the APS-R's Discrepancy scale (Rice & Slaney, 2002; Wang, 2007). Individual Discrepancy measures the perception of inconsistency between self-expectations and actual performance. Therefore, individuals with higher Discrepancy scores may doubt themselves and have negative feelings about their performance. This may be due in part to their beliefs of not reaching set goals. As found in previous research, individuals who believe they are not meeting their own expectations tend to have lower self-esteem, are often distressed

by mistakes, and often disregard their own achievements (Ashby & Kottman, 1996; Ashby, LoCicero, & Kenny, 2003; Rice & Slaney, 2002). Blatt (1995) discussed how perfectionistic individuals are often troubled by issues of self-worth, guilt, shame, and worthlessness. Therefore, the findings in this study indicate that the belief that one is not reaching his/her standards for performance may produce negative self-evaluations and rumination over not being good enough.

Rice and Mirzadeh (2000) found individuals with high Discrepancy scores tended to have excessive concerns about making mistakes, living up to the expectations of others, and self-doubt. Moreover, they found nearly three out of every five maladaptive perfectionists fell clearly within the at-risk group for clinical depression. Similarly, other research studies of perfectionism, (Chang, 2000; Chang, Watkins, & Banks, 2004) suggest individuals who consistently fail to meet their own standards are often less satisfied with their lives. Previous research supports the idea that the relationship between perfectionism and depression can be attributed to excessive self-evaluation, concern and doubt about oneself (Sherry, Hewitt, Flett, & Harvey, 2003).

Family Discrepancy

Family Discrepancy was found to have positive, significant relationships with depression and anxiety, but not self-esteem. These results suggest individuals who believe they are not meeting their family's expectations also experience depression and anxiety but their self-esteem is not affected. This finding supports past research that suggests that those individuals who believe that they fail to meet the expectations of their families are likely to experience negative affect (Schlenker & Leary, 1982). Past cross-cultural studies indicate Asian and Asian-American parents are more dissatisfied with their children's performances, which is associated with their children's psychological distress (Aldwin & Greenberger, 1987; Chung et al., 1997; Crystal et

al., 1994; Oishi & Sullivan, 2005). As a result of their parent's dissatisfaction, children may spend time and energy worrying and feeling troubled that they are not reaching their families' expectations. Previous research supports the contention that individuals with high individual Discrepancy scores who are classified as maladaptive perfectionists, report higher parental expectations (Rice & Mirzadeh, 2000; Rice, Ashby, & Preusser, 1996).

One explanation of this finding is that obligation to one's family is often ingrained in the Asian Indian culture. In ancient Indian culture four concepts guided the philosophy of life, one of which is, *dharma*, which makes references to appropriate behavior and obligations (Murphy & Murphy, 1968). Therefore, an individual's obligation is to the family and involves behaving in a way that meets the family's expectations. When individuals believe they are not meeting *dharma*, it may cause emotional distress, such as depression and anxiety. In the Asian community part of fulfilling family obligations is related to striving for achievement and educational success (Fulgini & Tseng, 1999), and not meeting obligations and loss of face can lead to psychological distress among Asian Americans (Nagayama- Hall, Teten, DeGarmo, Sue, & Stevens, 2005). Sue and Okasaki (1990) discuss how Asian families often place demands and expectations on children for achievement by inducing guilt and reminding children of their duty to fulfill their obligations. Consequently, when individuals perceive they may not be fulfilling their obligations, they can feel worried and unhappy. Another explanation is that in the Asian culture, previous research suggests parental involvement is often associated with high expectations and criticism (Chao, 1994). Parents may minimize their children's successes and highlight failure in order to encourage self-improvement. This may result in children feeling as though they are disappointing their families. Thus, when individuals believe they are not living up to familial expectations more psychological distress can be experienced. Bhattacharya and

Schoppelrey (2004) suggest unless familial expectations are appropriate, children may end up feeling like failures despite their actual achievements or performance.

