

The Association of Cultural Values, Generational Status, and Perceived Social Support
With Self-Reported Depressive Symptoms of Japanese American Females

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Abstract

Research has suggested that ethnic minorities' adherence to their culture of origin and their perceived social support are significantly correlated with positive mental health and that Asian American females are more likely than Asian American males to self-report depressive symptoms. The goals of this study were to examine the degree to which Japanese American females' self-reported depressive symptoms were associated with their: (1) degree of adherence to Japanese and American cultural values; (2) generational status; (3) generational status when moderated by their degree of adherence to Japanese and American cultural values; (4) adherence to Japanese and American cultural values when moderated by their levels of perceived social support; and (5) to examine the degree to which data from this sample were more consistent with a unilinear or bilinear model of acculturation and enculturation. Adult Japanese American female participants ($N = 207$) completed a demographic survey, two cultural values scales, two depressive symptoms self-report instruments, and two perceived social support scales. Multiple linear regression analyses showed that Japanese American females' self-reported depressive symptoms were not significantly associated with their adherence to Japanese and American cultural values and generational status but were significantly associated with their level of perceived social support. Although no main effects were found, moderating effects were investigated for purposes of this dissertation. This study suggests that Japanese American females in Hawai'i may have unique, protective factors against depressive symptoms compared to Asian American females in other parts of the United States. Results also showed that Japanese American females in Hawai'i are significantly either highly enculturated or highly acculturated, which supports the unilinear model of adherence to cultural values occurring on a single continuum.

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The Association of Cultural Values, Generational Status, and Perceived Social Support

With Self-Reported Depressive Symptoms of Japanese American Females

Introduction

Asian Americans

Persons of Asian descent were the fastest growing racial group in the United States between 2000 and 2010. According to the U.S. Census Bureau (2010), the population of persons of Asian descent increased 43% over that decade from 10.2 million to 14.7 million, and the last census of 2013 (U.S. Census Bureau, 2013a) reported an estimated population of 16.6 million Asian Americans. It is projected that the Asian American population in the United States will increase to 40.6 million by the year 2050, comprising an estimated 9.2% of the American population (U.S. Census Bureau, 2011). With almost 0.8 million persons of Asian descent, Hawai'i has the fifth largest population of persons of Asian descent in the United States (behind California, New York, Texas, and New Jersey; 5.7 million, 1.6 million, 1.1 million, and 0.8 million, respectively) (U.S. Census Bureau, 2013a), and a reported 57% of the state's total population are persons of Asian descent (U.S. Census Bureau, 2013b).

Japanese Americans in Hawai'i

The first contingent of contracted immigrants from Japan to work on plantations in Hawai'i arrived in Honolulu on February 8, 1885 (United Japanese Society of Hawai'i, 1971). Most of the Japanese Americans in Hawai'i are now second-, third-, or fourth-generation descendants of first-generation Japanese who came to Hawai'i before 1924 (Uba, 1994; Shibusawa, 2007). Members of that first generation of contracted immigrants in Hawai'i who were born in Japan and who came to the United States prior to the 1924 Asian Exclusion Act are called "Issei." Second generation Japanese children of Issei, generally born between the years

1910 and 1940, are called "Nisei." Third generation children of second-generation Nisei born between 1940 and 1965 are called "Sansei"; and the fourth generation born since 1965 is called "Yonsei" (Uba, 1994; Shibusawa, 2007). The fifth generation Japanese American children of Yonsei are called "Gosei" (Adler, 1998; Liu, Murakami, Eap, & Hall, 2009). Given the association between sex, immigration and self-reported depressive symptoms (discussed below), one goal of this study was to examine the degree to which Japanese American females' generational status (Issei, Nisei, Sansei, Yonsei, and Gosei) were associated with self-reported depressive symptoms.

Acculturation and Enculturation

Acculturation is the degree to which a person of a non-dominant ethnic culture adapts and functions consistent with the norms of the dominant culture and involves becoming culturally integrated (values, beliefs, behaviors, or attitudes) into the dominant culture (Berry, Trimble, & Olmedo, 1986; Chae & Foley, 2010; B. S. K. Kim & Abreu, 2001). According to B. S. K. Kim and Abreu (2001), *enculturation* is the degree to which a person of a non-dominant ethnic culture socializes into (retains, learns, or relearns) and maintains the norms of their culture of origin. *Acculturation* for Asian Americans refers to the degree to which the individual adapts to the norms of the dominant culture in the United States, while *enculturation* refers to the degree to which the individual maintains the norms of their Asian culture (B. S. K. Kim, Ahn, & Lam, 2009).

The unilinear or unidimensional model of these constructs measures the degree to which an individual is acculturated and enculturated on a single continuum (Suinn, 2009; Zhang & Tsai, 2014). That is, a person of a non-dominant ethnic culture would be somewhere on a continuum from highly enculturated to highly acculturated. According to Flannery, Reise, and Yu (2001),

the unilinear model has been found to be a better predictor of the acculturation and enculturation constructs that involve generational status compared to the multilinear model (discussed below) .

Another model measuring the acculturation and enculturation constructs is the multilinear or multidimensional model which focuses on the degree to which an individual has adopted both the culture of origin and the dominant American culture across multiple areas, such as behaviors, values, identity, and knowledge (Abe-Kim, Okazaki, & Goto, 2001; Suinn, 2009). That is, a person of a non-dominant ethnic culture may adhere to both their culture of origin and the dominant American culture at different degrees at the same time. Berry's (1994) model of acculturation describes an individual's position relative to the dominant culture and original ethnic culture. He describes various outcomes for individuals who identify themselves as an ethnic minority: *bicultural* (or *integrated*), *assimilated*, *separated*, or *marginalized*. An Asian American who is highly *bicultural* may be characterized as someone who is both highly acculturated and enculturated. That is, they have high retention of their Asian culture as well as high adoption of the American culture (Suinn, 2009). A person who is highly *assimilated* is considered highly acculturated and less enculturated. That is, they have high adoption of the American culture and less retention of their Asian culture (Suinn, 2009). Those who are more *separated* are less acculturated and highly enculturated. That is, they do not adopt much of the American culture but choose to maintain and perpetuate their Asian culture (Suinn, 2009). Finally, a *marginalized* individual is characterized as neither highly acculturated nor enculturated. That is, they have low retention of their Asian culture and low adoption of the American culture. Another goal of this study was to examine the degree to which data from this sample of Japanese American females in Hawai'i were more consistent with a unilinear or bilinear model of the enculturation and acculturation constructs.

Cultural Values

“Cultural values” is an element of the acculturation and enculturation constructs (Szapocznik, Scopetta, Kurtines, & Aranalde, 1978; B. S. K. Kim and Abreu, 2001). B. S. K. Kim and Abreu (2001) propose that "cultural values" is one of four dimensions of the acculturation and enculturation constructs (the other dimensions being behavior, knowledge, and identity). They describe the "cultural values" dimension as the attitudes and beliefs about a culture, which include social relationships, customs, traditions, gender roles, health, and illness. Asian American values that reflect the Asian culture include a hierarchical family structure, orientation toward extended family, emotional self-control, conformity to norms, collectivism, parental obedience, gender roles, deference to authority, modesty and humility, tendency toward shame and guilt, family recognition through achievement, and respect for elders (B. S. K. Kim, Atkinson, & Yang, 1999; Uba, 1994).

The values held by Japanese Americans give a sense of direction to their behaviors and are passed on from generation to generation (Kitano, 1969). Each succeeding generation of Japanese Americans has been found to retain fewer of their Japanese cultural values (Kitano, 1969; Kitano, 1993). Kitano (1969) stated that Issei tend to "cultivate" their Japanese culture (behavior, knowledge, identity, values), while Nisei tend to have more American family attitudes and concerns than their Issei parents and that the Sansei hold acculturative social values almost identical to European Americans, although Japanese Americans in Hawai'i tend to retain more of their Japanese values than Japanese Americans elsewhere in the United States. Yet other studies have found a considerable retention of Japanese values among Sansei (Arkoff, 1959; Arkoff, Meredith, & Iwahara, 1962; Conner, 1977; Fenz & Arkoff, 1962). A study by Marsella, Johnson, Johnson, and Brennan (1998) found that compared to Sansei, Yonsei in Hawai'i did not

show significant change in their ethnic identity with Japanese culture, suggesting a reduction in the progression toward acculturation.

Japanese cultural values are largely based on the Confucian philosophy that harmony among individuals is important and that an individual's existence is dependent on others (Kodansha International, 1994). An example of this is *giri*, the "obligation to act according to the dictates of society in relation to other persons" (Kodansha International, 1994). *Giri* is an integral part of the Japanese culture and includes socially expected reciprocal obligations, favors, or gifts to one another and is important in interpersonal relationships (Prasol, 2010). This interpersonal relationship among Japanese Americans has helped to reduce adverse health effects from difficult circumstances (e.g., World War II internment, Issei immigration) (Kitano, 1993).

Many Asian Americans, including Japanese Americans, are faced with the challenges of living according to their Asian cultural values within a society in which *American* cultural values predominate (recognizing that many subcultures constitute the *American* culture). It has been suggested that minority individuals' adherence to their culture of origin has a positive, protective effect on their mental health (Castro et al., 2007; Escobar, 1998; Ng, Bhugra, McManus, & Fennell, 2011; Okamoto et al., 2008). A qualitative study of Micronesian teens in Hawai'i found that the degree to which these teens were involved in Micronesian cultural practices was inversely associated with their likelihood of emitting adverse behaviors, such as school violence and substance use (Okamoto et al., 2008). Other studies have found that ethnic minorities in the United States have cultural resources, such as stability and predictability of role relationships, that can mitigate or protect them from acculturative stressors (e.g., adjusting to different customs, language, social structure) associated with living within the dominant American culture (Meyer, Dhindsa, Gabriel, & Sue, 2009; Sue & Chu, 2003, U.S. Department of Health and

Human Services, 2001). Another goal of this study was to examine the degree to which Japanese American females' adherence to Japanese and American cultural values were associated with self-reported depressive symptoms.

Measurement of Acculturation and Enculturation

The degree to which an Asian American has adopted the Asian and American culture have been assessed with instruments that measure the cultural "values" dimension of the acculturation and enculturation constructs. A person's position relative to these two constructs can be measured quantitatively based on a multilinear model in which an individual can maintain adherence to their culture of origin and to another culture (B. S. K. Kim, 2009). Several dimensions of Asian cultural values have been used to determine Asian enculturation, including collectivism, conformity to norms, emotional self-control, family recognition through achievement, filial piety, and humility (B. S. K. Kim, 2009; B. S. K. Kim, Atkinson, & Yang, 1999). Dimensions used to determine acculturation into the dominant American culture include child-rearing practices, marital status and behavior, autonomy, sexual freedom, career development, and friendship obligations (Hong, B. S. K. Kim, & Wolfe, 2005).

Acculturation/Enculturation and Mental Health

The degree to which Asian Americans adhere to the culture of their origin and the dominant American culture may be associated with the ways in which Asian Americans behave, including how they manifest their psychological problems, express their emotions, and seek psychological help (Hwang & Wood, 2009; B. S. K. Kim & Omizo, 2005; Meyer et al., 2009). There have been mixed findings of the relationship between acculturation and enculturation status and psychological well-being among ethnic minorities (Chae & Foley, 2010; Jang & Chiriboga, 2010; Juang & Cookston, 2009; Meyer et al., 2009; Yoon et al., 2013; Yoon,

Langrehr, & Ong, 2011). Some studies have shown that ethnic minority individuals, including Asian Americans (Meyer et al., 2009; Wang & Mallinckrodt, 2006), who were more acculturated evidenced better psychological well-being than those who were less acculturated (Choi, Miller, & Wilbur, 2009; Yoon et al., 2013). However, other studies have found that ethnic minority individuals, including Asian Americans, who were more acculturated evidenced more behavior problems or worse psychological well-being than those less acculturated (Cachelin, Veisel, Barzegarnazari, & Stiegel-Moore, 2000; Chae & Foley, 2010; Takeuchi et al., 2007; Yi & Daniel, 2001; Yoon et al., 2013).

Foreign-born Asian females were found by Meyer et al., (2009) to be “less likely” than Asian females born in the United States to have lifetime depressive, anxiety, substance abuse, and psychiatric disorders. For example, they found that second-generation Asian American females were at higher risk to have “lifetime and 12-month disorders” than the previous generation of foreign-born Asian females. The results of Meyer et al.'s (2009) study suggest that emotional and behavioral problems may be inversely associated with higher levels of acculturation.

High acculturation may lead to stressors, such as intergenerational family conflicts, when an adolescent is highly acculturated while parents are highly enculturated (Cho & Bae, 2005; Ying & Han, 2007). Conflicts within Asian American families can develop with children's defiance of parental traditional values (J. M. Kim, 2003). The American culture more strongly values independence, self-assertion, and self-reliance, while the traditional Asian culture more strongly values interdependence and filial piety. Decreased identity with an individual's culture of origin through acculturation experiences may negatively affect ethnic social support resources,

such as family support and networks, and thereby increase the risk of emotional and behavioral problems among family members (Rivera, 2007).

Many aspects of Japanese American acculturation and enculturation are common to Asian Americans in general. The following sections review some of the research on Asian Americans with the understanding that there are important differences among the cultures associated with different Asian countries (e.g., Japan, Philippines, Korea).

