THE CONCEPTUALIZATION OF DEPRESSION: AN EXAMINATION OF SECOND GENERATION ASIAN INDIANS

By

SHILPA MANGALORE PAI

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CHAPTER I

REVIEW OF THE LITERATURE

Depression is frequently reported as one of the most common mental health problems in the United States. This disorder affects approximately 11 million Americans per year and treatment generates revenues of up to 44 billion dollars annually (Antonucio, Thomas, & Danton, 1997). The symptomatology, etiology, course, and outcome of depression vary widely across and within cultures. According to the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV; American Psychiatric Association, 1994), depression will strike 10-25% of women and 5-13% of men in the United States during their lifetime. According to a government survey reported in Consumer Reports (1994), less than one-third of these afflicted individuals seek professional help.

In the American mental health literature, despite their growing numbers, Asian Indians have been largely neglected (Durvasula & Mylvaganam, 1994). According to the Census Bureau, in 1990 there were over 815,000 Asian Indians in the U.S. (U.S. Bureau of the Census, 1991). Although the mental health literature has started to examine causal factors, prevalence of depression, symptomatology, and helpseeking of Asian Indian immigrants, there is no such data on the 193,271 second generation Asian Indians living in

the U.S. With these rates, and the growing number of second generation Asian Indians, it is imperative that we study mental health issues within this population.

Studies conducted on first generation Asian Indians' conceptualization, prevalence, and expression of depression have not only reported equivocal findings on prevalence rates and gender differences, but also contain methodological problems. In addition, current research is also lacking. Even worse, no empirical research has been conducted on second generation Asian Indians' experience with depression. The purpose of the current study was to address the conceptualization and expression of depression as well as investigate influential factors that may contribute to depression among second generation Asian Indians.

Prevalence of Depression in India

The prevalence rates of depression in India range from 6% to 30% in psychiatric clinics and 5% to 85% in general medical practices (Sethi, 1986). In Sethi's review, a higher prevalence of depression seemed to occur in the Northern and Eastern areas (21%-25%) of India than in the Southern regions (6%-8%) of India. It was hypothesized that the difference in these prevalence rates was due to the poor socio-economic status of the Northern and Eastern regions. However, in another study, depression also was found to be more common in urban areas of India as well as in higher caste members (Sethi, Nathawat, & Gupta, 1973). These authors hypothesized that the higher rates of depression in urban areas were due to modern civilization (e.g., pollution, noise), technology, and rapidly changing social values.

Studies also have examined sex differences in depression in India. Thus far, research on gender differences has been equivocal. Sethi (1986) reported that statistics on gender differences of depression in India have been conflicting. Ananth (1978) hypothesized that women in India experience a variety of stresses due to their sex, therefore a higher prevalence of psychopathology would be found in women. However, a household survey found that women experience psychopathology at a rate of 2.4% as compared to a rate of 5.2% in men. Additionally, in mental hospitals, women were found to comprise only 26.4% of the population. In explaining the results of the survey, Ananth suggested that although women experience several forms of culturally determined stresses, the depression rate is lower in women due to cultural factors. That is, Indian women accept their subservient position in life as "God-given" and unchangeable. However, although Ananth made these conclusions, the author failed to take into account several methodological considerations and cultural factors that may affect the gender difference. For example, the rates from rural, hospital, urban, and clinical populations may vary due to different definitions of depression. In addition, cultural factors such as stigma associated with depression, may prevent individuals from admitting symptoms, especially in household surveys. Finally, regarding hospitalization in India, men are given priority over women, which also may account for the sex difference in clinical settings.

In contrast to Ananth (1978), Sen and Williams (1987) revealed that Indian women experienced depression at higher rates than Indian men. Across three questionnaires that measured depression, prevalence rates for women ranged from 27% to 50%, as compared to 10% to 29% for men. In addition, between the ages of 45 and 64, an increase in depressive symptoms occurred in women. Although percentage rates varied

between questionnaires, each of three questionnaires found women to score higher than men. Thus, gender differences in the prevalence of depression among Indians in India must still be further examined. One of the difficulties in interpreting the research on depression in India is the possible disparity between how depression is defined in India and how it is defined in the U.S. The applicability of the above mentioned findings to Asian Indians in the U.S. is questionable, as the conceptualization of depression among Asian Indian Americans has not yet been examined.

The Influence of Culture on Depression

The influence of culture on the conceptualization of disease and illness has been addressed in the work of Kleinman, Eisenberg, and Good (1978). Their explanatory model of illness (EMI) addresses the influence of culture on helpseeking behavior. The EMI defines disease as a Western concept of biological malfunctioning, whereas illness is a personal or cultural reaction to disease. Therefore, illness is shaped by how culture influences the perception, labeling, experience, and coping with disease. As a result, Kleinman et al. hypothesized that culture will influence the presentation of symptoms, which therefore influences one's expectations for treatment and thus, helpseeking. The implication, as suggested by Kleinman et al.'s EMI, is that mental health providers and other health care workers will provide inappropriate treatment or no treatment at all without knowledge of their patients' conceptualization of illness.

The Conceptualization of Depression Among First Generation Asian Indians

Following Kleinman et al.'s conceptualization of the EMI, the presentation of depression in India may be different from its presentation in Western cultures, or symptoms may carry a different meaning (Rack, 1982a). Within the Indian culture, mental illness in general is viewed as shameful and stigmatizing (Durvasula & Mylvaganam, 1994). Rack (1982b) discovered in a community survey in India that even after depressive symptoms were recognized, individuals rarely sought treatment. It is possible that immigrants carry this stigma into the United States, and influence their second generation children. As a result, mental health facilities in the United States are not frequently utilized by Asian Indians. Unfortunately, the influence of culture on the EMI's of depression among Asian Indians has not received any attention by mental health researchers.

Several studies on depression in India have highlighted that the existence of a stigma has direct consequences on symptomatology. Channabasvanna, Raguram, Weiss, and Parvathavardhini (1993) reported that 95% of their sample did not reveal their mental disorder due to the stigma associated with mental disorders. The participants stated that this stigma could adversely affect their ability to marry, as well as bring shame to the family. As a result, participants openly reported somatic symptoms (85%), indicated that these symptoms were the most troublesome (50%), and referred to their illness as a pain or body disorder (50%). Participants admitted to depressive symptoms only after probing by the interviewer, and only 7.5% of the sample referred to their illness as depression.

Gupta, Singh, Verma, and Garg (1991) reported similar findings in their study of depression where 81% reported somatic symptoms and 36% reported feelings of guilt.

Raguram, Weiss, Channabasvanna, and Devins (1996) hypothesized that stigma was positively related to depressive symptoms and negatively related to somatoform symptoms in Asian Indians. The researchers discovered that depressive symptoms were considered more socially disadvantageous than were somatic symptoms. Participants who revealed their somatic symptoms as the most troubling received a lower stigma score as compared to those participants reporting depressive symptoms.

The previously mentioned studies separately examined stigma and shame associated with depression. However, a study has not been conducted examining the presence of stigma, shame, or embarrassment. These three concepts are often interpreted with different connotations. A stigma implies a negative societal perception related to a specific mental disorder, whereas embarrassment denotes a sense of individual or personal negative perception. A sense of shame differs from stigma and embarrassment by more of a negative reflection not only on the individual but also on the individual's family, as result of having been diagnosed with a mental disorder which has a stigma.

As somatization of psychological symptoms occurs frequently among Indians, mental and physical health are conceptualized as inter-related, rather than separate entities. The conceptualization of mental disorders often follow *Ayurvedic Medicine*, an inter-related system of the mind, body, and soul where a disruption in one part results in illness. As a result, Indians with a mental illness are more likely to manifest not just psychological symptoms but physical symptoms as well (Durvasula & Mylvaganam, 1994). *Ayurveda* suggests that when somatic symptoms are present, a combination of spices, herbs, and

medicinal oils are enlisted to treat the disorder. The spices and herbs are ingested while the oils are massaged into the inflicted person's scalp (Kakar, 1975). The herbs are believed to improve mental power, emotional stability, and tranquillity of the mind (Singh, 1986). For the past decade, however, research has neglected what spices Ayurvedic practitioners are prescribing, and whether or not this treatment is effective.