Family Discrepancy was not found to be predictive of low-self-esteem, despite the identified negative relationship with self-esteem (see Table 3, p. 63). Bivariate correlations however indicate there is a significant relationship between self-esteem and family discrepancy (See Table 3, p. 63). This indicates that while family discrepancy may not significantly predict self-esteem in this sample, self-esteem is, as expected, negatively related to family discrepancy. Moreover, Rice and Vergara (2003) found individuals who were identified as maladaptive perfectionists and scored higher on the Discrepancy scale of the APS-R experienced fluctuations in self-esteem significantly more than did individuals identified as adaptive perfectionists and nonperfectionists. These fluctuations may explain why self-esteem was the only variable not significantly related to family discrepancy.

Adherence to Asian Values

Adherence to Asian Values was not a significant predictor of depression, anxiety, or self-esteem. This result was rather surprising given the previous literature (Kim & Omizo, 2003, Kim et al. 1999, Kim et al., 2001). There may be several possible explanations for not finding significant relationships between Adherence to Asian Values and measures of mental health. One explanation is that the AVS measures values as opposed to the behaviors involved in the acculturation process. Therefore, this scale may not take into account all the factors involved in the acculturation process. It may be possible that for this sample there was more variance in their behaviors than values. Another explanation is that this study used Asian Indians living in the United States, and the AVS has not been widely used with this sample. A third explanation may be that 90% of the participants in the present study are individuals who either identified as

Indian or Indian American. Gurung and Mehta (2001), in a study of 150 Asian Indians found that those individuals who identified themselves as “more Indian,” also reported more clarity in regards to their self-concept and higher self-esteem. Also, Lieber et al. (2001) found bicultural individuals experience higher levels of life satisfaction. Therefore, it may be that these participants did not have high levels of acculturative stress, which can cause depression, anxiety, or low self-esteem. Another possible explanation may be that 93% of the participants identified themselves as either first- or second-generation Indian Americans. Kim et al. (1999), in a study of 300 Asian American college students, identified no significant differences in AVS scores between first-, second-, and third-generation Asian Americans. Therefore, there may be no differences in Asian Indians across generational levels. It should be noted that adhering to Asian values in itself does not lead to depression, anxiety, or self-esteem, however, the conflict of adhering to Asian values while living in the United States can affect an individual’s depression, anxiety, and self-esteem because of the contrast between the two cultures.

Summary

In summary, the main hypotheses of this study were partially supported. Individual Discrepancy was a predictor of higher depression, higher anxiety and lower-self-esteem. Similarly, Family Discrepancy was a predictor of higher depression, higher anxiety, but not self-esteem. These findings provide additional support for the relevance of the Discrepancy subscales of the APS-R and APS-F, particularly among Asian Indians living in the United States. Further, this study also examined the relationship between adhering to Asian values and aspects of mental health for Asian Indians. Although no significant relationship between Asian values and mental health were found, bivariate correlations found a significant relationship between Adherence to Asian Values and self-esteem and anxiety. Thus, further examination of how culture and cultural

values maintained in the family affect the mental health of Asian Indians living in the United States may be important.

Limitations

It should be noted there were several limitations in this study. The first limitation of the study is because participants self-selected to participate in the study, the sample may be biased in favor of more altruistic, compliant individuals who take an active interest in providing feedback regarding their personal and familial experiences. These individuals may be more willing to share their personal experiences without reservations about disclosing information to someone outside of the family. Third, because this study gathered data through self-report, there may have been a bias by the participant to underreport. For example, participants may have underreported symptoms of depression, anxiety, and low self-esteem. If underreporting occurred, it may have been caused by participants not wanting to admit that they are struggling with depression, anxiety, or low self-esteem due to the stigma and shame associated with psychological distress. Moreover, both the APS-F and the AVS inquire about familial relationships. Participants may not have wanted to disclose information about their families because in Asian cultures it is inappropriate to disclose information about the family to non-family members. Fourth, the length of the survey may have detracted participants from completing the survey. Feedback was received by 3 participants that the survey length was too long. There were 147 items in total, and several participants stopped after the first two measures. A shorter survey may have yielded more completed surveys, however in order to fully explore the hypotheses presented it was necessary to attempt to collect all measures included in this study. Finally, because this study used a correlational design, we cannot assume that there are causal relationships between any of the variables.

