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# Etiology Beliefs Moderate the Influence of Emotional Self-Control on Willingness to See a Counselor through Help-Seeking Attitudes among Asian American Students

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Counselor through Help-Seeking Attitudes Among Asian American Students

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### Abstract

To identify correlates of Asian American professional help-seeking, we tested a mediation model describing Asian American help-seeking (Asian value of emotional self-control → help-seeking attitudes → willingness to see a counselor; Hypothesis 1) in a sample of Asian American college students from the Pacific Northwest region of the United States ( $N = 232$ ). We also examined biological and spiritual etiology beliefs as moderators of the mediation model (Hypotheses 2a & 2b). Our findings indicated that help-seeking attitudes significantly mediated the relation between emotional self-control and willingness to see a counselor, consistent with our mediation hypothesis. Furthermore, biological and spiritual etiology beliefs moderated this mediation model, providing partial support for our moderation hypotheses. Our findings suggest that researchers can contribute to the Asian American literature by investigating conditions in which established Asian American help-seeking models may or may not hold. In addition, the findings suggest additional nuanced ways for counselors to reach out to Asian American students to increase their mental health service utilization.

*Keywords:* Asian values, help-seeking, etiology beliefs

Etiology Beliefs Moderate the Influence of Emotional Self-Control on Willingness to See a Counselor through Help-Seeking Attitudes Among Asian American Students

Over the years, researchers have consistently highlighted the problem of mental health service underutilization within the Asian American community (e.g., Abe-Kim et al., 2007; Cheung & Snowden, 1990; S. Sue, Cheng, Saad, & Chu, 2012; S. Sue & McKinney, 1975). This mental health disparity manifests in a multifaceted manner, such as lower service utilization rates relative to Whites (Matsuoka, Breaux, & Ryujin, 1997), presenting for professional help with more severe symptoms compared to other races (S. Chen, Sullivan, Lu, & Shibusawa, 2003), and a preference for receiving help from sources outside of professional mental health services (e.g., mental health courses; Ruzek, Nguyen, & Herzog, 2011). What is especially troubling is the recent evidence based on national data indicating that Asian Americans continue to lag behind other groups (African Americans, Hispanics, and non-Hispanic Whites) in mental health service utilization, even while factoring in rates of distress (S. Sue et al., 2012). Therefore, a continued effort among researchers to unpack the contributing factors behind this mental health disparity is needed. We sought to add to this literature by (a) replicating an existing mediation model utilizing a more precise conceptualization of the predictor, and (b) testing the moderating effects associated with biological and spiritual etiology beliefs.

**Test of Mediation: Emotional Self-Control as a Predictor**

In the endeavor to identify contributing factors to Asian American help-seeking, one popular approach in the literature has been to examine cultural correlates of help-seeking among Asian Americans (e.g., Atkinson & Gim, 1989; Miller, Yang, Hui, Choi, & Lim, 2011). In particular, a mediating mechanism in which *Asian values* inversely predicts *willingness to see a counselor* through *help-seeking attitudes* has been empirically-identified (B .S. K. Kim &

Omizo, 2003; Liao, Rounds, & Klein, 2005). This is an important discovery in the Asian American literature, as it points to the explanatory role of professional help-seeking attitudes.

However, we noticed two issues related to this mediation model that warranted further empirical attention, and they serve as the springboard for our mediation and moderated mediation analyses. First, the mediation model (B. S. K. Kim & Omizo, 2003; Liao et al., 2005) was tested using a unidimensional assessment of Asian values that included Asian values of emotional self-control, collectivism, humility, conformity to norms, family recognition through achievement, and filial piety (B. S. K. Kim, Atkinson, & Yang, 1999). As noted elsewhere (B. S. K. Kim, Li, & Ng, 2005; P. Y. Kim & Lee, 2013), such an assessment of Asian values results in an inability to confidently discuss specific Asian value(s) in relation to help-seeking outcomes. Thus, our study adds to the literature, by examining a narrower conceptualization of Asian values to replicate the mediating effect – namely, *emotional self-control* as the predictor in the mediation model (see Figure 1). We provide below the rationale for the prediction of an association between emotional self-control and help-seeking attitudes (predictor-mediator relation in the mediation model, or path A); because the justification for the relation between help-seeking attitudes and willingness to see a counselor has already been made in prior published studies (mediator-dependent variable relation in the mediation model, or path B; B. S. K. Kim & Omizo, 2003; P. Y. Kim & Park, 2009), we do not elaborate on it in this paper.

The cultural weight placed upon emotional inhibition in the Asian context may be an especially important correlate of Asian American help-seeking. In Western settings, professional counseling is often associated with an emphasis on emotional exploration (see Jensen & Bergin, 1988; see also Bergin, 1991). Furthermore, this norm related to professional help implies that a favorable view toward emotional expression may be related to more favorable attitudes toward

professional help-seeking; consistent with this idea, a study found a direct relation between emotional openness and favorable help-seeking attitudes in a sample of college students in the United States (Komiya, Good, & Sherrod, 2000). In contrast, scholars have noted that emotional restraint is viewed as a noble outcome in the Asian context (B. S. K. Kim, Atkinson, & Umemoto, 2001; D. W. Sue & Sue, 2012). Given the evidence, it makes sense that an endorsement of emotional self-control may be related to unfavorable help-seeking attitudes among Asian Americans. Consistent with this idea, P.Y. Kim and Lee (2013) found that among the several core Asian values examined, only emotional self-control was significantly associated with professional help-seeking attitudes. In addition, others have reported a significant correlation between emotional self-control and help-seeking attitudes (B. S. K. Kim et al., 2005). In sum, based on the conceptual and empirical evidence for the relations between emotional self-control and help-seeking attitudes (path A), and help-seeking attitudes and willingness to see a counselor (path B), combined with the prior studies that have found a mediating effect utilizing a more global assessment of Asian values (B. S. K. Kim & Omizo, 2003; Liao et al., 2005), we sought to replicate the mediation model, but operationalizing Asian values as emotional self-control (Hypothesis 1).

Second, we observed a puzzling inconsistency in the empirical literature related to the mediation model: P.Y. Kim and Park (2009) reported that help-seeking attitude was not a significant mediator in the Asian values-willingness to see a counselor relation, contrary to the prior studies that found a significant mediation (B. S. K. Kim & Omizo, 2003; Liao et al., 2005). We then asked the critical question: which factors contribute to the inconsistency in the observation of the mediating effect? One possibility is that this variability in the strengths of the mediation model is a result of moderated mediation, in which moderators can influence the size

of the mediating effect (Muller, Judd, & Yzerbyt, 2005; Preacher, Ruckers, & Hayes, 2007). Frazier, Tix, and Barron (2004) write that the test of moderation is concerned with the question of “for whom” the predictor-outcome relation is magnified (p. 116). Extending this idea, we posit that the identification of moderators influencing our mediation model of Asian American help-seeking is crucial in answering the question of “for whom” the explanatory mechanism is amplified or reduced. To our knowledge, no studies have investigated the factors moderating the influence of Asian values on willingness to see a counselor through help-seeking attitudes. Therefore, our second aim was to test for moderated mediation, applying S. X. Chen and Mak’s (2008) theorizing on etiology beliefs.

### **Tests of Moderation: Etiology Beliefs and Asian American Help-Seeking**

We reasoned that beliefs about what causes mental illness (i.e., *etiology beliefs*) can influence the strength of our mediation model, based on extant theorizing and empirical findings related to causal beliefs. In particular, a perspective posited by S.X. Chen and Mak (2008) serves as the rationale for our investigation of etiology beliefs as moderators. S. X. Chen and Mak (2008) assert that etiology beliefs can be dichotomously conceptualized based on whether the beliefs tend to be more congruent with a Western or collectivistic worldview. More specifically, S. X. Chen and Mak (2008) note that etiology beliefs placing the responsibility for psychological distress on factors outside of the individual (e.g., a view that mental illness is hereditary) are more consistent with a Western perspective, whereas beliefs that emphasize the shortcomings of the individual are more consistent with a collectivistic perspective. An implication of this theorizing for help-seeking is that Asian Americans with views that are more congruent with a Western worldview may have more favorable help-seeking outcomes, whereas incongruence may be related to unfavorable help-seeking outcomes (see S. X. Chen & Mak, 2008). This is also

broadly consistent with the notion that an important underlying factor for Asian American underutilization of mental health services may be the mismatch between Asian American and Western ideals related to what constitutes health and effective professional treatment for mental health issues (see DHHS, 2001). In sum, we sought to identify and test two types of etiology beliefs as moderators, each representing views consistent with Western and Eastern perspectives.

