Asian Americans' Lay Beliefs About Depression and Professional Help Seeking

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Guided by a culturally informed illness representation self-regulation model (CIRSRM), this study analyzed the relations among 223 Asian Americans' lay beliefs about depression, enculturation to Asian values, and their likelihood of seeking professional help for depression. Participants' lay beliefs were assessed through an analysis of written responses to open-ended questions about depression. Enculturation as well as beliefs in biological causes, situational causes, and a short duration of depression were significantly related to the likelihood of professional help seeking. In addition, enculturation moderated the association between several lay beliefs and the endorsement of professional help seeking. The findings are discussed in light of how clinicians can incorporate mental illness lay beliefs in their work with Asian Americans. © 2010 Wiley Periodicals, Inc. J Clin Psychol 66: 317–332, 2010.

Keywords: Asian American; lay beliefs; Asian values; depression; enculturation

The way in which lay people conceptualize mental illnesses is inextricably linked to their cultural background (Hwang, Myers, Abe-Kim, & Ting, 2008; Kleinman, 1988). Cultural groups have culture-specific ways of explaining abnormal human behavior (Sue & Sue, 2008). In particular, scholars have proposed that Asian conceptualizations of mental illnesses differ markedly from those of Western notions, and that they profoundly shape the subjective meanings Asians and Asian Americans ascribe to mental illness experiences (Cheung, 1986; Leong & Lau, 2001; Ryder, Yang, & Heini, 2002).

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The study of Asian Americans' lay beliefs about mental illnesses is important to mental health clinicians because such beliefs have been theorized to influence the expression of psychological distress, coping strategies, and mental health help-seeking patterns (Hwang et al., 2008). Hence, an understanding of culturally informed conceptualizations of mental illness might help clinicians better address the mental health needs of Asian Americans. Against this backdrop, a growing number of studies have examined Asian Americans' lay beliefs about mental health problems (e.g., Chen & Mak, 2008; Fry & Grover, 1982; Kawanishi, 1995; Mori, Panova, & Keo, 2007; Narikiyo & Kameoka, 1992). For example, Kawanishi found that compared with their Caucasian counterparts, Japanese white-collar immigrants living in Southern California were more likely to attribute the causes of stress to a lack of carefulness and bad luck.

Several limitations in the extant research are noteworthy. First, research has been largely confined to comparing differences between Asian Americans and other cultural groups, especially European Americans (e.g., Kawanishi, 1995), instead of exploring how these beliefs might be related to coping processes, such as professional help seeking. In particular, professional help seeking among Asian Americans is a pertinent topic because of accumulating evidence indicating that Asian Americans tend to underutilize professional mental health services (U.S. Department of Health and Human Services, 2001). Specifically, some scholars have attributed Asian Americans' underutilization of professional help for mental health problems to culturally informed beliefs about mental illnesses (Kung, 2004; Leong & Lau, 2001).

Another limitation of previous studies on Asian Americans' lay beliefs about mental illnesses is that they have focused mainly on beliefs about causes of mental illnesses (e.g., Narikiyo & Kameoka, 1992) rather than on a more comprehensive range of beliefs. In contrast, scholars have proposed that culture influences a wide range of mental illness beliefs, including beliefs about the consequences and cure of mental illness (Angel & Thoits, 1987; Hwang et al., 2008; Leong & Lau, 2001). Research on Asian Americans' conceptualizations of mental illness can benefit from theoretical frameworks that examine a variety of beliefs in addition to causal beliefs. In the following section, we discuss one such framework, namely, the illness representation self-regulation model (Leventhal, Nerenz, & Steele, 1984).

Illness Representation Self-Regulation Model

The illness representation self-regulation model (Leventhal et al., 1984) is currently the most widely applied theoretical model in the study of lay beliefs about physical illnesses. The model is based on the premise that individuals are active problem solvers who use their beliefs about illnesses to make meaning out of illness experiences. These beliefs, in turn, guide how individuals cope with their illnesses (Cameron & Leventhal, 2003). The key beliefs in this model comprise five categories: (a) identity or label assigned to the illness, (b) causes of the illness, (c) duration of the illness, (d) consequences of the illness, and (e) coping with or cure of the illness.