In addition to conceptualizing mental disorders in terms of *Ayurvedic medicine*, psychological disorders also may be conceptualized in the context of religion. The limited research on the influence of religion on depression has yielded different results. Of Asian Indians, approximately 83% follow the conservative Hindu tradition where Brahma is the creator and world spirit or soul (Ramisetty-Mikler, 1993). Rather than a human being an individual, he or she is part of Brahma. By studying Hindu scripture and meditating, one learns of *maya*: that life is devoid of ego, inflicted by suffering, and transient. With this knowledge, a Hindu may attain *nirvana* or cessation from reincarnation and returns to Brahma (Sodowsky & Carey, 1987).

If an Asian Indian conceptualizes his or her depression within the context of religion, then depression will be viewed as God-given. For example, Ananth (1978) hypothesized a depressed Indian will view his/her situation as established, important, and unalterable. Thus, this infliction from the Hindu god is accepted and the Asian Indian is not likely to pursue treatment.

There is also a belief that happiness is contingent on praying to household gods, fasting on religious holidays, and following social codes. The social codes, termed *dharma*, are guidelines for appropriate behavior for each stage of life. Hindus also believe in *karma* or fate where past behavior influences the future (Sodowsky & Carey, 1987).

Kakar (1975) revealed that Indians also viewed mental disorders as the result of evil forces passing through an individual. This evil force may be the result of a displeased ancestor, a jealous individual, or not following the social codes. Narayanan, Mohan, and Radhakrishnan (1986) revealed that Indians also believe that *karma* may cause mental illness. Contrary to Ananth (1978), Narayanan et al's participants revealed that God was not responsible for their mental illness, rather acts from their past lives had caused the depression. Thus, whereas a review of the literature reveals that depression is often conceptualized within the context of religion, it is unknown which tenets of Hinduism are most influential in Asian Indians' conceptualization of depression.

When the disorder is viewed in the context of religion, several forms of treatment are utilized. Amulets, charms, or talisman may be worn to ward off evil spirits, or the family members of the inflicted individual pray to gods who cure mental disorders (i.e., Hanuman, the monkey god). The assistance of village exorcists also may be employed to cure individuals by smoking out the spirits (Kakar, 1975). Another treatment based on religion is yoga, a form of meditation to achieve integration of physical, mental, spiritual, and intellectual entities of a person (Singh, 1986). Once again, the limited amount of research on helpseeking behaviors of Asian Indians fails to address the efficacy of religious treatment and if these methods are currently utilized in India.

These writings provide support for the applicability of Kleinman et al.'s EMI for Asian Indians. This brief literature review of conceptualization clearly demonstrates how culture influences the experience and presentation of mental disorders among Asian Indians. The Indian culture conceptualizes mental disorders in terms of *Ayurvedic Medicine* and religion, as previously mentioned. Therefore, depression will be shaped

under those terms. How Asian Indians label depression, explain its occurrence, and seek help also will likely be defined under *Ayurvedic Medicine* and Hinduism. As previously noted, a preference among Asian Indians for medical practitioners and priests to treat mental disorders rather than consulting a mental health professional has been found (Durvasula & Mylvaganam, 1994). Thus, the concept of depression is uniquely constructed within the Indian culture. For Asian Indians, somatic symptoms and religious possession may be the only acceptable symptoms of psychological distress. Therefore, the individual conforms to the cultural rules or appropriate means of expressing their illness thus comprising their EMI's (Kleinman et al. 1978).

Factors Which May Influence Depression in Second Generation Asian Indians

Although some of the mental health literature addressed prevalence, conceptualization, and symptomatology of mental disorders in first generation Asian Indians, empirical data does not exist on second generation Asian Indians. Rather, the literature on second generation Indians is purely speculative. Do the children of Indian immigrants view, experience, and seek help from mental disorders in a similar fashion to their parents? This question has yet to be examined.

The structure of the Asian Indian family and the value system its members follow may influence second generation Asian Indians' experience of depression. The overall structure of the Asian Indian family promotes maturity, cooperation, respect, and conformity (Ramisetty-Mikler, 1993). The Indian family functions as a unit which focuses on the goals of the family rather than the goals of individual members. Therefore,

individual goals may be sacrificed to benefit the family as a unit (Durvasula & Mylvaganam, 1994). Opposite to Western values, achieving independence from the family is not a goal. Rather, the family is a source of security where all possessions are shared and the entire family may work toward one goal (Sodowsky & Carey, 1987).

The family exists within a continuum of respect between younger/older and more powerful/less powerful where roles such as sex roles, are clearly defined (Sodowsky & Carey, 1987). For example, Durvasula and Mylvaganam (1994) noted that males are viewed as the primary wage earners and decision makers. Therefore, the father is the head of the family and the mother's role as a nurturer involves caring for the children and the household (Ramisetty-Mikler, 1993). The parents' role in an Indian family is to instill a sense of obligation, duty, and respect in their children. In turn, the children's role is to bring honor to the family through academic achievement (Durvasula & Mylvaganam, 1993; Ramisetty-Mikler, 1993). In addition, the entire family becomes involved in choosing a career for each of its members. As a career plays a role in Asian Indians self-identity, achievement and education become valued status symbols in the Indian community (Ramisetty-Mikler, 1993). Pressures to achieve academic success, or a failure to meet the family's expectations, translate into feelings of guilt and shame, thus creating a context in which the development of symptoms of depression has a higher likelihood to occur among children of immigrant Asian Indians.

Another factor which may increase the development of depression among second generation Asian Indians is the custom of arranged marriages. Second generation children who have acculturated into American culture may desire dating and marriage based on love and thus disagree with this custom (Durvasula & Mylvaganam, 1994). As a result,

conflict may exist between parents and their children over these issues. Parents view marriage as a bond between two families and often desire their child to marry within the culture. Since an arranged marriage focuses on social and cultural characteristics in mate selection, such as caste, children may reject the arranged marriage based on their own criteria for choosing a mate. For instance, parents may look for a particular occupation, height, skin color, or caste, to choose a mate for their child, while their children may not view those characteristics as important criteria for a spouse. Conflict may ensue due to the parental view that their child is rejecting Indian culture, values, and tradition (Durvasula & Mylvaganam, 1994). For example, a second generation Asian Indian may want an American wedding instead of a traditional Indian wedding. Parents may view this as a rejection of Indian culture.

Acculturation level also may influence psychological conflict in second generation Asian Indians. The value system and structure of the Asian Indian family has been found to break down as the duration of residency in the United States increases, likely the result of increased levels of acculturation (Sodowsky & Carey, 1987). Although the father is typically primary decision maker, and the wife typically the caretaker of the children and home, sharing of decisions and labor seem to occur between husband and wife among more highly acculturated couples. In addition, children seem to gain a greater independence in educational attainment, career choices, Western foods, clothing, music, and attendance of American school dances. Although the children gain independence in these areas, as discussed earlier, marriage out of the Indian culture is not accepted nor frequent. Since second generation Indians seem to be more acculturated into Western

culture than their immigrant parents, conflict does occur. Parents accept Western ideas only if they are not in contrast to the Indian culture.

Pilot Study of Second Generation Asian Indians

Given the lack of research on second generation Asian Indians, prior to the development of the current study, a pilot study was conducted in an effort to identify factors related to the conceptualization and expression of depression in second generation Asian Indians.

Participants were 10 second generation Asian Indians (males, $\underline{N} = 4$, females, $\underline{N} = 6$) who lived in the Research Triangle Park of North Carolina. Participants ranged in age from 16 to 27, and the majority (80%) of the sample had completed or were currently working toward a four year college degree. In addition, the entire sample was personally familiar with the research. Each participant was contacted prior to data collection and asked if he/she would be willing to fill out a brief questionnaire. The questionnaires were in an anonymous format and asked participants to list symptoms and risk factors of depression. In addition, questions assessing stigma and potential experiences (i.e., arranged marriages) that may contribute to depression among second generation Asian Indians were included.