Future Directions

Future research on individual perfectionism, family perfectionism, and acculturation is needed to replicate the current study in the Asian Indian community. This research is one of a small number of studies that has been conducted within the Asian Indian community living in the United States. There are a number of factors that may be considered for future research. First, it would be useful to examine the similarities and differences in individual perfectionism between parents and their children. If perfectionism stems from family/parents, comparing children's and parents' perfectionism may lead to a clearer understanding of the role the family system plays in the development of children. Moreover, conducting studies which include both parents and children may also yield more cultural and generational differences. Second, it may be useful to include a qualitative component to provide space for participants to write about how they feel about their parents' expectations and their own perfectionism. Slaney et al. (2000) included a qualitative piece in their study which highlighted the idea of a discrepancy between high standards and perceived performance. The participants interviewed seemed to experience greater distress related to their inability to meet their own high standards. These interviews helped the researchers understand more deeply the individual's experience. Therefore, adding a qualitative portion to future studies can perhaps expand and enrich the findings. Future researchers may want to interview parents and children to examine whether high expectations experienced by children are correlated with the expectations that parents have for their children. Finally, future research may want to address how stressors associated with perfectionism and acculturation manifest somatically with Asian Indians. Past research suggests Asians express psychological distress somatically (Krishnan & Berry, 1992). Therefore, a measure which addresses psychosomatic complaints may be useful to include with this population. Although this study

yielded interesting results, further examination is necessary to better understand how Asian Americans are struggling to meet their self expectations and the expectations of their families.

Clinical Implications

The present findings highlight important factors that may be contributing to psychological distress in Asian Indians. Asian Indians come from a collectivistic culture where obligation to family is essential in life. Therefore, when one feels he or she is not fulfilling familial obligations, distress may be the result. Both an individual's self-expectations, but also familial expectations, should be explored in the counseling session. It may be helpful for the clinician to understand the source of the individual's expectations, particularly if it is the family. Moreover, identification of individual vs. familial expectations may permit a better understanding of the client, therefore allowing the clinician to understand, not only culture and family, but individual expectations. Additionally, cultural differences in parental expectations and perceived fulfillment of parental expectations need to be explored further with Asian Indian clients and families. For this reason, it would be beneficial to examine whether the clients' perceptions of their parents' expectations for them are an accurate reflection of their parents' actual expectations. A clinician might explore the belief systems the Asian Indian client holds. In addition to understanding an individual's belief system, understanding familial belief systems in regards to achievement would be helpful for the clinician to discuss. Additionally, a clinician may want to help the client acknowledge realistic standards for excellence, while also discussing unrealistic demands and the consequences of trying to reach those unrealistic demands. Because perfectionists are sometimes more focused on their failures, it may be useful in treatment to help clients feel satisfied and fulfilled with their accomplishments by allowing them to celebrate their achievements, rather than focusing on obstacles or failures. Finally, although Adherence to Asian

Values was not a significant predictor of distress, it is still helpful to understand the family and the importance of family from a cultural standpoint. Hence, counselors may find it useful to explore with Asian Indian clients cultural values that are a part of their belief system.

Conclusions

In conclusion, this study was the one of few studies examining perfectionism, perceived family perfectionism, acculturation and psychological distress among Asian Indians living in the United States. The current study supported the role of individual discrepancy as a predictor of mental health. It also found that family discrepancy was a predictor of depression and anxiety, but not self-esteem, despite the finding of a significant relationship between family discrepancy and self-esteem. Finally, this study examined the relationship between cultural values and psychological distress. Understanding the relationships between family expectations, individual perfectionism and cultural values and their relationship to the mental health of Asian Indians seems essential. Further research in this area can help mental health professionals gain more insight into the needs and issues of Asian Indians.