Although originally developed around physical illnesses, recently researchers have applied the illness representation self-regulation model to mental illness experiences (Fortune, Barrowclough, & Lobban, 2004; Lobban, Barrowclough, & Jones, 2003). A key benefit of this model is that it examines a more comprehensive range of beliefs than those found in previous studies on beliefs about mental illnesses (Lobban et al.). In a recent study that applied the model to the study of depression among Latino immigrants, beliefs about depression were found to be associated with informal and formal help-seeking patterns (Cabassa, Lester, & Zayas, 2007). In two other studies

(Karasz, 2005; Karasz & McKinley, 2007), the model was used as the basis for a qualitative investigation of South Asian immigrant women's beliefs about depression and fatigue. However, no known quantitative study has analyzed Asian Americans' mental illness lay beliefs using the illness representation self-regulation model.

Culturally Informed Illness Representation Self-Regulation Model

Although the illness representation self-regulation model provides a useful framework for examining lay beliefs about mental illnesses, it does not explicitly account for the influence of culture on mental illness lay beliefs and coping. To describe how culturally informed beliefs about mental illnesses influence Asian Americans' professional help seeking, we propose a new model based on an integration of the illness representation self-regulation model with Asian cultural worldviews. We label this integrated model the culturally informed illness representation self-regulation model (CIRSRM). Defined as a set of fundamental assumptions about social and physical reality that have profound influence on cognition and behavior (Koltko-Rivera, 2004), the construct of worldview has been recognized in the multicultural psychological literature as playing an integral role in coping and psychotherapeutic processes (Fischer, Jome, & Atkinson, 1998; Ibrahim, Roysircar-Sodowsky, & Ohnishi, 2001). Accordingly, within the CIRSRM, Asian cultural worldviews influence mental illness lay beliefs which, in turn, influence Asian Americans' professional help seeking (see Fig. 1).

The following three propositions undergird the CIRSRM. First, Asian cultural worldviews may exert contrasting influences on mental illness beliefs and professional help seeking; that is, some worldviews might inhibit the seeking of professional help while others might facilitate professional help seeking. This proposition dovetails with scholarly observations that different Asian cultural values (e.g., avoidance of family shame versus deference to authority figures) might be differentially related to attitudes toward seeking professional psychological help (Kim & Omizo, 2003) as well as the notion that individuals from Eastern cultures are capable of embracing paradoxical beliefs that influence coping (Wong, Wong, & Scott, 2006). Second, it is important to acknowledge that Asian Americans vary in the extent to which they embrace each of these worldviews. Some Asian Americans

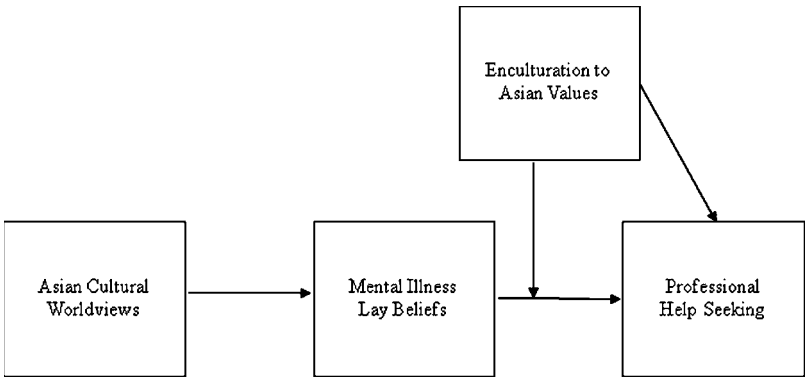

Figure 1. Culturally informed representation self-regulation model. Enculturation to Asian values is theorized to moderate the relationship between mental illness lay beliefs and professional help seeking. In the current study, professional help seeking was operationalized in terms of whether participants spontaneously mentioned that they would seek professional help.

may embrace a particular worldview more strongly than other worldviews because of differences in the type of cultural influences to which they are exposed.