We briefly note two issues prior to delving into our rationale for examining the moderators of the mediating effect. First, although we recognize that S.X. Chen and Mak (2008) describe environmental/hereditary and social-psychological beliefs (a distinction based on Luk & Bond, 1992) as being congruent with Western and collectivistic worldviews, respectively, we decided to examine *biological* and *spiritual etiology beliefs* to allow for more specificity in the assessment of etiology beliefs. Second, for our moderated mediation predictions, we positioned the two etiology beliefs as moderators of the relation between emotional self-control and help-seeking attitudes (path A; see Figure 1). Although we recognize that there are numerous possibilities regarding which path(s) are moderated within mediation (Hayes, 2013), we focused specifically on the A path because the non-significant mediating effect in P.Y. Kim and Park (2009) was driven by a non-significant relation between Asian values (predictor) and help-seeking attitudes (mediator).

Below, we first outline why *biological* and *spiritual etiology beliefs* should be considered as being congruent with Western and Eastern perspectives, respectively. We then outline the rationale for testing the moderating effects associated with the two etiology beliefs.

**Biological etiology beliefs as a moderator.** We examined *biological etiology beliefs* as a set of beliefs that are congruent with a Western worldview. There are some empirical findings that support this notion of a cultural difference in the emphasis (or lack thereof) of a biological



contribution to psychological distress. For example, Whites were more likely to report biologically-based etiology beliefs for depression, compared to African Americans, Asian/Pacific Islanders, and Hispanics (Givens, Houston, Van Voorhees, Ford, & Cooper, 2007). Similarly, Narikiyo and Kameoka (1992) found that Japanese Americans endorsed biology-related causal beliefs such as “diet” and “hereditary” less compared to White Americans. Taken together, these studies suggest that a biological explanation for psychological distress may be more salient in a Western context compared to an Asian setting.

Furthermore, biological etiology beliefs may be associated with more favorable help-seeking outcomes among Asian Americans, given the compatibility with a Western perspective. There is some limited empirical evidence linking biological beliefs with improved Asian American help-seeking outcomes. For example, a biological understanding of depression was related to an increased likelihood of help-seeking in a sample of Asian Americans (Wong, Tran, Kim, Van Horne Kerne, & Calfa, 2010). Likewise, S. X. Chen and Mak (2008) reported that the relation between environment/hereditary causal beliefs (which included biological attributions) and likelihood of help-seeking in a diverse sample (European Americans, Chinese Americans, Hong Kong Chinese, and Mainland Chinese) was in the expected positive direction. Altogether, these findings suggest that biological beliefs may lead to more favorable views of help-seeking (and by extension, less unfavorable views). However, although these studies have highlighted the direct relation between biological beliefs and help-seeking, to our knowledge, no researchers have examined biological etiology beliefs as a moderating variable in the context of a mediation model involving cultural values and help-seeking attitudes. As discussed earlier, such an effort allows for the identification of the circumstances in which the mediating effect is amplified or reduced. Therefore, we sought to advance the literature, by examining biological etiology beliefs

as a moderator of our mediation model. Given the theorizing that biological beliefs are aligned with a Western worldview due to its emphasis on external reasons for mental illness, combined with the empirical evidence for the positive relation between biological beliefs and help-seeking outcomes, we postulated that biological beliefs will moderate our mediation model, specifically by attenuating the negative indirect effect in our mediation model (Hypothesis 2a; see Figure 1).

**Spiritual etiology beliefs as a moderator.** We also examined *spiritual etiology beliefs* as a set of beliefs congruent with an Asian worldview. In support of this categorizing, Mallinckrodt, Shigeoka, and Suzuki (2005) listed etiology beliefs that Asian Americans who were most dissimilar from Western counselors in their causal beliefs tended to rely on, and some of these can be considered spiritual explanations (e.g., punishment for wrongdoings). Likewise, Narikiyo and Kameoka (1992) reported that Japanese American participants endorsed “curse” as a cause of mental illness significantly more compared to White participants. Taken together, these findings suggest that spiritual etiology beliefs among Asian Americans are salient and may be discrepant from what is “typical” in a Western setting.

In addition, Asian American help-seeking processes may be influenced by spiritual or religious elements. Scholars have noted that religious variations in general (Goldston et al., 2008) and a spiritual conceptualization of mental illness in particular (Uba, 1992) may unfavorably influence Asian American help-seeking. Similarly, Yeh, Inman, Kim, and Okubo (2006) reported qualitative evidence suggesting that fatalism, a spiritual concept often associated with the Asian context, may be a contributing factor to not seeking professional mental health services. Finally, there is also empirical evidence for the direct relation between spiritual beliefs and unfavorable help-seeking attitudes among Vietnamese Americans (Luu, Leung, & Nash, 2009). Overall, a stronger level of spiritual etiology beliefs may amplify unfavorable help-

seeking processes among Asian Americans, given the theorizing that spiritual etiology beliefs are less prevalent in the Western setting, as well as the empirical evidence for the direct relation between spiritual beliefs and unfavorable help-seeking outcomes. Based on these evidence, we predicted that spiritual etiology beliefs will moderate our mediation model, specifically by amplifying the negative indirect effect in our mediation model (Hypothesis 2b; see Figure 1).

### **Study Hypotheses**

*Hypothesis 1:* Help-seeking attitudes will mediate the inverse relation between emotional self-control and willingness to see a counselor.

*Hypotheses 2a and 2b:* The mediation model specified in *Hypothesis 1* will be conditional upon levels of biological and spiritual etiology beliefs. Specifically, the negative indirect effect of Asian values on willingness to see a counselor through help-seeking attitudes is hypothesized to be moderated in the following manner:

2a: Biological beliefs will attenuate it;

2b: Spiritual beliefs will amplify it.

### **Method**

#### **Participants**

Participants for this study were 232 Asian American college students (159 females, 72 males, and 1 with missing gender information; mean age = 20.10,  $SD = 1.76$ ) from the Pacific Northwest region of the United States. We recruited participants from four 4-year institutions in the Pacific Northwest (3 private [ $n = 133, 28, 27$ ], 1 public [ $n = 41$ ]; three participants did not report institutional affiliation) to maximize the number of Asian American participants. The majority of the participants ( $n = 184; 79.3%$ ) identified U.S. as their place of birth and had lived in the U.S., on average, 17.91 years ( $SD = 4.74$ ). There were 58 (25%) freshmen, 69 (29.7%)

sophomores, 55 (23.7%) juniors, and 50 (21.6%) seniors. Some participants ( $n = 59$ ; 25.4%) noted that they have experience receiving psychological counseling. Several Asian ethnic groups were represented: 56 (24.1%) Korean, 52 (22.4%) Chinese, 39 (16.8%) Japanese, 38 (16.4%) Filipino, 8 (3.4%) Vietnamese, 7 (3.0%) Taiwanese, 4 (1.7%) Indian, 2 (0.9%) Cambodian, 1 (0.4%) Indonesian, 1 (0.4%) Laotian, 1 (0.4%) Hmong, and 1 (0.4%) Thai. Fourteen participants (6.0%) identified as multiethnic (e.g., two or more Asian groups), 5 (2.2%) identified as biracial, 1 (0.4%) identified as multiethnic and biracial, and 2 (0.9%) respondents described their ethnicity with terms that made it difficult to determine whether they were biracial, multiracial, or multiethnic (e.g., “mixed.”).

We recruited participants through the Registrar’s Office, student organizations serving ethnic minority students, a General Psychology course, and courses taught in departments with large number of Asian American students (e.g., Department of American Ethnic Studies). All potential participants received an email introducing the study and containing a hyperlink to an online survey. By clicking on the hyperlink, participants were directed first to an online consent form and then to the study measures. The number of respondents that began the survey was 289, but this was reduced to 232 after we deleted those not eligible to participate in our study (i.e., did not identify as at least 18 years of age, Asian American, and/or undergraduate student;  $n = 20$ ) and those missing more than 15% of items on any of the study measures ( $n = 37$ ). Of the 232 remaining participants, missingness at the item level was  $< 2.3\%$ . According to Schafer (1999), when less than 5% of data is missing, resulting estimates are not significantly biased. Because our level of missingness was well below Schafer’s conservative estimate, we averaged the items to create scale composites without conducting multiple imputation at the item level. Consequently, at the scale level, there were no missing data.

Participants were compensated for participation either through credit for General Psychology or a chance to obtain an online bookstore gift card priced at \$100 (2 drawings), \$50 (3 drawings), or \$25 (4 drawings). All participants were treated in accordance with the standards set forth by the American Psychological Association.