Asian American minorities who were highly bicultural were found to have better psychological well-being compared to those with the other levels of acculturation/enculturation (Chae & Foley, 2010; E. Kim, 2009; Lieber, Chin, Nihira, & Mink, 2001). Bicultural Chinese American immigrants reported higher levels of quality of life compared to marginalized and assimilated Chinese Americans (Lieber, et al., 2001). LaFromboise et al. (1993) found that immigrants or first generation individuals who were proficient in both the culture of the dominant group and their culture of origin had better psychological health and well-being than those who were not proficient in both cultures. In a meta-analysis of the relationships between levels of acculturation and enculturation and mental health among various ethnic minority groups, Yoon et al. (2013) found that individuals who were bicultural were found to have more positive mental health (self-esteem, satisfaction with life, positive affect) and found to have less negative mental health (depression, anxiety, psychological distress, negative affect) than individuals at other levels of acculturation and enculturation.

Depressive Symptoms

The World Health Organization (WHO) stated that depression is the leading cause of disability and is a major contributor to the burden of disease globally, potentially leading to suicide (WHO, 2012). Depressive symptoms may include mood symptoms, such as feeling sad,

empty, worried, or irritable; vegetative symptoms, such as fatigue, social withdrawal, agitation, or diminished interest or pleasure in activities; changes in sleep (insomnia or hypersomnia); changes in appetite with weight loss or gain; cognitive symptoms, such as inability to concentrate, difficulty making decisions, low self-esteem, negative thoughts, guilt, or suicidal ideation; and psychomotor agitation or retardation (American Psychiatric Association, 2013; Arean & Chataw, 2003).

Studies over the past decades have found about a 20% prevalence of reported depressive symptoms among persons of Asian American descent (Aczon-Armstrong & Inouye, 2013; Kuo, 1984; Shibusawa & Mui, 2001). Three decades ago, the prevalence of potential depression (self-reported depressive symptom scores of 16 or above on the Center for Epidemiologic Studies Depression scale) among Asian Americans, including Japanese Americans, was estimated at 19.1% (Kuo, 1984). A few decades later, close to 20% of Japanese American elders ages 65 and older were found to report symptoms of depression on the Geriatric Depression Scale (Shibusawa & Mui, 2001). More recently, a study in Hawai'i by Aczon-Armstrong and Inouye (2013) found that although lower in prevalence compared to Pacific Islanders, about 19% of Asian Americans, including Japanese Americans, self-reported some degree of depressive symptoms (mild, moderate, or severe/moderately severe).

Females and Self-Reported Depressive Symptoms

Females report more depressive symptoms (Piccinelli & Wilkinson, 2000; WHO, 2012) and higher severity of depressive symptoms compared to males (Ryba & Hopko, 2012). Using data on 8,205 adults, including participants from Hawai'i, from the National Epidemiologic Survey on Alcohol and Related Conditions study, Chou and Cheung (2013) also found higher prevalence of self-reported major depressive disorder among females compared to males.

Piccinelli and Wilkinson (2000) found in their review of the research literature that "gender differences in depressive disorders are genuine" and that determinants, such as social and cultural roles with related negative experiences and behavioral and emotional problems related to vulnerability to adverse life events, were likely involved as causal variables. In the National Comorbidity Survey Replication (NCS-R) survey, Kessler et al. (2003) found that females were 70% more likely than males to be diagnosed with major depressive disorder some time during their lifetime.

According to the National Alliance on Mental Illness (NAMI) (2009), depression is one of the leading causes of death among Asian Americans, with Asian American females ages 15-24 years having the highest suicide rate among women. From a 2011 NAMI proceeding, Africa and Carrasco (2011) reported that among all races and between genders, adolescent Asian American females had the highest rates of self-reported depressive symptoms. A recent study in Hawai'i found that Asian American adult females self-reported higher levels of depressive symptoms than did Asian American adult males (Aczon-Armstrong & Inouye, 2013). Another study in Hawai'i found that Japanese American adolescent females self-reported more depressive symptoms than did Japanese American adolescent males (Williams et al., 2005). Given the higher expected prevalence of self-reported depressive symptoms among Asian American females and Japanese American females compared to Japanese American males, this study focuses on Japanese American females in Hawai'i.

Acculturation/Enculturation and Self-Reported Depressive Symptoms

A meta-analysis by Yoon, Langrehr, and Ong (2011) of the relationship of acculturation and enculturation with mental health found no statistically significant relationship between measures of acculturation and enculturation and depressive symptoms among minorities.

However, another meta-analysis by Gupta, Leong, Valentine, and Canada (2013) of the relationship between acculturation and self-reported depressive "scores" among Asian Americans found acculturation but not enculturation was significantly inversely associated with self-reported depressive symptoms. But a study by Harada et al. (2012) found higher enculturation was significantly associated with fewer self-reported depressive symptoms among older Japanese American men in Hawai'i.

Masten et al. (2004) found no significant relationship between levels of acculturation and self-reported depressive symptoms among Mexican American women. But other studies found significant relations between the degree of acculturation and enculturation with depressive symptoms among ethnic minority females (see Table 1 of studies below).

Table 1

Acculturation and Enculturation and Depressive Symptoms Studies Among Ethnic Minority Females

Studies Showing Acculturation (Assimilated) Significantly Directly Associated With Measures of Depressive Symptoms				
Study	Female Sample	Acculturation/ Enculturation Measure	Depressive Symptoms Measure	Results
Hwang & Myers, 2007	Chinese Americans	Modified version of Burnam, Hough, Karno, Escobar, & Telle's acculturation scale	UM-CIDI*	Acculturation increases the impact of negative life events in predicting the likelihood of a major depressive episode; OR = 1.52; $p = .04$
Nguyen & Peterson, 1993	Vietnamese Americans	Authors' designed to measure degree of identification w/ Vietnamese society & acculturation with U.S. society	Total Depression Inventory	Acculturation to U.S. society significantly related to depressive symptoms; $r = .29, p < .05$
Rivera, 2007	Hispanic Americans	Short Acculturation Scale for Hispanics	CES-D**	Acculturation significantly associated to depressive symptoms; $\beta = .07, p < .05$
Studies Showing Acculturation (Assimilated) Significantly Inversely Associated With Measures of Depressive Symptoms				
Study	Female Sample	Acculturation/ Enculturation Measure	Depressive Symptoms Measure	Results
Ayers et al., 2009	Korean Americans	Modified Suinn-Lew Asian self-identity acculturation to US society scale for phone administration	CES-D**	Acculturation negatively related to depressive symptoms; $r = -.119, p < .01$
Choi, Miller, & Wilbur, 2009	Korean Americans	Vancouver Index of Acculturation	CES-D**	Higher assimilation significantly related to lower depressive symptoms scores than separated and marginalized individuals; $\chi^2 = 12.248, p = .007$
Ryder, Alden, & Paulhus, 2000	Chinese Americans	Vancouver Index of Acculturation	Beck Depression Inventory	Higher assimilation significantly predicted lower levels of depressive symptoms; $\beta = -.18, p < .05$

Studies Showing Acculturation and Enculturation (Bicultural) Significantly Inversely Associated With Measures of Depressive Symptoms				
Study	Female Sample	Acculturation/ Enculturation Measure	Depressive Symptoms Measure	Results
Chae & Foley, 2010	Chinese, Japanese, Korean & Americans	Suinn-Lew Asian Self-Identity Acculturation Scale	Depression Happiness Scale	Bicultural status reported fewest depressive symptoms compared to lower and higher acculturated statuses; $F = 68.8, p < .001$ Bicultural: $M = 2.2, SD = .42$ Low Acc: $M = 1.7, SD = .64, p = .001$ High Acc: $M = 1.4, SD = .70, p < .001$
Kim, E., 2009	Korean Americans	Acculturation Attitudes Scale	CES-D**	Integration/bicultural significantly related to lower depressive symptoms; $\beta = -.24, p < .05$
Studies Showing Neither Acculturation Nor Enculturation (Marginalized) Significantly Directly Associated With Measures of Depressive Symptoms				
Study	Female Sample	Acculturation/ Enculturation Measure	Depressive Symptoms Measure	Results
Kim, E., 2009	Korean Americans	Acculturation Attitudes Scale	CES-D**	Marginalization significantly related to higher depressive symptoms; $\beta = .50, p < .01$
Kim, S., Gonzales, Stroh, & Wang, 2006	Chinese, Japanese, & Korean Americans	Modified Acculturation Rating Scale for Mexican Americans (e.g., "Mexican" replaced by "Asian")	CES-D**	Anglo marginality significantly related to depressive symptoms; $r = .33, p < .01$ Asian American marginality significantly related to depressive symptoms; $r = .34, p < .01$
Studies Showing Enculturation (Separated) Significantly Inversely Associated With Measures of Depressive Symptoms				
Study	Female Sample	Acculturation/ Enculturation Measure	Depressive Symptoms Measure	Results
Meta-analysis by Yoon et al., 2013	Including, but not limited to, Latino, Asian, African Americans	89 acculturation/enculturation measures; most frequently used include: SL-ASIA***, ARSMA-II****, Short Acculturation Scale, Vancouver Index of Acculturation	30 measures used for depressive symptoms; CES-D** most used	Enculturation not significantly related to negative mental health (includes depressive symptoms); $r = .02, p < .05$ Enculturation positively related to positive mental health; $r = .14, p < .001$
Williams et al., 2005	Japanese American adolescents	Japanese Cultural Scale	CES-D**	Higher the score on Japanese cultural behavior, the lower the depressive symptoms; $F = 4.05, p = .046$

*University of Michigan's version of the Composite International Diagnostic Interview

**Center for Epidemiological Studies Depression Scale

***Suinn-Lew Asian Self-Identity Acculturation Scale

****Acculturation Rating Scale for Mexican Americans

In the context of research on the relationships among ethnicity, sex, acculturation, enculturation, and depressive symptoms, the third goal of this study was to examine the degree to which the association between Japanese American females' generational status and degree of self-reported depressive symptoms was moderated by their degree of adherence to Japanese and American cultural values.

Perceived Social Support

Social support is generally referred to as any process that promotes health and well-being through social relationships (Cohen, Underwood, & Gottlieb, 2000). One type of social support process is an individual's perception that social resources are available to them by nonprofessionals, such as family and friends, to aid in times of need (e.g., acute or chronic illness, stressful life events) (Cohen, Underwood, & Gottlieb, 2000). A person's belief that he or she can receive social support is associated with better outcomes when coping with adverse life events (Lazarus & Folkman, 1984) and better psychological health (Sarason, Sarason, & Gurung, 1997).

Numerous studies have found that supportive social relationships have a protective effect against depressive symptoms (Cohen, Underwood, & Gottlieb, 2000; Henderson, 1992; Prati & Pietrantonio, 2010; Rhodes & Lakey, 1999; Sarason, Sarason, & Gurung, 1997). Henderson (1992) evaluated 35 studies that examined the relationship between social support and self-reported depressive symptoms. Despite the varied measures and assessment methods used, the author found a consistent, strong negative relationship between levels of perceived social support and self-reported depressive symptoms across the studies.

Among Asian Americans, higher levels of perceived social support has been found to be associated with fewer self-reported depressive symptoms (Han, Kim, Lee, Pistulka, & Kim, 2007; B. J. Kim, Sangalang, & Kihl, 2012; Lee & Holm, 2012; Mui & Kang, 2006; Shibusawa & Mui, 2001). The fourth goal of this study was to examine the degree to which the association between Japanese American females' adherence to Japanese and American cultural values and degree of self-reported depressive symptoms was moderated by their level of perceived social support.

Goals

To summarize, the goals of this study were to examine the degree to which Japanese American females' self-reported depressive symptoms were associated with their:

1. Degree of adherence to Japanese and American cultural values;
2. Generational status;
3. Generational status when moderated by their degree of adherence to Japanese and American cultural values;
4. Adherence to Japanese and American cultural values when moderated by their level of perceived social support; and
5. To examine the degree to which data from this sample were more consistent with a unilinear or bilinear model of acculturation and enculturation.

Method

Participants, Inclusion and Exclusion Criteria, and Recruitment

Participants. Participants were 207 first- (Issei), second- (Nisei), third- (Sansei), fourth- (Yonsei), and fifth-generation (Gosei) adult Japanese American females. Table 2 presents a descriptive profile of these four groups of Japanese American females. Respondents were .5% ($n = 1$) Issei, 18.4% ($n = 38$) Nisei, 48.8% ($n = 101$) Sansei, 30.4% ($n = 63$) Yonsei, and 1.9% ($n = 4$) Gosei. The ages of the sample ranged from 18 to 96 years ($M = 57.95$, $SD = 19.04$). The breakdown of the mean age of each generational group was 76 years for Issei, 79.9 years for Nisei, 60.6 years for Sansei, 42.3 years for Yonsei, and 23.8 years for Gosei. 24.2% ($n = 50$) of the total sample were single, 48.8% ($n = 101$) were married, 3.4% ($n = 7$) were separated, 10.1% ($n = 21$) were divorced, and 13.5% ($n = 28$) were widowed. The one Issei participant was widowed. Of the Nisei participants, 10.5% ($n = 4$) were single, 26.3% ($n = 10$) were married,

5.3% ($n = 2$) were separated, 10.5% ($n = 4$) were divorced, and 47.4% ($n = 18$) were widowed; of the Sansei participants, 19.8% ($n = 20$) were single, 57.4% ($n = 58$) were married, 4% ($n = 4$) were separated, 11.9% ($n = 12$) were divorced, and 6.9% ($n = 7$) were widowed; of the Yonsei participants, 36.5% ($n = 23$) were single, 50.8% ($n = 32$) were married, 1.6% ($n = 1$) were separated, 7.9% ($n = 5$) were divorced, and 3.2% ($n = 2$) were widowed; and of the Gosei participants, 75% ($n = 3$) were single and 25% ($n = 1$) were married. With regard to last formal education completed with this sample, .5% ($n = 1$) completed Intermediate/Middle School, 10.6% ($n = 22$) completed high school, 18.8% ($n = 39$) had some college education, 12.6% ($n = 26$) received an Associate's degree, 33.8% ($n = 70$) received a Bachelor's degree, 21.3% ($n = 44$) received a Master's degree, and 2.4% ($n = 5$) received a Ph.D. or M.D. The breakdown of last formal education completed for each generation is shown on Table 2.