Results from this small pilot study revealed that second generation Asian Indians were likely to conceptualize and express depression differently from their immigrant parents. Contrary to previous research with the first generation, a large amount of somatic symptoms were not listed as features of depression. In addition, in contrast to studies in India that revealed depression was shameful and stigmatizing, only half of this pilot sample

believed depression carried a stigma. Not only was depression conceptualized differently, but it appeared that different factors may contribute to the development of depression among second generation Asian Indians, including those that occur as a result of generational cultural conflict. Specifically, this sample reported that dating outside of the Indian culture and parental pressures for academic success were strong contributors to the development of depression. Pressures for arranged marriages and ethnic minority status also were rated as contributors to depression, but to a lesser extent.

Purpose of the Proposed Study

Based on Kleinman et al.'s EMI, second generation Asian Indians may be faced with two opposing conceptualizations of depression. As second generation Asian Indians are born and raised in the United States, they are more likely to be influenced by the Western culture's view of mental disorders. However, as children of Indian immigrants, they also may be influenced by their parents' view of mental disorders. A larger and more comprehensive study will better reveal what factors influence second generation Asian Indians, thus providing information on this population's conceptualization of depression. Only with this knowledge, may we begin to develop effective treatment interventions for second generation Asian Indians with depression.

The purpose of the current exploratory study was to assess how second generation Asian Indians conceptualize depression. Participants completed four questionnaires and read two vignettes, one based on depression, the other on somatization, and responded to questions about the depicted individual in the vignette. These questions assessed participants' conceptualization of the disorders and patterns of helpseeking. In addition, participants'

acculturation level, perceptions of shame, and ratings of factors associated with the development of depression that may be specific to second generation Asian Indians were examined.

Hypotheses

Hypothesis One

Second Generation Asian Indians' acculturation level, CES-D scores and demographic variables, such as sex will influence how much they perceive parental pressures for academic success, issues of dating, arranged marriages, and ethnic minority status as contributors to depression. The higher participants' acculturation level, the more they will believe the aforementioned variables will contribute to depression.

Hypothesis Two

Regarding the relationship between shame and acculturation, there will be a negative relationship between shame and acculturation level for the depression vignette. There will be a positive relationship between shame and acculturation level for the somatization vignette.

CHAPTER II

METHOD

Participants

Participants were 105 (men, N = 49, women, N = 56) self-identified second generation Asian Indians, aged 18-29 (M = 19.69), recruited from three universities located in North Carolina: The University of North Carolina at Chapel Hill, North Carolina State University, and Duke University. All participants were members of their university's Asian Indian social club. Most participants were sophomores (N = 26, 24.8%). The entire population was single and reported a mean family income of $126,561.64 (N = 73). The majority (83.8%) of the sample declared Hinduism as their religion and were born in the United States (57.0%). See Table 1 for a summary of demographic characteristics of the sample.

Measures

The following five questionnaires were bound together in a booklet format in the order in which they are listed. The estimated time for completion of the booklet was 20 minutes. All of the questions required a self-rating response.

Hypothesis Three

Regarding helpseeking for the depression vignette, it is predicted that second generation Asian Indians will choose a psychologist over Ayurvedic practitioners. For the somatic vignette, results will be analyzed but no predictions will be made regarding helpseeking.

Demographic Questionnaire

A nine question survey was developed to assess participants' age, sex, marital status, educational attainment, place of birth, and length of stay in the United States (see Appendix A).

Depression and Somatic Vignettes

Participants read two vignettes describing second generation Asian Indians who met criteria for depression and somatization according to the DSM-IV (see Appendix B). These vignettes were based on vignettes used in past research on the conceptualization of depression (Ying, 1990; Iwamasa, Pai, & Hilliard, 1999). As previously discussed, the existing literature indicates that first generation Asian Indians more frequently report somatic symptoms of depression. Thus, based on the literature, if a participant labeled the depicted individual in the somatization vignette with depression, then the person was more likely to conceptualize depression under Asian Indian constructs more than in Western constructs. Therefore, a somatization vignette was included to assess the role of somatic symptoms in second generation Asian Indians' conceptualization of depression.
The thirteen questions following each vignette assessed participants' conceptualization of the disorders and from whom the target individual should seek help. Specifically, participants rank ordered seven possible choices (e.g., Ayurvedic practitioners, psychologist) from whom the target individuals may seek help. A question also was included asking participants if the target individual's problem would bring shame to his or

her family. For both vignettes, in order to control for the effects of sex of the target, sex of the target individuals were counterbalanced in each packet, and packets were randomly distributed.

Acculturation Assessment

Seven multiple-choice questions that assessed ethnic identity, pride, and interaction were included in the current study as a brief measure of acculturation level (see Appendix C). These questions were based on past studies that measured acculturation level in Asian Americans (Suinn, Rickland-Figueroa, Lew, & Vigil, 1987; Sodowsky & Carey, 1988). An individual's response may range from 1(low acculturation) to 5 (high acculturation). Acculturation level was scored by summing all responses and dividing by 7, with higher scores indicating higher acculturation level.

These questions were based on published, somewhat lengthy scales that measured acculturation level in Asian Americans. The current measure utilized a small numbers of items to assess acculturation. In developing this study, the advantages and disadvantages of including an abridged acculturation scale were discussed. The decision to use a brief scale was based on the following reasons: 1) a short scale decreased the amount of time to complete the entire study, 2) a complete acculturation scale was not used since the researchers were specifically interested in assessing conceptualization, helpseeking, and shame related to depression, and were only interested in the influence of acculturation level on these issues, 3) the applicability of current acculturation scales to second generation Asian Indians has not yet been addressed.

Contributors to Depression

Four questions which addressed the unique experiences of second generation Asian Indians were included (see Appendix D). These questions assessed participants' perspectives on the effects of arranged marriages, academic success, dating, and ethnic minority status on depression. Questions were based on a Likert Scale ranging from 0 (does not contribute) to 10 (contributes a lot). Scores were calculated by summing across all responses and dividing by the total number of responses. In addition, an open-ended question was included for participants to list any factors that may contribute to depression among second generation Asian Indians.

The Center for Epidemiological Studies Depression Scale

The CES-D (Radloff, 1977) is a brief 20-item self-report scale that measures current level of depressive symptomatology in the general population. An individual's response to each item may range from 0 (rarely) to 3 (all of the time), with the highest attainable score of 60. A higher score may indicate a higher frequency of symptoms or a higher level of intensity of fewer symptoms. The initial sample consisted of 2,846 participants from Missouri and Maryland, aged 18 and over. Internal consistency for the initial sample was .85 and test-retest correlations ranged from .45 to .70 (Radloff, 1977). However, in her analyses, Radloff included only Caucasian participants (N=2,514). In addition, although efforts were made to recruit a randomized sample, males and individuals with lower levels of education were slightly underrepresented. Based on her

results, Radloff reported that the CES-D was suitable to use with both sexes and with an extensive range of age and socioeconomic status. While it was not designed as a clinical diagnostic tool, the scale does identify individuals at risk for depression.

The CES-D was chosen for this study due to its brevity and ability to assess for depression in epidemiological studies. In addition, this measure was selected to determine the influence of different levels of depression in answering the questionnaires.

Procedure

The researcher traveled to North Carolina to conduct data collection over a 5-day period in the Fall, 1998. Prior to the researcher's arrival, meeting times to complete the questionnaires were previously established with a contact person from each university. The researcher collected data at each recruitment site during a meeting of each social club. Prior to the commencement of the survey, the researcher introduced the general purpose, procedure of the study (see Appendix E), and the consent form (see Appendix F). In addition, participants were informed that the study was voluntary, that their responses were anonymous, and that they may withdraw at any time. As an incentive to participate, 7-8 names were drawn in each group from participants who completed a questionnaire. Winners received $10.00 gift certificates to local merchants on each campus. The researcher provided all funds necessary for the incentives in this study.

During the survey administration, the primary investigator was available at each recruitment site to answer questions and for debriefing (see Appendix G) at the end of the study. After the data was collected and analyzed, the researcher summarized the results in written format and sent copies to the contact person at each university.

CHAPTER III

RESULTS

Acculturation Level

Acculturation level was scored by summing all responses on the acculturation items and dividing by 7. The higher the number, the higher the acculturation level. Scores (N = 99) ranged from 1.43 to 4.00 (M = 2.23, SD = .43). The mean indicates that this sample approached a bicultural acculturation level. In addition, gender differences in acculturation level was assessed. The mean acculturation score for men was 2.24 (SD = .40), while the mean score for women was 2.23 (SD = .46). There were no significant gender differences for acculturation level, t = .08, p = .946.