### Measures

**Background information.** Participants provided responses to a set of questions assessing age, gender, ethnicity, school level, birth place, time of residency in the United States, institutional affiliation, and prior experience of receiving professional counseling.

**Main study variables.** Participants also responded to several measures assessing the main study variables (1 predictor [emotional self-control], 1 mediator [help-seeking attitudes], 1 outcome variable [willingness to see a counselor], and 2 moderators [biological and spiritual etiology beliefs]). For all the measures, we used the mean score for analyses.

**Emotional self-control.** We used the Emotional Self-Control subscale from the Asian American Values Scale-Multidimensional (AAVS-M; B. S. K. Kim et al., 2005) to measure emphasis placed on curbing one's emotions. The AAVS-M (B. S. K. Kim et al., 2005) is a 42-item measure that includes five subscales (Emotional Self-Control, Family Recognition through Achievement, Collectivism, Conformity to Norms, and Humility). The Emotional Self-Control subscale consists of 8 items on a 7-point Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*), and example items include "One should not act based on emotions" and "It is more important to behave appropriately than to act on what one is feeling" (B.S.K. Kim et al., 2005). B. S. K. Kim et al. (2005) found this scale to be reliable (alphas of .80 to .89) and also provided empirical support for using the subscales separately. In addition, B. S. K. Kim et al. (2005) provided empirical evidence for the concurrent (e.g., correlated with Asian Values Scale [B. S. K. Kim et al., 1999]) and discriminant (e.g., non-significantly correlated with a self-esteem

measure) validity of the AAVS-M. The AAVS-M has been used with Asian Americans in studies examining correlates of help-seeking attitudes (P. Y. Kim & Lee, 2013; P. Y. Kim & Park, 2009). The measure demonstrated good internal consistency in the present study,  $\alpha = .85$ .

***Professional help-seeking attitudes.*** We used the Attitudes Toward Seeking Professional Psychological Help Scale – Short Form (ATSPPH-SF; Fischer & Farina, 1995) to measure views related to seeking professional mental health services. The ATSPPH-SF includes 10 items on a 4-point Likert scale ranging from 0 (*disagree*) to 3 (*agree*). Item examples are “A person with an emotional problem is not likely to solve it alone; he or she is likely to solve it with professional help” and “I would want to get psychological help if I were worried or upset for a long period of time” (Fischer & Farina, 1995). Fischer and Farina (1995) found the measure to have good internal consistency,  $\alpha = .84$ . Fischer and Farina (1995) provided evidence for the validity of the ATSPPH-SF by reporting its (a) correlation with an older and lengthier version of the measure (Fischer & Turner, 1970), and (b) correlation with previous utilization of professional counseling. Researchers have utilized the ATSPPH-SF with Asian American samples to tap into help-seeking attitudes (e.g., B. S. K. Kim & Omizo, 2010; Miller et al., 2011). The measure demonstrated good internal consistency in the present study,  $\alpha = .82$ .

***Willingness to see a counselor.*** We used the Willingness to See a Counselor (WSC; Gim, Atkinson, & Whiteley, 1990) to measure one’s intent related to seeing a mental health professional for various issues. The WSC is a 24-item measure with a 4-point Likert scale ranging from 1 (*not willing*) to 4 (*willing*). Examples of problems specified by the WSC include “depression” and “college adjustment problems.” As Gim et al. (1990) reported, the WSC was developed by modifying a measure of ethnic minority student distress by Ponce and Atkinson (1989) to include items that were particularly salient for Asian American students; Ponce and

Atkinson's measure, in turn, is a modification of the Personal Problem Inventory (Cash, Begley, McCown, & Weise, 1975) to be more relevant for the experiences of ethnic minority students. Prior studies have reported high internal consistencies for the WSC ranging from .92 (B. S. K. Kim & Omizo, 2003) to .93 (P. Y. Kim & Park, 2009). Kim and Omizo (2003) also provided information regarding the construct validity of the WSC, such that the subscales of the WSC and the total WSC were correlated as expected. Previous studies have utilized the measure with Asian American samples (B. S. K. Kim & Omizo, 2003; P. Y. Kim & Park, 2009; Liao et al., 2005). The WSC for the present study demonstrated excellent internal consistency,  $\alpha = .93$ .

***Biological and spiritual etiology beliefs.*** We measured biological and spiritual etiology beliefs using items from a measure developed by Narikiyo and Kameoka (1992). This measure of etiology beliefs includes 16 items on a 5-point Likert scale ranging from 1 (*not a cause at all*) to 5 (*definitely a cause*) and taps into beliefs related to biological, spiritual, psychological, and social causes of mental illness; given the scope of the present study, we utilized the items assessing biological (4 items) and spiritual (4 items) etiology beliefs. Two examples of biological beliefs include beliefs that mental illness is a "brain disorder" and "hereditary" (Narikiyo & Kameoka, 1992). Two examples of spiritual beliefs include beliefs that mental illness is caused by "demons/spirits" and "punishment for sins" (Narikiyo & Kameoka, 1992). Narikiyo and Kameoka (1992) provided some limited information regarding the validity of the measure, reporting that: (a) the measure was developed by the authors based on a review of the Asian American literature and a pilot study involving 41 students, and (b) the subscales are consistent with what is typically discussed in the literature on etiology beliefs. The measure has been successfully used with Asian American students to compare causal beliefs between Asian American students and professional counselors (Mallinckrodt et al., 2005). Nonetheless, given

the somewhat limited data on the psychometric properties of the measure, the results should be cautiously interpreted. The internal consistencies of the biological and spiritual subscales for the present study were adequate, with alphas of .70 and .71, respectively.

## Results

### Preliminary Analyses and Model Fit

Bivariate correlations are shown in Table 1. The demographic variables significantly correlated with help-seeking attitudes (i.e., mediator) were age ( $r = .14, p = .046$ ), school year ( $r = .14, p = .033$ ), and prior counseling experience (0 = no; 1 = yes;  $r = .25, p < .001$ ). No demographic variables were significantly correlated with willingness to see a counselor (i.e., dependent variable). As expected given our mediation hypothesis, emotional self-control was significantly correlated with help-seeking attitudes ( $r = -.34, p < .001$ ), which in turn was significantly correlated with willingness to see a counselor ( $r = .46, p < .001$ ).

We decided to include prior counseling experience as a control variable in all of our main analyses, given the following: (a) its significant correlation with help-seeking attitudes; (b) the theorizing and empirical evidence in the literature indicating that prior counseling experience is associated with more favorable views related to help-seeking (Fischer & Turner, 1970; Halgin, Weaver, Edell, & Spencer, 1987); and (c) empirical precedent for controlling for its effects (P. Y. Kim & Lee, 2013; P. Y. Kim & Park, 2009) or ruling out participants with prior counseling experience (Hinson & Swanson, 1993).

Before testing our hypotheses, we compared the fit of our proposed mediation model with two alternative models. For our proposed model (emotional self-control → help-seeking attitudes → willingness to see a counselor), the fit was acceptable ( $\chi^2[2] = 4.374; p = .112$ ; RMSEA = .072;  $p = .255$ ; NFI = .959). The first alternative model tested was one in which help-



seeking attitudes was the DV and willingness to see a counselor became the mediator (emotional self-control → willingness to see a counselor → help-seeking attitudes). In this case, the fit was poorer than our originally-proposed model ( $\chi^2[2] = 17.604$ ;  $p = .000$ ; RMSEA = .184,  $p = .002$ ; NFI = .835). We tested a final alternative model in which emotional self-control simultaneously predicted two dependent variables: help-seeking attitudes and willingness to see a counselor. Because this model's fit was also poorer than our hypothesized model ( $\chi^2[2] = 40.848$ ;  $p = .000$ ; RMSEA = .290,  $p = .000$ ; NFI = .617), we felt justified to move ahead with our primary analyses.

### Primary Analyses

To test all the hypotheses, we used the SPSS Macro, PROCESS (Hayes, 2013), which provides bootstrapped estimates of the indirect effects and the conditional indirect effects based on 5,000 resamples. In accordance with the pattern of relations depicted in Figure 1, we used the PROCESS Macro for SPSS to investigate the (a) total, direct, and indirect effects of emotional self-control on willingness to see a counselor, and (b) the conditional indirect effects due to the two moderators.

In Hypothesis 1, we predicted that emotional self-control would be associated with willingness to see a counselor through the mediating mechanism of help-seeking attitudes. Bootstrapping estimates revealed support for this prediction (Bias Corrected [BC] 95% confidence interval [CI] = -.138 to -.046; see Table 2). As expected, the a path was negative ( $B = -.182$ ;  $p = .001$ ) and the b path was positive ( $B = .474$ ;  $p = .000$ ). Thus, Hypothesis 1 was fully supported.