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Appendix A
Recruitment Notice

My name is Bindu Methikalam and I am a fourth year doctoral student in the Counseling Psychology program at the Pennsylvania State University. I am collecting data for my dissertation.

If you are 18 years of age or older, and identify yourself as US citizen, international student, or permanent resident of **Asian Indian descent** (e.g., Indian American, American, or Indian), please consider participating in my study on perfectionism, and parental expectations and Asian Indians. For every completed survey I receive, \$.25 will be donated to the South Asian Youth Association. This is an organization that assists immigrant children from South Asian backgrounds academically, psychologically, and socially. If you choose to participate in this study, please click on www.psychdata.com and enter survey # **123318**.

Your answers will be held confidential to the degree permitted by the technology used. The survey takes 15-20 minutes to complete.

This study is being used for research purposes only. This research has been approved by The Pennsylvania State University's Institutional Review Board for human participants (#27285). If you have any questions regarding this research study, please contact Bindu Methikalam, M.A., M.Ed, (bfm122@psu.edu), a doctoral student at Penn State University.

Please pass this announcement on to Asian Indians that you may know and who may be interested in participating

Appendix B
Recruitment Flyer

ASIAN INDIAN VOLUNTEERS NEEDED!!!!

Are you?

- ❖ 18 years of age or older
- ❖ A US citizen of **Asian Indian descent** (e.g., Indian American, American, or Indian)
- ❖ An international student of **Asian Indian descent** (e.g., Indian American, American, or Indian)
- ❖ A permanent resident of **Asian Indian descent** (e.g., Indian American, American, or Indian)

If so, please consider participating in a study on perfectionism, and parental expectations and Asian Indians.

For every completed survey \$.25 will be donated to the South Asian Youth Association. This is an organization that assists immigrant children from South Asian backgrounds academically, psychologically, and socially.

If you choose to participate in this study, simply go to www.psychdata.com and enter survey # 123318 and start the survey.

Please pass this announcement on to Asian Indians that you may know and who may be interested in participating.

This study is being used for research purposes only. This research has been approved by The Pennsylvania State University's Institutional Review Board for human participants (#27285). If you have any questions regarding this research study, please contact Bindu Methikalam, M.A., M.Ed. ([bzm122@psu.edu](mailto: bzm122@psu.edu)), a doctoral candidate at Penn State University.

www.psychdata.com m Asian Indian study survey# 123318	www.psychdata.com m Asian Indian study survey# 123318	www.psychdata.com m Asian Indian study survey# 123318	www.psychdata.com om Asian Indian study survey# 123318	www.psychdata.com Asian Indian study survey# 123318
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Appendix C

Informed Consent

Informed Consent Form for Social Science Research The Pennsylvania State University

Title of Project: PERFECTIONISM AND FAMILY EXPECTATIONS IN ASIAN INDIANS: HOW THESE VARIABLES RELATE TO ACCULTURATION AND MENTAL HEALTH.

Principal Investigator: Bindu Methikalam, Doctoral student
801 Southgate Drive-Apt C12
State College, PA 16801
(814) 238-2948; bzm122@psu.edu

Advisor: Robert B. Slaney, Ph.D.
327 CEDAR Building, Penn State University
University Park, PA 16802
(814) 863-4594; rslaney@psu.edu

1. Purpose of the study: The purpose of the study is to understand how values, personality and family factors influence the mental health of Asian Indians living in the United States.

2. Procedures to be followed: You will be asked to answer an online survey. The online survey includes questions about some demographics and your thoughts, attitudes, and behaviors.

3. Benefits: Your participation will help researchers and mental health clinicians increase their knowledge about issues that affect the mental health of Asian Indians. The study also may help mental health clinicians provide a better understanding of Asian Indian clients they are working with or will work with in the future.