CES-D

CES-D scores were calculated by summing across all responses on the depression measure (N = 98). The internal consistency of the CES-D with this sample was .77. Item total correlations ranged from -.07 (Item #12, "I was happy") to .72 (Item #18, "I felt sad"). Inter-item correlations ranged from -.32 to .74. Total scores ranged from 1.00 to 48.00 (M = 21.17, SD = 7.42). The mean indicates that this sample had low-medium depression scores. Total scores for the CES-D were also assessed by gender. Men's level of depression (M = 18.89) was significantly lower than women's level of depression

($\underline{M}$ = 23.19), $\underline{t}$ = -2.98, $\underline{p}$ < .001. However, overall means for both genders reflected low-medium depression scores.

Hypothesis One

The first hypothesis predicted that second generation Asian Indians' acculturation level, CES-D scores, and sex would significantly contribute to how much they believed parental pressures for academic success, issues of dating, arranged marriages, and ethnic minority status contributed to depression. Specifically, it was predicted that the higher participants' acculturation level, the more they would believe that the aforementioned variables contributed to depression. No predictions were made concerning the contributions of CES-D scores and sex.

In order to assess the first hypothesis, multiple regression analyses were used. Acculturation level, CES-D scores, and sex served as predictor variables. Religion was not included as a predictor variable as the majority of the sample was Hindu. The criterion variables were participants' beliefs of how the following variables influenced the development of depression: 1) pressures for academic success, 2) dating within the culture, 3) arranged marriages, and 4) ethnic minority status.

For ratings of pressures for academic success ($\underline{N}$ = 93), the predictors accounted for 15% of the variance. CES-D scores emerged as a significant predictor, $\underline{t}$ (92) = 3.47, $\underline{p}$ < .001. Individuals with higher CES-D scores rated pressures for academic success as contributing more to the development of depression. Acculturation level, $\underline{t}$ (92) = 1.27,

p = .21 and sex, t (92) = -.25, p = .81 were not found to contribute significantly to the participants' ratings of how pressures for academic success influence depression. See Table 2 for a summary of the results.

For ratings of pressures to date within the culture (N = 93), the predictor variables accounted for 11% of the variance. CES-D scores emerged as a significant predictor, t (92) = 1.96, $p < .05$, with individuals with higher depression scores rating pressures to date within the culture as contributing more to the development of depression. Sex, t (92) = -1.42, p = .16 and acculturation level, t (92) = 1.69, p = .10. were not found to contribute significantly to the participants' ratings of how pressures to date within the culture influence depression. See Table 3 for a summary of the results.

For ratings of pressures for arranged marriages (N = 93), the predictor variables accounted for 7% of the variance. Acculturation level emerged as a significant predictor, t (92) = 2.08, $p < .05$. The higher the acculturation level, the higher individuals rated pressures for arranged marriages as contributing to depression. CES-D scores, t (92) = .06, p = .96 and sex, t (92) = -1.36, p = .18 were not found to contribute significantly to the participants' ratings of how pressures for arranged marriages influence depression. See Table 4 for a summary of the results.

For ratings of ethnic minority status (N = 93), the predictor variables accounted for 15% of the variance. CES-D scores emerged as a significant predictor, t (92) = 3.71, $p < .001$. The higher one's CES-D score, the higher individuals rated ethnic minority status as contributing to the development of depression. Acculturation level, t (92) = .69, p = .49 and sex, t (92) = -.01, p = .93 were not found to contribute significantly to

participants' ratings of how ethnic minority status influences depression. See Table 5 for a summary of the results.

Hypothesis Two

The second hypothesis examined the relationship between shame and acculturation level. Specifically, it was predicted that for the depression vignette, a negative relationship would occur between shame and acculturation level. For the somatization vignette, it was predicted that a positive relationship between shame and acculturation level would exist. To assess shame, a question was included following each vignette asking participants if the target individual's problem would bring shame to his or her family. Scores on this question were based on a Likert scale ranging from 0 (not at all) to 10 (very likely).

For both vignettes, this hypothesis was examined with Pearson Product Moment Correlations. For the depression vignette ($N = 99$), the relationship between acculturation scores and beliefs on shame was assessed. The result was not statistically significant, $r = .13$, $p = .19$, indicating that there was no relationship between participants' acculturation level and the belief that depression brought shame to the family. For the somatization vignette ($N = 98$), the relationship between acculturation levels and beliefs on shame also was assessed. The result was not statistically significant, $r = -.08$, $p = .42$, indicating that there was no relationship between participants' acculturation level and the belief that somatization disorder was shameful.

Hypothesis Three

Regarding helpseeking, the third hypothesis predicted that second generation Asian Indians would select a psychologist over Ayurvedic practitioners for the depression vignette. For the somatic vignette, no predictions were made regarding helpseeking. Participants were asked to rank order seven possible choices (e.g., Ayurvedic practitioners, psychologist) from whom target individuals in the depression and somatization vignettes might seek help. Thus, a ranking of 1 would be higher than a ranking of 2. In order to examine this hypothesis, independent samples t-tests were utilized. In addition, participants' conceptualization was assessed by rank ordering three possible choices (i.e. psychological, physical, religious) that described the target individual's problem in both vignettes.

For the depression vignette, the result revealed a significant difference between the two helpseeking choices, t (190) = 10.17, $p < .001$. Participants (N = 96) ranked psychologists (M = 3.47, SD = .24) significantly higher than Ayurvedic practitioners (M = 6.39, SD = .16) to treat depression. In addition, the following rank ordering was revealed: psychological (M = 1.34), physical (M = 1.95), and religious (M = 3.07).

For the somatization vignette, the result also yielded a significant difference between the two helpseeking choices, t (170) = 3.90, $p < .001$. Participants (N = 86) ranked psychologists (M = 3.27, SD = .26) significantly higher than Ayurvedic practitioners (M = 4.72, SD = .27) to treat somatization disorder. In addition, the rank ordering for somatization was physical (M = 1.40), psychological (M = 1.78), and religious (M = 3.15). See Table 6 for a summary of the results.

CHAPTER IV

DISCUSSION

The purpose of this exploratory study was to assess how second generation Asian Indians conceptualized depression. Questions included in this study assessed the conceptualization of mental disorders as well as patterns of helpseeking. In addition, participants' acculturation level, perceptions of shame, and beliefs of factors (i.e., academic success, arranged marriages, dating, ethnic minority status) potentially associated with the development of depression that may be specific to second generation Asian Indians were examined.

Summary of Results

Acculturation Level

The overall mean acculturation level ($\underline{M}$ = 2.23) for this sample approached a bicultural level. Responses for this sample ranged from 1.43 to 4.00, with few individuals endorsing a high acculturation level. In addition, gender differences were not found for acculturation level. This sample appeared to achieve a balance between American and Indian culture. In adolescence, second generation Asian Indians may struggle in developing a sense of identity. They may attempt to assimilate all, some, or none of Indian culture into their American lifestyle. By college, most second generation Asian Indians

may have developed a sense of identity which includes both American and Indian culture. Thus, the overall mean acculturation level was not surprising.

Depression Scores

The internal consistency of the CES-D for this sample was .77. This score was slightly lower than the internal consistency from Radloff's (1977) initial sample. Item total correlations ranged from -.07 to .72, with eight items having item-total correlation scores below .40. Scores for this sample ranged from 1.00 to 48.00, with an overall mean of 21.17, reflecting low-medium depression scores. In this sample, gender differences were found, with women significantly revealing more depressive symptomatology. One explanation for this sex difference may be that it is the result of gender socialization. Although significantly higher than scores for men, women's scores still reflected low-medium depression scores.

This measure was included to determine the depression level of this sample, as it may influence individual's responses to questions. After scoring this measure, the first author reviewed the packets with scores of forty or higher. Participants endorsing these high depression scores provided a written explanation for their ratings (e.g., recently moved).

In addition, this measure assessed depression by restricting participants to think about only the past week when selecting items. It is probable that participants with higher depression levels also may have had a difficult week (e.g., exams).

