

THE CONCEPTUALIZATION OF ANXIETY:
AN EXPLORATORY STUDY OF
JAPANESE AMERICAN
OLDER ADULTS

By

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Bachelor of Arts

Butler University


Indianapolis, Indiana

1995

Submitted to the Faculty of
the Graduate College of the
Oklahoma State University
in partial fulfillment of
the requirements for
the Degree of
MASTER OF SCIENCE
May, 1998

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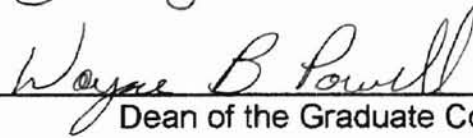
Thesis Approved:



Thesis Adviser







Dean of the Graduate College

ACKNOWLEDGMENTS

I would like to take this opportunity to express my sincere appreciation to my major advisor and mentor, Gayle Y. Iwamasa, Ph.D., for her time, guidance, and dedication to this study, as well as to my academic and professional development. I would also like to express my sincere appreciation to my committee members John M. Chaney, Ph.D., and Douglas A. Hershey, Ph.D., for their time and invaluable suggestions, which made this study possible.

I also need to express my sincere gratitude to Mr. Roy Yokoyama and the members of the Seinan Senior Citizens' Center for providing me with the opportunity to work with your organization. This study would not have been possible without your help. It was so wonderful to have an opportunity to not only work with you, but get to know the members of the Seinan Center. Thank you so much for your time and dedication.

A number of people have supported me throughout my academic career. I would like to thank my parents for their support throughout my education. You taught me my most valuable lesson, to follow my dreams. Thank you for all that you have given and taught me.

I would also like to express my appreciation to Douglas Sorocco for his continuous support, encouragement, patience, and understanding.

Finally, I would like to thank the Department of Psychology and my colleagues for supporting me during these two years of study.

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CHAPTER I

REVIEW OF LITERATURE

By the year 2000, older adults will represent 13% of our population (American Association of Retired Persons [AARP], 1995). The population of older adults is growing at such a rate that by the year 2030, there will be 70 million older adults, representing 20% of our population (AARP, 1995). Given the rapid rate at which the population of older adults is increasing, mental health professionals must examine the types of services provided to older adults.

Unfortunately, in research, older adults are often viewed as being homogeneous when in fact, there are many within-group differences. For example, of those 70 million older adults in the year 2030, 25% will be from minority populations (AARP, 1995). There also appear to be gender differences in lifespan. Women tend to live longer than men (AARP, 1995). Further, as the life span increases, many more cohorts will be included in the population of older adults. For example, it is possible that a 95-year old may have a child who is 65-years old, yet both are considered older adults. Thus, researchers focusing on older adults must take cohort effects into consideration (Weiner, 1992). Knight (1986) has suggested that researchers divide the older adult

years into young-old (60 to 70-years old), old (70 to 80-years old), and old-old (80+-years old) age cohorts.

Anxiety in Older Adults

As the population of the United States continues to grow older and the complexities of life multiply, the relationship between anxiety, age, ethnicity, and health is an important area for mental health researchers to examine (Sallis & Lichstein, 1982). In comparison to the quantity of research conducted on depression and dementia in the elderly, little research has been conducted on anxiety disorders in the elderly (Flint, 1994). Barbee and McLaulin (1990) stated that the few existing research studies, as well as clinical experience, have demonstrated the importance of studying anxiety in the elderly. Unfortunately, there is little information concerning the incidence or prevalence of anxiety disorders among the elderly in various populations based on diagnostic criteria outlined in the Diagnostic Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV); American Psychiatric Association [APA], 1994). Barbee and McLaulin stated that while there is little published data on the prevalence of generalized anxiety disorder in the elderly, their clinical experience indicated that most anxious elderly clients present with reactive or generalized anxiety, rather than symptoms characteristic of a phobia or panic disorder.

The limited amount of research literature concerning the prevalence of anxiety disorders in older adults appears to be mixed (Parmelee, Katz, & Lawton, 1993). Some of the data suggest that older adults have the lowest rate

of anxiety disorders in comparison to other age groups (Smith, Sherrill, & Colenda, 1995), while others have reported survey data indicating that symptoms of anxiety are more prevalent in the elderly than in any other age group, often occurring at more than twice the rate in the aged as compared to young adults (Sallis & Lichstein, 1982). Other literature indicates that it is unlikely for an anxiety disorder to develop suddenly in late life (Smith, Sherrill, & Colenda, 1995), while at the same time, other researchers state that it is possible for anxiety disorders to appear for the first time after age 65 (Turnbull, 1989).

Some research conducted on the prevalence of anxiety disorders in the elderly indicate a high prevalence rate in older adults. Himmelfarb and Murrell (1984) conducted a study to estimate the prevalence rate of self-reported symptoms of anxiety in older adults and to explore the relationship between anxiety and sociodemographic variables, specific medical conditions, general physical health, and the use and need for a range of medical services. Participants were 713 men and 1,338 women ages 55 years and older from Kentucky. Participants were administered the trait half of the State-Trait Anxiety Inventory (STAI; Spielberger, Gorsuch, & Lushene, 1970) and a general physical health scale (Belloc, Breslow, & Hochstim, 1971). The results suggested that women had higher levels of anxiety than men. Further, about 20% of persons 55 and older reported levels of anxiety symptoms sufficient enough to interfere with daily functioning.

Despite the fact that older adults reported the lowest prevalence rate of anxiety disorders in the Epidemiologic Catchment Area (ECA) study (Regier, Narrow & Rae, 1990), the rates of anxiety disorders in older adults were still significant (Smith et al., 1995). This was especially apparent for women over age 65, for whom the prevalence of any anxiety disorder was higher than for men at any age. However, the authors emphasized that ECA prevalence rates may underestimate the clinical significance of anxiety among older adults because subsyndromal states, those that did not meet Diagnostic Statistical Manual of Mental Disorders, Third Edition Revised (DSM-III-R; APA, 1987) criteria for a specific disorder, appeared to be highly prevalent. It appears that many older adults have a significant amount of symptoms that interfere in their lives, but they may not experience all the symptoms required to meet criteria for an anxiety disorder diagnosis (Smith et al., 1995). As a result, these anxiety symptoms are often not treated because they are considered subsyndromal states and not a disorder.

Factors Associated with Aging that May

Lead to an Increase in Anxiety

There are many factors associated with aging that may explain an increase in anxiety as one ages. For example, as one ages and matures, changes in social support, health status, quality of life, and the occurrence of certain life events are also likely to occur (Flint, 1994). Older adults face many external threats to their well-being such as retirement, illness, bereavement,

relocation, and changes in family roles, which may lead to an increase in anxiety as a result of stress due to these significant life changes (Barbee & McLaulin, 1990).

Arling (1987) conducted a study to examine the relationship between life-strain (e.g., physical health problems, economic deprivation, activities of daily living (ADL) impairment, and psychosomatic and emotional distress) in old age, while taking into account the effects of age, race, sex, education, social support, and other measures of social resources. Participants in the study were 2,146 noninstitutionalized older adults, ages 60 years and older. Nineteen percent were non-white and 59% were women. Participants were interviewed using the OARS Multidimensional Functional Assessment Questionnaire (Duke University Center for the Study of Aging and Human Development, 1978). Results indicated that women, whites, those living alone, and those with less education, reported greater levels of strain. Further, older adults with greater levels of strain were more likely to receive social support from family, friends, and neighbors. However, they also had smaller social networks and limited social contact outside the home. Poor health status and ADL impairment were the strongest predictors of distress. Social support was positively related, whereas social contact was negatively related, to distress. Social support had a moderate influence on the relationship between ADL impairment and psychosomatic symptoms of distress. Other measures of social resources, such as living arrangement and support network size, had neither main nor interactive effects on distress.

Himmelfarb and Murrell (1994) also examined several factors associated with aging that may increase the experience of anxiety in older adults. This study indicated that anxiety was inversely associated with socioeconomic status, education, and urban dwelling. Further, anxiety was inversely and highly correlated with physical health.

Thus, high levels of social support, good health, a limited number of negative life events, and high quality of life appear to serve as protective factors against the development of anxiety for older adults. Knowledge concerning the relationship between these factors associated with aging and the development of anxiety disorders will enable mental health professionals to implement prevention programs for older adults.

Assessment of Anxiety in Older Adults

Methods for assessing anxiety symptoms in older adults have received little research attention (Hersen, Van Hasselt, & Goreczny, 1993). Hersen et al. identified three critical diagnostic problems with the research on anxiety in older adults: 1) the distinction between anxiety as a disorder and anxiety as a symptom manifestation is not well defined, 2) the reliability and validity of the diagnostic categories for anxiety as defined by the DSM-III-R (APA, 1987) are not at an adequate level, and 3) the current scales used to study anxiety in older adult populations were initially developed for use with much younger individuals.

Flint (1994) discussed several other methodological issues related to the assessment of anxiety in older adults. One issue is the fact that criteria for anxiety disorders, like those found in the DSM-IV (APA, 1994), tend to be somewhat arbitrary, since anxiety symptoms lie on a continuum of behavior. Second, diagnosis will also be affected if the older adult minimizes, explains away, or forgets to recall, symptoms of anxiety. Hersen et al. (1993) and Flint both provide support for Barbee and McLaulin's (1990) explanation that difficulties exist in accurately detecting and diagnosing anxiety disorders among the elderly, which may explain why some of the research which has found that the prevalence rate of anxiety disorders for older adults is lower in comparison to other age groups.