Third, the CIRSRM incorporates the influence of enculturation to Asian values on professional help seeking. Enculturation differs from acculturation in that enculturation refers to the extent to which ethnic minority individuals retain and are socialized to the norms of their indigenous culture, whereas acculturation refers to the extent to which these individuals adopt the norms of the dominant (e.g., European American) culture (Kim, 2007a). An Asian American who is highly enculturated to Asian values is one who adheres strongly to traditional Asian cultural values. Enculturation to cultural values can be further distinguished from mental illness lay beliefs in that the former refers to adherence to shared beliefs about the types of behaviors that are considered desirable or undesirable in an indigenous culture (cf., Schwartz, 1999; e.g., belief that it is inappropriate to express strong emotions). In contrast, mental illness lay beliefs focus on perceptions about the reality of mental illness (e.g., belief that mental illness is a result of biological causes).

The importance of enculturation was demonstrated in a recent study in which the values dimension of enculturation, but not acculturation, were inversely related to attitudes toward seeking professional psychological help among Asian Americans (Kim, 2007b). In addition, Kim and Omizo (2003) have called for researchers to address possible moderating effects between enculturation to Asian values and other variables on helping-seeking attitudes and behaviors.

Therefore, within the CIRSRM, enculturation to Asian values is viewed as having main as well as moderating effects on coping. Aligning with previous research (Kim, 2007b), enculturation to Asian values is theorized to be inversely related to professional help seeking. In addition, the degree to which mental health lay beliefs are related to professional help seeking is posited to be moderated by enculturation to Asian values. Asian Americans who are highly enculturated to Asian cultural values may be more attuned to the Asian worldviews embedded within their mental illness beliefs. Consequently, within the CIRSRM, enculturation to Asian values serves the function of strengthening the relationship between mental illness lay beliefs and professional help seeking.

Asian Cultural Worldviews

In the current study, we focused on the Asian worldviews of mind-body holism, collectivism, and the naïve dialectical principles of change and holism, because the theoretical and empirical literature provides support for the notion that these worldviews might play a crucial role in determining mental illness lay beliefs and professional help seeking. One of the most well-known Asian worldviews is the concept of mind-body holism (Cheung, 1986; Conrad & Pacquiao, 2005; Kleinman, 1988; Leong & Lau, 2001; Ryder et al., 2002). Within this worldview, psychological and physical problems are inseparable, and psychological problems are viewed as caused by as well as resulting in physical illnesses. Studies have indicated that Asians and Asian Americans are more likely than Caucasians to report somatic complaints for mental health problems (see Ryder et al.; U.S. Department of Health and Human Services, 2001, for reviews) and have a tendency to believe mental illnesses are caused by biological factors (McKelvey et al., 2002; Mori et al., 2007). The adoption of mind-body holism may facilitate professional help seeking among Asian Americans because biological problems and somatic symptoms are viewed as socially legitimate complaints that warrant external help (Conrad & Pacquiao, 2005; Kung & Lu,

2008). In line with this perspective, the tendency to somatize psychological distress and a biological attribution for depression have been shown to be positively related to professional help seeking among Chinese Americans (Kung & Lu) and Taiwanese college students (Han, Chen, Hwang, & Wei, 2006), respectively.

In addition to the mind-body holistic worldview, scholars have noted that Asian conceptualizations of mental health concerns are linked to a collectivistic worldview (Yeh, Inman, Kim, & Okubo, 2006). Included in this worldview is the need to maintain interpersonal harmony (Kim, Atkinson, & Umemoto, 2001; Triandis, 1995). Relationships are characterized by loyalty, obligations, and the need to save face, especially with regard to one's family (Leong & Lau, 2001). These cultural notions may have profound influences on mental illness lay beliefs and help seeking. Chen and Mak (2008) posited that beliefs in social-personal causes of mental illnesses are rooted in collectivistic mental health worldviews; these authors found that such beliefs were inversely related to professional help seeking among Chinese Americans. Beliefs in personal failure and interpersonal causes of psychological problems might inhibit professional help seeking among Asian Americans because of a desire to save face by not drawing attention to one's personal weaknesses and perceived failure to preserve relational harmony, respectively.