While the CES-D was chosen to identify second generation Asian Indians at risk for depression, the psychometric properties indicate that scores from this measure should

be interpreted cautiously. For example, the internal consistency of the measure was below that of the standardization sample. In addition, 8 out of 20 items were found to have item total correlations below .40. Four (Items #4, #8, #12, #16) of these 8 items were worded in a positive direction. Although these four items were expected to result in a negative correlation with the total score, results revealed an item-total correlation range of -.06 to .12. Of the remaining 4 items with item-total correlations below .40, two items were somatic symptoms of depression. It is not surprising that the these somatic symptoms resulted in item-total correlations below .40, as second generation Asian Indians may not exhibit somatic symptoms for depression. The lower correlation coefficients found with this sample, as compared to a Caucasian sample, were not surprising given that the CES-D was standardized on Caucasian participants. The results indicate that this measure should be interpreted cautiously when assessing the influence of different levels of depression for second generation Asian Indians.

Hypothesis One

It was hypothesized that acculturation level, sex, and CES-D scores would significantly contribute to participants' beliefs on the effects of arranged marriages, academic success, dating, and ethnic minority status on depression. Specifically, it was predicted that individuals with higher acculturation scores would endorse the above mentioned variables more than individuals with lower acculturation scores. No predictions were made concerning the contributions of sex and CES-D scores.

Academic Success.

This hypothesis was partially supported. CES-D scores were found to significantly contribute to the variance, while acculturation level and sex were not found to be significant predictors. Participants with higher depression scores believed that pressures for academic success contributed to depression among second generation Asian Indians more than did individuals with lower depression scores. This finding may imply that individuals with higher depression scores may themselves have been experiencing more pressure to succeed academically at the time of the study. This finding was not surprising given the college student population.

Dating

This hypothesis was partially supported. CES-D scores were found to significantly contribute to the variance, while acculturation level and sex were not found to be significant predictors. Individuals with higher depression scores believed that pressures for dating within the culture contributed more to the development of depression among second generation Asian Indians than did individuals with lower depression scores. This finding may suggest that individuals experience higher levels of depression due to a desire to date outside of their ethnicity more than individuals with lower levels of depression. These participants may desire to follow the Western practice of dating whomever they find more attractive, while their traditional parents may not approve of them dating or may prefer that their children date within their ethnicity. Thus, pressures for dating within the culture may contribute to depression among those second generation Asian Indians who

wish to date whomever they choose, while being simultaneously compelled to uphold parental values.

Arranged Marriages

This hypothesis also was partially supported. Acculturation level was a significant predictor, while CES-D scores and sex did not make significant contributions to the variance. Participants with higher acculturation levels believed that pressures to have an arranged marriage contributed more to depression among second generation Asian Indians more than did participants with lower acculturation scores. This finding may suggest that individuals who are more acculturated into the American culture do not want to uphold traditional Indian practices of arranged marriages or may feel more pressure to agree to arranged marriages. By identifying with the American culture, highly acculturated Asian Indians may desire marriages based on love, whereas their traditional parents may value arranged marriages based on status. Thus, pressures for arranged marriages may contribute to depression among second generation Asian Indians who wish to marry for love, while being simultaneously compelled to uphold opposing parental values.

Ethnic Minority Status

This hypothesis was partially supported, with CES-D scores emerging as a significant predictor. That is, individuals with higher depression scores believed that ethnic minority status contributed to the development of depression among second generation Asian Indians more than individuals with lower depression scores. This finding may suggest that those with higher depression levels may feel more oppressed or may have

experienced more racism as compared to those with lower levels of depression. Acculturation level and sex did not significantly contribute to the variance.

Hypothesis Two

It was hypothesized that a relationship would exist between shame and acculturation level. Specifically, in reading the depression vignette, it was hypothesized that individuals with higher acculturation levels would be less likely to believe that a label of depression brought shame to the depressed individual's family. Conversely, it was hypothesized that for the somatization vignette, individuals with higher acculturation levels would be more likely to believe that the mental disorder brought shame to the afflicted individual's family. The hypothesis was not supported.

Specifically, regardless of acculturation level, participants in this sample did not report that depression and somatization were shameful. Results from this study are in contrast to research based on first generation Asian Indians. These findings may suggest that second generation Asian Indians adopt a Western view of mental disorders.

Hypothesis Three

It was hypothesized that second generation Asian Indians would choose psychologists over traditional Ayurvedic practitioners to treat depressive symptomatology. This hypothesis was upheld. In addition, participants conceptualized depression as a psychological problem. To treat somatization, this sample also chose psychologists over Ayurvedic practitioners, despite categorizing somatization as a physical problem. It may be that the sample perceived the target individual to have a physical manifestation of a

psychological problem. These findings may suggest that second generation Asian Indians conceptualize mental disorders under Western constructs and thus, preferred mental health professionals to treat the disorders. This finding is in contrast to research based on first generation Asian Indians.

Implication of Findings

Kleinman et al. (1978) stated that an explanatory model of illness was necessary to provide appropriate assessment and treatment of mental illness in ethnic minorities. Based on the present study, it appears that second generation Asian Indians follow a Western view of mental disorders rather than their first generation parent's traditional Indian conceptualization.

Regarding the conceptualization and helpseeking patterns of second generation Asian Indians, this sample appeared to conceptualize the individuals depicted in the vignettes as possessing a mental disorder. Following this conceptualization, the sample chose a psychologist for treatment. Results indicated that this sample did not view mental disorders as stigmatizing, which is contrary to what has been suggested in the literature.

This finding has a number of implications for the treatment of depression among second generation Asian Indians. Past research suggested that Asian Indians conceptualize depression under *Ayurvedic medicine* and Hinduism. That is, somatic symptoms and religious possession appeared to be the only acceptable symptoms for mental disorders. However, the findings of this study suggest that second generation Indians do not conform to the conceptualization of depression of traditional Indian culture. Rather, the second

generation's conceptualization appears to be influenced by Western culture's view of mental disorders.

Following this conceptualization of mental disorders, it also appears that second generation Asian Indians believed a mental health professional could appropriately treat symptoms of depression, whereas the literature suggests that Asian Indians would seek help solely from medical practitioners or priests. It appears that stigma, shame, and embarrassment are not as strongly associated with depression for the second generation. Thus, contrary to the literature on first generation Asian Indians, the findings of this study suggest that second generation Asian Indians' conceptualization and helpseeking patterns appear to follow Western constructs.

A further implication of this study was the importance of assessing acculturation level in second generation Asian Indians. It appeared that participant's acculturation level predicted some factors that may contribute to depression among second generation Asian Indians. Specifically, results from this study found that participants with higher levels of acculturation believed that pressures for arranged marriages contributed more to the development of depression than did individuals with lower acculturation levels. Thus, the development of depression in second generation Asian Indians may be the result of individuals attempting to acculturate into the American culture, while being simultaneously compelled to uphold Indian values. The implication of this finding is the importance of mental health professionals assessing acculturation level when working with second generation Asian Indian, as well as assessing potential concerns regarding conflicting parental values.

In addition to the treatment of depression for second generation Asian Indians, a further implication of the findings relates to conducting research. This study demonstrated the application of emic research approaches. With Asian American populations, such research approaches are important because culture specific elements must be addressed and incorporated in order to conduct culturally appropriate and relevant research. For this study, cultural values were taken into consideration. For example, issues such as providing a rationale, confidentiality, and heterogeneity were incorporated into the design of the study. First, when approaching the student organizations, the rationale for the study was provided. Among Asian Indians, the field of psychology may not be as respected as other fields of study (i.e., mathematics, science). Researchers may have to explain the merits and basis of a psychological study in order for Asian Indians to be willing to participate. For the current study, the researchers emphasized how psychological research would benefit the Indian culture and also agreed to provide a summary of the results. Second, as sensitive questions were being asked to a conservative population who does not freely express personal emotions and opinions, confidentiality of responses was emphasized at the beginning of data collection. Third, in preparing the questionnaires for the current study, the researchers did not assume homogeneity of the sample. The fact that second generation Asian Indians may speak over 100 different Indian languages and practice different religious and social customs was acknowledged. Such information was utilized in the development of the demographic questionnaire and contributed to identifying areas in which to assess within-group differences.