An additional methodological problem concerning the assessment of anxiety in older adults is that anxiety symptoms in older adults maybe overlooked because these symptoms maybe expressed as somatic complaints (Flint, 1994). A typical presentation of anxiety in older adults is often through physical complaints (De Leo et al., 1993). Further, anxiety syndromes and behavioral disturbances in late life are difficult to differentiate from physical illness (Smith et al., 1995). This may be because older adults also may report emotional distress in terms of physical symptoms. Additionally, some older adults are unable or unwilling to verbalize emotional distress. Unfortunately, expression of emotional distress in terms of physical dysfunction places older adults at an increased risk for unnecessary diagnostic evaluations, iatrogenic complications, and polypharmacy (Smith et al., 1995). In addition, medications

commonly used in treating various medical illnesses further complicate this diagnostic problem because they may result in psychiatric sequelae, such as symptoms of cognitive impairment, depression, and anxiety.

Turnbull (1989) proposed that symptoms of anxiety in older adults may be broken down into even more specific categories to aid in the assessment of anxiety disorders. For example, symptoms frequently associated with anxiety in older adults may be specified as: 1) neurologic (e.g., tremors, tics, dizziness, paresthesias), 2) genitourinary (e.g., pruritus vaginae or ani, dysparunia), 3) gastrointestinal (e.g., dysphagia, indigestion, nausea and vomiting), 4) cardiovascular/respiratory (e.g. chest pain, tachycardia), and 5) miscellaneous (e.g., weight gain, weakness and fatigue, neck and back pain, insomnia). Patients with generalized anxiety disorder may demonstrate additional symptoms from the following four categories: 1) motor tension (e.g., shakiness, twitching, trembling), 2) autonomic hyperactivity (e.g., sweating, dizziness, heart pounding or racing), 3) apprehension (e.g., worry, anxiety, fear), and 4) hypervigilance (e.g., distractibility, inability to concentrate, irritability).

Another interpretation of anxiety symptomatology is Sallis and Lichstein's (1982) somatic (physiological) and cognitive distinction. Additionally, Sallis and Lichstein suggested that types of anxiety symptoms may differ across age groups, therefore the consequences of the predominance of one type of anxiety expression over the other also may differ. For example, somatic dominance may contribute to deteriorating physical health, while cognitive expression could lead

to depression or confusional states. Unfortunately, this conceptualization has received little attention in the published literature. Clearly, more research is needed on the distinction between cognitive and somatic anxiety symptoms among older adults.

Smith et al. (1995) broadened Sallis and Lichstein's cognitive distinction to include psychological symptoms. These researchers proposed that symptoms of anxiety in older adults may be divided into two categories of complaints: psychological and physiological. Psychological complaints include tension, nervousness, worry, irritability, difficulty concentrating, rumination, and dread. Physiological (somatic) complaints include palpitations, shortness of breath, dyspnea or exertion, choking sensations, heartburn, vomiting and nausea, insomnia, tremors, and restlessness.

Comorbidity of Anxiety and Depression in Older Adults

A difficulty when studying anxiety in older adults, is that anxiety and depression often coexist (Flint, 1994; Smith et al., 1995). Cloninger (1990) reported that about one-third of patients with an anxiety disorder met the diagnostic criteria for depression and about two-thirds of depressive patients met the diagnostic criteria for anxiety. Several hypotheses have been suggested in order to explain the comorbidity of anxiety and depression. One proposal is that both mental disorders may result from one factor or set of factors. The second proposal states that the development of one mental disorder depends on the

previous development of the other mental disorder. For example, anxiety may predispose an individual to depression, or depression may predispose an individual to anxiety.

Although little research has been conducted on the comorbidity of anxiety and depression in older adults (Alexopoulos, 1990), anxiety disorders, together with mood disorders, represent a frequent pathology in older adults (De Leo et al., 1993), and the data that does exist suggest that there is considerable overlap between the symptoms of the two disorders (Parmelee et al., 1993). Parmelee et al. conducted a study to examine the association between anxiety and depression among institutionalized elderly. The participants were 1,775 older adults ages 61 years-old to 102 years-old. Half of the subjects were living in nursing home facilities and the other half in independent living apartments. The participants were predominantly white and Jewish. Results indicated that anxiety was indeed strongly associated with depression, as well as with physical health, functional disability, and cognitive status.

The Impact of Culture on the Expression of Anxiety

The experience and expression of anxiety symptoms may differ across ethnic groups as well as across age groups. The influence of culture on the expression of a mental disorder constitutes another major omission in the existing literature on anxiety disorders in older adults. Kleinman, Eisenberg, and Good (1978) discussed the importance of utilizing an explanatory model to

describe the impact of both disease and illness for particular individuals.

Kleinman et al. proposed an explanatory model of illness (EMI), which explains the relationship between culture, belief systems, and the pattern of symptom expression and help-seeking behavior among various ethnic populations.

According to the EMI, disease refers to abnormalities in the structure and function of body organs and systems, whereas illness refers to the human experience of sickness. Kleinman et al. suggested that illness is shaped by cultural factors governing perception, labeling, explanation, and evaluation of the discomforting experience; processes embedded in a complex family, social, and cultural nexus. Therefore, for any particular individual, illness in essence, is a culturally-constructed concept.

Given the role of culture on the expression of illness, it is likely that culture also influences symptom manifestation. An example of how Asian culture impacts symptom manifestation, is the impact that Chinese culture has on the symptom manifestation of depression. Kleinman, Kunstadter, Alexander, and Gale (1975) reported that in China, a person who is diagnosed with a mental disorder is stigmatized. For example, a diagnosis of a mental disorder makes the rest of one's family members unfit for marriage. Furthermore, mental illness in Chinese culture is often conceptualized as severe. Kleinman et al. found that Chinese patients often sought medical attention for somatic symptoms associated with depression and anxiety. This may be a result of the notion that it is not appropriate to express affect in the Chinese culture. In fact, expression of any affect is uncommon.

Western medical practitioners primarily focus on the disease aspect of an individual's sickness. Kleinman et al. (1978) has criticized the United States medical field, claiming that inattention to illness often results in patient noncompliance, patient and family dissatisfaction with professional health care, and inadequate clinical care. Kleinman et al.'s model suggests that a mental health provider's inattention to how a patient, especially an ethnic minority patient, conceptualizes illness, often results in a under-utilization of mental health services, as well as implementation of inappropriate treatment interventions, or worse, no treatment.

In the United States, Kleinman et al.'s observations regarding the importance of culture on EMI's also have support. Research has shown that Asian Americans underutilized mental health services (Sue, 1977; O'Sullivan, Peterson, Cox, & Kirkeby, 1989). Some authors suggest that an explanation for this underutilization of mental health services is because the treatment is not culturally-responsive. Like the explanatory model of illness proposed by Kleinman et al. (1978), the theory of cultural responsiveness states that effective treatment needs to incorporate one's cultural beliefs and practices (Sue & Zane, 1987).

The Conceptualization of Anxiety

Among the Japanese

It has been suggested that the concept of anxiety in Japanese culture is different from Western cultures. Imada (1989) conducted a study to determine

how to “define” Japanese equivalents of anxiety, fear, and depression: fu-an, kyo-fu, and yu-utsu, respectively. The study was a replication of a previous study conducted by Davitz (1969), where American participants were given a checklist consisting of 556 statements describing emotional experiences of anxiety. Imada gave a translated checklist to 60 Japanese college students and young college graduates. Half the participants were women and the mean age was 21.4 years. In groups of two to six, participants were asked to think of a specific experience when they experienced one of the three emotions (anxiety, fear, and depression). Then, participants were asked to read through the 556 statements and check the statements that described their particular emotional experience. This was done in a randomized order for each of the three emotions. The results obtained from the Japanese sample were then compared with the results obtained by Davitz.

Results of Imada’s study indicated that for the Japanese participants, experiences of fu-an (anxiety) were found to be more similar to those of yu-utsu (depression) than those of kyo-fu (fear). In comparison, the results obtained from Davitz’s study indicated that with the English-speaking American participants, experiences of anxiety were more similar to those of fear than to those of depression. There was little overlap with experiences of fu-an and those of anxiety, and anxiety tended to be more physical than fu-an. A semantic differential analysis of specific instances of anxiety and fu-an written by American and Japanese students revealed that the experiences of fu-an were more distressing and more ambiguous than those of anxiety. Imada emphasized

the importance of recognizing discrepancies in the connotative meaning of formally equivalent emotional concepts across languages. These ethnic group differences have implications for the conceptualization of anxiety among Japanese Americans, whose cultural values are often considered as lying on a cultural continuum between Japanese and American values (Iwamasa, 1997).

Nakazato and Shimonaka (1989) investigated anxiety scores among Japanese adults of various ages. Participants consisted of 551 men and 663 women residents of a city adjacent to Tokyo. Ages of participants ranged from 25 to 92 years old. Anxiety was measured using the Japanese version of the STAI (Nakazato & Mizuguchi, 1982). Results indicated that anxiety within this population appeared to decline with age. A sex difference was observed on trait anxiety, with women demonstrating higher levels of anxiety than men.