4. Duration: It will take about 15-20 minutes to complete the questions.

5. Statement of Confidentiality: Your participation in this research is confidential. The survey does not ask for any information that would identify who the responses belong to. In the event of any publication or presentation resulting from the research, no personally identifiable information will be shared because your name is in no way linked to your responses. Your confidentiality will be kept to the degree permitted by the technology used. No guarantees can be made regarding the interception of data sent via the Internet by any third parties.

6. Right to ask questions: You may ask questions about the research study. Bindu Methikalam, a Ph.D. student and psychology intern at Penn State is conducting this research and can be reached at (814) 238-2948 or bzm122@psu.edu. Her advisor is Dr. Robert B. Slaney and can be reached at (814) 863-4594 or rslaney@psu.edu.

7. Compensation: For every completed survey \$.25 will be donated to the South Asian Student Association in New York City. This is an organization that assists immigrant children from South Asian backgrounds academically, psychologically, and socially.

8. Voluntary Participation: Your participation is strictly voluntary. You may withdraw from the study at any time. If you decide to withdraw, please do not submit your answers.

You may choose not to answer certain questions. Completion and submission of the survey implies your consent to participate in this research.

You must be 18 years of age or older to take part in this research study. If you have read and understand the above statements, please click on the "Continue" button below to indicate your consent to participate in this study.

CONTINUE

We recommend that you either print out or copy and paste this page and keep it for your own records.

Appendix D**Demographic Questionnaire**

- 1) Age: _____
- 2) Biological Sex: M F
- 3) Marital status:
 1. Single
 2. Married
 3. Separated
 4. Widowed
 5. Other
- 4) Were you born in the U.S.? Yes No
If "No" Country of birth: _____
- 5) Number of years living in the U.S.? _____
- 6) Please select you ethnic identity: National origin (select one that most applies):
 - A. Indian
 - B. American
 - C. Indian American
 - D. Other (specify) _____
- 7) Please select what best describes the community you grew up in:
 - A. Predominantly Asian
 - B. Predominantly White
 - C. Ethnically diverse
 - D. Other
- 8) Please select your religion:
 - A. Christian
 - B. Hindu
 - C. Sikh
 - D. Jain
 - E. Muslim
 - F. Buddhist
 - G. Other (specify) _____
- 9) What is your highest level of education?
 - A. High school
 - B. Some high school
 - C. College
 - D. Some college

- E. Graduate or Professional school
- F. Some graduate or professional school

10) What generation are you? (select the generation that best applies to you)

- A. 1st Generation = I was born in Asia or country other than U.S.
- B. 2nd Generation = I was born in U.S., either parent was born in Asia or country other than U.S.
- C. 3rd Generation = I was born in U.S., both parents were born in U.S, and all grandparents born in Asia or country other than U.S.
- D. 4th Generation = I was born in U.S., both parents were born in U.S, and at least one grandparent born in Asia or country other than U.S. and one grandparent born in U.S.
- E. 5th Generation = I was born in U.S., both parents were born in U.S., and all grandparents also born in U.S.
- F. Don't know what generation best fits since I lack some information.

Appendix E

Almost Perfect Scale - Revised (APS-R; Slaney, Mobley, Trippi, Ashby, & Johnson, 1996)

Directions: The following items are designed to measure attitudes people have toward themselves and their parents. There are no right or wrong answers. Please respond to all of the items. Use your first impression and do not spend too much time on individual items in responding.

Respond to each of the items using the scale below to describe your degree of agreement with each item.