Methodological Considerations and Future Research Directions

Although the researchers utilized an emic approach, there are a few methodological considerations that must be mentioned. A primary methodological consideration is that the findings are based on a college student sample. The results may not be generalizable to second generation Asian Indians who do not attend college. In addition, the findings were based on participants who attend college in North Carolina. Therefore, the results also may be restricted by geographical location. Future research should examine second generation Asian Indians from diverse geographical locations and those who do not attend college. In order to sufficiently assess the complexity of this population, expanding research to these other areas is important to account for the diversity and within-group differences of second generation Asian Indians.

A second methodological consideration to take into account is acquiescence. Participants were aware that the researcher was a second generation Asian Indian graduate student in the field of psychology. It is possible that this information biased participants into answering questions in order to assist the researcher.

A third methodological consideration to take into account is that participants' personal experiences with the factors (i.e., arranged marriages, dating within the culture, academic success, ethnic minority status) used to relate to depression among second generation Asian Indians was not assessed. Given that higher CES-D scores were found to predict ratings of the influence of academic success, dating within the culture, and ethnic minority status, it would be important to assess participants' own ratings of pressures they

felt related to these variables. In addition, although level of depression was assessed, participants' own helpseeking patterns were not assessed. Rather, this study assessed second generation Asian Indian's beliefs on the conceptualization of depression and patterns of helpseeking. Mental health professionals would benefit from future research examining the actual experiences of this population, from whom they would actually seek help to treat depression and other disorders, and assess other potential predictors of depression such as experiences with racism, anxiety levels, and competition with family members.

A fourth methodological consideration is the chosen mode of assessment. The current study utilized a combination of self reported, forced choice responses and open-ended questions. It is unknown which means of assessment is more applicable with second generation Asian Indians. Therefore, it is important for future research to determine the appropriate mode of assessment (e.g., forced-choice) in researching this population.

A fifth methodological consideration is the appropriateness of the CES-D in assessing second generation Asian Indians at risk for developing depression. The psychometric properties of this depression scale revealed that scores for this sample should be interpreted with caution. Future research with a larger sample should examine the extent to which the CES-D can accurately identify second generation Asian Indians at risk for depression.

A final methodological consideration to take into account is the acculturation measure utilized in the study. Although this measure was developed based on past research, a small number of items were employed to assess acculturation. It may be that the selected items chosen did not fully assess the acculturation level of the sample.

Therefore, the need to develop an acculturation scale for second generation Asian Indians still exists. Although current acculturation measures (e.g., SL-ASIA; Suinn et al., 1987) for Asian Americans exist, the applicability of these scales to second generation Asian Indians is questionable. Therefore, future research is necessary to determine the applicability of such acculturation measures to second generation Asian Indians. Developing an appropriate acculturation scale is also a necessity as acculturation level plays a significant role for second generation Asian Indians. This study demonstrated that the extent to which the second generation identifies with Western or Indian culture influences patterns of conceptualization, helpseeking, and ratings of factors (i.e., arranged marriages, dating) which may contribute to depression.

In addition, the influence of acculturation level may be more meaningful for later generations. Will the findings of this study generalize to future generations of Asian Indians? Similar to the second generation, future generations will likely be more acculturated into the American culture than their parents. However, these future generations may still be influenced by their parents' adherence to Indian culture. Thus, the conceptualization of depression as well as potential contributors to depression for future generations may remain dependent on their acculturation level and the acculturation level of their parents.

In addition to the above mentioned suggestions for future research, researchers should also examine potential gender differences in second generation Asian Indians. Research on gender differences with first generation Asian Indians has resulted in equivocal findings. The current study assessed gender differences only for acculturation level and CES-D scores, and found that CES-D scores differed between men and women.

It is unknown if factors unique to second generation Asian Indians contribute differently to developing depression in women or men. It may be that women feel more pressure to adhere to traditional Indian values, thus contributing to depressive symptomatology. As this study was a first attempt to examining the conceptualization and helpseeking patterns of second generation Asian Indians, a larger more comprehensive study would better corroborate the findings of this study as well as better reveal potential gender differences.

Conclusions

This study assessed the conceptualization and expression of depression and investigated factors which may contribute to the development of depression among second generation Asian Indians. Second generation Asian Indians appear to be influenced by a Western view of mental disorders. That is, this sample conceptualized depression as a psychological disorder and selected a mental health professional for treatment. In addition, the findings revealed that second generation Asian Indians did not view mental disorders as shameful. Finally, pressures for an arranged marriage, dating within the culture, academic success, and ethnic minority status were endorsed as contributors toward the development of depression in second generation Asian Indians, specifically by individuals with higher acculturation and depression levels. The findings of this study have important implications for the assessment and treatment of depression with second generation Asian Indians.

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APPENDIXES

APPENDIX A

DEMOGRAPHIC QUESTIONNAIRE

The purpose of this questionnaire is to collect general demographic information. Please read each question carefully and answer them accurately and honestly.

1. Please indicate your age: _____ years

2. Please indicate you sex: Male$_{(1)}$ Female$_{(2)}$

3. Please indicate you marital status:

   __single$_{(1)}$ (skip to #5) __married$_{(2)}$ __separated/divorced$_{(3)}$ __widowed(4)

4. If you are/were married, was the marriage arranged? __Yes$_{(1)}$ __No$_{(2)}$

   Are/were you satisfied with the arranged marriage?

   0 1 2 3 4 5 6 7 8 9 10
   Not satisfied Satisfied Extremely Satisfied

5. Please indicate what year you are in college:

   __First$_1$ __Second$_2$ __Third$_3$ __Fourth$_4$ __Graduate Student$_5$

6. Please indicate your place of birth:

   __United States$_{(1)}$ (skip to #8) __India$_{(2)}$ __Other_____$_{(3)}$

7. How many years have you lived in the United States? _____

8. Please indicate your religious faith:

   __Hindu$_{(1)}$ __Christian$_{(2)}$ __Muslim$_{(3)}$ __Other _____$_{(4)}$

9. Please indicate your TOTAL family yearly income: $_____.

APPENDIX B

DEPRESSION AND SOMATIC VIGNETTES

Please read the following brief descriptions and respond to the questions that follow each description.

Preeta (Sanjay) is 36 year-old office manager for a local company. She (He) is married and has a five year-old son. During the last two months, she (he) has lost interest and no longer finds pleasure in most of the things she (he) usually enjoys such as spending time with her (his) son and husband (wife), working in the garden, and reading romance (adventure) novels. During this time, she (he) has lost her(his) appetite, has difficulty falling asleep, and always feels tired. Preeta (Sanjay) has trouble concentrating at work and has had difficulty interacting with others. She (He) constantly feels sad, empty, and worthless--at times to the point of wondering if her (his) life is worth living.

Please complete the following questions based on the above description. **Please answer all of the items.**

1. Please rank order whether Preeta's (Sanjay)'s problem is (1=mostly, to 4=least likely)
   _____*psychological*
   _____*physical/physiological*
   _____*religious*
   _____*other, please describe*_____

2. What is Preeta's (Sanjay)'s problem called? What is its name?
   _____

3. Please rank which of the following aspects contribute most to what you called Preeta's (Sanjay)'s problem in #2 (1=contributes most, to 6=contibutes least):
   _____*difficulties getting along with others*
   _____*feeling tired*
   _____*feelings of sadness and worthlessness*
   _____*sleep and eating problems*
   _____*trouble thinking/concentrating*
   _____*not enjoying activities*

4. Circle how severe Preeta's (Sanjay)'s problem is.

   0 1 2 3 4 5 6 7 8 9 10
   Not severe *Severe* *Extremely Severe*

5. How long do you think Preeta's (Sanjay)'s problem will last? (write in your response)
   _____days _____weeks _____months _____years

6. What do you think caused Preeta's (Sanjay)'s problem? _____

_____

7. Circle how strong you think Preeta's (Sanjay)'s relationship is with her (his) family.

0 1 2 3 4 5 6 7 8 9 10
Not strong at all *Neutral* *Very Strong*

8. Circle how well you think Preeta (Sanjay) currently gets along with her (his) coworkers.

0 1 2 3 4 5 6 7 8 9 10
Not well at all *Neutral* *Very Well*

9. Could Preeta's (Sanjay)'s problem be prevented? _____yes _____no If yes, how could it be prevented? _____

_____

10. Is Preeta's (Sanjay)'s problem treatable? _____yes _____no If yes, how could it be treated? _____

_____

11. Do you think Preeta (Sanjay) should seek help? _____yes _____no If yes, please rank order the kind of help you would recommend. (1=most recommended, 7=least recommended; leave space blank if you would not recommend it)