The Conceptualization of Anxiety Among Japanese and Japanese American Older Adults

Nagatomo, Nomaguchi, and Takigawa (1995) conducted one of the only studies that specifically examined anxiety in Japanese older adults. The purpose of their investigation was to determine how anxiety affected the quality of life of Japanese older adults who were living in full-time care nursing homes. Participants included 40 Japanese older adult residents of a special care nursing home, and consisted of 4 men and 36 women. Participants had been judged to understand the questions on the Japanese version of the STAI (Nakazato & Mizuguchi, 1982), and the Self-Rating Depression Scale (SDS;

Zung, 1967) translated into Japanese. After completing the STAI and the SDS, participants were assessed using the Quality of Life Rating Scale (QOL; Iida, Kohashi, Kumon, & Inoue, 1991; Iida and Kohashi, 1993). Further, the nursing staff also evaluated residents' behavior problems using the modified Stockton Geriatric Rating Scale (SGRS; Ikegami, 1979).

The results indicated that there was a negative correlation between the STAI and the SDS scores. Low levels of anxiety were correlated with higher depression scores. Higher scores on the SDS scale were significantly positively correlated with higher scores for physical impairment. Level of depression was related to the degree of physical impairment. The only score that correlated with the SGRS was the score on attitudes towards life from the QOL, which was positively correlated with the apathy score and the total score of the SGRS. The results suggested that the QOL in residents of nursing homes was influenced both by anxiety and depression. Also physical impairment was influenced by depression in residents both with and without high anxiety. Further, the QOL in residents with high anxiety was found to be lower than residents with lower anxiety, suggesting that anxiety influences the QOL in older adults.

Watari and Brodbeck (1996) conducted a cross-cultural study that examined worry in older Japanese Americans and older Euro-Americans in community based groups. The following scales were used: The Penn State Worry Questionnaire (PSWQ; Meyer, Miller, Metzger, & Borkovec, 1990), the Worry Scale-Revised (WSR; Wisocki, 1995), and a self-report worry questionnaire adapted from Wisocki by the researchers. Participants consisted

of 66 Japanese Americans and 65 Euro-Americans, ages 65 years or older from community nutrition programs or senior centers located in Los Angeles, California. Sixty-nine percent were women and thirty-one percent were men. No interaction effect or main effects for ethnicity or gender were found on perceived worry classification or frequency. However, regardless of ethnicity, women were found to have significantly higher scores on the PSWQ and WSR. The authors suggested that future research should examine the cultural factors in worry and anxiety in order to understand the specific health needs of older Japanese Americans, who may be reluctant to seek mental health services.

Iwamasa, Hilliard, and Osato (in press) conducted a qualitative study with 23 Japanese American older adults to determine how they define anxiety and depression. Results from these interviews suggested that there was no clear distinction between symptoms of anxiety and depression. Additionally, the Japanese American older adults in this sample defined anxiety and depression using primarily psychological symptoms, contradicting the popular belief that individuals from Asian cultures tend to express psychological complaints somatically. More research needs to be conducted to determine how anxiety is conceptualized and expressed in individuals with specific Asian backgrounds.

Purpose of the Proposed Study

Little research has been conducted examining anxiety disorders among older adults, and even less research has been conducted examining the expression of anxiety disorders among ethnic minority older adults. The limited

amount of published research suggests that anxiety symptoms may be expressed differently in Japanese American older adults. The purpose of this research project is to determine whether or not anxiety is conceptualized by Japanese American older adults in the same way that anxiety is conceptualized using Western criteria. Participants in this study will complete an anxiety scale and an anxiety adjective checklist in order to assess their conceptualization of anxiety.

Hypotheses

Hypothesis 1

Japanese American older adults will use an equal proportion of anxiety and depressive adjectives to describe an anxious Japanese American older adult.

Hypothesis 2

Japanese American older adults will use a greater proportion of somatic symptoms than cognitive symptoms to describe an anxious Japanese American older adult.

Hypothesis 3

Other demographic variables, such as degree of social support, health status, quality of life, life events, attendance at the Seinan Center, sex, and

cohort will be examined to determine how these variables relate to how participants described symptoms of anxiety.

Hypothesis 4

Other demographic variables, such as degree of social support, health status, quality of life, life events, attendance at the Seinan Center, sex, and cohort will be examined to determine how these variables relate to participants' level of anxiety as measured by the Beck Anxiety Inventory.

CHAPTER II

METHOD

Participants

Participants consisted of 165 Japanese American older adults, ages 58 years and older. The participants were recruited from the Seinan Center in Los Angeles, California. The Seinan Center is a senior citizen day program for Japanese American older adults. The Executive Director of the Seinan Center provided consent for the research project to be conducted at the center (See Appendix A). The Seinan Center provides services to over 1,000 members, two thirds of whom are women. The researcher gathered data from 114 women and 50 men. Further, according to the Executive Director of the Center, about three-fourths of the members are proficient in speaking and reading English. In order for the responses to the questionnaires to be valid, an effort was made to sample members from those who were proficient in the English language.

Measures

The following three questionnaires were bound together in a booklet format. The completion time was approximately fifteen minutes. Most of the

questions involved responding in a check format (i.e., "check each of the following,") or self-ratings.

Demographic Questionnaire

This questionnaire(See Appendix B) was designed specifically for this study to assess each participant's sex, age, marital status, education, primary occupation, annual income, living situation, and attendance at the Seinan Center. Eight additional questions were included to assess social support, quality of life, health status, and significant life events. These demographic variables were examined to determine whether they were related to how Japanese American older adults conceptualize anxiety.

Beck Anxiety Inventory

The Beck Anxiety Inventory (BAI; Beck, Epstein, Brown, & Steer, 1988), a 21-item scale was included so that psychometric analyses could be performed. This questionnaire was designed to measure the severity of anxiety in adults and adolescents. There are currently no anxiety measures specifically designed for older adults or that are not culturally biased. The BAI's response format consists of a zero to three point rating scale. BAI items assess cognitive and somatic symptoms associated with anxiety, such as feeling shaky, nervous, terrified, and fear of the worst happening, that have occurred during the past week. A total score between 0-9 is considered in the normal range; scores between 10-18 indicate mild-moderate anxiety; scores between 19-29 indicate

moderate-severe anxiety; and scores between 30-63 indicate extremely severe anxiety. With the original sample, the internal consistency of the BAI was .94, and the test-retest correlation after one week was .75 (Beck et al., 1988). The BAI was chosen for this study because it is relatively short and it has been shown to have sound psychometric properties on middle aged-adults and adolescents.

Anxiety Symptom Checklist

This anxiety checklist was designed specifically for this study (See Appendix C). Participants were asked to think of a Japanese American older adult who was suffering from anxiety and then check off the symptoms they thought that individual would experience as a result of the anxiety. Symptoms included on the checklist consisted of symptoms from generalized anxiety disorder in the DSM-IV (APA, 1994), DSM-IV major depressive disorder criteria, and symptoms derived from Iwamasa et al.'s (in press) interview study on Japanese American older adults' definitions of anxiety and depression. Frequency counts as well as proportions were calculated for DSM-IV criteria for anxiety and depression for comparison purposes. In addition, proportions were calculated for somatic and cognitive symptoms.

Procedure

The researcher went to the Seinan Center in Los Angeles, California to conduct the data collection over a period of five days. The questionnaire packets

were distributed to the older adult participants at the beginning portion of an activity session. Participants were informed their participation was voluntary and that ten dollars would be donated to the Seinan Center for each completed questionnaire packet. The consent form included in the packet explained to the participants that their responses would be anonymous and that they were free to withdraw from the study at any time (See Appendix D).

CHAPTER III

RESULTS

Summary of Demographic Data

The demographic information on the participants are summarized in Table 1. Fifty (30.3%) of the participants were men and 114 (69.1%) were women. One (.6%) participant did not indicate their sex. Age of participants ranged from 58 to 91 years-old, with a mean age of 73.7 years. Forty-seven (28.5%) participants were in the first cohort (60 to 70 years), 84 (50.9%) in the second cohort (70 to 80 years), and 22 (13.3%) in the third cohort (80+ years). A majority of the participants were second generation, $n=125$ (75.8%), followed by 20 (12.1%) participants who reported being first generation, 11 (6.7%) participants who reported being third generation, and only one (.6%) participant reported being fourth generation. Eight (4.8%) participants did not indicate their generational status. Ninety-two (55.8%) participants were interned during WWII, while 3 (1.8%) participants did not indicate whether or not they were interned. In terms of marital status, 87 (52.7%) participants were married, 52 (31.5%) were widowed, 15 (9.1%) were single, and eight (4.8%) were divorced. Three (1.8%) participants did not indicate their marital status. The mean number of children

that the participants had was 2.3 with a range of zero to seven. Eighty-two (49.7%) of the participants lived with their spouse, 58 (35.2%) lived alone, 14 (8.5%) lived with their children, and seven (4.2%) lived with someone else. Four (2.4%) participants did not indicate with whom they were currently living. Eighty-four (50.9%) participants felt as though they received “some to a lot” of support from their family and friends, and 151 (91.6%) participants spent “some to a lot” of time with their friends, loved ones, and family.