Finally, naïve dialecticism is a set of worldviews that has been described as prevalent in many Asian cultures (Peng & Nisbett, 1999; Spencer-Rodgers & Peng, 2005). An important facet of naïve dialecticism is the principle of change, the perception that reality is a dynamic process and that the world is in a constant state of flux (Spencer-Rodgers & Peng). Hence, positive and negative life experiences, including psychopathology, tend to be viewed as relatively short-term and subject to change. For instance, in a crosscultural study of lay beliefs about fatigue, Karasz and McKinley (2007) found that South Asian immigrant women were more likely than European American women to view fatigue as episodic and transient. Aligning with this perspective, studies have shown that Asian Americans tend to delay seeking professional mental health services until their symptoms are severe (U.S. Department of Health and Human Services, 2001). Consequently, Asian Americans' belief in the transient nature of mental illnesses might discourage professional help seeking because of the perception that it is not worth seeking help or bothering others for a problem that is relatively short-term.

Another key facet of naïve dialecticism is the principle of holism, which emphasizes that a part is not meaningful except in connection to the whole and that it is important to pay attention to one's environment and situational context (Peng & Nisbett, 1999; Spencer-Rodgers & Peng, 2005). Nisbett, Peng, Choi, and Norenzanan (2001) reviewed several studies indicating that Asians were more likely than Westerners to explain human behavior in terms of contextual rather than dispositional factors. Applied to the context of mental illness lay beliefs, Asian Americans who embrace the dialectical principle of holism might be more attuned to situational causes of depression. Moreover, situational causes of psychological problems (e.g., change in life events such as a new job) might be viewed as not within one's responsibility and is, therefore, considered less stigmatizing than personal failure and interpersonal causes; consequently, belief in situational causes might facilitate professional help seeking (cf. Chen & Mak, 2008). Partial support for this view was shown in Chen and Mak's study in which Chinese Americans' beliefs in environmental/hereditary causes of mental illnesses were positively related to the likelihood of professional help seeking, although it should be noted that Chen and Mak's study did not distinguish between environmental and hereditary causes.

Hypotheses

The theoretical underpinnings of this study are based, in part, on the CIRSRM. Specifically, we sought to investigate the relations among Asian Americans' lay beliefs about depression, enculturation to Asian values, and the likelihood of seeking professional help. Drawing from the illness representation self-regulation model, we focused on the following lay beliefs about depression because these beliefs appear to be most closely aligned with the Asian cultural worldviews discussed in the foregoing literature review: (a) four potential causes of depression – biological causes, personal failure causes, interpersonal causes, and noninterpersonal situational causes (hereafter known as situational causes); (b) effects of depression, focusing specifically on somatic consequences (e.g., poor appetite); and (c) duration of depression.

First, we examined the association between lay beliefs about depression and the likelihood of professional help seeking. We hypothesized that beliefs in biological causes, situational causes, and somatic consequences would be positively associated with professional help seeking, whereas beliefs in personal failure causes, interpersonal causes, and a short duration of depression would be inversely related to professional help seeking. Second, we expected that enculturation to Asian values would be inversely related to professional help seeking. Third, we predicted that enculturation to Asian values would moderate the relations between lay beliefs about depression and professional help seeking; that is, the association between lay beliefs and professional help seeking would be stronger among highly enculturated Asian Americans as compared with less enculturated Asian Americans.

Lay Beliefs and Narrative Responses

Previous quantitative studies on lay beliefs about mental illnesses have relied mostly on self-report rating scales to assess individuals' beliefs. For example, the Illness Perception Questionnaire (Moss-Morris et al., 2002) is used to measure belief categories of the illness representation self-regulation model. In contrast, the present study systematically coded narrative responses to open-ended questions associated with the belief categories of the CIRSRM. Such an approach has the advantage of allowing participants the latitude to respond to questions as they see fit rather than limit their responses to whether they agree with specific statements (Levi & Haslam, 2005).