For Hypothesis 2a, we predicted that the magnitude of the indirect effect would be conditional on biological etiology beliefs. Specifically, as participants increasingly endorse the notion that there is a biological basis for mental illness, the negative indirect effect of emotional

self-control predicting willingness to see a counselor through help-seeking attitudes would weaken. The results of the analysis are displayed in Table 3. First, the interaction term depicting the moderating effect of biological beliefs on the relations between emotional self-control and help-seeking attitudes was significant ( $B = .073$ ;  $p = .026$ ). Specifically, at low levels of biological etiology beliefs, the indirect effect was significantly negative (BC 95% CI =  $-.172$  to  $-.070$ ), whereas at high levels of biological etiology beliefs, the indirect effect weakened considerably (BC 95% CI =  $-.098$  to  $.013$ ). As depicted in Figure 2, the indirect effect is negative until biological etiology beliefs reaches approximately 4.5 on the 5 point scale. At each point thereafter, the indirect effect disappears, reflecting the pattern of results we expected. Therefore, Hypothesis 2a was supported.

For Hypothesis 2b, we predicted that the magnitude of the indirect effect would be contingent upon the participants' spiritual etiology beliefs. We postulated that the stronger the participants' beliefs that there is a spiritual basis for their psychological symptoms, the more robust the indirect effect. As displayed in Table 4, the interaction coefficient depicting spiritual etiology beliefs' moderating effect on the relation between emotional self-control and help-seeking attitudes is significant ( $B = .151$ ;  $p = .000$ ). At low levels of spiritual etiology beliefs, the indirect effect is significantly negative (BC 95% CI =  $-.210$  to  $-.086$ ); however at high levels of spiritual etiology beliefs, the indirect effect disappears (BC 95% CI =  $-.049$  to  $.085$ ). In Figure 3, the indirect effect is plotted at various levels of the moderator, spiritual etiology beliefs. It is noteworthy that the indirect effect is significantly negative until approximately 2.5 on the 5-point spiritual etiology beliefs scale. Then, at each subsequent point, the indirect effect is non-significant. Consequently, our statistical test for Hypothesis 2b was significant, but in the

opposite direction that we had predicted. Specifically, as spiritual etiology beliefs increased, the indirect effect became weaker, rather than stronger as we had originally proposed.

### **Discussion**

In this study, we sought to (a) replicate the previously identified mediation model (Asian values → help-seeking attitudes → willingness to see a counselor; B. S. K. Kim & Omizo, 2003; Liao et al., 2005) but operationalizing Asian values as emotional self-control, and (b) examine biological and spiritual etiology beliefs as moderators of the mediation model. Help-seeking attitudes significantly explained the inverse relation between emotional self-control and willingness to see a counselor, controlling for previous experience with counseling. More importantly, biological and spiritual etiology beliefs moderated this explanatory model, providing partial support for our hypotheses related to moderated mediation.

### **Mediation Finding**

Our significant mediation finding is consistent with previous studies (B. S. K. Kim & Omizo, 2003; Liao et al., 2005) and partially consistent with studies that have linked Asian values with help-seeking attitudes (B. S. K. Kim, 2007; Miller et al., 2011; Shea & Yeh, 2008). However, our study makes a contribution by conceptualizing and assessing Asian values as a specific one (i.e., emotional self-control) instead of a generalized one containing many dimensions of Asian values. The usefulness of a narrower assessment of Asian values in the context of Asian American help-seeking has been demonstrated elsewhere (see P. Y. Kim & Lee, 2013) and can be easily done using the AAVS-M containing subscales that reliably assess specific Asian values (B. S. K. Kim et al., 2005), but to our knowledge this is the first study replicating the mediation model using the Asian value of emotional self-control. In keeping with the literature (S. W. H. Chen & Davenport, 2005; Hall, Hong, Zane, & Meyer, 2011), the

“incompatibility” explanation may explain the deleterious role of emotional self-control on help-seeking—that is, because Western therapy tends to value exploration of emotions (see Jensen & Bergin, 1988), someone who is socialized to view emotional restraint as a noble endeavor (e.g., an indication of maturity; X. Chen & Swartzman, 2001) may perceive therapy to be in conflict with their ideals.

### **Moderated Mediation Findings**

The present study’s main contribution to the literature was in highlighting biological and spiritual etiology beliefs individually as attenuating moderators in the mediation model. Below, we first ponder the moderating role of these two etiology beliefs separately, and then briefly discuss the observed moderated mediations in general terms.

**Biological beliefs.** The significant moderated mediation associated with biological beliefs lends support for the argument that a biological conceptualization of psychological distress may be a facilitator of Asian American help-seeking. This finding is consistent with the empirical literature indicating that biological causal beliefs were related to favorable help-seeking outcomes among those from an Asian cultural background (Han, Chen, Hwang, & Wei, 2006; Wong et al., 2010). However, our finding advances the literature, by highlighting biological beliefs as a facilitator in the context of an empirically-established mediating mechanism of Asian American help-seeking.

We present two possible explanations for our finding related to biological etiology beliefs. First, it is possible that the significant attenuating role of biological causal beliefs on the mediation model is due to the notion it is more congruent with a Western worldview, which in turn can serve as a facilitator of professional help-seeking (S. X. Chen & Mak, 2008). More broadly, this interpretation is keeping with the empirical evidence indicating that a match in

etiology beliefs is related to counselors being perceived as more credible (Worthington & Atkinson, 1996) and S. Sue's (1998) assertion that a "cognitive match" between clients and counselors on multiple dimensions is a key component for successful outcomes in therapy. Second, attribution theory states that a biological view of mental illness may lead to reduction in stigmatization of disorders because it attributes the cause to external factors (Boysen & Vogel, 2008; Han et al., 2006). Applying and extending the attribution theory to the present study, Asian Americans who tend to believe in a biological explanation may have less stigmatizing views of psychological distress, which in turn may lead to a more favorable help-seeking outcome. But we present this interpretation tentatively, given that the examination of stigma was beyond the scope of our study.

**Spiritual beliefs.** The direction of the conditional indirect effect associated with spiritual etiology beliefs was unexpected. We had hypothesized that spiritual beliefs would amplify the mediation model; but in reality, it weakened it. One possibility for this intriguing finding is that Asian Americans who endorse spiritual beliefs may perceive psychological distress as embodying a deeper meaning, such that the suffering is ordained or overseen by forces beyond one's control; this accepting perspective, in turn, may lead to better outcomes related to help-seeking. This interpretation is especially plausible when considering the qualitative evidence indicating that the acceptance of spiritual meaning behind psychological suffering can play a facilitative role in help-seeking (Mayers, Leavey, Vallianatou, & Barker, 2007). However, this unexpected finding related to spiritual etiology beliefs warrants future empirical investigations.

We also found it curious that the two etiology beliefs operated in the same direction in regards to the conditional indirect effects. We speculate that regardless of which etiology belief one endorses, as long as one endorses a set of beliefs at a certain level, it can be effective in

facilitating help-seeking among Asian Americans. Perhaps those who do not endorse any etiology beliefs may be more susceptible to denial regarding mental issues, resulting in unfavorable help-seeking outcomes; conversely, those who are more sure of the cause of psychological symptoms may be less defensive about seeking help.

### **Implications for Research and Practice**

Our findings have some implications for the literature on Asian American help-seeking. First, our findings suggest that it is fruitful to not only consider barriers related to help-seeking of Asian Americans, but also facilitators of help-seeking processes as well. Facilitators of Asian American help-seeking have been identified elsewhere (e.g., values acculturation; Miller et al., 2011), and the present findings further speak to the usefulness examining both facilitators and barriers in Asian American help-seeking for a more balanced perspective, which in turn may broaden ways to implement psycho-educational programs. Second, our findings imply that the mediation model identified in prior literature (B. S. K. Kim & Omizo, 2003; Liao et al., 2005) is more complex, such that the strength of the model is dependent on how one thinks about the causes of mental health problems. We encourage researchers to continue to examine personal and contextual factors that may influence models of help-seeking that have already been identified in the literature.