In terms of education level, 88 (53.3%) participants were high-school graduates, 39 (23.6%) attended some college, 17 (10.3%) were college graduates, 13 (7.9%) had some grade school education, four (2.4%) had post-graduate degrees, and one had no formal education. Three (1.8%) participants did not indicate their highest level of education. In terms of employment status, most participants were not currently employed, $n=149$ (90.3%). Twelve (7.3%) participants were currently employed, and 4 (2.4%) did not indicate employment status. About eighty percent of the participants indicated that their annual income of participants was less than \$19,999.

Most of the members who attend the Seinan Center reported being relatively healthy. A majority of the participants felt healthy, $n=102$ (61.8%) and rarely or sometimes got sick, $n=151$ (91.5%). One hundred and three (62.4%) participants took medication on a daily basis, 59 (35.8%) did not take medication regularly, and 3 (1.8%) did not indicate their medication usage. Out of the 175 participants who answered if their medications had side effects, 93 (56.4%) participants reported “no” and 11 (6.7%) reported “yes”.

Members of the Seinan Center attended the center regularly. Most participants attended the Seinan Center at least one or more times a week, $n=146$ (88.5%). Most participants spent 2 to 5 hours at the center, 103 (62.4%); 29 (17.6%) participants were there 1 to 2 hours, 35 (21.2%) 2 to 3 hours, 33 (20%) 3 to 4 hours, 35 (21.2%) 4 to 5 hours, 30 (18.2%) spent 5 or more hours at the center, and 3 (1.8%) did not indicate the amount of time that they spent at the center. While at the Center, most participants reported that they attended regular activity classes, $n=129$ (78.2%) or talked with friends, $n=79$ (47.9%). Most participants exercised on a weekly basis, $n=101$ (61.2%), and watched television on a weekly basis, $n=106$ (64.2%). One hundred and nine (66.1%) participants indicated that they did not go to church on a regular basis.

In terms of life satisfaction, 160 (97%) participants were "somewhat happy" to "happy" with their life. An equal number also reported "moderate satisfaction" to "satisfaction" with their lives. Seventy-four (44.8%) participants reported experiencing about the same number of negative life events relative to other older adults, 72 (43.6%) reported less, and 10 (6.1%) reported more. Sixty-one (37%) participants reported experiencing about the same number of positive life events relative to other older adults, 72 (43.6%) reported more, and 20 (12.1%) reported less.

Psychometric Properties of the Beck Anxiety Inventory (BAI)

Eighty-eight of the 165 participants completed BAI questionnaires on which the present analyses were based. Sixty-one (69%) of the BAI questionnaires were completed by women and 27 (31%) by men. The overall mean for the total score on the BAI for this sample was relatively low ($M = 5.11$). No significant differences were found between the mean total BAI score for women ($M = 5.3$) and men ($M = 4.7$, $p > .05$). Internal consistency was assessed using Cronbach's alpha and split-half reliability. Cronbach's (1951) alpha was found to be .77, which is lower than Cronbach's alpha of .94 reported in the normative sample. The split-half reliability coefficient was found to be .67. Corrected item-total correlations ranged from .01 to .68. Item #1 (Numbness or tingling) had the lowest item-total correlation, while item #16 (Fear of dying) had the highest item total correlation.

Hypothesis 1

The first hypothesis predicted that Japanese American older adults would use an equal proportion of anxiety and depressive adjectives to describe an anxious Japanese American older adult. Participants were asked to think of a Japanese American older adult who was suffering from anxiety and to check all the symptoms an anxious Japanese American older adult would have from an adjective checklist. One-hundred and thirty-two participants out of 165 had

completed the adjective checklist on which the following analyses were based. Completion of the checklist was defined as indicating at least one symptom of anxiety.

In order to examine the first hypothesis, two analyses were conducted. The first analysis examined the proportion of depressive symptoms indicated in comparison to the proportion of anxiety symptoms indicated. The proportion of depressive symptoms and the proportion of anxiety symptoms was determined for each participant. A paired samples t-test was used to determine if there was a significant difference between the proportion of depressive symptoms and the proportion of anxiety symptoms checked off by the participants. The analysis yielded significant results, $t(1,131) = 11.25$, $p < .001$. Participants checked off a significantly greater proportion of depressive symptoms ($M = 19\%$) than anxiety symptoms ($M = 9\%$).

A second analysis determined whether or not participants indicated anxiety and depressive symptoms that were similar to DSM-IV (APA, 1994) criteria for anxiety and depression. Frequency counts were used to determine the total number of participants who indicated that a Japanese American older adult suffering from anxiety who also met DSM-IV criteria for anxiety and depression. Of the DSM-IV criteria for anxiety, participants needed to check off three or more adjectives. Of the DSM-IV criteria for depression, participants needed to check off five or more adjectives. Frequency counts are listed in Table Two.

Fifty-three participants indicated that a Japanese American older adult suffering from anxiety would experience the same symptoms as an individual who was diagnosed with either anxiety or depression according to DSM-IV criteria. Of those 53 participants, 39 participants indicated that a Japanese American older adult suffering from anxiety would experience the same symptoms as an individual who was diagnosed with both anxiety and depression, according to DSM-IV criteria.

Forty-six participants indicated that a Japanese American older adult suffering from anxiety would experience the same symptoms as an individual who was diagnosed with anxiety, according to DSM-IV criteria. Also, an equal number of participants indicated that a Japanese American older adult suffering from anxiety would experience the same symptoms as an individual who was diagnosed with depression, according to DSM-IV criteria.

Table Three displays the ranking of the top nine anxiety symptoms according to Japanese American older adults, in comparison to the DSM-IV criteria for generalized anxiety disorder. The participants who agreed with DSM-IV generalized anxiety disorder criteria indicated that the following criteria: 1) Being easily fatigued/feels tired, 2) Difficulty concentrating, and 3) Difficulty controlling his or her worries, also were symptoms of an anxious individual. However, it is interesting to note that five (62%) of the top nine anxiety symptoms according to Japanese American older adults also were DSM-IV diagnostic criteria for depression (Feels slowed down, has a decreased appetite,

has difficulty making decisions, has no energy, and has a loss of interest in activities).

Hypothesis 2

The second hypothesis predicted that Japanese American older adults would use a greater proportion of somatic symptoms rather than cognitive symptoms to describe an anxious Japanese American older adult. Two paired sample t-tests examining anxiety and depression separately were conducted to examine this hypothesis. Similar to hypothesis one, these analyses were based on the 132 participants out of 165 who completed the adjective checklist.

The first paired sample t-test was used to determine if the proportion of somatic symptoms of anxiety on the adjective checklist was significantly different when compared to the proportion of cognitive symptoms of anxiety on the adjective checklist. This analysis yielded significant results, $t(1, 131) = -4.062$, $p < .001$. Participants checked a significantly greater proportion of cognitive anxiety symptoms on the adjective checklist ($M = 29\%$) as compared to the proportion of somatic anxiety symptoms ($M = 20\%$).

The second paired sample t-test examined the proportion of somatic and cognitive symptoms of depression on the adjective checklist. This analysis yielded significant results, $t(1, 131) = 3.307$, $p < .001$. Participants checked a significantly greater proportion of somatic depressive symptoms ($M = 33\%$) on the anxiety checklist as compared to the proportion of cognitive depressive symptoms ($M = 27\%$).

Hypothesis 3

The third hypothesis stated that demographic variables, such as degree of social support, health status, quality of life, life events, attendance at the Seinan Center, sex, and age cohort, need to be examined to determine how these variables relate to how participants described symptoms of anxiety. How one described symptoms of anxiety was categorized in the following manner :

1) the total proportion of cognitive anxiety symptoms indicated on the adjective checklist, 2) the total proportion of somatic anxiety symptoms indicated on the adjective checklist, 3) the total proportion of anxiety symptoms on the adjective checklist, 4) the proportion of cognitive symptoms on the adjective checklist, 5) the proportion of somatic symptoms on the adjective checklist, 6) the total proportion of cognitive depressive symptoms on the adjective checklist, 7) the total proportion of somatic depressive symptoms on the adjective checklist, and 8) the total proportion of depressive symptoms. All of these variables consisted of continuous data, thus Biserial correlations were conducted, with the intention of including significantly-related variables in a hierarchical regression.

The only demographic variables that were found to be significantly related to how participants described anxiety were age, age cohort, social support, and generational status. Age and age cohort were found to be significantly related to: 1) the total proportion of cognitive anxiety symptoms on the adjective checklist ($r^{\text{age}} = -.197, p < .05; r^{\text{age cohort}} = -.201, p < .05$), 2) the total proportion of anxiety symptoms on the adjective checklist ($r^{\text{age}} = -.205, p < .05; r^{\text{age cohort}} = -.193;$

$p < .05$), 3) the proportion of cognitive symptoms on the adjective checklist ($r^{\text{age}} = -.222$, $p < .05$; $r^{\text{age cohort}} = -.217$; $p < .05$), 4) the total proportion of depressive symptoms ($r^{\text{age}} = -.186$, $p < .05$; $r^{\text{age cohort}} = -.188$, $p < .05$), and 5) the total proportion of cognitive depressive symptoms ($r^{\text{age}} = -.215$, $p < .05$; $r^{\text{age cohort}} = -.227$, $p < .05$). Social support was the only demographic variable that was found to be significantly related to the proportion of somatic symptoms on the adjective checklist ($r = .196$, $p < .05$). Lastly, generational status and social support were found to be significantly related to the total proportion of somatic depressive symptoms on the adjective checklist ($r^{\text{generational status}} = .178$, $p < .05$; $r^{\text{social support}} = .178$, $p < .05$). No demographic variables were found to be significantly related to the total proportion of somatic anxiety symptoms indicated on the adjective checklist.