- 1 = Strongly Disagree
- 2 = Disagree
- 3 = Slightly Disagree
- 4 = Neutral
- 5 = Slightly Agree
- 6 = Agree
- 7 = Strongly Agree

1. I have high standards for my performance at work or at school.
2. I am an orderly person.
3. I often feel frustrated because I can't meet my goals.
4. Neatness is important to me.
5. If you don't expect much out of yourself, you will never succeed.
6. My best just never seems to be good enough for me.
7. I think things should be put away in their place.
8. I have high expectations for myself.
9. I rarely live up to my high standards.
10. I like to always be organized and disciplined.
11. Doing my best never seems to be enough.
12. I set very high standards for myself.
13. I am never satisfied with my accomplishments.
14. I expect the best from myself.
15. I often worry about not measuring up to my own expectations.
16. My performance rarely measures up to my standards.
17. I am not satisfied even when I know I have done my best.
18. I try to do my best at everything I do.
19. I am seldom able to meet my own high standards of performance.
20. I am hardly ever satisfied with my performance.
21. I hardly ever feel that what I've done is good enough.
22. I have a strong need to strive for excellence.
23. I often feel disappointment after completing a task because I know I could have done better.

Appendix F

The Almost Perfect Scale-Family (APS-F; Methikalam, Slaney, & Wang, 2005)

Directions: The following items are designed to measure your perceptions of the attitudes, beliefs, and values your family has and conveyed to you. There are no right or wrong answers. Please respond to all of the items. Use your first impression and do not spend too much time on individual items in responding.

Respond to each of the items using the scale below to describe your degree of agreement with each item.

- 1 = Strongly Disagree
- 2 = Disagree
- 3 = Slightly Disagree
- 4 = Neutral
- 5 = Slightly Agree
- 6 = Agree
- 7 = Strongly Agree

1. My family has high standards for my performance at work or at school.
2. My family believes that if I can't be the best, I should not even try.
3. My family expects me to admit I'm a perfectionist.
4. My family expects me to be an orderly person.
5. I often feel frustrated because I can't meet the goals my family has for me.
6. Neatness is important to my family.
7. My family believes, if you don't expect much out of yourself, you will never succeed.
8. My best just never seems to be good enough for my family.
9. My family thinks things should be put away in their place.
10. My family has high expectations for me.
11. My family expects me to have trouble when I leave things incomplete.
12. I rarely live up to my family's high standards.
13. My family expects me to always be organized and disciplined.
14. My family believes that it is easier to do something yourself than it is to get someone else to do it.
15. Doing my best never seems to be enough for my family.
16. It bothers my family when I am distracted when I have work to do.
17. My family sets very high standards for me.
18. Nothing short of perfect is acceptable in my family.
19. My family is never satisfied with my accomplishments.
20. My family likes me to be very careful and precise when measuring things.
21. My family expects the best from me.
22. I often worry about not measuring up to my family's expectations.
23. My performance rarely measures up to my family's standards.
24. I can generally meet the standards my family sets for me.

25. My family is not satisfied even when they know I have done my best.
26. My family expects me to try to do my best at everything I do.
27. I am seldom able to meet my family's high standards of performance.
28. My family likes it when I make a list of tasks I have to do and then check them off as I do them.
29. My family is hardly ever satisfied with my performance.
30. My family can get pretty upset when I don't do as well as they think I should.
31. My family hardly ever feels that what I've done is good enough.
32. When I don't meet my family's standards, it doesn't bother me.
33. My family thinks that people should do their best or don't bother.
34. According to my family, if I don't perform well, I don't let it get me down.
35. I am aware that my family sets standards that are unrealistically high.
36. My family usually feels pretty satisfied with what I do.
37. My family expects me to have a strong need to strive for excellence.
38. My family usually feels like what I have done is good enough.
39. My family often feels disappointment after I complete a task because they know I could have done better.

Appendix G

Asian Values Scale (AVS-R; Kim, Atkinson, & Yang, 1999)

Directions: Use the scale below to indicate the extent to which you agree with the value expressed in each statement.