There are also ways in which counselors who have the goal of increasing favorable help-seeking outcomes among Asian Americans through outreach can apply our research findings. First, an assessment of etiology beliefs may be effective in regards to obtaining data related to an Asian American client's help-seeking attitudes; for instance, for a client who endorses strong spiritual or biological etiology beliefs, the counselor might hypothesize that their help-seeking attitudes and intent may be more favorable. Second, counselors may find it worthwhile to design

psycho-educational programs focusing specifically on etiology of mental health problems, with the ultimate goal of facilitating help-seeking. Finally, our findings seem to indicate that (at least for the purposes of increasing favorable help-seeking outcomes) the issue of which etiology beliefs (biology vs. spiritual) are more accurate may be less essential, as long as some level of etiology beliefs are endorsed. This should provide counselors with more flexibility in working with Asian Americans adhering to various etiology beliefs. For instance, a clinician working with Asian Americans in a religious context may find it helpful to tailor his or her discussion of etiology beliefs to fit the setting in influencing favorable help-seeking outcomes.

### **Limitations and Future Directions**

We recognize that there are several limitations to our study. First, there are issues indicating that our findings should be generalized judiciously, including (a) recruitment of participants from the Pacific Northwest region of the United States, (b) targeting of only college students as participants, (c) recruitment of participants from four different institutions, (d) overrepresentation of females, and (e) inclusion of all Asian groups (not just one). We encourage researchers to replicate and extend our findings with other samples (e.g., community samples) within the Asian American context. For instance, it would be fascinating to explore whether there are conditional indirect effects associated with institutional settings, geographic locations, gender, or Asian ethnicities influencing the mediation model. Second, and related to the issue of generalizability, because we tallied only the number of people that responded to the email participation request and not the number that received the study announcement email, we were unable to provide the response rate for our study and consequently cannot make a definitive statement regarding the representativeness of our Asian American sample. Future researchers interested in Asian American help-seeking may find it fruitful to be more deliberate in ensuring

the representativeness of their Asian American samples, such that the main findings can be generalized with more confidence. Third, we examined individual factors related to help-seeking, and did not investigate contextual factors. Contextual factors such as difficulties related to language, accessibility, and cost of services (Uba, 1992) should also be considered as moderators of help-seeking mechanisms in future studies. Fourth, although conceptually and theoretically consistent with the extant literature on etiology beliefs (see Narikiyo & Kameoka, 1992), the measure we used to assess for biological and spiritual etiology beliefs has limited validity information, and thus future researchers may find it useful to conduct a validation study with the measure or develop and validate new measures of etiology beliefs that can be used with Asian American samples. Fifth, our cross-sectional mediation analysis renders the mediation findings vulnerable to potential biases, such as bias resulting from utilizing cross-sectional analysis in situations where the mediation process might take place longitudinally (Maxwell & Cole, 2007; see also Cole & Maxwell, 2003). We encourage future researchers to build the evidence for time progression in regards to the mediation model identified in our study by using longitudinal approaches. Finally, we recognize that our use of path analysis to assess model fit can be potentially problematic. Cole and Preacher (2013) demonstrated that measurement unreliability results in both Type I and Type II errors when making inferences regarding model fit. They recommend several strategies such as testing simpler models and taking steps to ensure greater reliability. Although they admit that none of their proposed solutions will likely be effective in every situation, it would be worthwhile for future researchers to be cognizant of the role of measurement error and make intentional steps in the research design phase to reduce it as much as possible.

## **Conclusion**



The recent and powerful data presented by S. Sue et al. (2012) indicating that the Asian American underutilization trend still holds even after taking into account psychopathology, only serves to further underscore the need for more research addressing this mental health disparity. Our aspiration is that the findings of this study will assist in this endeavor in a small yet substantial manner, by providing a more nuanced understanding of when an explanatory mechanism of help-seeking (Asian values → help-seeking attitudes → willingness to see a counselor) is attenuated—namely, when spiritual and biological etiology beliefs are strongly endorsed.

## References

- Abe-Kim, J., Takeuchi, D. T., Hong, S., Zane, N., Sue, S., Spencer, M. S., et al. (2007). Use of mental health–related services among immigrant and US-born Asian Americans: Results from the National Latino and Asian American study. *American Journal of Public Health, 97*, 91–98. doi: 10.2105/AJPH.2006.098541
- Atkinson, D. R., & Gim, R. H. (1989). Asian-American cultural identity and attitudes toward mental health services. *Journal of Counseling Psychology, 36*, 209-212.  
doi:10.1037/0022-0167.36.2.209
- Bergin, A. E. (1991). Values and religious issues in psychotherapy and mental health. *American Psychologist, 46*, 394-403. doi:10.1037/0003-066X.46.4.394
- Boysen, G. A., & Vogel, D. L. (2008). Education and mental health stigma: The effects of attribution, biased assimilation, and attitude polarization. *Journal of Social and Clinical Psychology, 27*, 447–470. doi:10.1521/jscp.2008.27.5.447
- Cash, T. F., Begley, P. J., McCown, D. A., & Weise, B. C. (1975). When counselors are heard but not seen: Initial impact of physical attractiveness. *Journal of Counseling Psychology, 22*, 273-279. doi:10.1037/h0076730
- Chen, S. W. H., & Davenport, D. S. (2005). Cognitive-behavioral therapy with Chinese American clients: Cautions and modifications. *Psychotherapy: Theory, Research, Practice, Training, 42*, 101-110. 10.1037/0033-3204.42.1.101
- Chen, S. X., & Mak, W. W. (2008). Seeking professional help: Etiology beliefs about mental illness across cultures. *Journal of Counseling Psychology, 55*, 442-450.  
doi:10.1037/a0012898

- Chen, S., Sullivan, N. Y., Lu, Y. E., & Shibusawa, T. (2003). Asian Americans and mental health services: A study of utilization patterns in the 1990s. *Journal of Ethnic and Cultural Diversity in Social Work, 12*, 19-42. doi: 10.1300/J051v12n02\_02
- Chen, X., & Swartzman, L. (2001). Health beliefs and experiences in Asian cultures. In S.S. Kazarian & D.R. Evans (Eds.), *Handbook of cultural health psychology* (pp. 391–410). New York: Academic Press.
- Cheung, F. K., & Snowden, L. R. (1990). Community mental health and ethnic minority populations. *Community Mental Health Journal, 26*, 277-291. doi: 10.1007/BF00752778
- Cole, D. A., & Maxwell, S. E. (2003). Testing mediational Models with longitudinal data: Questions and tips in the use of structural equation modeling. *Journal of Abnormal Psychology, 112*, 558-577. doi:10.1037/0021-843X.112.4.558
- Cole, D. A., & Preacher, K. J. (2013). Manifest variable path analysis: Potentially serious and misleading consequences due to uncorrected measurement error. *Psychological Methods*, doi:10.1037/a0033805
- Fischer, E. H., & Farina, A. (1995). Attitudes toward seeking professional psychological help: A shortened form and considerations for research. *Journal of College Student Development, 36*, 368-373.
- Fischer, E. H., & Turner, J. I. (1970). Orientations to seeking professional help: Development and research utility of an attitude scale. *Journal of Consulting and Clinical Psychology, 35*, 79-90. doi: 10.1037/h0029636
- Frazier, P. A., Tix, A. P., & Barron, K. E. (2004). Testing moderator and mediator effects in counseling psychology research. *Journal of Counseling Psychology, 51*, 115-134. doi:10.1037/0022-0167.51.1.115

- Gim, R. H., Atkinson, D. R., & Whiteley, S. (1990). Asian-American acculturation, severity of concerns, and willingness to see a counselor. *Journal of Counseling Psychology, 37*, 281-285. doi:10.1037/0022-0167.37.3.281
- Givens, J. L., Houston, T. K., Van Voorhees, B. W., Ford, D. E., & Cooper, L. A. (2007). Ethnicity and preferences for depression treatment. *General Hospital Psychiatry, 29*, 182–191. doi:10.1016/j.genhosppsy.2006.11.002
- Goldston, D. B., Molock, S. D., Whitbeck, L. B., Murakami, J. L., Zayas, L. H., & Hall, G. C. N. (2008). Cultural considerations in adolescent suicide prevention and psychosocial treatment. *American Psychologist, 63*, 14-31. doi:10.1037/0003-066X.63.1.14
- Halgin, R. P., Weaver, D. D., Edell, W. S., & Spencer, P. G. (1987). Relation of depression and help-seeking history to attitudes toward seeking professional psychological help. *Journal of Counseling Psychology, 34*, 177-185. doi:10.1037/0022-0167.34.2.177
- Hall, G. C., Hong, J. J., Zane, N. W., & Meyer, O. L. (2011). Culturally competent treatments for Asian Americans: The relevance of mindfulness and acceptance-based psychotherapies. *Clinical Psychology: Science and Practice, 18*, 215-231. doi:10.1111/j.1468-2850.2011.01253.x
- Han, D. Y., Chen, S. H., Hwang, K. K., & Wei, H. L. (2006). Effects of psychoeducation for depression on help-seeking willingness: Biological attribution versus destigmatization. *Psychiatry and Clinical Neurosciences, 60*, 662–668. doi:10.1111/j.1440-1819.2006.01580.x
- Hayes, A. F. (2013). *Introduction to mediation, moderation, and conditional process analysis*. New York: The Guilford Press.