Hierarchical regression analysis were planned with each of the possible conceptualizations of anxiety serving as criterion variables and the demographic variables that were found to be significantly-related serving as the predictor variables. Based on the biserial correlations, only one regression analysis was conducted with the total proportion of somatic depressive symptoms on the adjective checklist serving as the criterion variable and generational status and social support serving as the predictor variables. This analysis yielded nonsignificant results.

Hypothesis 4

The fourth hypothesis stated that other demographic variables, such as degree of social support, health status, quality of life, life events, attendance at the Seinan Center, sex, and age cohort, need to be examined to determine how these variables relate to participants' level of anxiety as measured by the BAI. Level of anxiety as measured by the BAI was defined by the total BAI score. The total BAI score consisted of continuous data, thus Biserial correlations were conducted, with the intention of including significantly-related variables in a hierarchical regression. The results indicated that none of the demographic variables listed above were significantly related to the participants level of anxiety as measured by the BAI. With all of the predicted variables not being significantly related to the participants level of anxiety as measured by the BAI, the hierarchical regression was not conducted.

CHAPTER IV

DISCUSSION

Summary of Results

The Psychometric Properties of the BAI

The overall mean BAI score for this sample ($M = 5.11$) was fairly low. According to Beck et al. (1988), the participants in this study appear to have a normal level of anxiety. The range of scores within this sample were restricted. The range of scores fell between one and twenty-six, however, 78 (88.6%) of the participants obtained a score between one and 10. In addition, no sex differences in BAI scores were found in this sample of Japanese American older adults.

The alpha coefficient (.77) for this sample was slightly lower when compared with the alpha coefficient (.94) obtained from the normative sample. However, the alpha coefficient is still large enough for the BAI to be considered a reliable measure of anxiety to use with Japanese American older adults. The corrected item total correlations also were slightly lower (.01 to .68) than those obtained with a sample of older adult medical patients (.48 to .70; Wetherell &

Arean, 1997). This suggests that some items on the BAI may not be as reliable and valid with Japanese American older adults as for other older adults.

These results are not much of a surprise given the nature of the sample. First, this sample of Japanese American older adults was a predominantly healthy and active group. Second, less than half of our sample completed the entire survey. It is possible that if all 165 participants completed the survey, we would have received results more similar to the normative sample which was larger. As a result of our small sample consisting of individuals who were relatively healthy and active, there was little variability in the scores. The variability of scores would have possibly been more similar to the normative sample if there was a greater proportion of participants who were experiencing more anxiety symptoms. Fourth, the format of the BAI with this sample of Japanese American older adults may have been troublesome. The format of the BAI asks individuals to rate themselves on a zero to three point rating scale for each symptom of anxiety. Researchers make an assumption that their participants can complete the questions accurately by choosing one of four choices. It is possible that some individuals may be able to more accurately describe their symptoms in an interview format. This may be particularly true for individuals with culturally diverse backgrounds because cultural values may influence symptom presentation and thus the format and presentation of self-report surveys may not be as meaningful to them.

In summary, the psychometric properties with this sample of Japanese American older adults, were slightly lower than normative samples. However,

until future research with a more diverse sample is conducted, results from the current study indicate that the BAI may be a reliable measure of anxiety with this population.

Hypothesis 1

It was hypothesized that Japanese American older adults would use an equal proportion of anxiety and depressive adjectives to describe an anxious Japanese American older adult. This hypothesis was partially supported. The hypothesis was not supported when comparing the proportion of anxiety adjectives to the proportion of depressive adjectives participants used to describe an anxious Japanese American older adult. Participants indicated a greater proportion of depressive adjectives in order to describe an anxious Japanese American older adult. This suggests that Japanese American older adults may express anxiety with more depressive symptoms than anxiety symptoms.

This hypothesis was supported, however, when we examined whether or not participants indicated anxiety and depressive symptoms that were similar to DSM-IV (APA, 1994) criteria for anxiety and depression. A majority of the participants described an anxious Japanese American older adult in a similar fashion to DSM-IV criteria for both depression and anxiety. Therefore, the participants who described an anxious Japanese American older adult similarly to DSM-IV indicated that an anxious Japanese American older adult would

experience both depressive and anxiety symptoms. These results were similar to those obtained by Iwamasa et al. (in press), who found that there was no clear distinction between symptoms of anxiety and depression.

The finding that Japanese American older adults may express anxiety with more depressive symptoms than anxiety symptoms has a number of implications for both the assessment and treatment of anxiety among this population. For example, the prevalence of anxiety symptoms in this population may be underestimated because mental health professionals are not assessing for the proper symptoms of anxiety in this population. In terms of treatment for anxiety, following Kleinman et al.'s (1978) concept of explanatory model of illness, treatment that focuses on alleviating depressive symptomatology as opposed to symptoms of anxiety may be more culturally appropriate.

These findings provide support for the numerous difficulties in assessing anxiety disorders in older adults as described previously in the literature. Hersen et al. (1993) explained that the reliability and validity of the diagnostic categories for anxiety among older adults are not clearly defined. The fact that only about a third of the Japanese American older adult participants in this study described an anxious Japanese American older adult with enough symptoms to meet the Western criteria for both anxiety and depression, suggests the need for more well defined anxiety criteria for Japanese American older adults.

These findings also suggest the possibility of high comorbidity between anxiety and depression among Japanese American older adults. Fernandez, Levy, Lachar, and Small (1995) emphasized that anxiety and depression may

often coexist among older adults, thus making diagnosis difficult. Fernandez et al. stated that many of the symptoms of depression also may be associated with anxiety as well. For example, feelings of loss, hopelessness, decreased self-worth, sleep disturbance, change in appetite, and cognitive disturbances, are common symptoms of both anxiety and depression in older adults. Results from this study further highlight the need to examine these issues even more so among Japanese American older adults.

In summary, Japanese American older adults in this sample tended to describe an anxious Japanese American older adult with more depressive symptoms than anxiety symptoms. However, a portion of these participants also described an anxious Japanese American older adult as suffering from both anxiety and depressive disorders as defined by DSM-IV.

Hypothesis 2

It was hypothesized that Japanese American older adults would use a greater proportion of somatic symptoms rather than cognitive symptoms to describe an anxious Japanese American older adult. This hypothesis was partially supported. Participants used a significantly greater proportion of cognitive symptoms when compared to somatic symptoms to describe an anxious Japanese American older adult. This finding contradicts past literature, which has found that individuals with an Asian background tend to express mental illness in the form of somatic complaints. However, the emphasis on cognitive symptoms was not apparent when depressive symptoms were

examined. Thus, cognitive anxiety symptoms were emphasized and somatic depressive symptoms were emphasized in the conceptualization of anxiety.

There could be a number of reasons for these new findings. First, the studies in the past literature that examined symptom expression among Asians are outdated. Secondly, as a result of the passage of time, these Japanese American participants may be more acculturated into the dominant culture, which may explain why their conceptualization was similar to Western criteria for anxiety. Thirdly, these new findings may be due to the fact that somatic symptomatology is only related to particular forms of mental distress among the Asian population. For example, Japanese American older adults may use more somatic symptoms to describe an individual suffering from depression and more cognitive symptoms to describe an individual suffering from anxiety.

These findings suggest that DSM-IV might not be an accurate classification system to use when assessing anxiety disorders among Japanese American older adults. If all Japanese American older adults' do not express anxiety symptoms in terms of DSM-IV criteria, then the assessment measures designed to diagnose anxiety according to DSM-IV criteria may be inappropriate to use with this population. Thus, mental health professionals should be aware of this discrepancy and include somatic depressive symptomatology when assessing for anxiety among Japanese American older adults.

Hypothesis 3

It was hypothesized that demographic variables, such as degree of social support, health status, quality of life, life events, attendance at the Seinan Center, sex, and age cohort need to be examined to determine how these variables relate to how participants described symptoms of anxiety. This hypothesis was partially supported. The only demographic variables that were found to be significantly related to how participants described anxiety were age, age cohort, social support, and generational status, and these were entered into the hierarchical regression analysis. However, results revealed that none of the criterion variables were significant predictors of the conceptualization of anxiety.

Hypothesis 4

It was hypothesized that demographic variables, such as degree of social support, health status, quality of life, life events, attendance at the Seinan Center, sex, and age cohort need to be examined to determine how these variables relate to participants' level of anxiety as measured by the Beck Anxiety Inventory. This hypothesis was not supported. No demographic variables were found to be significantly-related to the participants level of anxiety as measured by the BAI. Therefore, no hierarchical regression analysis was conducted. As reported previously, overall BAI scores were quite low for this sample. Furthermore, the variability of scores also was restricted. In addition, this sample also showed little variability in level of perceived social support, health

status, quality of life, and were quite active at the center. All of these factors likely contributed to the degree to which we were able to accurately examine this hypothesis.