Table 2

Descriptive Profile By Generation

	Nisei ($n = 38$)	Sansei ($n = 101$)	Yonsei ($n = 63$)	Gosei ($n = 4$)
Age in Years[Mean (SD)]	79.8 (15.1)	60.6 (12.5)	42.3 (13.3)	23.8 (6.2)
Marital Status (Percent)				
Single	10.5	19.8	36.5	75.0
Married	26.3	57.4	50.8	25.0
Separated	5.3	4.0	1.6	-
Divorced	10.5	11.9	7.9	-
Widowed	47.4	6.9	3.2	-
Last Formal Education Completed (Percent)				
Intermediate/Middle	2.6	-	-	-
High School	36.8	5.0	1.6	50.0
Some College	21.1	18.8	19.0	-
Associate's	10.5	9.9	19.0	-
Bachelor's	21.1	35.6	38.1	25.0
Master's	7.9	29.7	15.9	25.0
Ph.D./M.D.	-	1.0	6.3	-

Inclusion and exclusion criteria. Inclusion criteria were adult (i.e., 18 years or older) Japanese American females who were second-, third-, fourth-, or fifth-generation descendants of Japanese from Japan who arrived in Hawai'i prior to the 1924 Asian Exclusion Act. As discussed earlier, these Japanese cohorts were identified by generations: Issei, Nisei, Sansei, Yonsei, Gosei. An exclusion criterion was females with descendants from anywhere outside of the country of Japan (e.g., Okinawa prefecture). The one Issei participant was excluded from the data analyses because she arrived in Hawai'i in the late 1950s.

Recruitment. Participants for the study were recruited from the City and County of Honolulu and the County of Maui (i.e., Islands of Oahu and Maui) in the State of Hawai'i. The participants were recruited from locations such as community-based organizations, university, and by word of mouth through three strategies:

Community-based organizations. By the researcher at community-based organizations (e.g., community centers) with the permission from the organization's leaders. The participants were approached by the researcher and invited to participate in the study.

Subject pool system. Through the University of Hawai'i at Mānoa SONA subject pool system. Scheduled appointments with students were made through this system, and qualified participants received two credits in their psychology course for participating in the study. Through e-mail the participant and the researcher made arrangements to meet on the University of Hawai'i at Mānoa campus.

"Snowball" technique. By using the "snowball" technique (Minke & Haynes, 2011). The following methods of this strategy were used:

(a) Participants were asked to suggest other potential individuals who met the study criteria and who might be willing to participate in the study. These potential participants were then contacted by the researcher or they contacted the researcher by phone.

(b) Participants were asked if they would be willing to pass on information about the study to other potential participants. The original participant was given an information sheet (Appendix A) to give to adult Japanese American females they thought might be interested and qualified. These potential participants contacted the researcher by phone if they were interested.

(c) Participants or individuals familiar to the researcher (hereinafter referred to as “friend/family member”) were asked if they knew of Japanese American females who qualified for the study and who might be willing to participate. These potential participants informed the friend/family member if they were interested.

Assessment Methods and Measures

Assessment Methods. The assessment methods for the three recruitment strategies were as follows:

Community-based organizations. Potential participants were recruited at community-based organizations in two ways: (1) they were individually approached and screened to determine if they met the inclusion criteria or (2) a teacher, leader or the researcher would inform the class about the study and its inclusion criteria, and those interested in participating would approach the researcher. Qualified participants were invited to participate and informed that the researcher was a graduate student at the University of Hawai'i at Mānoa conducting a dissertation study about cultural values, mental health, and social support. Japanese American females who were interested in participating and who met the inclusion criteria were asked to complete the contents in the packet when it was convenient for them (e.g., before, after class) and given the

option of taking the packet of questionnaires home to complete and returning or mailing it back to the researcher.

Subject pool system. All participants using the University of Hawai'i at Mānoa SONA subject pool system contacted the researcher by e-mail. These participants were screened by e-mail to determine if they met the inclusion criteria. If so, they were invited to participate and arrangements were made to meet at an office on the University of Hawai'i at Mānoa campus. At the meeting, the participant was asked to complete the contents in the packet.

"Snowball" technique. Potential participants who were referred by participants by word-of-mouth or by responding to the information sheet contacted the researcher by phone. They were screened over the phone to determine if they met the inclusion criteria. If so, they were invited to participate. Those qualified and willing to participate were given the option of meeting the researcher to complete the contents in the packet or having the packet mailed to them.

Friend/family members of the researcher who recruited potential, qualified participants were given packets to pass on to the participants. The friend/family members were instructed to have the participant follow the instructions in the packet. Potential participants were given the option of returning the completed packet to the friend/family member or mailing it back to the researcher.

A stamped, self-addressed envelope was included in the packet if the participant chose to mail it back. All participants were informed that the researcher was available to answer any questions (in person or by phone).

The numbered packets included a letter of invitation to participate (Appendix B), two copies of the Research Description and Consent Form (Appendix C), and seven questionnaires

(Appendices D through J). Participants were informed in person and/or by the Research Description and Consent Form (Appendix C) that the researcher was conducting research by collecting data for a dissertation, and they were assured of their anonymity. The Research Description and Consent Form (Appendix C) instructed the participant to sign the consent form, fill out the seven questionnaires in the order they were presented, place them back into the envelope after completion along with the consent form, and keep the Research Description and Consent Form marked “Copy For Your Records.”

Measures. The questionnaires included a demographic questionnaire (Appendix D), two cultural values scales (Appendices E and F), two depressive symptoms scales (Appendices G and H), and two perceived social support scales (Appendices I and J). The cultural values scales, depressive symptoms scales, and perceived social support scales were counterbalanced to control for order effects. As mentioned above, each packet was numbered, and a log (Appendix K) was used to track each packet and track return rates.

Cultural Scales. Two cultural values assessment instruments were separately used to measure the degree to which an individual was acculturated and enculturated (Suinn, 2010). The two cultural values scales, the Asian Values Scale-Revised (AVS-R; B. S. K. Kim & Hong, 2004) (Appendix E) and the European American Values Scale for Asian Americans-Revised (EAVS-AA-R; Hong, B. S. K. Kim & Wolfe, 2005) (Appendix F), have been recommended by Hong, B. S. K. Kim, & Wolfe (2005) for the bilinear assessment of both Asian American and European American values of enculturation and acculturation. For derivation of the two cultural values measures, see Table 3.

[For exploratory purposes based on the unilinear model as previously described, measures of the degree to which a participant adhered to overall Japanese and American cultural

values were calculated by constructing a composite score of the two cultural values scales to reduce measurement errors associated with each individual scale. The raw scores from both scales were standardized and converted to z-scores. (Note that the EAVS-AA-R was reverse scored.) Z-scores from both scales were totaled for an individual's overall cultural values composite score. Higher scores indicated higher enculturation, and lower scores indicated more acculturation of the participant.]

Asian Values Scale-Revised. The AVS-R is a 25-item, 4-point index of enculturation used to assess adherence to Asian cultural values by Asian Americans. Higher total scores show higher adherence to Asian cultural values.

Based on data from 618 Asian Americans, B. S. K. Kim and Hong (2004) revised the 36-item Asian Values Scale (AVS; B. S. K. Kim, Atkinson, & Yang, 1999) using the Rasch model analog of Cronbach's alpha and developed the AVS-R. The study found internal consistency with both the AVS-R and AVS at .80. Park, Kim, Chiang, and Ju (2010) found a coefficient of internal consistency of .87 with a sample of 149 Asian American students. Concurrent convergent validity was found ($r = .93, p < .001$) between scores from the AVS-R and the Asian Values Scale (B. S. K. Kim & Hong, 2004), which was found to be a reliable and valid measure of adherence to Asian cultural values by B. S. K. Kim, Atkinson, and Yang (1999).

European American Values Scale for Asian Americans-Revised. The EAVS-AA-R is a 25-item, 4-point index of acculturation used to assess adherence to European American cultural values by Asian Americans. Higher total scores show higher adherence to European American cultural values.

Based on data from 257 Asian American students, Hong, B. S. K. Kim, and Wolfe (2005) revised the 18-item European American Values Scale for Asian Americans (EAVS-AA-18;

Wolfe, Yang, Wong, & Atkinson, 2001) using the Rasch model analog of Cronbach's alpha and developed the EAVS-AA-R. The EAVS-AA-R was found to have an internal consistency of .78 for person separation reliability and .98 for item separation reliability. There is also evidence of the EAVS-AA-R's validity from Rasch analysis that showed that the measures from this scale were sensitive to the full range of the person trait and item difficulty levels (Hong et al., 2005).

Table 3

Derivation of Measures

Construct and Instrument	Measure
<u>Cultural Values</u>	
Asian Values Scale-Revised (Enculturation)	<ul style="list-style-type: none"> • 25 total items • 4-point scale: 1=Strongly Disagree, 2=Disagree, 3=Agree, 4=Strongly Agree • Items 3, 5, 7, 8, 10, 12, 18, 20, 21, 22, 23, and 25 were reverse scored • Scores range from 25 to 100 • To obtain the total score, add the scores from the 25 items • Higher scores indicate more enculturation; lower scores indicate more acculturation
European American Values Scale for Asian Americans-Revised (Acculturation)	<ul style="list-style-type: none"> • 25 total items • 4-point scale: 1=Strongly Disagree, 2=Disagree, 3=Agree, 4=Strongly Agree • Items 2, 4, 5, 6, 7, 8, 9, 10, 11, 13, 14, 18, 20, 21, 22, 24, and 25 were reverse scored • Scores range from 25 to 100 • To obtain the total score, add the scores from the 25 items • Higher scores indicate more acculturation; lower scores indicate more enculturation
<u>Depressive Symptoms</u>	
Center for Epidemiologic Studies Depression Scale	<ul style="list-style-type: none"> • 20 total items • 4-point scale: 0=Rarely or none of the time (<1 day), 1=Some or a little of the time (1-2 days), 2=Occasionally or a moderate amount of time (3-4 days), 3=Most or all of the time (5-7 days) • Items 4, 8, 12, and 16 were reverse scored • Scores range from 0 to 60 • To obtain the total score, add the scores from the 20 items • Higher scores indicate greater depressive symptoms, lower scores indicate less depressive symptoms
Zung Self-rating Depression Scale	<ul style="list-style-type: none"> • 20 total items • 4-point scale: 1=A little of the time, 2=Some of the time, 3=Good part of the time, 4=Most of the time • Items 2, 5, 6, 11, 12, 14, 16, 17, 18, and 20 were reverse scored • Scores range from 0 to 80 • To obtain the total score, add the scores from the 20 items • Higher scores indicate greater depressive symptoms, lower scores indicate less depressive symptoms

Social Support	
Multidimensional Scale of Perceived Social Support	<ul style="list-style-type: none"> • 12 total items • 7-point scale: 1=Very Strongly Disagree, 2=Strongly Disagree, 3=Mildly Disagree, 4=Neutral, 5=Mildly Agree, 6=Strongly Agree, 7=Very Strongly Agree • Scores range from 12 to 84 • To obtain the total score, add the scores from the 12 items • Higher scores indicate higher perception of social support, lower scores indicate less perception of social support
Personal Resource Questionnaire 85	<ul style="list-style-type: none"> • 25 total items • 7-point scale: 1=Strongly Disagree, 2=Disagree, 3=Somewhat Disagree, 4=Neutral, 5=Somewhat Agree, 6=Agree, 7=Strongly Agree • Items 4, 7, 10, 16, and 24 were reverse scored • Scores range from 25 to 175 • To obtain the total score, add the scores from the 25 items • Higher scores indicate higher perception of social support, lower scores indicate less perception of social support

Depressive Symptoms Scales. Two depressive symptoms scales, the Center for Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977) (Appendix G) and the Zung Self-rating Depression Scale (SDS; Zung, 1965) (Appendix H), were used to provide scores for self-reported depressive symptoms. For derivation of the two depressive symptoms measures, see Table 3. Measures of the degree to which a participant self-reported depressive symptoms were calculated by constructing a composite score of the two depressive symptoms scales to reduce measurement errors associated with each individual scale. The raw scores from both scales were standardized and converted to z-scores then added together for an individual's composite score for self-reported depressive symptoms. Higher scores indicated higher reports of self-reported depressive symptoms.