- Hinson, J. A., & Swanson, J. L. (1993). Willingness to seek help as a function of self-disclosure and problem severity. *Journal of Counseling & Development, 71*, 465-470.  
doi:10.1002/j.1556-6676.1993.tb02666.x
- Jensen, J. P., & Bergin, A. E. (1988). Mental health values of professional therapists: A national interdisciplinary survey. *Professional Psychology: Research and Practice, 19*, 290-297.  
doi:10.1037/0735-7028.19.3.290
- Kim, B. S. K. (2007). Adherence to Asian and European American cultural values and attitudes toward seeking professional psychological help among Asian American college students. *Journal of Counseling Psychology, 54*, 474-480. doi:10.1037/0022-0167.54.4.474
- Kim, B. S. K., & Omizo, M. M. (2003). Asian cultural values, attitudes toward seeking professional psychological help, and willingness to see a counselor. *The Counseling Psychologist, 31*, 343-361. doi:10.1177/0011000003031003008
- Kim, B. S. K., & Omizo, M. M. (2010). Behavioral enculturation and acculturation, psychological functioning, and help-seeking attitudes among Asian American adolescents. *Asian American Journal of Psychology, 1*, 175-185. doi:10.1037/a0021125
- Kim, B. S. K., Atkinson, D. R., & Umemoto, D. (2001). Asian cultural values and the counseling process current knowledge and directions for future research. *The Counseling Psychologist, 29*, 570-603. doi:10.1177/0011000001294006
- Kim, B. S. K., Atkinson, D. R., & Yang, P. H. (1999). The Asian Values Scale: Development, factor analysis, validation, and reliability. *Journal of Counseling Psychology, 46*, 342-352.  
doi:10.1037/0022-0167.46.3.342

- Kim, B. S. K., Li, L. C., & Ng, G. F. (2005). The Asian American Values Scale--  
Multidimensional: Development, reliability, and validity. *Cultural Diversity and Ethnic  
Minority Psychology, 11*, 187-201. doi:10.1037/1099-9809.11.3.187
- Kim, P. Y., & Lee, D. (2013). Internalized model minority myth, Asian values, and help-seeking  
attitudes among Asian American students. *Cultural Diversity and Ethnic Minority  
Psychology*, doi:10.1037/a0033351
- Kim, P. Y., & Park, I. J. K. (2009). Testing a multiple mediation model of Asian American  
college students' willingness to see a counselor. *Cultural Diversity and Ethnic Minority  
Psychology, 15*, 295-302. doi:10.1037/a0014396
- Komiya, N., Good, G. E., & Sherrod, N. B. (2000). Emotional openness as a predictor of college  
students' attitudes toward seeking psychological help. *Journal of Counseling Psychology,*  
*47*, 138-143. doi:10.1037/0022-0167.47.1.138
- Liao, H., Rounds, J., & Klein, A. G. (2005). A Test of Cramer's (1999) help-seeking model and  
acculturation effects with Asian and Asian American college students. *Journal of  
Counseling Psychology, 52*, 400-411. doi:10.1037/0022-0167.52.3.400
- Luk, C.-L., & Bond, M. H. (1992). Chinese lay beliefs about the causes and cures of  
psychological problems. *Journal of Social and Clinical Psychology, 11*, 140– 157.
- Luu, T. D., Leung, P., & Nash, S. G. (2009). Help-seeking attitudes among Vietnamese  
Americans: The impact of acculturation, cultural barriers, and spiritual beliefs. *Social  
Work in Mental Health, 7*, 476–493. doi:10.1080/15332980802467456
- Mallinckrodt, B., Shigeoka, S., & Suzuki, L. A. (2005). Asian and Pacific Island American  
students' acculturation and etiology beliefs about typical counseling presenting problems.

*Cultural Diversity and Ethnic Minority Psychology*, 11, 227-238. doi:10.1037/1099-9809.11.3.227

Matsuoka, J. K., Breau, C., & Ryujin, D. H. (1997). National utilization of mental health services by Asian Americans/Pacific Islanders. *Journal of Community Psychology*, 25, 141-145. doi: 10.1002/(SICI)1520-6629(199703)25:2<141::AID-JCOP3>3.0.CO;2-0

Maxwell, S. E., & Cole, D. A. (2007). Bias in cross-sectional analyses of longitudinal mediation. *Psychological Methods*, 12, 23-44. doi:10.1037/1082-989X.12.1.23

Mayers, C., Leavey, G., Vallianatou, C., & Barker, C. (2007). How clients with religious or spiritual beliefs experience psychological help-seeking and therapy: A qualitative study. *Clinical Psychology & Psychotherapy*, 14, 317-327. doi: 10.1002/cpp.542

Miller, M. J., Yang, M., Hui, K., Choi, N., & Lim, R. H. (2011). Acculturation, enculturation, and Asian American college students' mental health and attitudes toward seeking professional psychological help. *Journal of Counseling Psychology*, 58, 346-357. doi:10.1037/a0023636

Muller, D., Judd, C. M., & Yzerbyt, V. Y. (2005). When moderation is mediated and mediation is moderated. *Journal of Personality and Social Psychology*, 89, 852-863. doi:10.1037/0022-3514.89.6.852

Narikiyo, T. A., & Kameoka, V. A. (1992). Attributions of mental illness and judgments about help seeking among Japanese-American and White American students. *Journal of Counseling Psychology*, 39, 363-369. doi:10.1037/0022-0167.39.3.363

Ponce, F. Q., & Atkinson, D. R. (1989). Mexican-American acculturation, counselor ethnicity, counseling style, and perceived counselor credibility. *Journal of Counseling Psychology*, 36, 203-208. doi:10.1037/0022-0167.36.2.203

- Preacher, K. J., Rucker, D. D., & Hayes, A. F. (2007). Assessing moderated mediation hypotheses: Theory, methods, and prescriptions. *Multivariate Behavioral Research, 42*, 185– 227. doi: 10.1080/00273170701341316
- Ruzek, N. A., Nguyen, D. Q., & Herzog, D. C. (2011). Acculturation, enculturation, psychological distress and help-seeking preferences among Asian American college students. *Asian American Journal of Psychology, 2*, 181-196. doi:10.1037/a0024302
- Schafer, J. L. (1999). Multiple imputation: A primer. *Statistical Methods in Medical Research, 8*, 3–15.
- Shea, M., & Yeh, C. J. (2008). Asian American students' cultural values, stigma, and relational self-construal: Correlates and attitudes toward professional help seeking. *Journal of Mental Health Counseling, 30*, 157-172.
- Sue, D.W., & Sue, D. (2012). *Counseling the culturally diverse: Theory and practice* (6th ed.). Hoboken, NJ: John Wiley & Sons, Inc.
- Sue, S. (1998). In search of cultural competence in psychotherapy and counseling. *American Psychologist, 53*, 440-448. doi:10.1037/0003-066X.53.4.440
- Sue, S., & McKinney, H. (1975). Asian Americans in the community mental health care system. *American Journal of Orthopsychiatry, 45*, 111-118. doi: 10.1111/j.1939-0025.1975.tb01172.x
- Sue, S., Yan Cheng, J. K., Saad, C. S., & Chu, J. P. (2012). Asian American mental health: A call to action. *American Psychologist, 67*, 532-544. /doi:10.1037/a0028900
- U.S. Department of Health and Human Services. (2001). *Mental health: Culture, race, and ethnicity—A supplement to Mental Health: A Report of the Surgeon General*. Retrieved from <http://www.surgeongeneral.gov/library/reports/>



- Uba, L. (1992). Cultural barriers to health care for Southeast Asian refugees. *Public Health Reports, 107*, 544-548.
- Wong, Y. J., Tran, K. K., Kim, S.-H., Van Horn Kerne, V., & Calfa, N. A. (2010). Asian Americans' lay beliefs about depression and professional help seeking. *Journal of Clinical Psychology, 66*, 317–332. doi: 10.1002/jclp.20653
- Worthington, R. L., & Atkinson, D. R. (1996). Effects of perceived etiology attribution similarity on client ratings of counselor credibility. *Journal of Counseling Psychology, 43*, 423-429. doi:10.1037/0022-0167.43.4.423
- Yeh, C. J., Inman, A. C., Kim, A. B., & Okubo, Y. (2006). Asian American families' collectivistic coping strategies in response to 9/11. *Cultural Diversity and Ethnic Minority Psychology, 12*, 134-148. doi:10.1037/1099-9809.12.1.134