_____ *see Western physician*
_____ *use Ayurvedic practices (e.g., Indian spices & herbs)*
_____ *see psychologist/psychiatrist/social worker*
_____ *talk to an Indian priest*
_____ *talk to friend*
_____ *talk to immediate family (i.e., spouse, parents, siblings)*
_____ *talk to other family members (e.g., aunt, uncle, cousin)*
_____ *other, please explain* _____

12. Do you think Preeta's (Sanjay)'s problem brings shame to her (his) family? Please circle <u>one</u> number.

0 1 2 3 4 5 6 7 8 9 10
Not at all *Somewhat* *Very Likely*

13. If <u>you</u> were Preeta (Sanjay), what would <u>you</u> do? _____

_____

_____

Kavitha (Sanjeeth) is a 45 year-old clerk for a local county courthouse. She (He) is married and has three school-aged children. Kavitha (Sanjeeth) has a history of physical complaints beginning before the age of 27, for which she (he) has sought medical treatment numerous times, and has resulted in her(his) no longer being able to work. She (He) has numerous pain symptoms such as headaches, back pain, chest pain, and muscle pain. She (He) also complains of digestive problems such as nausea and diarrhea. Kavitha (Sanjeeth) reports having sexual problems and neurological symptoms such as weakness in her(his) arms or fingers. Although she (he) has had numerous medical tests, they have all been negative, and physicians have not been able to explain the cause of her(his) symptoms.

Please complete the following questions based on the above description. **Please answer all of the items.**

1. Please rank order whether Kavitha's (Sanjeeth)'s problem is (1=mostly, to 4=least likely)
   _____*psychological*
   _____*physical/physiological*
   _____*religious*
   _____*other(his), please describe*_____

2. What is Kavitha's (Sanjeeth)'s problem called? What is its name?_____

3. Please rank which of the following aspects contribute most to what you called Kavitha's (Sanjeeth)'s problem in #2 (1=contributes most, to 6=contibutes least):
   _____*difficulties getting along with others*
   _____*feeling tired*
   _____*feelings of sadness and worthlessness*
   _____*sleep and eating problems*
   _____*trouble thinking/concentrating*
   _____*not enjoying activities*

4. Circle how severe Kavitha's (Sanjeeth)'s problem is.

   0 1 2 3 4 5 6 7 8 9 10
   Not severe *Severe* *Extremely Severe*

5. How long do you think Kavitha's (Sanjeeth)'s problem will last? (write in your response)
   _____days _____weeks _____months _____years

6. What do you think caused Kavitha's (Sanjeeth)'s problem?
   _____
   _____

7. Circle how strong you think Kavitha's (Sanjeeth)'s relationship is with her(his) family.

0 1 2 3 4 5 6 7 8 9 10
Not strong at all *Neutral* *Very Strong*

8. Circle how well you think Kavitha (Sanjeeth) currently gets along with her(his) coworkers.

0 1 2 3 4 5 6 7 8 9 10
Not well at all *Neutral* *Very Well*

9. Could Kavitha's (Sanjeeth)'s problem be prevented? _____yes _____no If yes, how could it be prevented?

_____

_____

10. Is Kavitha's (Sanjeeth)'s problem treatable? _____yes _____no If yes, how could it be treated?

_____

_____

11. Do you thin Kavitha (Sanjeeth) should seek help? _____yes _____no If yes, please rank order the kind of help you would recommend. (1=most recommended, 7=least recommended; leave space blank if you would not recommend it)

_____ *see Western physician*
_____ *use Ayurvedic practices (e.g., Indian spices & herbs)*
_____ *see psychologist/psychiatrist/social worker*
_____ *talk to an Indian priest*
_____ *talk to friend*
_____ *talk to immediate family (i.e., spouse, parents, siblings)*
_____ *talk to other family members (e.g., aunt, uncle, cousin)*
_____ *other, please explain*_____

12. Do you think Kavitha's (Sanjeeth)'s problem brings shame to her (his) family? Please circle <u>one</u> number.

0 1 2 3 4 5 6 7 8 9 10
Not at all *Somewhat* *Very Likely*

13. If <u>you</u> were Kavitha (Sanjeeth), what would <u>you</u> do?

_____

_____

APPENDIX C

ACCULTURATION ASSESSMENT

The purpose of this questionnaire is to gather information on your experience as a second generation Asian Indian. Please select only <u>one</u> answer to each question. There are no right or wrong answers. Please answer each question honestly and accurately.

1. What contact have you had with India?
   - ☐ Raised one year or more in India$_{(1)}$
   - ☐ Lived for less than one year in India$_{(2)}$
   - ☐ Occasional visits to India$_{(3)}$
   - ☐ Occasional communication (e.g., letters, phone calls, etc.) with people in India$_{(4)}$
   - ☐ No exposure to or communication with people in India$_{(5)}$

2. How much pride do you have in being Asian Indian or Asian Indian American?
   - ☐ Extreme pride$_{(1)}$
   - ☐ Moderate pride$_{(2)}$
   - ☐ Little pride$_{(3)}$
   - ☐ No pride but do not feel negative toward group$_{(4)}$
   - ☐ No pride and feel negative toward group$_{(5)}$

3. How much do you believe in traditional Asian Indian values (e.g., about marriage, family, education, etc.)?
   - ☐ Very strongly$_{(1)}$
   - ☐ Strongly$_{(2)}$
   - ☐ Somewhat$_{(3)}$
   - ☐ Weakly$_{(4)}$
   - ☐ Not at all$_{(5)}$

4. How much do you believe in traditional American values?
   - ☐ Very strongly$_{(1)}$
   - ☐ Strongly$_{(2)}$
   - ☐ Somewhat$_{(3)}$
   - ☐ Weakly$_{(4)}$
   - ☐ Not at all$_{(5)}$

5. How well do you "fit in" when you are with other Asian Indians?
   - ☐ Very well$_{(1)}$
   - ☐ Well$_{(2)}$
   - ☐ Somewhat$_{(3)}$
   - ☐ A little$_{(4)}$
   - ☐ Not at all$_{(5)}$

6. How well do you "fit in" when you are with other Americans who are non-Asian Indian?
   - ☐ Very well$_{(1)}$
   - ☐ Well$_{(2)}$
   - ☐ Somewhat$_{(3)}$
   - ☐ A little$_{(4)}$
   - ☐ Not at all$_{(5)}$

7. Which one of the following most closely describes how you view yourself?
   - ☐ Very Asian Indian: Even though I live in America, I still view myself basically as an Asian Indian.$_{(1)}$
   - ☐ More Asian Indian than American: I consider myself as an Asian Indian American, although deep down I always know I am Indian.$_{(2)}$
   - ☐ Bicultural (Indo-American): I have both Indian and American characteristics, and I view myself as a blend of both.$_{(3)}$
   - ☐ More American than Asian Indian: I consider myself as an Asian Indian American, although deep down I view myself as an American first.$_{(4)}$
   - ☐ Very American$_{(5)}$

APPENDIX D

CONTRIBUTORS TO DEPRESSION

The following questions pertain to a disorder called depression. The purpose is to get your opinion on what factors may contribute to depression among second generation Asian Indians.

Please list 3 main symptoms of depression and use these symptoms to answer the following questions. _____

_____

_____

For the following questions, please circle one appropriate number.