Implication of Findings

These findings have a number of implications for the assessment and treatment of anxiety among Japanese American older adults. In general, it is acknowledged that the assessment of anxiety among older adults is difficult due to the fact that anxiety symptoms may be overlooked because they are often expressed in terms of somatic complaints (Flint, 1994). In addition, early research findings suggested that Asians tended to express mental illness in the form of somatic complaints (Kleinman et al., 1978). However, the findings from this study suggest that Japanese American older adults use more cognitive symptoms of anxiety to describe another Japanese American older adult who is suffering from anxiety. Therefore, anxiety symptoms among Japanese American older adults may not be expressed as somatic complaints as previously thought.

The finding that Japanese American older adults used both cognitive anxiety symptoms and somatic depressive symptoms to describe an anxious Japanese American older adult suggests the possibility that DSM-IV's conceptualization of anxiety is not applicable to them. Thus, it appears as if a mixed anxiety and depressive conceptualization is perhaps more consistent with Japanese American older adults' conceptualization of anxiety.

These findings help to clarify the relationship between culture, belief systems, and the pattern of symptom expression of anxiety among Japanese American older adults. These findings suggest the possibility that Japanese American older adult belief systems and pattern of symptom expression for anxiety may be different than previously thought. Thus, the explanatory model of illness (Kleinman et al., 1978) for Japanese American older adults suffering from anxiety must be revised. The explanatory model of illness for Japanese American older adults suffering from anxiety needs to incorporate symptom manifestation, which includes both depressive and anxiety symptoms, as well as more cognitive symptomatology than previously thought. Thus the explanatory model of illness of anxiety among Japanese American older adults does not suggest strict adherence to DSM-IV criteria.

Kleinman (1978) proposed that without an accurate explanatory model of illness, individuals from ethnically diverse backgrounds may not receive proper assessment and treatment. Proper assessment of mental illness among ethnic minority older adults is essential for proper treatment. Ethnic minority older adults may often times have a greater need for psychological services, due to such risk factors as physical conditions and stresses associated with their ethnic background. Stresses associated with their ethnic background may include dealing with discrimination due to stereotypes and prejudice associated with their ethnicity (Iwamasa, 1997). However, ethnic minority older adults have lower utilization rates of services than the general geriatric population (Damon-Rodriguez, Wallace, & Kington, 1994). This disparity between possible need

and utilization of services would suggest that health care providers have not adequately assessed the conceptualization of their patients' illness and thus are not appropriately meeting their needs.

One may argue that Asians do not utilize mental health services because they are less likely to experience psychological distress. Research has not found any support for this hypothesis. In fact, research has demonstrated that Asian Americans are just as likely to experience a mental disorder as other ethnic groups (Chan, 1991; Sue & Morishima, 1982). Another possibility is that Asian Americans do not utilize mental health services because they do not find it helpful due to cultural barriers to receiving proper assessment and treatment. For example, if therapists are not aware of the cultural factors that could influence the expression of anxiety, a diagnosis of anxiety may be overlooked or misdiagnosed. When working with Japanese American older adults, mental health professionals may need to further examine nonspecific complaints or the subsyndromal thresholds of anxiety and depression. Proper treatment cannot be provided until a proper and thorough assessment has been conducted.

Methodological Considerations and Future Research Directions

A strength of this study is that it examined how Japanese American older adults conceptualize anxiety from an emic approach. Emics are ideas, behaviors, items, and concepts that are culture specific, whereas etics are ideas, behaviors, items, and concepts that are universal in nature (Triandis, 1994). To

date, most research has not examined how individuals conceptualize mental disorders from an emic approach. Triandis stated that the only way we can understand the impact of culture is by using an emic approach to research.

Despite the insights that an emic approach to research provides, there are a number of methodological considerations of this study. A primary methodological consideration to take into account is the fact that this design had Japanese American older adults describe someone other than themselves who suffered from anxiety. Even though the findings indicate that Japanese American older adults tend to describe someone else suffering with anxiety with both cognitive symptoms of anxiety and depressive symptoms, we cannot be sure that they would express their anxiety in the same exact terms. For example, perhaps when they themselves are experiencing anxiety, they may be too embarrassed or ashamed to admit they are in emotional distress, so they may express their personal anxiety in terms of somatic complaints as past research suggested. This design did not allow us to examine how participants would personally express symptoms of anxiety. Future research should examine whether or not participants would express their anxiety in the same way as they describe other Japanese American older adults who are suffering from anxiety.

A second methodological consideration to take into account is that these findings are based on Japanese American older adults who were healthy and active individuals. These results may not be generalizable to Japanese American older adults who are themselves suffering from an anxiety disorder. Japanese American older adults who are suffering from an anxiety disorder or

are at risk of suffering from an anxiety disorder may describe an anxious individual differently than a healthy and active Japanese American older adult. Another related methodological consideration is the fact although a total of 175 participants were recruited, the total number of participants who completed the questionnaire for inclusion in the analyses were small and resulted in little variability of scores making more difficult to detect significant findings.

A fourth methodological consideration is that the type of questionnaire used may not have been the most effective way to collect data. For example, perhaps participants did not feel as if they could adequately answer the questions on the BAI because they were forced to choose from only four items. Also, there were not an equal number of cognitive and somatic symptoms on the anxiety symptom checklist, which may have influenced the findings. There were more cognitive symptoms of anxiety on the anxiety symptom checklist than somatic symptoms based on DSM-IV criteria.

As a result of these methodological considerations, the results of this study should be used as preliminary findings on which to base future research. First, more research needs to be conducted examining the psychometric properties of current measures of anxiety. The reliability coefficients found for the BAI are adequate, but should be verified by future research on larger samples of Japanese American older adults. Future research also needs to include more diverse samples of Japanese American older adults. Specifically, research needs to be conducted on Japanese American older adults who are at risk for anxiety disorders, such as homebound Japanese American older adults,

those with low SES, or those suffering from a physical illness. Researchers should also examine Japanese American older adults who are currently suffering from symptoms of anxiety. This task will be a large undertaking due to the fact that ethnic minority older adults are difficult to recruit into research studies (Ballard, Nash, Raiford, & Harrell, 1993). However, research has also indicated that once they are recruited, they are less likely to drop out of the research study (Carter, Elward, Malmgren, Martin, & Larson, 1991). Areal and Gallagher-Thompson (1996) provide a number of recommendations for the recruitment and retention of older ethnic minority adults into clinical research.

Future research also needs to examine the effectiveness of assessment measures with Japanese American older adults. Researchers make an assumption that participants can accurately respond to forced choice questionnaires. Researchers could address this issue by conducting focus groups with Japanese American older adults to determine whether or not they feel that self-report questionnaires are meaningful to them. Researchers need to determine whether or not participants understand the format of the questionnaire, if they feel comfortable about asking questions when they do not understand, if they would feel more comfortable being interviewed instead of filling out a questionnaire, etc. Research focusing on these issues will promote the development of more appropriate assessment measures to use with this population.

Future research also needs to focus further on the comorbidity of anxiety and depression among Japanese American older adults. The fact that Japanese

American older adults tended to describe individuals suffering from anxiety using more depressive symptoms than anxiety symptoms demonstrates the need for more research in this area. This need is further emphasized by the finding that about one third of the participants indicated enough symptoms of anxiety and depression to meet DSM-IV criteria for both generalized anxiety and depression.

Research on the comorbidity of anxiety and depression among Japanese American older adults would also aid in the research concerning the development of a new DSM diagnosis of mixed anxiety and depression. Katon and Roy-Byrne (1991) conducted a review of the literature examining the possible use for a diagnosis of mixed anxiety and depression. The results of their review suggest that there are a number of individuals who appear to have mixed anxiety and depressive symptoms that do not meet diagnostic criteria for either anxiety or depression yet have subsyndromal symptoms of both disorders. However, many of these individuals suffer from a number of social and vocational impairments.

It is possible that Japanese American older adults are not believed to be at risk for anxiety disorders because they do not meet the DSM-IV criteria for anxiety disorders. However, perhaps Japanese American older adults do experience anxiety symptoms that are below diagnostic thresholds, and their symptoms may be more similar to those within the diagnosis of mixed anxiety and depression disorder. This possibility is supported by the findings from this study in that Japanese American older adults included symptoms of depression in their conceptualization of anxiety.

Conclusions

This study assessed whether or not anxiety is conceptualized by Japanese American older adults in the same way as anxiety is conceptualized by Western criteria. Results indicated that the BAI was a reliable measure of anxiety to use with Japanese American older adults. However, future research with larger samples is recommended. Japanese American older adults tended to use a significantly greater proportion of depressive symptoms to describe an anxious Japanese American older adult. They also tended to use more cognitive symptoms of anxiety than past literature has suggested. However, Japanese American older adults appeared to conceptualize anxiety using cognitive anxiety symptoms and somatic depressive symptoms. Some demographic variables were found to be related to how participants described an anxious Japanese American older adult, however no demographic variables were found to be related to participants' level of anxiety. Further, significantly related demographic variables were not found to predict how participants described an anxious Japanese American older adult. Implications for both the assessment and treatment of anxiety disorders among Japanese American older adults were discussed.