Table 1

*Bivariate Correlations, Means, and Standard Deviations for the Study Variables*

Variable	1	2	3	4	5	6	7	8	9	<i>M</i>	<i>SD</i>
1. Age	-									20.1	1.76
2. Gender <sup>a</sup>	-.10	-								NA	NA
3. School level	.71***	-.09	-							NA	NA
4. Previous counseling <sup>b</sup>	.14*	-.16*	.10	-						NA	NA
5. Emotional self-control	.07	-.001	-.04	.02	-					3.88	1.10
6. Help-seeking attitudes	.14*	-.12	.14*	.25***	-.34***	-				1.48	0.58
7. Willingness to see a counselor	-.07	-.03	-.06	.07	-.28***	.46***	-			2.21	0.65
8. Biological etiology beliefs	.01	-.11	.05	.14*	-.21**	.25***	.29***	-		3.57	0.89
9. Spiritual etiology beliefs	-.07	-.01	-.04	-.05	-.08	.06	.21**	.20**	-	1.95	0.89

Note. <sup>a</sup> 0 = female, 1 = male. <sup>b</sup> 0 = no, 1 = yes. \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

Table 2. *Regression Results for Mediation: Emotional Self-Control → Help-Seeking Attitudes → Willingness to See a Counselor.*

<i>Predictor</i>	<i>B</i>	<i>SE</i>	<i>T</i>	<i>p</i>
Constant	1.814	.559	4.625	.000
Previous Counseling	-.048	.089	-.541	.589
Emotional Self-Control	-.076	.037	-2.071	.040
Help-Seeking Attitudes	.474	.071	6.635	.000
	Boot indirect effect	Boot SE	Bias Corrected 95% CI	
			Lower	Upper
<i>Indirect Effect</i>	-.087	.024	-.138	-.046

*Note:*  $N = 232$ .  $R^2 = .230$ . SE = standard error. CI = confidence interval. Previous Counseling coded: 0 = no; 1 = yes. All  $p$  values indicate 2-tailed test.

Table 3. *Regression Results for Conditional Indirect Effect: Emotional Self-Control → Help-Seeking Attitudes → Willingness to See a Counselor. Moderator: Biological Etiology Beliefs.*

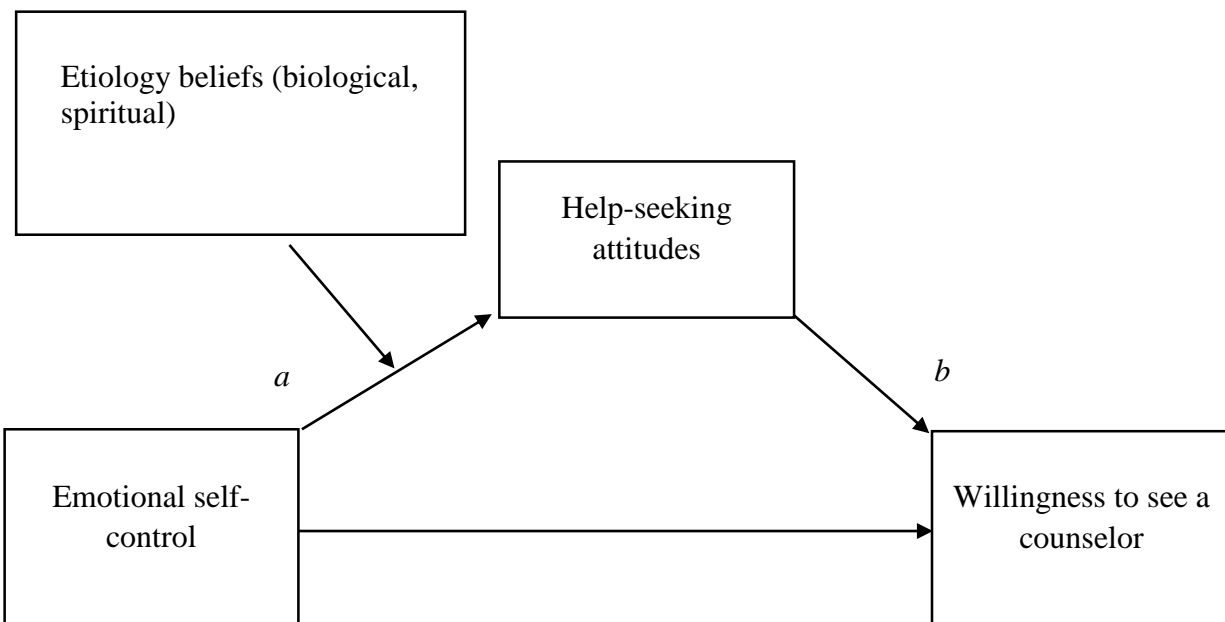
<i>Predictor</i>	<i>B</i>	<i>SE</i>	<i>t</i>	<i>p</i>
<i>Mediator Model (DV = Help-Seeking Attitudes)</i>				
Constant	2.793	.535	5.223	.000
Previous Counseling	3.040	.080	3.850	.000
Emotional Self-Control	-.426	.120	3.552	.001
Biological Etiology Beliefs	-.208	.143	-1.454	.148
Emotional Self-Control X Biological Etiology Beliefs	.073	.033	2.241	.026
<i>Outcome Model (DV = Willingness to see a Counselor)</i>				
Constant	1.814	.205	8.835	.000
Previous Counseling	-.048	.089	-.541	.589
Emotional Self-Control	-.076	.037	-2.071	.040
Help-Seeking Attitudes	.474	.071	6.635	.000
<i>Conditional effects at moderator = 10<sup>th</sup>, 50<sup>th</sup>, and 90<sup>th</sup> percentiles</i>	<i>Boot indirect effect</i>	<i>Boot SE</i>	<i>Bias Corrected 95% CI</i>	
			<i>Lower</i>	<i>Upper</i>
10 <sup>th</sup> percentile	-.115	.030	-.172	-.070
50 <sup>th</sup> percentile	-.072	.022	-.122	-.035
90 <sup>th</sup> percentile	-.037	.028	-.098	.013

*Note:*  $N = 232$ . SE = standard error; CI = confidence interval. Previous Counseling coded: 0 = no; 1 = yes. All  $p$  values indicate 2-tailed test.

Table 4. *Regression Results for Conditional Indirect Effect: Emotional Self-Control → Help-Seeking Attitudes → Willingness to See a Counselor. Moderator: Spiritual Etiology Beliefs.*

<i>Predictor</i>	<i>B</i>	<i>SE</i>	<i>T</i>	<i>p</i>
<i>Mediator Model (DV = Help-Seeking Attitudes)</i>				
Constant	3.078	.291	10.573	.000
Previous Counseling	.330	.077	4.284	.000
Emotional Self-Control	-.450	.071	-6.322	.000
Spiritual Etiology Beliefs	-.549	.144	-3.814	.000
Emotional Self-Control X Spiritual Etiology Beliefs	.151	.036	4.173	.000
<i>Outcome Model (DV = Willingness to see a Counselor)</i>				
Constant	1.813	.205	8.835	.000
Previous Counseling	-.048	.089	-.541	.589
Emotional Self-Control	-.076	.037	-2.071	.040
Help-Seeking Attitudes	.474	.071	6.635	.000
<i>Conditional effects at moderator = 10<sup>th</sup>, 50<sup>th</sup>, and 90<sup>th</sup> percentiles</i>				
	Boot indirect effect	Boot SE	Bias Corrected 95% CI	
			Lower	Upper
10 <sup>th</sup> percentile	-.142	.032	-.210	-.086
50 <sup>th</sup> percentile	-.088	.022	-.138	-.051
90 <sup>th</sup> percentile	.020	.033	-.049	.085

*Note:*  $N = 232$ . SE = standard error; CI = confidence interval. Previous Counseling coded: 0 = no; 1 = yes. All  $p$  values indicate 2-tailed test.



*Figure 1.* Hypothesized moderated mediation model in which emotional self-control predicts willingness to see a counselor through help-seeking attitudes, conditional upon biological and spiritual etiology beliefs.