Center for Epidemiologic Studies Depression Scale. The CES-D is a 20-item self-report scale that provides an index of the number and frequency of depressive symptoms (poor appetite, hopelessness, pessimism, fatigue) that had occurred over the past week. Based on two separate field surveys of the general population ($n = 3574$) and psychiatric patients ($n = 70$), Radloff (1977) found that the CES-D had an internal consistency of .85 and .90, respectively. Convergent validity at .89 ($p < .001$) was found between the CES-D and the Beck Depression Inventory-II in a sample of 33 college students (Hicks & McCord, 2012). The CES-D was

designed for studying the relationships of depressive symptoms and other variables such as social support (Devins & Orme, 1985). It has been widely used as a screening instrument for depressive symptoms in various settings and with various community and nonpsychiatric populations (Devins & Orme, 1985; Dozeman et al., 2011; Marcus, Flynn, Blow, & Barry, 2003; Shean & Baldwin, 2008).

Zung Self-rating Depression Scale. The second measure of depressive symptoms was the 20-item self-report SDS. With a sample of 282 family escorts, 218 nondepressed clients, and 369 depressed clients, Gabrys and Peters (1985) found the internal consistencies for the SDS at .91, .88, and .85, respectively. In his review of the SDS, Gurtman (1985) stated there were extensive validity studies for this instrument, including correlation with scales such as the Hamilton Rating Scale. In a validation study of the SDS by Biggs, Wylie, & Ziegler (1978), the authors found correlation between the two scales at .80 among 41 moderate-to-severe depressed outpatients. Additionally in his review, Gurtman (1985) stated that the strongest evidence of validity for the SDS was its ability to distinguish between depressed and nondepressed individuals. The SDS has been widely used to screen for the presence of depressive symptoms across multiple settings (Dugan et al., 1998; Liu, Ma, Kurita, & Tang, 1999; Oyama et al., 2010; Smith, Rosenstein, & Granaas, 2001) and has been found to be appropriate for screening both normal and psychiatric adult populations (Gurtman, 1985). Research has found the SDS to have good reliability and validity among mixed-aged samples, including adults up to age 69, and to be a valid measure in older adult samples as a screening measure (Fiske & O'Riley, 2008).

Social Support Scales. Two social support scales, the Multidimensional Scale of Perceived Social Support (MSPSS; Zimet, Dahlem, Zimet, & Farley, 1988) (Appendix I) and Part 2 of the Personal Resource Questionnaire 85 (PRQ85; Weinert, 1987) (Appendix J), were

used to indicate the degree to which participants self-reported social support was available to them. For derivation of the two social support measures, see Table 3. Measures of the degree to which a participant self-reported social support was available to them were calculated by constructing a composite score of the two social support scales to reduce measurement errors associated with each individual scale. The raw scores from both scales were standardized and converted to z-scores then added together for an individual's composite score for perceived social support. Higher scores indicated higher perceived social support.

Multidimensional Scale of Perceived Social Support. The MSPSS is a 12-item, 7-point measure of an individual's perception of social support from three sources--family, friends, and significant other. With a sample of 475 university undergraduates, Zimet et al. (1988) found internal consistencies for the MSPSS at .91 for significant other, .87 for family, and .85 for friends, with total scale reliability at .88. Among 154 young adults from diverse ethnic and socioeconomic backgrounds, Dahlem, Zimet, and Walker (1991) found total scale reliability of the MSPSS at .91, and reliability for family, friends, and significant other subscales at .90, .94, and .95, respectively. Stanley, Beck, and Zebb (1998) found strong internal consistencies for the total scale and subscales among 50 older adults who met the DMS-III-R criteria for generalized anxiety disorder (aged 55 to 81 years) and 94 normal controls (aged 55 to 82 years) ranging from .87 to .94.

The same study by Zimet et al. (1988) in the development of the MSPSS found support for convergent validity based on the relationship of perceived social support with self-reported depressive symptoms. Correlations between the MSPSS and the Hopkins Symptom Checklist depressive symptoms subscale showed perceived social support negatively related to self-reported depressive symptoms ($r = -.25, p < .01$).

A later study by Zimet, Powell, Farley, Werkman, and Berkoff (1990) examined the validity of the Significant Other and Family subscales. Validity of the Significant Other subscale was examined by comparing married pediatric residents with single residents. They found that married residents compared to single residents self-reported greater support from a significant other [$F(1, 46) = 16.50, p < .001$] but there were no differences in support from friends or family between both groups. Validity of the Family subscale was examined by comparing linear trends between high school students' reports in the frequency with which they share concerns with their mothers (perceived support from family) and linear trends with the other two subscales (perceived support from friends and significant others). They found a significant linear trend between students' reporting frequency in perceived social support from family [$F(1, 68) = 34.47, p < .001$] and no significant linear trend in perceived social support from friends and significant others.

Personal Resource Questionnaire 85, Part 2. The PRQ85 Part 2 is a 25-item, 7-point Likert scale that measures an individual's level of perceived social support. With a sample of 100 adults who were mailed two sets of questionnaires, Weinert and Brandt (1987) found good internal consistency for the total scale at .93 for the first set and .91 for the second set. In the same study, test-retest reliability coefficient for perceived social support was $r = .72, p < .001$. Additionally, moderate convergent validity was determined by correlating perceived support with mental health measures of anxiety ($r = -.37, p < .001$) and depressive symptoms ($r = -.42, p < .001$).

Tawalbeh and Ahmad (2013) reviewed five studies that used the PRQ85 with a combined sample size of 1455 from various populations and settings (e.g., cancer patients and their caregivers, men and women living in rural areas). These authors found the PRQ85 to be a

reliable (alpha reliability ranging from .80 to .94) and valid (significant inverse relationships between PRQ scores and scores for stress, depressive symptoms, pain, and disability) perceived social support scale with diverse populations, including different ages (19 to 86 years), backgrounds, and health problems.

Data Entry and Statistical Analyses

Data Entry

Data were analyzed using the Statistical Package for the Social Sciences (SPSS). Before preparing the data file for analysis, the data was manually double-checked for any total score errors. Raw score data were entered into the SPSS program by two people and then crossed checked for typographical errors to ensure accuracy of data entry. Raw scores were entered for the variables, converted to z-scores as described above, and generational status was dummy coded.

Statistical Analyses

Multiple linear regression and multiple hierarchical linear regression analyses were used to examine the degree to which participants' self-reported depressive symptoms were explained by generational status, adherence to cultural values, and perceived social support. In order to examine the degree to which Japanese American females' self-reported depressive symptoms were associated with their degree of adherence to Japanese and American cultural values as delineated in Goal 1, the first model (causal models) regressed self-reported depressive symptoms on adherence to Japanese cultural values ($Y = X_1 + \varepsilon_1$) and American cultural values ($Y = X_2 + \varepsilon_2$). In order to examine the degree to which Japanese American females' self-reported depressive symptoms were associated with their generational status as delineated in Goal 2, the first model (causal model) regressed self-reported depressive symptoms on generational status

$$(Y = X_3 + \varepsilon_3).$$

In order to examine the degree to which the relationship between generational status and self-reported depressive symptoms was moderated by the degree of the participants' adherence to Japanese cultural values (enculturation) as delineated in Goal 3, the second model (moderation model) examined the increment in proportion of variance accounted for by the main and interaction effects of Japanese cultural values over and above what generational status explained self-reported depressive symptoms. In order to do this, the incremental variance was examined from two equations:

$$Y = X_3 + X_I + \varepsilon_4 \quad (1)$$

$$Y = X_3 + X_I + (X_3 \times X_I) + \varepsilon_4 \quad (2)$$

The first equation estimated the degree to which self-reported depressive symptoms was accounted for by generational status and adherence to Japanese cultural values. The second equation estimated the degree to which self-reported depressive symptoms was accounted for by adding adherence to Japanese cultural values and the interaction of adherence to Japanese cultural values and generational status to generational status. The *R Squares* of these two equations were compared using an *F* test to examine the significance of the change in *R Squares*.

In order to examine the degree to which the relationship between generational status and self-reported depressive symptoms was moderated by the degree of the participants' adherence to American cultural values (acculturation) as delineated in Goal 3, the second model (moderation model) examined the increment in proportion of variance accounted for by the main and interaction effects of American cultural values over and above what generational status explained self-reported depressive symptoms. In order to do this, the incremental variance was examined from two equations:

$$Y = X_3 + X_2 + \varepsilon_5 \quad (1)$$

$$Y = X_3 + X_2 + (X_3 \times X_2) + \varepsilon_5 \quad (2)$$

The first equation estimated the degree to which self-reported depressive symptoms was accounted for by generational status and adherence to American cultural values. The second equation estimated the degree to which self-reported depressive symptoms was accounted for by adding adherence to American cultural values and the interaction of adherence to American cultural values and generational status to generational status. The *R Squares* of these two equations were compared using an *F* test to examine the significance of the change in *R Squares*.

In order to examine the degree to which the relationship between Japanese cultural values (enculturation) and self-reported depressive symptoms was moderated through the degree of the participants' perceived social support as delineated in Goal 4, the second model (moderation model) examined the increment in proportion of variance accounted for by perceived social support over and above what Japanese cultural values explained self-reported depressive symptoms. In order to do this, the incremental variance was examined from two equations:

$$Y = X_1 + X_4 + \varepsilon_6 \quad (1)$$

$$Y = X_1 + X_4 + (X_1 \times X_4) + \varepsilon_6 \quad (2)$$

The first equation estimated the degree to which self-reported depressive symptoms was accounted for by Japanese cultural values and perceived social support. The second equation estimated the degree to which self-reported depressive symptoms was accounted for by adding perceived social support and the interaction of perceived social support and adherence to Japanese cultural values to Japanese cultural values. The *R Squares* of these two equations were compared using an *F* test to examine the significance of the change in *R Squares*.

In order to examine the degree to which the relationship between American cultural values (acculturation) and self-reported depressive symptoms was moderated through the degree of the participants' perceived social support as delineated in Goal 4, the second model (moderation model) examined the increment in proportion of variance accounted for by perceived social support over and above what American cultural values explained self-reported depressive symptoms. In order to do this, the incremental variance was examined from two equations:

$$Y = X_2 + X_4 + \varepsilon_7 \quad (1)$$

$$Y = X_2 + X_4 + (X_2 \times X_4) + \varepsilon_7 \quad (2)$$

The first equation estimated the degree to which self-reported depressive symptoms was accounted for by American cultural values and perceived social support. The second equation estimated the degree to which self-reported depressive symptoms was accounted for by adding perceived social support and the interaction of perceived social support and adherence to American cultural values to American cultural values. The *R* Squares of these two equations were compared using an *F* test to examine the significance of the change in *R* Squares.

Results

Descriptive Analyses

Table 2 above presented a descriptive profile of the four groups of Japanese American females ($n = 206$). Table 4 shows the raw score means and standard deviations for the two self-report depressive symptoms scales (CES-D and SDS), the two cultural values scales (AVS-R and EAVS-AA-R), and the two perceived social support scales (MSPSS and PRQ85) for each generation. [Because the Issei Japanese American female did not qualify for the study and the

paucity of Gosei Japanese American females in this sample, these two generations were not included in the analyses].

As indicated in Table 4, there were statistically significant differences found with adherence to American cultural values (EAVS-AA-R) among the generations [$F(2, 199) = 13.5$, $p < .01$]. Post hoc analyses found statistically significant differences between Nisei and Sansei females ($p < .00$), Nisei and Yonsei females ($p < .01$), and Sansei and Yonsei females ($p = .045$). (Analyses were all based on two-tailed tests.)

Table 4

Raw Score Means (Standard Deviations) by Generation

	Nisei ($n = 38$)	Sansei ($n = 101$)	Yonsei ($n = 63$)
CES-D	6.26 _a (6.32)	8.29 _a (7.28)	7.37 _a (5.48)
SDS	30.97 _a (6.01)	33.09 _a (7.18)	33.02 _a (6.64)
AVS-R	60.34 _a (7.26)	60.45 _a (6.66)	59.44 _a (5.56)
EAVS-AA-R	68.05 _a (6.04)	72.28 _b (6.28)	74.13 _c (4.45)
MSPSS	73.63 _a (10.35)	74.36 _a (9.14)	75.14 _a (12.46)
PRQ85	145.42 _a (17.78)	147.87 _a (17.15)	148.65 _a (16.70)

Note. Row means with same subscript letter are not significantly different. Row means with differing subscripts are significantly different at $p < .05$.

Table 5 shows the composite z-score means and standard deviations for self-reported depressive symptoms, overall adherence to cultural values (i.e., composite z-scores of the AVS and EAVS-AA; note that higher scores indicated more enculturation), and perceived social support, as well as the z-score means and standard deviations for the AVS (enculturation) and EAVS-AA (acculturation) scales for each generation. Overall adherence to cultural values was included in the analyses to summarize the main characteristics of the enculturation and

acculturation constructs and to maximize insight into the data collected for this study. This would allow exploration beyond independently associating enculturation and acculturation with the other variables of self-reported depressive symptoms and perceived social support.

As indicated in Table 5 with z-score means and standard deviations and as found with raw score means and standard deviations in Table 4 above, there were statistically significant differences found with adherence to American cultural values among the generations [$F(2, 199) = 13.5, p < .01$]. Post hoc analyses again found statistically significant differences between Nisei and Sansei females ($p < .00$), Nisei and Yonsei females ($p < .01$), and Sansei and Yonsei females ($p = .045$).

Statistically significant differences were found with overall adherence to cultural values among the generations [$F(2, 199) = 6.79, p < .01$]. Post hoc analyses found statistically significant differences between Nisei and Sansei females ($p = .019$) and Nisei and Yonsei females ($p < .01$) but no statistically significant difference between Sansei and Yonsei females ($p = .058$).