1. Does the pressure to have an arranged marriage contribute to depression among second generation Asian Indians?

0	1	2	3	4	5	6	7	8	9	10
Does not contribute				Contributes somewhat					Contributes a lot	

2. Do parental pressures for academic success contribute to depression among second generation Asian Indians?

0	1	2	3	4	5	6	7	8	9	10
Does not contribute				Contributes somewhat					Contributes a lot	

3. Do pressures of dating within your culture contribute to depression among second generation Asian Indians?

0	1	2	3	4	5	6	7	8	9	10
Does not contribute				Contributes somewhat					Contributes a lot	

4. Does your status as an ethnic minority contribute to depression among second generation Asian Indians?

0	1	2	3	4	5	6	7	8	9	10
Not at all				somewhat					Very Likely	

5. Please list any factors unique or specific to second generation Asian Indians that you feel might contribute to depression. _____

_____

APPENDIX E

GREETING

Hi! My name is Shilpa Pai. I am a graduate student at Oklahoma State University, and I am conducting my Master's Thesis research. It will involve answering questionnaires about your experience as a second generation Asian Indian and your perceptions of peoples' problems. It will take approximately 20 minutes of you time. Your participation is voluntary and you may withdraw at any time. As an incentive, all individuals who complete the survey will be placed in a drawing for $10.00 gift certificates to local merchants on campus. After you turn in your completed packet, write your name and phone number on the sheets of paper I have provided and place it in the shoe box up front. Five winners will be randomly drawn and either I or _____ (contact person) will call you if you have won.

In order to participate, I will need your signature on two copies of a consent form. You keep one, and I will keep the other. The consent form also has my name, phone number, and email address in case you would like to contact me after today. I will be available while you are completing the study to answer any questions that may arise. Does anyone have any questions at this time?

APPENDIX F

CONSENT FORM

I, _____, hereby authorize and direct Shilpa M. Pai, who is under the supervision of Gayle Y. Iwamasa, Ph.D. in the Department of Psychology at Oklahoma State University, to perform the procedures listed here:

1. Purpose: This study is designed to investigate how your experience as a second generation Asian Indian may contribute to specific problems. It also addresses second generation Asian Indians' perceptions of people's problems and from whom they would seek help.

2. Procedures: Your participation in this study will involve filling out several questionnaires, some of which ask your opinion on people's problems. Your participation is voluntary and you may withdraw at any time after notifying the experimenter.

3. Duration of Participation: This study will take approximately 20 minutes of your time.

4. Confidentiality: All questionnaires will be identified by a numerical subject number and will NOT be associated with your name. This form will be kept in a location separate from your questionnaire packet.

You may contact Shilpa M. Pai at the following address should you wish further information about the study:

215 North Murray
Department of Psychology
Oklahoma State University
Stillwater, OK 74078
(405) 744-9062
email: pshilpa@okstate.edu

or

Gay Clarkson
Institutional Review Board
Oklahoma State University
Stillwater, OK 74078
(405) 744-5700

By signing below, I certify that I am 18 years of age or older. I have read and fully understand the consent form. I sign it freely and voluntarily. A copy has been given to me. I hereby give permission for my participation.

_____	_____	_____
Signature of Participant	Date	Time (AM/PM)
_____	_____	
Signature of Witness	Date	

APPENDIX G

DEBRIEFING

Thank you for participating in this study. The preceding questionnaires examined how second generation Asian Indians defined depression. The study also examined some factors unique to second generation Asian Indians that might contribute to depression. In addition, this study focused on whom participants would choose for help if diagnosed with depression. There were no right or wrong answers to any of these questions. This study was conducted in efforts to examine a population that has been largely neglected in the mental health literature. In several months, a written summary of the results will be given to _____ and available for you to read. You have my name, address, and email address on your copy of the consent form. If you have any questions before the written summary is available, please feel free to contact me. Thank you for your participation!

APPENDIX H

TABLES

Table 1

Demographic Characteristics

	N	%
Sex		
Female	56	53.3
Male	49	46.7
Year in College		
Freshman	24	22.9
Sophomore	26	24.8
Junior	24	22.9
Senior	15	14.3
Graduate	8	7.6
No indicated	8	7.6
Marital Status		
Single	105	100.0
Place of Birth		
U.S.	57	54.3
India	35	33.3
Other	13	12.4
Religion		
Hindu	88	83.8
Christian	5	4.8
Muslim	2	1.9
Other	10	9.5
Mean Age of Participants (N = 105)	19.69	
Mean Income (N = 73)	$126,561.64	

Table 2

Summary of Regression Analysis for the Predictors of Depression by Academic Success (N=93)

Variables	Academic Success (DV)	Acculturation Level	CES-D	Se x	B	β
Acculturation Level	.135				.65	.12
CES-D	.367	.032			.11***	.36
Sex	-.130	.020	-.301		-.11	-.03
M	5.16	2.25	20.94			R^2=.15
SD	2.73	.43	7.28			Adjusted R^2=.12

Note: * $p < .05$
*** $p < .001$

Table 3

Summary of Regression Analysis for the Predictors of Depression by Dating Within Culture (N=93)

Variables	Dating (DV)	Acculturation Level	CES-D	Sex	B	β
Acculturation Level	.17				1.01	.17
CES-D	.26	.032			7.27*	.04
Sex	-.207	.020	-.301		-.76	-.15
M	5.35	2.25	20.94			R^2=.11
SD	2.58	.43	7.28			Adjusted R^2=.08

Note: * $p < .05$
*** $p < .001$

Table 4

Summary of Regression Analysis for the Predictors of Depression by Arranged Marriage (N=93)

Variables	Arranged Marriage (DV)	Acculturation Level	CES-D	Sex	B	β
Acculturation Level	.21				1.36*	.21
CES-D	.06	.032			2.24	.01
Sex	-.14	.020	-.301		-.79	-.15
M	5.16	2.25	20.94			R^2=.07
SD	2.73	.43	7.28			Adjusted R^2=.04

Note * $p < .05$
*** $p < .001$

Table 5

Summary of Regression Analysis for the Predictors of Depression by Ethnic Minority Status (N=93)

Variables	Ethnic Minority Status	Acculturation Level	CES-D	Sex	B	β
Acculturation Level	.08				.40	.07
CES-D	.39	.032			.13***	.38
Sex	-.12	.020	-.301		-4.84	-.01
M	3.30	2.25	20.94			R^2=.15
SD	2.51	.43	7.28			Adjusted R^2=.13

Note: * $p < .05$
*** $p < .001$

Table 6

Ranking of Helpseeking Options by Vignette

	Ranking of Source of Help				
	Psychologist		Ayurvedic		
Vignette	M	(SD)	M	(SD)	t
Depression (N=96)	3.47	(2.36)	6.39	(1.52)	10.17***
Somatization (N=86)	3.27	(2.41)	4.72	(2.47)	3.90***

Note. ***$p < .001$

APPENDIX I

IRB APPROVAL FORM

OKLAHOMA STATE UNIVERSITY
INSTITUTIONAL REVIEW BOARD

DATE: 08-05-98 **IRB #: AS-99-000**

Proposal Title: THE CONCEPTUALIZATION OF DEPRESSION: AN EXAMINATION OF SECOND GENERATION ASIAN INDIANS

Principal Investigator(s): Gayle Y. Iwamasa, Shilpa M. Pai

Reviewed and Processed as: Modification

Approval Status Recommended by Reviewer(s): Approved

Signature: Carol Olson (cc) Date: March 3, 1999

Carol Olson, Director of University Research Compliance
cc: Shilpa M. Pai

Approvals are valid for one calendar year, after which time a request for continuation must be submitted. Any modification to the research project approved by the IRB must be submitted for approval. Approved projects are subject to monitoring by the IRB. Expedited and exempt projects may be reviewed by the full Institutional Review Board.

VITA 2

SHILPA MANGALORE PAI

Candidate for the Degree of

Master of Science

Thesis: THE CONCEPTUALIZATION OF DEPRESSION: AN EXAMINATION OF SECOND GENERATION ASIAN INDIANS

Major Field: Psychology

Biographical:

Education: Graduated from Apex High School, Apex, North Carolina in June 1992; received Bachelor of Arts degree in Psychology from The University of North Carolina at Chapel Hill, Chapel Hill, North Carolina in May, 1996; completed the requirements for the Master of Science degree with a major in Psychology at Oklahoma State University in May, 1999.

Experience: Research assistant for Dr. Gayle Y. Iwamasa 1997 to present; employed by Oklahoma State University, Department of Psychology as an assistant to the Psychology Diversified Student's Program and graduate instructor; Oklahoma State University, Department of Psychology, 1997 to present.

Professional Memberships: American Psychological Association, Association for the Advancement of Behavior Therapy.