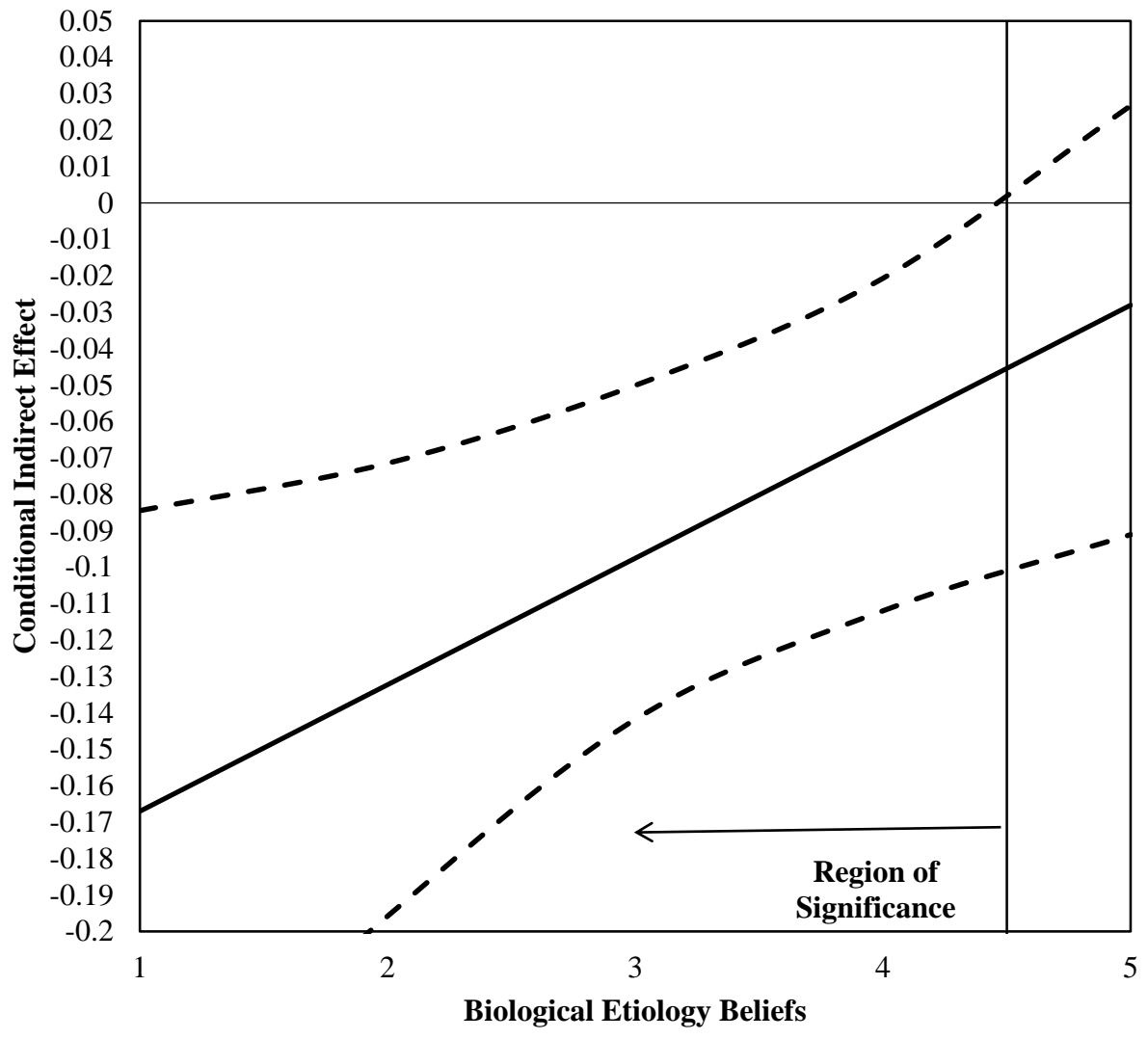
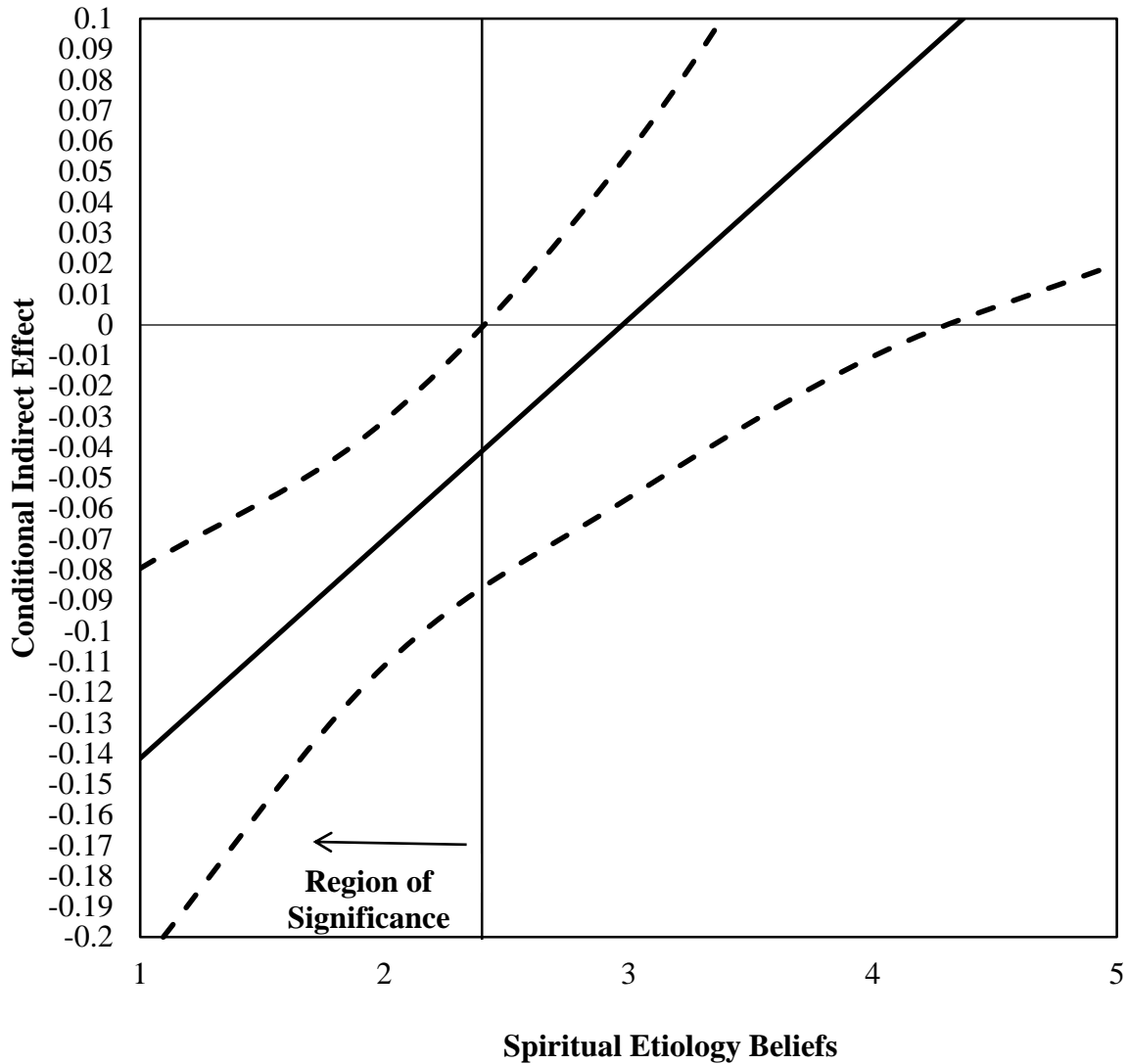


Figure 2. Plot of biological etiology beliefs as a moderator conditioning the indirect effect of emotional self-control on willingness to see a counselor through help-seeking attitudes. The y axis denotes the indirect effect. Levels of the moderator are plotted on the x axis. Dashed lines indicate the biased corrected confidence intervals estimated with 5,000 bootstrap samples in the PROCESS SPSS Macro (Hayes, 2013). Horizontal line indicates an indirect effect of zero. Vertical line indicates the boundary of the region of significance, such that the indirect effect is significant for biological etiology beliefs  $\leq 4.5$ .



*Figure 3.* Plot of spiritual etiological etiology beliefs as a moderator conditioning the indirect effect of emotional self-control on willingness to see a counselor through help-seeking attitudes. The y axis denotes the indirect effect. Levels of the moderator are plotted on the x axis. Dashed lines indicate the biased corrected confidence intervals estimated with 5,000 bootstrap samples in the PROCESS SPSS Macro (Hayes, 2013). Horizontal line indicates an indirect effect of zero. Vertical line indicates the boundary of the region of significance, such that the indirect effect is significant for spiritual etiology beliefs  $\leq 2.4$ .