Table 5

Z-Score Means (Standard Deviations) By Generation

	Nisei (<i>n</i> = 38)	Sansei (<i>n</i> = 101)	Yonsei (<i>n</i> = 63)
Self-Reported Depressive Symptoms*	-.47 _a (1.64)	.15 _a (1.92)	-0.00 _a (1.63)
Overall Adherence to Cultural Values*	.67 _a (1.66)	-.01 _b (1.59)	-.47 _b (1.24)
Enculturation	.02 _a (1.13)	.04 _a (1.04)	-.12 _a (.87)
Acculturation	-.64 _a (.99)	.05 _b (1.03)	.35 _c (.73)
Perceived Social Support*	-.22 _a (1.85)	-.01 _a (1.73)	.12 _a (1.89)

*Composite Z-Scores

Note. Row means with same subscript letter not significantly different.

Row means with differing subscripts are significantly different at $p < .05$.

Pearson correlation coefficients were computed to examine the relationships among the measures of self-reported depressive symptoms, overall adherence to cultural values, enculturation, acculturation, and perceived social support. There were statistically significant positive correlations between overall adherence to cultural values and enculturation as well as acculturation and perceived social support. There were statistically significant negative correlations between self-reported depressive symptoms and perceived social support, overall adherence to cultural values and acculturation, and enculturation and acculturation. Table 6 summarizes the results.

Table 6

Correlation Matrix of the Relationships Among Self-Reported Depressive Symptoms, Overall Adherence to Cultural Values, Enculturation, Acculturation, and Perceived Social Support

Measure	1	2	3	4	5
1. Self-Reported Depressive Symptoms	—				
2. Overall Adherence to Cultural Values	.07	—			
3. Enculturation	.07	.78*	—		
4. Acculturation	-.05	-.77*	-.19*	—	
5. Perceived Social Support	-.21*	-.08	.07	.19*	—

* $p < .01$

The Association Between Self-Reported Depressive Symptoms and Adherence to Cultural Values

The first goal was to examine the degree to which Japanese American females' self-reported depressive symptoms were associated with their degree of adherence to Japanese and American cultural values (overall cultural values was also included for exploratory purposes). Bivariate results indicated that self-reported depressive symptoms were not significantly associated with adherence to Japanese or American cultural values. Adherence to Japanese and American cultural values explained less than 1% of the variance in self-reported depressive symptoms and did not have any statistically significant contribution ($R^2 = .005$, $F(1, 200) = .94$, $p = .333$; and $R^2 = .002$, $F(1, 200) = .40$, $p = .527$, respectively).

Additionally for exploratory purposes, the degree to which Japanese American females' self-reported depressive symptoms were associated with their degree of overall adherence to cultural values (indicated by a composite z-score of the AVS-R and EAVS-AA-R) was also examined. Overall adherence to cultural values also explained less than 1% of the variance in self-reported depressive symptoms and did not have any statistically significant contribution ($R^2 = .005$, $F(1, 200) = 1.08$, $p = .299$).

The Association Between Self-Reported Depressive Symptoms and Generational Status

The second goal was to examine the degree to which Japanese American females' self-reported depressive symptoms were associated with their generational status. Bivariate results, reported in Table 6, indicated that self-reported depressive symptoms were not significantly associated with the generations of the participants. Generational status was found to explain only 2% of the variance in self-reported depressive symptoms and did not have any statistically significant contribution ($R^2 = .016$, $F(2, 199) = 1.65$, $p = .194$).

Hierarchical linear regression analyses were then used to examine the additive and interaction effects of independent variables on levels of self-reported depressive symptoms for the third and fourth goals. All analyses were based on two-tailed tests.

The Association Between Self-Reported Depressive Symptoms and Generational Status When Moderated by Adherence to Japanese (Enculturation) and American (Acculturation) Cultural Values

The third goal was to examine the degree to which Japanese American females' self-reported depressive symptoms were associated with their generational status when moderated by their degree of adherence to Japanese and American cultural values. The main effects of dummy-coded generational status and adherence to Japanese and American cultural values on level of self-reported depressive symptoms were each first tested. These models had an $R^2 = .021$, $F(3, 198) = 1.41$, $p = .240$, and $R^2 = .023$, $F(3, 198) = 1.58$, $p = .195$, respectively, with generational status and adherence to both Japanese and American cultural values not having significant regression weights or contribution to either model.

An additive and interactive model was then used to test the interaction effects between dummy-coded generational status and adherence to both Japanese and American cultural values.

These interaction models tested whether the association of generational status and self-reported depressive symptoms would change when moderated by the relative degree of adherence to both Japanese and American cultural values. Findings showed that these models had an $R^2 = .033$, $F(5, 196) = 1.32$, $p = .255$, and $R^2 = .027$, $F(5, 196) = 1.08$, $p = .374$, respectively. The interaction of generational status and adherence to Japanese and American cultural values showed no statistically significant changes in self-reported depressive symptoms [R^2 change = $.012$, $F(2, 196) = 1.19$, $p = .308$, R^2 change = $.003$, $F(2, 196) = .34$, $p = .713$, respectively]. These results mean that the association of adherence to both Japanese and American cultural values with self-reported depressive symptoms did not vary by generational status.

The Association Between Self-Reported Depressive Symptoms and Generational Status When Moderated by Overall Cultural Values

Additionally for exploratory purposes, the degree to which Japanese American females' self-reported depressive symptoms were associated with their generational status when moderated by their degree of overall adherence to cultural values was also examined. The main effects of dummy-coded generational status and overall adherence to cultural values on level of self-reported depressive symptoms were first tested. This model had an $R^2 = .026$, $F(3, 198) = 1.76$, $p = .156$, with generational status and overall adherence to cultural values not having significant regression weights or contribution to the model.

An additive and interactive model was then used to test the interaction effect between dummy-coded generational status and overall adherence to cultural values. The interaction model tested whether the association of generational status with self-reported depressive symptoms would change when moderated by the relative degree of overall adherence to cultural values. Findings showed that this model had an $R^2 = .028$, $F(5, 196) = 1.13$, $p = .347$. The

interaction of generational status and overall adherence to cultural values showed no statistically significant change in self-reported depressive symptoms [R^2 change = .002, $F(2, 196) = .201$, $p = .818$]. These results mean that the association of overall adherence to cultural values with self-reported depressive symptoms did not vary by generational status.

The Association Between Self-Reported Depressive Symptoms and Adherence to Japanese (Enculturation) and American (Acculturation) Cultural Values When Moderated by Perceived Social Support

The fourth goal was to examine the degree to which Japanese American females' self-reported depressive symptoms were associated with their adherence to Japanese and American cultural values when moderated by their level of perceived social support. The main effects of adherence to Japanese and American cultural values and perceived social support on levels of self-reported depressive symptoms were each first tested. These models had an $R^2 = .052$, $F(2, 199) = 5.44$, $p = .005$, and $R^2 = .045$, $F(2, 199) = 4.68$, $p = .010$, respectively, with only perceived social support having significant regression weight and contribution to the models [$\beta = -.22$, $t(3, 198) = -3.12$, $p = .002$, and $\beta = -.21$, $t(3, 198) = -2.99$, $p = .003$, respectively].

An additive and interactive model was then used to test the interaction effects between adherence to Japanese and American cultural values and perceived social support. These interaction models tested whether the association of adherence to Japanese and American cultural values with self-reported depressive symptoms would change when moderated by the relative degree of perceived social support. Findings showed that these two models had an $R^2 = .052$, $F(3, 198) = 3.61$, $p = .014$, and $R^2 = .046$, $F(3, 198) = 3.16$, $p = .026$ respectively, and, as mentioned above, only perceived social support had significant contribution to self-reported depressive symptoms. Adherence to Japanese and American cultural values [$\beta = .08$, $t(3, 198) =$

1.08, $p = .280$, and $\beta = .00$, $t(3, 198) = -.06$, $p = .950$, respectively] and the interaction of adherence to Japanese and American cultural values and perceived social support [$\beta = .01$, $t(3, 198) = .10$, $p = .918$, and $\beta = .03$, $t(3, 198) = -.40$, $p = .690$,] did not have any significant contribution to self-reported depressive symptoms. Additionally, the R -squared changes were not found to be statistically significant [R^2 change = .000, $F(1, 198) = .01$, $p = .918$, and R^2 change = .001, $F(1, 198) = .16$, $p = .690$, respectively]. These results mean that perceived social support did not add to the adherence to either Japanese or American cultural values on levels of self-reported depressive symptoms. (See Table 7 for main and interaction effects of cultural values when controlling for perceived social support on self-reported depressive symptoms.)

Table 7

Main and Interaction Effects of Adherence to Cultural Values When Controlling for Perceived Social Support on Self-Reported Depressive Symptoms

	β	t	p
Enculturation	.08	1.08	.28
Perceived Social Support	-.22	-3.12	<.01*
Acculturation x Perceived Social Support	.01	.10	.92
Acculturation	.00	-.06	.95
Perceived Social Support	-.21	-2.99	<.01*
Enculturation x Perceived Social Support	.03	-.40	.69
Overall Adherence to Cultural Values	.05	.74	.46
Perceived Social Support	-.21	-2.97	<.01*
Cultural Values x Perceived Social Support	.04	.49	.62

*statistically significant

The Association Between Self-Reported Depressive Symptoms and Overall Adherence to Cultural Values When Moderated by Perceived Social Support

Additionally for exploratory purposes, the degree to which Japanese American females' self-reported depressive symptoms were associated with their overall adherence to cultural

values when moderated by their level of perceived social support was also examined. The main effects of overall adherence to cultural values and perceived social support on level of self-reported depressive symptoms were first tested. This model had an $R^2 = .048$, $F(2, 199) = 5.04$, $p = .007$, with only perceived social support having significant regression weight and contribution to the model ($\beta = -.21$, $t(3, 198) = -2.97$, $p = .003$).

An additive and interactive model was then used to test the interaction effect between overall adherence to cultural values and perceived social support. The interaction model tested whether the association of overall adherence to cultural values with self-reported depressive symptoms would change when moderated by the relative degree of perceived social support. Findings showed that this model had an $R^2 = .049$, $F(3, 198) = 3.43$, $p = .018$, and, as mentioned above, only perceived social support had significant contribution to self-reported depressive symptoms. Overall adherence to cultural values [$\beta = .05$, $t(3, 198) = .74$, $p = .460$] and the interaction of overall adherence to cultural values and perceived social support [$\beta = .04$, $t(3, 198) = .49$, $p = .623$] did not have any significant contribution to self-reported depressive symptoms. Additionally, the R -squared change was not found to be statistically significant [R^2 change = $.001$, $F(1, 198) = .24$, $p = .623$]. These results mean that perceived social support did not add to the overall adherence to cultural values on levels of self-reported depressive symptoms.

Discussion

Previous research has suggested that the degree to which Asian Americans adhere to Asian and American culture is significantly associated with the severity or number of self-reported depressive symptoms (Gupta, Leong, Valentine, & Canada, 2013). Research has also found an inverse association between self-reported depressive symptoms and perceived social support among Asian Americans (Han, Kim, Lee, Pistulka, & Kim, 2007; B. J. Kim, Sangalang,

& Kihl, 2012; Lee & Holm, 2012; Mui & Kang, 2006; Shibusawa & Mui, 2001). The findings from this study on three generations of Japanese American females in Hawai'i were inconsistent with most findings from previous research on the association of adherence to cultural values and generational status with self-reported depressive symptoms among Asian Americans. This study found self-reported depressive symptoms of Japanese American females in Hawai'i were not significantly associated with their (1) adherence to cultural values; (2) generational status; (3) generational status when moderated by their degree of adherence to cultural values; and (4) adherence to cultural values when moderated by their levels of perceived social support. However, the findings of this study were consistent with those of previous research on the inverse association of self-reported depressive symptoms and perceived social support.

The Association Between Self-Reported Depressive Symptoms and Adherence to Cultural Values

This study's results indicated that self-reported depressive symptoms of Japanese American females in Hawai'i were not significantly associated with their adherence to Japanese, American, or overall cultural values. This is consistent with the findings of a non-significant association of acculturation and enculturation with mental health among ethnic minorities in a meta-analysis by Yoon, Langrehr, and Ong (2011) as well as a study of acculturation and self-reported depressive symptoms among Mexican American females by Masten et al. (2004). Unlike this study, these two studies were not specific to Japanese Americans.

Although findings have been mixed, most previous research has found significant associations between levels of acculturation and enculturation with self-reported depressive symptoms among adult Asian Americans. A meta-analysis by Gupta, Leong, Valentine, and Canada (2013) of Asian Americans found a significant inverse association between acculturation

and self-reported depressive symptoms. Other studies that found a similar significant association among Asian Americans include those by Ayers et al. (2009), Choi, Miller, and Wilbur (2009), and Ryder, Alden, and Paulhus (2000). In contrast, a significant direct association between acculturation and self-reported depressive symptoms of Asian Americans was found in studies by Hwang and Myers (2007) and Nguyen and Peterson (1993). A later meta-analysis of 325 studies by Yoon et al. (2013) found a significant inverse association between enculturation and self-reported depressive symptoms. A study of Japanese American men in Hawai'i by Harada et al. (2012) also found a significant inverse association between enculturation and self-reported depressive symptoms. Studies have also shown an inverse association of biculture (highly acculturated and enculturated) and self-reported depressive symptoms among Asian American females (Chae & Foley, 2010; Kim, E., 2009). A direct association of marginalization (neither highly acculturated nor enculturated) and self-reported depressive symptoms among Asian American females were found in studies by Kim, E. (2009) and Kim, S., Gonzales, Stroh, and Wang (2006).