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APPENDIXES

APPENDIX A

SEINAN CENTER CONSENT

Seinan Senior Citizens' Center

3116 WEST JEFFERSON BOULEVARD

LOS ANGELES, CALIFORNIA 90018

(213) 734-2175

April 28, 1997

*Kristen M. Hilliard
Oklahoma State University
College of Arts & Sciences
Dept. of Psychology
215 North Murray
Stillwater, Oklahoma 74078-3064*


Dear Ms. Hilliard,

It was really nice hearing from you and also knowing that you are continuing your study toward your goal.

We, at Seinan Center are more than willing to conduct your research project this summer.

Please inform us when you are ready and how you would like to conduct your survey.

Sincerely,


*Roy R. Yokoyama
Executive Director
Tel: (213) 734-2175
FAX: (213) 734-3004*

APPENDIX B

DEMOGRAPHIC QUESTIONNAIRE

Demographic Questionnaire

1. What is your sex?

(Please Check One)

- Male₍₁₎ Female₍₂₎

2. What is your age? _____

3. What is your generational status?

(Please Check One)

- 1st₍₁₎ 2nd₍₂₎ 3rd₍₃₎ 4th₍₄₎

4. Were you interned during WWII?

(Please Check One)

- Interned₍₁₎ Not Interned₍₂₎

If interned, what camp? _____

How long? _____

5. What is your Marital Status?

(Please Check One)

- Single₍₁₎ Divorced₍₂₎
 Married₍₃₎ Widowed₍₄₎

6. How many children do you have? _____

7. What is your highest level of education?

(Please Check One)

- No formal education₍₁₎
 Some grade school₍₂₎
 High school graduate₍₃₎
 Some college₍₄₎
 College graduate₍₅₎
 Post graduate degree₍₆₎

8. What has been your primary occupation? _____

9. Are you currently employed?

(Please Check One)

- Yes₍₁₎ No₍₂₎

10. What is your annual income?

(Please Check One)

- I am financially dependent on others₍₁₎
 Under \$10,000₍₂₎
 \$10,000-\$19,999₍₃₎
 \$20,000-\$39,999₍₄₎
 \$40,000+₍₅₎

11. With whom do you live?

(Please Check One)

- I live alone₍₁₎
 I live with my spouse₍₂₎
 I live with my children₍₃₎
 I live in a retirement home₍₄₎
 Other, please explain₍₅₎: _____

12. Are taking medications on a regular basis?

(Please Check One)

- Yes₍₁₎ No₍₂₎

If yes, do any of these medications have any side effects?

(Please Check One)

- Yes₍₁₎ No₍₂₎

Please Go To Next Page →

Demographic Questionnaire (Continued)

13. How often do you attend the Seinan Center?

(Please Check One)

- Once a month₍₁₎
 Twice a month₍₂₎
 Three times a month₍₃₎
 Once a week₍₄₎
 Two to three times a week₍₅₎
 Four to five times a week₍₆₎

14. When you visit the Seinan Center how much time do you spend there?

(Please Check One)

- 1 to 2 hours₍₁₎
 2 to 3 hours₍₂₎
 3 to 4 hours₍₃₎
 4 to 5 hours₍₄₎
 5 or more hours₍₅₎

15. When you visit the Seinan Center what do you do? (Please Check All That Apply)

- Go for coffee₍₁₎
 Go for lunch₍₂₎
 Attend regular activity classes₍₃₎
 Talk with friends₍₄₎
 Volunteer at the center₍₅₎

16. What activities do you participate in weekly? (Please Check All That Apply)

- Church₍₁₎ Shopping₍₄₎
 Exercise₍₂₎ Eating out₍₅₎
 Reading₍₃₎ Watching TV₍₆₎

17. How often do you exercise on a weekly basis?

(Please Check One)

- None₍₁₎
 1 to 2 times per week₍₂₎
 3 to 4 times per week₍₃₎
 5 or more times per week₍₄₎

18. How much support do you receive from your family and friends? (Please Circle One)

None	Some	A Lot
1	2	3
4	5	

19. How much time do you spend with friends, loved ones, and family? (Please Circle One)

None	Some	A Lot
1	2	3
4	5	

20. How happy are you with your life? (Please Circle One)

Unhappy	Somewhat Happy	Happy
1	2	3
4	5	

21. How satisfied are you with your life? (Please Circle One)

Unsatisfied	Moderately Satisfied	Satisfied
1	2	3
4	5	

Please Go To Next Page →

**Demographic Questionnaire
(Continued)**

22. How healthy do you feel?
(Please Circle One)

Unhealthy	All right	Healthy
1	2	3
4	5	

23. How often do you get sick?
(Please Circle One)

Rarely	Sometimes	Often
1	2	3
4	5	

24. Relative to other people, do you think you have experienced more or less negative life events?
(Please Check One)

- More negative life events₍₁₎
 Less negative life events₍₂₎
 About the same number of negative life events₍₃₎

25. Relative to other people do you think you have experienced more or less positive life events?
(Please Check One)

- More positive life events₍₁₎
 Less positive life events₍₂₎
 About the same number of positive life events₍₃₎

26. Please list the 4 most important events that changed your life, the age they occurred, and whether the experience was positive (pos.) or negative (neg.).

Age	Life Event	Pos.	Neg.
1. _____		<input type="checkbox"/> ₍₁₎	<input type="checkbox"/> ₍₂₎
2. _____		<input type="checkbox"/> ₍₁₎	<input type="checkbox"/> ₍₂₎
3. _____		<input type="checkbox"/> ₍₁₎	<input type="checkbox"/> ₍₂₎
4. _____		<input type="checkbox"/> ₍₁₎	<input type="checkbox"/> ₍₂₎

Please Go To Next Page →

Based on your definition of anxiety, how many people do you know
have suffered from or are suffering from anxiety? _____

APPENDIX C

ANXIETY SYMPTOM CHECKLIST

I would like you to think of a Japanese American older adult who is suffering from anxiety. Please check all the symptoms they would be experiencing from the list below.

- | | |
|---|--|
| <input type="checkbox"/> Has difficulty concentrating | <input type="checkbox"/> Feels irritable |
| <input type="checkbox"/> Has a decrease in appetite | <input type="checkbox"/> Feels fearful |
| <input type="checkbox"/> Has an increase in appetite | <input type="checkbox"/> Feels tired |
| <input type="checkbox"/> Has difficulty controlling his/her worries | <input type="checkbox"/> Has no energy |
| <input type="checkbox"/> Feels a loss of security | <input type="checkbox"/> Has muscle tension |
| <input type="checkbox"/> Feels depressed most of the day, nearly everyday | <input type="checkbox"/> Feels sad |
| <input type="checkbox"/> Has a loss of interest in activities | <input type="checkbox"/> Feels worthless |
| <input type="checkbox"/> Appears quiet | <input type="checkbox"/> Feels guilty |
| <input type="checkbox"/> Loses weight | <input type="checkbox"/> Has trouble sleeping |
| <input type="checkbox"/> Gains weight | <input type="checkbox"/> Feels impatient |
| <input type="checkbox"/> Feels keyed up or on edge | <input type="checkbox"/> Has difficulty thinking |
| <input type="checkbox"/> Feels excited | <input type="checkbox"/> Has difficulty making decisions |
| <input type="checkbox"/> Sleeps too much | <input type="checkbox"/> Has excessive feelings of anxiety and worry |
| <input type="checkbox"/> Feels as if his/her mind is going blank | <input type="checkbox"/> Feels Nervous |
| <input type="checkbox"/> Feels lonely | <input type="checkbox"/> Has thoughts of death and suicide |
| <input type="checkbox"/> Feels restless | <input type="checkbox"/> Withdraws from others |
| <input type="checkbox"/> Feels slowed down | |

APPENDIX D

CONSENT FORM

OKLAHOMA STATE UNIVERSITY



College of Arts and Sciences
 Department of Psychology
 215 North Murray
 Stillwater, Oklahoma 74078-3064
 405-744-6027

Dear Members of the Seinan Center,

Thank you for agreeing to participate in this study. This survey will take about 15 minutes to complete. For each survey completed, \$10 will be donated to the Seinan Center. Additionally, after I examine the results of the survey, I will present an in-service presentation at the Seinan Center.

Responses to the survey are completely anonymous and confidential. You are not obligated to participate in this study and you may elect to stop completing the survey at any time.

Thank you again for participating in this important study. Your participation will result in benefits to the Seinan Center, as well as to the Japanese American older adult community at large.

Sincerely,

Kristen M. Hilliard, B.A.
 Clinical Psychology Graduate Student

Gayle Y. Iwamasa, Ph.D.
 Assistant Professor

If you have any questions or concerns about this study, please feel free to contact the Institutional Review Board at Oklahoma State University, (405) 744-5700.