- 1 = Strongly Disagree**
- 2 = Moderately Disagree**
- 3 = Mildly Disagree**
- 4 = Neither Agree nor Disagree**
- 5 = Mildly Agree**
- 6 = Moderately Agree**
- 7 = Strongly Agree**

1. Educational failure does not bring shame to the family.
2. One should not deviate from familial and social norms.
3. Children should not place their parents in retirement homes.
4. One need not focus all energies on one's studies.
5. One should be discouraged from talking about one's accomplishments.
6. One should not be boastful.
7. Younger persons should be able to confront their elders.
8. When one receives a gift, one should reciprocate with a gift of equal or greater value.
9. One need not follow one's family's and the society's norms.
10. One need not achieve academically in order to make one's parents proud.
11. One need not minimize or depreciate one's own achievements.
12. One should consider the needs of others before considering one's own needs.
13. Educational and career achievements need not be one's top priority.
14. One should think about one's group before oneself.
15. One should be able to question a person in an authority position.

16. Modesty is an important quality for a person.
17. One's achievements should be viewed as family's achievements.
18. Elders may not have more wisdom than younger persons.
19. One should avoid bringing displeasure to one's ancestors.
20. One need not conform to one's family's and the society's expectations.
21. One should have sufficient inner resources to resolve emotional problems.
22. Parental love should be implicitly understood and not openly expressed.
23. The worst thing one can do is to bring disgrace to one's family reputation.
24. One need not remain reserved and tranquil.
25. The ability to control one's emotions is a sign of strength.
26. One should be humble and modest.
27. Family's reputation is not the primary social concern.
28. One need not be able to resolve psychological problems on one's own.
29. Following familial and social expectations are important.
30. One should not inconvenience others.
31. Occupational failure does not bring shame to the family.
32. One need not follow the role expectations (gender, family hierarchy) of one's family.
33. One should not make waves.
34. Children need not take care of their parents when the parents become unable to take care of themselves.
35. One need not control one's expression of emotions.
36. One's family need not be the main source of trust and dependence.

Appendix H

The Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965)

Directions: Respond to each of the items using the scale below to describe your degree of agreement with each item.

- 1 = Strongly Disagree
- 2 = Disagree
- 3 = Agree
- 4 = Strongly Agree

1. I feel that I am a person with worth, at least on an equal plane with others.
2. I feel that I have a number of good qualities.
3. All in all, I am inclined to feel that I am a failure.
4. I am able to do things as well as most other people.
5. I feel I do not have much to be proud of.
6. I take a positive attitude toward myself.
7. On the whole, I am satisfied with myself.
8. I wish I could have more respect for myself.
9. I certainly feel useless at times.
10. At times I think I am no good at all.

Appendix I

The State-Trait Anxiety Inventory Form Y-1 (STAI-Y-1; Spielberger, Gorsuch, Luchene, Vagg, & Jacobs, 1983)

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 feeling best.

- 1 = Not at all
- 2 = Somewhat
- 3 = Moderately so
- 4 = Very much so

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

Appendix J**The Center for Epidemiological Studies-Depression Scale
(CES-D; Radloff, 1977)**

Using the scale below, circle the number which best describes how often you felt or behaved this way -- DURING THE PAST WEEK.

- 0 = Rarely or none of the time (less than 1 day)
- 1 = Some or a little of the time (1-2 days)
- 2 = Occasionally or a moderate amount of time (3-4 days)
- 3 = Most or all of the time (5-7 days)

1. I was bothered by things that usually don't bother me
2. I did not feel like eating; my appetite was poor
3. I felt that I could not shake off the blues even with help from my family or friends
4. I felt that I was just as good as other people
5. I had trouble keeping my mind on what I was doing
6. I felt depressed
7. I felt that everything I did was an effort
8. I felt hopeful about the future
9. I thought my life had been a failure
10. I felt fearful
11. My sleep was restless
12. I was happy
13. I talked less than usual
14. I felt lonely
15. People were unfriendly
16. I enjoyed life
17. I had crying spells
18. I felt sad
19. I felt that people disliked me
20. I could not get "going"

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