This is the only known study to examine the associations between adherence to Japanese cultural values, American cultural values, overall cultural values, and generational status with self-reported depressive symptoms among adult Japanese American females in Hawai'i. It is conceivable that the findings with this sample could differ from findings of other studies of Asian Americans, as well as the few studies on Japanese Americans, on these associations. With the exception of a study by Williams et al. (2005) of adolescent Japanese Americans from Hawai'i, previous research on the association of these constructs with Asian and Japanese Americans all involved participants from the continental United States.

There are several plausible explanations as to why this study's results of female Japanese Americans in Hawai'i might differ from other studies' results of female Japanese Americans on the mainland. These include, but are not limited to, differences in (1) geographic locations; (2) degree of minority status; (3) degree of discrimination; (4) cultural environment; and (5) self-reported depressive symptoms.

The difference in geographic locations between previous studies and this study's samples may have played a significant role in shaping Japanese American females' respective adherence to cultural values and may explain some of the differences in the findings. The state of Hawai'i is an isolated island state about 2300 miles away from the nearest state on the mainland. Its unique geographic insularity from the other contiguous states may have contributed to a different process of acculturation into the dominant American culture for Japanese Americans in Hawai'i compared to Japanese Americans on the mainland.

The acculturation process includes cultural, behavioral, and psychological changes as a result of intercultural contact (Berry, 2003). Acculturation typically involves the degree to which a person of a non-dominant ethnic culture adapts and functions consistent with the norms of a dominant culture and involves becoming culturally integrated into the dominant culture (Berry, Trimble, & Olmedo, 1986; Chae & Foley, 2010; B. S. K. Kim & Abreu, 2001). But the degree to which Asian Americans in Hawai'i have had to adapt, function, and integrate into American culture has been different from Asian Americans on the mainland. One reason could be the ethnic population disparities between Hawai'i and the mainland. Constituting a large segment of the Hawai'i population for many years, Japanese Americans in Hawai'i have lived in a state with no ethnic majority for generations. In a state with no ethnic majority, Asian

Americans in Hawai'i may not have had to adapt, function, and integrate into the dominant American culture in the same way as Asian Americans on the mainland.

The degree of minority status of Japanese Americans may explain the acculturation process differences between mainland and Hawai'i Japanese Americans. In the 1920s, the Japanese American population peaked at 43 percent of the population in Hawai'i (Bishop Museum, 1990), and in the 1960s Japanese Americans constituted approximately one-third of the Hawai'i population (Meredith & Meredith, 1966). There are no specific data for mainland Japanese Americans, but the U.S. Census Bureau (2002) reported that in 1950, California had the highest percentage of Asian and Pacific Islanders, which included Japanese Americans, but at just 1.4 percent of its total population. More recently, according to the 2010 Census Demographic Profile for Hawai'i, self-identified Japanese Americans in Hawai'i constituted about 14 percent of the population (State of Hawai'i, Department of Business, Economic Development and Tourism, 2010). In comparison, in 2010 the state of California had the largest population of Japanese Americans, but Japanese Americans constituted just .7% of its total population (State of California, California Department of Finance, State Census Data Center, 2010). This proportionate disparity in minority status between Hawai'i and mainland Japanese American females may have had an effect on their respective acculturation processes and contributed to how they adhered to Japanese and American cultural values.

As discussed by Wooden (1981), Japanese Americans on the mainland faced more challenges living according to their Japanese cultural values within a society in which American cultural values predominated compared to Japanese Americans in Hawai'i. Because of Hawai'i's geographical isolation, and larger share of the population, Japanese Americans from Hawai'i may have experienced far less prejudice and discrimination compared to their mainland counterparts

(Bishop Museum, 1990). For generations, Asian Americans on the mainland have encountered overt discrimination (e.g., employment, housing) and lived in environments where prejudice against Asian Americans is widespread (U.S. Commission on Civil Rights, 1992; Weaver, 2012). With regard to employment, for example, Mar (1999) found earning disparities between Hawai'i and California Japanese males with those living in Hawai'i earning significantly more. Mar (1999) suggested this showed less labor discrimination in Hawai'i than California and that it could be attributed to Hawai'i's "colorblind" multicultural environment.

The relative security and protection from overt racism from the days of the plantation laborers (Ogawa & Grant, 1978) may have allowed Hawai'i Japanese American females to have a greater capacity to maintain the norms of their culture compared to their mainland counterparts. This may be partially due to historical events in Hawai'i, such as Post-World War II heroism, which benefited Hawai'i's Nisei, including Japanese females, with new opportunities in the pursuit of higher education and careers outside the home (Bishop Museum, 1990; Fan, 1996). During and after World War II, Japanese Americans on the mainland, however, may have experienced more prejudice and discrimination than other Asian American groups because of strong anti-Japan and anti-Japanese feelings (Iino, 1994).

Ogawa and Grant (1978) discussed in their book that the experience of discrimination and prejudice encountered by mainland and Hawai'i Japanese Americans were different in quality and quantity. Overt discrimination was frowned upon in Hawai'i whereas on the mainland such constraints barely existed (Ogawa & Grant, 1978). Anti-Japanese sentiment in California (the state with the most Japanese Americans) alone has been publicly evident for decades (Iino, 1994).

In order to succeed, Wooden (1981) discussed that Japanese Americans on the mainland had to adopt American cultural values and emulate the majority's norms. Alternatively, Japanese Americans in Hawai'i may have had less need to adapt to the dominant American culture in order to succeed. Japanese Americans in Hawai'i were found to belong to a larger and more cohesive group and therefore retained more "Japanese ways" compared to Japanese Americans on the mainland (Wooden, 1981). Not having to face the discrimination and forced acculturation experienced by their mainland counterparts, Japanese Americans in Hawai'i, in contrast, readily accepted and willingly chose to acculturate (Bishop Museum, 1990).

Alongside their acculturation into the American lifestyle, Japanese American women in Hawai'i also held on to Japanese values, such as the high regard for education, family, interpersonal relationships, and a sense of gratitude (Bishop Museum, 1990). Unlike their mainland counterparts, Japanese American females in Hawai'i have also existed in a multi-cultural environment in which there is the added culture of being "local." Possibly nowhere else in the United States do Japanese American women identify themselves strongly as being "local" in their home state alongside their strong identity as Americans (Bishop Museum, 1990). The "local" culture in Hawai'i was created in part due to its unique, multi-cultural societal conditions (Wooden, 1981) and developed as a process of "melting pot" assimilation as various ethnic groups blended together to exist in a shared society and with a shared dialect (Yamamoto, 1979).

This additional unique culture may have influenced the degree to which Hawai'i Japanese American females adhered to Japanese and American cultural values in this study. Mainland Japanese Americans, however, have had to actively hold on to their Japanese culture and have militantly questioned assimilation into the American culture (Wooden, 1981). These differences

may have influenced different degrees to which mainland and Hawai'i Japanese American females adhered to Japanese and American cultural values.

The two cultural scales (AVS-R and EAVS-AA-R) used in this study performed similarly to other studies. [See Tables 8 (AVS-R) and 9 (EAVS-AA-R) for mean scores, standard deviations, and description of the samples for this study and other studies.] Mean scores for the AVS-R showed adult Japanese American females in Hawai'i to be less enculturated than samples of adult Asian Americans on the mainland. Mean scores for the EAVS-AA-R showed adult Japanese American females in Hawai'i to be similarly acculturated to samples of adult Asian Americans on the mainland.

Table 8

AVS-R Mean (Standard Deviation) Scores of Present Study and Other Studies

Study	Mean (SD)	Sample
Yoshioka	2.40 (.25)	202 adult Japanese American females; mean age 57.95 (19.04)
Miville & Constantine (2007)	2.57 (.33)	201 Asian American college females born and raised in U.S.; 22.4% Japanese American; mean age 19.80 (1.66)
Park, et al. (2010)	2.83 (0.29)	149 Asian American college students; 57% female; 6.8% Japanese American; mean age 19.58(1.26); participants' perception of parents' adherence to Asian cultural values

Table 9

EAVS-AA-R Mean (Standard Deviation) Scores of Present Study and Other Studies

Study	Mean (SD)	Sample
Yoshioka	2.85 (.22)	202 adult Japanese American females; mean age 57.95 (19.04)
Kim, Ng, & Ahn (2005)	2.91 (.24)	88 Asian American college students; 66% female; mean age 19.28 (1.41)
Kim & Omizo (2005)	2.86 (.26)	156 Asian American college students; 62% females; mean age 19.30 (1.23)
Kim & Park (2015)	2.81 (.32)	158 Asian American college students; 55% females; mean age 19.66 (1.93)
Park & Kim (2008)	2.85 (.28)	210 Asian American college students; 54.3% females; mean age 20.4 (2.21)

The significant inverse association between adherence to Asian cultural values and mental health problems, such as depression, found in studies of mainland Asian American females may be due to their self-reporting more depressive symptoms than Japanese American females from Hawai'i. The self-reported depressive symptoms total score means for the CES-D among all the generations in this study was 7.31 ($SD = 6.36$). CES-D total score means of many studies measuring self-reported depressive symptoms of adult mainland Asian Americans were higher than the total score means found with this study (see Table 10 for total score means, standard deviations, and description of the samples for this study and various other studies).

Table 10

CES-D Total Score Means (Standard Deviations) of Present Study and Other Studies

Study	Mean (SD)	Sample
Yoshioka	7.32 (6.36)	202 adult Japanese American females; mean age 57.95 (19.04)
Kim, Seo, & Cain (2010)	Low American Orientation-13.72 (8.92) High American Orientation-11.48 (7.56) High Korean Orientation-12.28 (8.38) Low Korean Orientation-12.88 (8.42)	172 Korean Americans; 69% females; mean age 40.90 (3.53)
Kim, E. (2009)	12.29 (7.83)	78 Korean Americans; 63% females; mean age 43.68 (4.25)
Kuo (1984)	9.38 (8.07)	499 Chinese, Filipino, Japanese, Korean Americans; mean age 43.68 (4.25)
Lund, Chan, & Liang (2014)	17.16 (9.22)	117 Asian American females, first-year and senior undergraduate students; mean age 19 (1.5)

The self-reported depressive symptoms total score means for the SDS among all the generations in this study was 32.36 ($SD = 6.61$). There were no known studies showing SDS total score means of self-reported depressive symptoms specifically for adult mainland Asian Americans. But SDS total score means of studies measuring self-reported depressive symptoms with predominantly adult European American populations were higher than the total score means found with this study (see Table 11 for total score means, standard deviations, and description of the samples for this study and various other studies). Some studies with mainland samples have

found no significant differences in self-reported depressive symptoms between adult Asian American and European American females (Lam, Pepper, & Ryabchenko, 2004; Lund, Chan, & Liang, 2014). Other studies with mainland samples have found adult Asian Americans to have significantly higher levels of self-reported depressive symptoms than adult European Americans (Gratch, Bassett, & Attra, 1995; Okazaki, 2000). Therefore, the SDS total score means of adult European Americans may be similar to or less than mean scores of adult mainland Asian Americans, thereby showing that adult Asian American females on the mainland have higher self-reported depressive symptoms than adult Japanese American females in this study.

Table 11

SDS Total Score Means (Standard Deviations) of Present Study and Other Studies

Study	Mean (SD)	Sample
Yoshioka	32.36 (6.61)	202 adult Japanese American females; mean age 57.95 (19.04)
Conybeare, et al. (2012)	36.67 (8.66)	471 college students (majority Caucasian 84.7%; Asian or Pacific Islander 6.4%); 67% female; mean age 19.33 (2.54)
Gabrys and Peters (1985)	36.05 (4.41)	218 non-depressed participants; 53% females; mean age 23.09 (11.23)
	33.89 (8.25)	173 familial escorts of depressed patients; mean age 44.59 (8.24)

More exposure to discrimination and racism experienced by mainland Japanese American females compared to Hawai'i Japanese American females may explain the disparity between the studies. A meta-analysis by Nadimpalli and Hutchinson (2012) found seven studies in which discrimination was significantly directly associated with self-reported depressive symptoms among Asian Americans. Therefore, it could be argued that Hawai'i Japanese American females self-report fewer depressive symptoms than mainland Japanese American females because of their less exposure to discrimination. These two factors (differing degrees of self-reporting adherence to cultural values and depressive symptoms) could explain the different findings between previous studies and this study.

This study found no significant association between adherence to cultural values and self-reported depressive symptoms. But results indicated that the Nisei Japanese American female generation was significantly the least acculturated of the three groups. Nisei were also found to adhere the most to overall cultural values (i.e., the most enculturated with significantly higher composite scores of the two cultural scales than Sansei and Yonsei composite scores). Nisei were also found, but not significantly, to self-report the least amount of depressive symptoms. This association is consistent with the findings from the meta-analyses by Yoon et al. (2013) and a study by Williams et al. (2005) of Asian American females that enculturation was inversely associated with self-reported depressive symptoms.

Interestingly, there was a significant, strong negative correlation between acculturation and overall adherence to cultural values ($r = -.77, p = .000$) and a smaller, yet significant, negative correlation between acculturation and enculturation ($r = -.19, p = .006$). This may indicate that Japanese American females in Hawai'i are significantly either highly enculturated or highly acculturated. This finding for Japanese American females in Hawai'i supports the unilinear model of adherence to cultural values occurring on a single continuum. This study also supports the findings by Flannery, Reise, and Yu (2001) that the unilinear model was a better predictor of the acculturation and enculturation constructs that involve generational status compared to the multilinear model.