APPENDIX E

TABLES

TABLE I
DEMOGRAPHIC CHARACTERISTICS

	N	%
Sex		
Female	114	69.1%
Male	50	30.3%
Not indicated	1	.6%
Generational Status		
First Generation	20	12.1%
Second Generation	125	75.8%
Third Generation	11	6.7%
Fourth Generation	1	.6%
Not indicated	8	4.8%
Interned During WWII		
Yes	92	55.8%
No	70	42.4%
Not indicated	3	1.8%

TABLE I (Continued)

	N	%
Marital Status		
Married	87	52.7%
Widowed	52	31.5%
Single	15	9.1%
Divorced	8	4.8%
Not indicated	3	1.8%
Living Arrangements		
Lived w/ spouse	82	49.7%
Lived alone	58	35.2%
Lived w/ children	14	8.5%
Lived w/ someone else	7	4.2%
Not indicated	4	2.4%

TABLE I (Continued)

	N	%
Social Support		
None to some	78	47.3%
Some	30	18.2%
Some to a lot	54	32.7%
Not indicated	3	1.8%
Amount Of Time Spent With Friends, Loved Ones, And Family		
None to some	11	6.6%
Some	49	29.7%
Some to a lot	102	61.9%
Not indicated	3	1.8%
Education		
No formal education	1	.6%
Some grade school	13	7.9%
High school graduate	88	53.3%
Some college	39	23.6%
College graduate	17	10.3%
Post graduate degree	4	2.4%
Not indicated	3	1.8%

TABLE I (Continued)

	N	%
Employment Status		
Currently employed	12	7.3%
Not currently employed	149	90.3%
Not indicated	4	2.4%
Annual Income		
Dependent on others	6	3.6%
Under \$10,000	43	26.1%
\$10,00-\$19,999	41	24.8%
\$20,000-\$39,999	38	23%
\$40,000+	22	13.3%
Not indicated	15	9.1%
Regular Medication Usage		
Yes	103	62.4%
No	59	35.8%
Not indicated	3	1.8%
Side Effects Of Medication		
Yes	11	6.7%
No	93	56.4%
Not indicated	61	37%

TABLE I (Continued)

	N	%
How Healthy You Feel		
Unhealthy to all right	4	2.4%
All right	56	33.9%
All right to health	102	61.8%
Not indicated	3	1.8
How Often You Get Sick		
Rarely to sometimes	88	53.3%
Sometimes	63	38.2%
Sometimes to often	11	6.6%
Not indicated	3	1.8%
Attendance At The Seinan Center		
Once a month	3	1.8%
Twice a month	6	3.6%
Three times a month	9	5.5%
Once a week	47	28.5%
Two or three times a week	58	35.2%
Four to five times a week	41	24.8%
Not indicated	1	.6%

TABLE I (Continued)

	N	%
The Amount Of Time Spent At The Seinan Center		
1 to 2 hours	29	17.6%
2 to 3 hours	35	21.2%
3 to 4 hours	33	20%
4 to 5 hours	35	21.2%
5 or more hours	30	18.2%
Not indicated	3	1.8%
Activities Participated In While At The Seinan Center		
Goes for coffee	33	20%
Does not go for coffee	131	79.4%
Not indicated	1	.6%
Goes for lunch	77	46.7%
Does not go for lunch	87	52.7%
Not indicated	1	.6%
Attends regular activity classes	129	78.2%
Does not attend regular activity classes	35	21.2%
Not indicated	1	.6%

TABLE I (Cont.)

	N	%
Activities Participated In While At The Seinan Center (Cont.)		
Talk with friends	79	47.9%
Does not talk with friends	85	51.5%
Not indicated	1	.6%
Volunteer at the center	47	28.5%
Does not volunteer at the center	117	70.9%
Not indicated	1	.6%
Activities Participated In Weekly		
Church	55	33.3%
No church	109	66.1%
Not indicated	1	.6%
Reading	74	44.8%
No reading	90	54.5%
Not indicated	1	.6%
Shopping	92	55.8%
No shopping	72	43.6%
Not indicated	1	.6%

TABLE I (Continued)

	N	%
Activities Participated In Weekly (Cont.)		
Eating out	74	44.8%
No eating out	90	54.5%
Not indicated	1	.6%
Watch TV	106	64.2%
Does not watch TV	58	35.2%
Not indicated	1	.6%
Exercise	101	61.2%
No exercise	63	38.2%
Not indicated	1	.6%
Amount Of Exercise On A Weekly Basis		
None	16	9.7%
1 to 2 times per week	59	35.8%
3 to 4 times per week	47	28.5%
5 or more times per week	40	24.2
Not indicated	3	1.8%

TABLE I (Continued)

	N	%
How Happy You Are With Their Lives		
Unhappy to somewhat happy	2	1.2%
Somewhat happy	48	29.1%
Somewhat happy to happy	112	67.9%
Not indicated	3	1.8%
How Satisfied You Are With Their Lives		
Unsatisfied to moderately satisfied	2	1.2%
Moderately satisfied	45	27.3%
Moderately satisfied to satisfied	115	69.7%
Not indicated	3	1.8%
Experienced More Or Less Negative Life Events Than Others		
More	10	6.1%
Less	72	43.6%
About the same	74	44.8%
Not indicated	8	4.8%

TABLE I (Continued)

	N	%
Experienced More Or Less Positive Life Events Than Others		
More	72	43.6%
Less	20	12.1
About the same	61	37%
Not indicated	12	7.3%
Age Cohort		
60 to 70 years	47	28.5%
70 to 80 years	84	50.9%
80+ years	22	13%
Not Indicated	12	7.3%
Mean Age of Participants (N=53)	73.7 years	
Mean Number of Children (N=153)	2.3	

TABLE II
NUMBER OF PARTICIPANTS WHO INDICATED ANXIETY AND
DEPRESSIVE SYMPTOMS THAT WERE SIMILAR
TO DSM-IV CRITERIA

Type of disorder	N
Generalized anxiety or depressive disorder	53
Both anxiety and depression	39
Generalized anxiety disorder	46
Major depression	46

TABLE III
RANKING OF ANXIETY SYMPTOMS

Note: Symptoms in bold print are those DSM-IV symptoms which also were among the top nine anxiety symptoms listed by the sample.

<u>DSM-IV Criteria for Generalized Anxiety Disorder</u>	<u>Top Nine Anxiety Symptoms according to sample</u>
1. Being easily fatigued Frequency=65 (49.2%)	1. Feels slowed down Frequency=72 (54.5%)
2. Difficulty Concentrating Frequency=63 (47.7%)	2. Being easily fatigued Frequency=65 (49.2%)
3. Has difficulty controlling his or her worries Frequency=49 (37.1%)	3. Difficulty Concentrating Frequency=63 (47.7%)
4. Restlessness Frequency=39 (29.5%)	4. Feels lonely Frequency=57 (43.2%)
5. Irritability Frequency=39 (29.5)	5. Has a decreased appetite Frequency=53 (40.2%)
6. Mind going blank Frequency=34 (25.8%)	6. Has difficulty making decisions Frequency=49 (37.1%)
7. Sleep disturbance Frequency=30 (22.7%)	7. Has difficulty controlling his or her worries Frequency=49 (37.1%)
8. Feeling keyed up on edge Frequency=28 (21.2%)	8. Has no energy Frequency=47 (35.6%)
9. Muscle tension Frequency=24 (18.2%)	9. Has a loss of interest in activities Frequency=46 (34.8%)

APPENDIX F
INSTITUTIONAL REVIEW BOARD
APPROVAL FORM

OKLAHOMA STATE UNIVERSITY
INSTITUTIONAL REVIEW BOARD
HUMAN SUBJECTS REVIEW

Date: 06-11-97

IRB#: AS-97-073

Proposal Title: CONCEPTUALIZATION OF ANXIETY: AN EXPLORATORY STUDY OF JAPANESE OLDER ADULTS

Principal Investigator(s): Gayle Y. Iwamasa, Kristen M. Hilliard

Reviewed and Processed as: Exempt

Approval Status Recommended by Reviewer(s): Approved

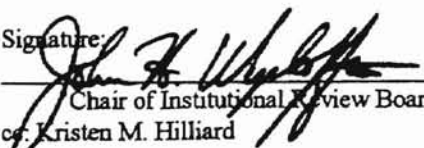
ALL APPROVALS MAY BE SUBJECT TO REVIEW BY FULL INSTITUTIONAL REVIEW BOARD AT NEXT MEETING, AS WELL AS ARE SUBJECT TO MONITORING AT ANY TIME DURING THE APPROVAL PERIOD.

APPROVAL STATUS PERIOD VALID FOR DATA COLLECTION FOR A ONE CALENDAR YEAR PERIOD AFTER WHICH A CONTINUATION OR RENEWAL REQUEST IS REQUIRED TO BE SUBMITTED FOR BOARD APPROVAL.

ANY MODIFICATIONS TO APPROVED PROJECT MUST ALSO BE SUBMITTED FOR APPROVAL.

Comments, Modifications/Conditions for Approval or Disapproval are as follows:

Signature:


Chair of Institutional Review Board
cc: Kristen M. Hilliard

Date: June 13, 1997

2

VITA

Kristen M. Hilliard

Candidate for the Degree of

Master of Science

Thesis: CONCEPTUALIZATION OF ANXIETY: AN EXPLORATORY STUDY
OF JAPANESE AMERICAN OLDER ADULTS

Major Field: Psychology

Biographical:

Education: Graduated from Wilmington Friends School, Wilmington, Delaware, 1991; received a Bachelor of Art degree in Psychology and French from Butler University, Indianapolis, Indiana in 1995. Completed the requirements for the Master of Science degree with a major in Clinical Psychology at Oklahoma State University in May, 1998.

Experience: Resident technician for a group home for the mentally ill; research assistant for Gayle Y. Iwamasa 1995 to present; employed by Oklahoma State University, Department of Psychology as a teacher's assistant and graduate instructor; Oklahoma State University, Department of Psychology, 1996 to present.

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