Additionally, the findings that Japanese American females in Hawai'i are significantly highly enculturated or highly acculturated may indicate the importance of adherence to a culture with regard to less self-reported depressive symptoms. This suggests that the more a minority individual adheres to a culture, whether adherence is to the culture of origin or the dominant American culture, the less they report depressive symptoms. This would support studies which

found significant direct associations between marginalized ethnic minorities and self-reported depressive symptoms (Kim, E., 2009; Kim, S., Gonzales, Stroh, & Wang, 2006) in which non-adherence to any culture is directly associated with self-reported depressive symptoms.

The Association Between Self-Reported Depressive Symptoms and Generational Status and When Moderated By Adherence to Cultural Values

The degree to which Japanese American females self-reported depressive symptoms were not significantly associated with their generational status or with their generational status when moderated by their degree of adherence to cultural values. Previous studies have found that the number of years living in the United States was a significant factor in levels of self-reported depressive symptoms among ethnic minorities. A study by Lam, Pacala, and Smith (1997) found an inverse association in the number of years living in the United States and self-reported depressive symptoms among Chinese Americans. A study by Yanagida and Marsella (1978) found a significant association between self-reported depressive symptoms and generational groups of Japanese American females. They found that two younger age and generational groups self-reported significantly more depressive symptoms than two older age and generational groups of Japanese American females. The present study found no clear direction of this association and was not consistent with the findings of either of these two studies.

This study did find significant differences among generations on adherence to American cultural values (acculturation), with Yonsei having the highest level of acculturation, followed by Sansei, then Nisei females. There were also significant differences among generations on overall adherence to cultural values (higher scores indicated higher enculturation), with Nisei having a significantly higher level of enculturation than Sansei and Yonsei females. These results showed that Nisei were the most enculturated of the three generations, Yonsei were the most

acculturated, and Sansei were in between, possibly the most bicultural of the three generations.

(See Appendix L for comments by Nisei and Sansei participants.) This supports Kitano's (1969) findings that change in values towards acculturation (American cultural values) occurs with each succeeding generation of Japanese Americans.

The Association Between Self-Reported Depressive Symptoms and Adherence to Cultural Values When Moderated By Perceived Social Support

Results of this study showed that perceived social support did not affect the degree to which adherence to Japanese, American, and overall cultural values was associated with levels of self-reported depressive symptoms. But perceived social support had a significant inverse association with self-reported depressive symptoms. That is, the more a Japanese American female perceived social support, the less she self-reported depressive symptoms and the less a Japanese American female perceived social support, the more she self-reported depressive symptoms. This finding is consistent with those from other studies that had found perceived social support had a positive influence on mental health (Cohen, Underwood, & Gottlieb, 2000; Henderson, 1992; Prati & Pietrantoni, 2010; Rhodes & Lakey, 1999; Sarason, Sarason, & Gurung, 1997). The findings also support studies with Asian American samples (Han, Kim, Lee, Pistulka, & Kim, 2007; B. J. Kim, Sangalang, & Kihl, 2012; Lee & Holm, 2012; Mui & Kang, 2006; Shibusawa & Mui, 2001).

The two perceived social support scales (MSPSS and PRQ85) used in this study performed similarly to other studies. [See Table 12 (MSPSS) for mean scores, standard deviations, and description of the samples and Table 13 (PRQ85) for total score means, standard deviations, and description of the samples for this study and other studies.] Mean scores for the MSPSS showed adult Japanese American females in Hawai'i had similar levels of perceived

social support as samples from other studies. Total score means for the PRQ85 showed adult Japanese American females in Hawai'i had slightly higher levels of perceived social support compared to samples from other studies.

Table 12

MSPSS Mean (Standard Deviation) Scores of Present Study and Other Studies

Study	Mean (SD)	Sample
Yoshioka	6.20 (.87)	202 adult Japanese American females; mean age 57.95 (19.04)
Dahlem et al. (1991)	5.58 (1.07)	154 college students; 79% female; mean age 26.5 (7.4)
Kazarian & McCabe (1991)	5.81 (.79)	165 college students; 58% female; mean age 19.53
Stanley et al. (1988)	5.20 (1.37)	50 older adults who met criteria for generalized anxiety disorder; 72% female; mean age 67.92 (6.81)
	6.40 (0.75)	94 normal controls; 69.1% females; mean age 67.53 (6.77)
Zimet et al. (1988)	5.80 (.86)	275 college students; 49% female; mean age 18.6 (.88)
Zimet et al. (1990)	6.01 (.90)	265 pregnant women in 3 rd trimester; mean age 25.8 (5.3)
	5.58 (.98)	55 1 st - and 2 nd -year pediatric residents; 60% female; mean age 29.2 (3.0)

Table 13

PRQ85 Total Score Means (Standard Deviations) of Present Study and Other Studies

Study	Mean (SD)	Sample
Yoshioka PRQ85	147.31 (17.21)	202 adult Japanese American females; mean age 57.95 (19.04)
Adams et al. (2000) PRQ85	121.73 (1.41)	400 female voters from rural U.S. county; mean age 47.21
Tsai et al. (2003) PRQ85	140.18 (24.83)	71 older people from arthritis foundation and visitors of local grocery store; 76% female; mean age 71.63
Weinert (1987) PRQ85	Range 139.03 to 142.78	248 males and females from general population

Kitano (1993) stated that interrelationships among Japanese Americans have helped them cope in stressful situations, and Prasol (2010) has stated that the social expectations in Japanese culture are important in their interpersonal relationships. This may explain the inverse relationship of self-reported depressive symptoms and perceived social support for Hawai'i

Japanese American females. That is, Hawai'i Japanese American females who did not believe social support was available to them were more likely to report depressive symptoms than those who believed they had social support.

Limitations

There were several limitations to the inferences that can be drawn from this study. These include questions with this study's measures, sample, and generalizations.

The measures used for adherence to cultural values (AVS-R and EAVS-AA-R) measured Asian views on cultural values of various Asian groups (Japanese, Chinese, Filipino, and Korean Americans) instead of exclusively measuring Japanese American views on cultural values. Although participants used in the development of these scales included Japanese Americans, including Japanese Americans from Hawai'i for the AVS-R scale, these scales might not have fully captured Japanese Americans' views on cultural values since development of the scales included other groups of Asian participants. Asian groups do share many similar cultural values, but they have been found to differ in the degree to which they adhere to various Asian values (Kim, B. S. K., Yang, Atkinson, Wolfe, & Hong, 2001). Kim, B. S. K. et al. (2001) examined group differences on Asian cultural values for the AVS. They found that compared to other Asian American groups, Japanese Americans scored higher on most of the Asian cultural values than the other groups (Chinese, Filipino, and Korean Americans), suggesting that Japanese Americans maintained a higher degree of adherence to Asian values than the other groups in the study.

Another limitation regarding the measures is that internal consistencies were not calculated for the six measures in this study. Raw scores entered for each measure were total scores for each of the participant's six questionnaires, and these total scores were used in the

statistical analyses. No individual item scores for each measure were entered into the SPSS program for the statistical analyses; therefore, no internal consistency analyses for the measures were performed for this study.

Another limitation was the sample size of each generation. Compared to Sansei and Yonsei female participants, Nisei female participants were difficult to recruit because of the limited sample of this generation alive and/or lucid enough to answer the questionnaires (the average age of Nisei in this study was about 80 years old). But the actual number of recruited Nisei participants ($n = 38$) exceeded the number anticipated (35) as well as the number required (28) to obtain a medium effect size for the multiple regression analyses. The sample size for each of the three generations may be proportionately representative of the Japanese American female population in Hawai'i, with the most Sansei ($n = 101$), then Yonsei ($n = 63$), and the least number of Nisei ($n = 38$) participants.

Another sample limitation is that this study consisted of Japanese American females who were predominantly educated (70 percent had an Associate's degree or higher). Therefore, the implications of these results may be sample specific and should be interpreted cautiously.

Additionally, it is important to consider that there may be variability in the data related to generational status. Some participants identified themselves with two generations (e.g., Sansei and Yonsei) and were instructed to force-choice their generation.

This study consisted of an area probability sample of Japanese American females from rural and urban areas of Hawai'i. The generalizability from the results of this study is limited to the state of Hawai'i. Despite this limitation, this study's finding on the significant inverse association of perceived social support and self-reported depressive symptoms provide additional

information for mental health providers about the need for social support when working with Japanese American females and their families.

This study was specific to Japanese American females; therefore, generalizations to the Japanese American male population in Hawai'i should be made with caution. Japanese American males may have been affected differently by their social and historical experiences in Hawai'i than Japanese American females. This may, in turn, affect how Japanese American males would self-report their depressive symptoms, adherence to cultural values, and perceived social support. Limitations notwithstanding, this study adds to the limited research on this unique ethnic population in Hawai'i.

Implications

Although most previous studies found significant associations on adherence to cultural values with self-reported depressive symptoms among mainland Asian Americans, this study's findings did not reach significance on associations for either Japanese or American values with self-reported depressive symptoms. There may be possible protective factors (e.g., geographical, historical, societal) experienced by Hawai'i Japanese American females that may have shielded them from significantly showing direct or inverse associations of self-reported depressive symptoms with adherence to cultural values as found with mainland Asian and Japanese American females. Research on what these possible protective variables as well as any mediator and moderator variables may be for Japanese American females in Hawai'i may help promote prevention and intervention strategies for Japanese American females as well as other minority females on the mainland. Elucidation of such variables may be especially important given the increasing population of Asian Americans, particularly on the mainland.

This study's target population was Japanese American females living in Hawai'i.

Replication of this study with females from other ethnic minority groups in Hawai'i would be interesting to see if findings of this study extend to females from other ethnic minority groups in Hawai'i as well. If comparative findings with females from mainland ethnic minority groups are similar to this study, attempting to determine what these protective variable or variables might be could also promote better mental health among ethnic minority females beyond Asian American females in Hawai'i and on the mainland.

The results of the present study provided initial evidence that Japanese American females in Hawai'i highly adhere to a culture, to either the Japanese culture or the dominant American culture. It has also been suggested from this study that Japanese American females in Hawai'i reported less depressive symptoms than Asian American females on the mainland. Replication of this study may be extended to females of other minority ethnic groups in Hawai'i to determine any significant differences in adherence to cultural values and self-reported depressive symptoms between female minority ethnic groups in Hawai'i and the mainland. Significant findings would strengthen findings from other studies on the importance of adherence to cultural norms as a possible form of promotion for better mental health among American ethnic minority females.

The significant results of the inverse association of perceived social support and self-reported depressive symptoms in this study show the importance of perceived social support as an attenuating factor for self-reported depressive symptoms among Japanese American females in Hawai'i. This study adds to the plethora of other studies on the significant impact perceived social support has on self-reported depressive symptoms. It also calls attention to the importance for clinicians to use strategies that include increased social support by informing and emphasizing to collateral individuals of their clients of the value of social support.

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APPENDIX A

Study Information Sheet

Title of Study: Influence of Cultural Values

Investigators: Dawn T. Yoshioka, M.A., University of Hawai'i at Mānoa, Department of Psychology
Stephen N. Haynes, Ph.D., University of Hawai'i at Mānoa, Department of Psychology

Description: The purpose of this study is to investigate the influence of cultural values on well-being. Information from this investigation will be used to help determine how much adherence to an individual's culture of origin has on well-being.

Anonymity: For this study, you will NOT be asked to give any identifying information, such as your name, date of birth, social security number, etc. The questionnaires you complete will be identified only by code number. Your packet of questionnaires will be retained by the researcher who will keep the results confidential. Thus, your name will never be associated with any information you provide.

Anticipated Risks and Benefits: In the unlikely event you feel distressed at any time, you will be able to contact the investigator, Dawn Yoshioka, at 386-8120. A potential benefit to you is knowing that you are contributing to a scholarly investigation designed to increase our ability to further understand the influence of social mechanisms on well-being.

Voluntary: Your participation in the study is strictly voluntary. You may either refuse to participate or withdraw from the study at any time without any penalty to you.

If you have any questions about the research or if you would like to a copy of the results when the study is completed, you can contact Dawn Yoshioka at 386-8120.

IF YOU FEEL FULLY INFORMED ABOUT THE STUDY AND ARE WILLING TO PARTICIPATE,
PLEASE CALL **DAWN YOSHIOKA AT 386-8120**. MAHALO!

APPENDIX B

**Influence of Cultural Values Study
Project Description**

Dear Participant:

You are being invited to participate in a study about cultural values and well-being. If you are 18 years of age or older, and a Japanese American female, you are eligible to participate. If you are interested, please read the attached research description and consent form; and if you agree to participate, sign the consent form, keep the copy of the consent form, then go ahead and fill out the questionnaires in this packet. If you are not eligible or not interested in participating in this study, please return the entire packet to the researcher.

Please feel free to ask me any questions, or you can call me at 386-8120. Mahalo!

Sincerely,

Dawn T. Yoshioka, M.A.
Ph.D. Candidate
University of Hawai'i at Mānoa
Department of Psychology

APPENDIX C

Research Description and Consent Form

Title of Study: Influence of Cultural Values on Well-being

Investigators: Dawn T. Yoshioka, M.A., University of Hawai'i at Mānoa, Department of Psychology
Stephen N. Haynes, Ph.D., University of Hawai'i at Mānoa, Department of Psychology

Description: The purpose of this study is to investigate the influence of cultural values on potential emotional and behavioral problems. Information from this investigation will be used to help determine how much adherence to an individual's culture of origin has on well-being. The principal investigator, Dawn Yoshioka, is a graduate student conducting this study as a component of her graduate degree program.

Procedures: If you agree to participate, please complete the enclosed questionnaires in the order they are presented. Completion of the questionnaires should take about 15 minutes. After you complete the questionnaires, please place them back into the envelope along with the signed copy of this form, and return the envelope to the researcher. You may keep the copy of this form and the project description letter for your records. (Approximately 185 participants are expected to complete this study.)

Anonymity: You will not be asked to give any identifying information, such as your name, date of birth, social security number, etc. The questionnaires you complete will be identified only by code number. Your packet of questionnaires will be retained by the researcher who will keep the results confidential. Thus, your name will never be associated with any information you provide.

Anticipated Risks and Benefits: In the unlikely event you feel distressed at any time:

- You can contact the principal investigator, Dawn Yoshioka, for assistance at 386-8120;
- Participants from the University of Hawai'i at Mānoa may contact counselors at the Student Counseling and Development Center, Queen Lili'uokalani Center for Student Services, Room 312, in person or call 956-7927, Monday through Friday, 8:00 a.m. to 4:30 p.m.;
- You can call the Adult Mental Health Division of the State of Hawai'i, Department of Health, at 832-3100, available 24 hours a day, 7 days a week;
- You can call Mental Health America of Hawai'i at 521-1846, available Monday through Friday, 9:00 a.m. to 4:30 p.m.; and/or
- You can visit the Mental Health America website, www.mentalhealth-hi.org, to consult the Finding Help Guide phone list of agencies and programs available in Hawai'i.

(Examples of questions to be asked: "I felt depressed," "I am more irritable than usual," "I felt that people dislike me.")

A potential benefit to you is knowing that you are contributing to a scholarly investigation designed to increase our ability to further understand the influence of social mechanisms on well-being.

Voluntary: Your participation in the study is strictly voluntary. You may either refuse to participate or withdraw from the study at any time without any penalty to you.

If you have any questions about the research or if you would like to a copy of the results when the study is completed, you can contact Dawn Yoshioka at 386-8120.

IF YOU FEEL FULLY INFORMED ABOUT THE STUDY AND ARE WILLING TO PARTICIPATE, PLEASE SIGN BELOW AND FILL OUT THE ATTACHED MATERIALS IN THE ORDER THEY ARE PRESENTED. YOUR PARTICIPATION WILL BE GREATLY APPRECIATED. YOU MAY RETAIN THE EXTRA COPY OF THIS FORM AND THE PROJECT DESCRIPTION LETTER FOR YOUR RECORDS.

(If you cannot obtain satisfactory answers to your questions or have comments or complaints about your treatment in this study, contact: Human Studies Program, University of Hawai'i, 1960 East West Road, Suite B-104, Honolulu, Hawai'i 96822. Phone: 808-956-5007. E-mail address: uhirb@hawaii.edu.)

Statement of Consent: I have read this consent form and have been given the opportunity to ask questions. I give my consent to participate in this study.

Signature: _____ Date: _____

APPENDIX D

Participant No. _____

PERSONAL INFORMATION FORM

Today's Date: _____

Age: _____ years

Japanese American Generation Status:

_____ **Issei** (first generation Japanese American; born in Japan and came to the U.S.)

_____ **Nisei** (second generation Japanese American; child of Issei)

_____ **Sansei** (third generation Japanese American; child of Nisei)

_____ **Yonsei** (fourth generation Japanese American; child of Sansei)

_____ **Gosei** (fifth generation Japanese American; child of Yonsei)

Marital Status: _____Single _____Married _____Separated _____Divorced _____Widowed

Last formal education completed:

_____Elementary school

_____Intermediate/Middle school

_____High school degree

_____Some college

_____Associate's degree

_____Bachelor's degree

_____Master's degree

_____Ph.D./M.D.

APPENDIX E

AVS-R

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

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

- _____ 1. One should not deviate from familial and social norms.
- _____ 2. Children should not place their parents in retirement homes.
- _____ 3. One need not focus all energies on one's studies.
- _____ 4. One should be discouraged from talking about one's accomplishments.
- _____ 5. Younger persons should be able to confront their elders.
- _____ 6. When one receives a gift, one should reciprocate with a gift of equal or greater value.
- _____ 7. One need not achieve academically in order to make one's parents proud.
- _____ 8. One need not minimize or depreciate one's own achievements.
- _____ 9. One should consider the needs of others before considering one's own needs.
- _____ 10. Educational and career achievements need not be one's top priority.
- _____ 11. One should think about one's group before oneself.
- _____ 12. One should be able to question a person in an authority position.
- _____ 13. Modesty is an important quality for a person.
- _____ 14. One's achievements should be viewed as family's achievements.
- _____ 15. One should avoid bringing displeasure to one's ancestors.
- _____ 16. One should have sufficient inner resources to resolve emotional problems.
- _____ 17. The worst thing one can do is to bring disgrace to one's family reputation.
- _____ 18. One need not remain reserved and tranquil.
- _____ 19. One should be humble and modest.
- _____ 20. Family's reputation is not the primary social concern.
- _____ 21. One need not be able to resolve psychological problems on one's own.
- _____ 22. Occupational failure does not bring shame to the family.
- _____ 23. One need not follow the role expectations (gender, family hierarchy) of one's family.
- _____ 24. One should not make waves.
- _____ 25. One need not control one's expression of emotions.

APPENDIX F

EAVS-AA-R

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

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

- _____ 1. I think it is fine for an unmarried woman to have a child.
- _____ 2. Sometimes it is necessary for the government to stifle individual development.
- _____ 3. You can do anything you put your mind to.
- _____ 4. Single women should not have children and raise them alone.
- _____ 5. I prefer not to take on responsibility unless I must.
- _____ 6. I do not like to serve as a model for others.
- _____ 7. It is okay if work interferes with the rest of my life.
- _____ 8. It is okay to allow others to restrict one's sexual freedom.
- _____ 9. No one is entitled to complete sexual freedom without restriction.
- _____ 10. A woman should not have a child unless she is in a long-term relationship.
- _____ 11. I follow my supervisor's instructions even when I do not agree with them.
- _____ 12. The world would be a better place if each individual could maximize his or her development.
- _____ 13. Partners do not need to have similar values in order to have a successful marriage.
- _____ 14. I cannot approve of abortion just because the mother's health is at risk.
- _____ 15. It is okay for a woman to have a child without being in a permanent relationship.
- _____ 16. Friends are very important.
- _____ 17. Faithfulness is very important for a successful marriage.
- _____ 18. Monetary compensation is not very important for a job.
- _____ 19. A student does not always need to follow the teacher's instructions.
- _____ 20. Luck determines the course of one's life.
- _____ 21. Cheating on one's partner doesn't make a marriage unsuccessful.
- _____ 22. Greater emphasis on individual development is not a good thing.
- _____ 23. I have always enjoyed serving as a model for others.
- _____ 24. Being humble is better than expressing feelings of pride.
- _____ 25. Faithfulness is not important for a successful marriage.

APPENDIX G

Center for Epidemiologic Studies Depression Scale (CES-D)

Below is a list of the ways you might have felt or behaved. Please tell me how often you have felt this way during the past week by placing a check mark (✓) in the applicable column.

	During the Past Week			
	Rarely or None of the time (less than 1 day)	Some or a Little of the time (1-2 days)	Occasionally or a Moderate amount of time (3-4 days)	Most of All of the time (5-7 days)
1. I was bothered by things that usually don't bother me.				
2. I did not feel like eating; my appetite was poor.				
3. I felt that I could not shake off the blues even with help from my family or friends.				
4. I felt I was just as good as other people.				
5. I had trouble keeping my mind on what I was doing.				
6. I felt depressed.				
7. I felt that everything I did was an effort.				
8. I felt hopeful about the future.				
9. I thought my life had been a failure.				
10. I felt fearful.				
11. My sleep was restless.				
12. I was happy.				
13. I talked less than usual.				
14. I felt lonely.				
15. People were unfriendly.				
16. I enjoyed life.				
17. I had crying spells.				
18. I felt sad.				
19. I felt that people dislike me.				
20. I could not get "going."				

APPENDIX H

Zung Self-Rating Depression Scale (SDS)

For each item below, please place a check mark (✓) in the column which best describes how often you felt or behaved this way during the past several days.

Place check mark (✓) in correct column	A little of the time	Some of the time	Good part of the time	Most of the time
1. I feel down-hearted and blue.				
2. Morning is when I feel the best.				
3. I have crying spells or feel like it.				
4. I have trouble sleeping at night.				
5. I eat as much as I used to.				
6. I still enjoy sex.				
7. I notice that I am losing weight.				
8. I have trouble with constipation.				
9. My heart beats faster than usual.				
10. I get tired for no reason.				
11. My mind is as clear as it used to be.				
12. I find it easy to do the things I used to.				
13. I am restless and can't keep still.				
14. I feel hopeful about the future.				
15. I am more irritable than usual.				
16. I find it easy to make decisions.				
17. I feel that I am useful and needed.				
18. My life is pretty full.				
19. I feel that others would be better off if I were dead.				
20. I still enjoy the things I used to.				

APPENDIX I

Multidimensional Scale of Perceived Social Support

Instructions: We are interested in how you feel about the following statements. Read each statement carefully. Indicate how you feel about each statement.

Circle "1" if you **Very Strongly Disagree**

Circle "2" if you **Strongly Disagree**

Circle "3" if you **Mildly Disagree**

Circle "4" if you are **Neutral**

Circle "5" if you **Mildly Agree**

Circle "6" if you **Strongly Agree**

Circle "7" if you **Very Strongly Agree**

- | | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1. There is a special person who is around when I am in need. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2. There is a special person with whom I can share my joys and sorrows. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3. My family really tries to help me. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4. I get the emotional help and support I need from my family. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5. I have a special person who is a real source of comfort to me. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6. My friends really try to help me. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7. I can count on my friends when things go wrong. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8. I can talk about my problems with my family. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 9. I have friends with whom I can share my joys and sorrows. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 10. There is a special person in my life who cares about my feelings. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 11. My family is willing to help me make decisions. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 12. I can talk about my problems with my friends. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

APPENDIX J

Personal Resource Questionnaire 85

Below are some statements with which some people agree and others disagree. Please read each statement then **CIRCLE** the response most appropriate for you. There is no right or wrong answer.

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

- | | | | | | | | |
|--|---|---|---|---|---|---|---|
| 1. There is someone I feel close to who makes me feel secure. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2. I belong to a group in which I feel important. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3. People let me know that I do well at my work (job, homemaking). | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4. I can't count on my relatives and friends to help me with my problems. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5. I have enough contact with the person who makes me feel special. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6. I spend time with others who have the same interests I do. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7. There is little opportunity in my life to be giving and caring to another person. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8. Others let me know that they enjoy working with me (job, committees, projects). | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 9. There are people who are available if I needed help over an extended period of time. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 10. There is no one to talk to about how I am feeling | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 11. Among my group of friends we do favors for each other. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 12. I have the opportunity to encourage others to develop their interests and skills. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 13. My family lets me know that I am important for keeping the family running. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 14. I have relatives or friends that will help me out even if I can't pay them back. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 15. When I am upset there is someone I can be with who lets me be myself. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 16. I feel no one has the same problems as I. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 17. I enjoy doing little "extra" things that make another person's life more pleasant. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 18. I know that others appreciate me as a person. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 19. There is someone who loves and cares about me. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 20. I have people to share social events and fun activities with. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 21. I am responsible for helping provide for another person's needs. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 22. If I need advice there is someone who would assist me to work out a plan for dealing with the situation. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 23. I have a sense of being needed by another person. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 24. People think that I'm not as good a friend as I should be. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 25. If I got sick, there is someone to give me advice about caring for myself. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

APPENDIX K

PACKETS LOG

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APPENDIX L

Qualitative Data

The following Sansei female wrote a comment on her bicultural struggle:

53-year-old married Sansei: "This is difficult to answer. I think my generation (3rd) is right in between 'respectful' but 'wanting to be heard.' Also, I'm going thru (sic) some work issues right now, so answers of sadness (sic) and worries are stronger currently than they would have been a few years ago. (I'm retirement age working for Corp. America.)"

The following Sansei, who self-reported elevated symptoms of depression, verbally commented on her bicultural struggle:

Cathy: "I feel torn between two cultures. Even though I know I should see someone for my depression, there is still that stigma on getting help and going to therapy." She also commented that she sometimes does not tell her daughters things because of conflicting values.

The following are comments made by a Sansei female and two Nisei females about their views of cultural values:

Myrna (71-year-old Sansei): "This study made me think about my values. For example, how I felt about unwed mothers. When I was growing up, it was a 'no-no' to have a child out of wedlock, but now it's so acceptable to do so." She commented that she found this change in values interesting.

Jenny (Nisei): "Culture is very important, to follow what parents say."

Teruko (Nisei): "I've lived a long life with so many different things that happened and gone through so much, like marriage, divorced children, that I don't think the same as most people (her age). I've changed the way I look at things. I have a friend who did not approve of her son's choice of a wife because she wasn't Japanese--she was Chinese. This girl was the only girl her son brought home and he never married, so I scolded her for her son never marrying."