Method

Participants and Procedure

This study was part of a larger project on Asian Americans' enculturation and mental health. The original sample comprised 238 Asian Americans recruited from the undergraduate subject pool of a large public university and electronic mailing lists of Asian American organizations throughout the United States. After deleting incomplete data, the final sample comprised 223 Asian Americans (69.9% female, 30.1% male). The criteria for participation included being at least 18 years old and of East, South, and/or Southeast Asian descent. Psychology/counseling graduate students and psychologists/therapists were ineligible for participation. Participants' average age was 23.57 (SD = 6.76) years. Most participants were born in the United States (63.9%) with first-generation participants living in the United States for an average of 13.38 years (SD = 8.94). In terms of ethnicity, participants identified as Chinese (30.6%), Indian (14.6%), Vietnamese (14.2%), Filipino/Filipina (11.9%),

Taiwanese (9.1%), Korean (4.1%), and other Asian (15.5%). Participants were fairly well educated (94% had at least some college experience). The study was administered online via an Internet-based computer program.

Instruments

Asian American Values Scale-Multidimensional. The Asian American Values Scale (AAVS-M; Kim et al., 2005) is a measure of enculturation to common cultural values across Asian Americans ethnic groups. Developed using samples of diverse Asian ethnic groups, this 42-item measure has a 7-point Likert-type scale with five subscales: conformity to norms, family recognition through achievement, emotional self-control, collectivism, and humility. Scores are determined by calculating the average item mean, with high scores indicating greater enculturation to Asian values. A sample question includes, "One's personal needs should be second to the needs of the group." Because we were interested in exploring the relations between enculturation and a diverse range of mental illness lay beliefs, we used the overall scale, representing the general construct of enculturation, rather than specific AAVS-M subscales. Concurrent validity was reported via associations with measures of loss of face and interdependence (Kim et al.). The 2-week test-retest reliability coefficient and the coefficient alpha for the overall scale was .92 and .89, respectively (Kim et al.). In the present study, the coefficient alpha for the overall scale was .88.

Depression Vignette. The authors created a vignette that described symptoms consistent with the diagnosis of major depressive disorder as defined by the DSM-IV. The depressive symptoms described in the vignette included affective and somatic symptoms. Participants were asked to imagine that they experienced the following problem in their lives:

> For the past 4 weeks, you have felt that something is wrong with your life. You feel intense sadness and fatigue throughout the day. You no longer have interest in anything that you once enjoyed. Despite feeling tired, you have great difficulty sleeping each night. In addition, you have difficulty concentrating and increasing feelings of worthlessness nearly every day. Because of these experiences, you have difficulty functioning in important areas of your life.

As part of a manipulation check, eight counseling psychology doctoral students, blind to the study's hypotheses, were asked to provide a DSM-IV diagnosis for the vignette. All eight of them provided the diagnosis of either depression or major depressive disorder. Participants provided written responses to several open-ended questions about the problem described in the vignette. Guided by the five belief categories of the illness representation self-regulation model (Leventhal et al., 1984), questions included participants' opinions about the (a) label they would assign to the problem, (b) causes, (c) expected duration, (d) probable effects on their lives, and (e) most effective way(s) to resolve the problem.

Data Analysis and Results

Coding of Lay Beliefs

The authors created a coding manual (available upon request from the first author) to categorize lay beliefs about depression. Although the manual comprises 24 lay

beliefs, we focused on seven lay beliefs relevant to our hypotheses: biological causes, personal failure causes, interpersonal causes, situational causes, somatic consequences, duration, and professional help. Dichotomous variables were created for each of the lay beliefs: participants' narrative responses to the open-ended questions on the vignette were coded 1 if they satisfied the criteria of the category and 0 otherwise.

In terms of causes of the problem, responses were coded for whether they identified biological causes (e.g., diet, sleep problems, diseases, neurological processes, and hormonal imbalances), personal failure causes (e.g., failure to achieve one's goals, attributing fault to self, shame, or guilt, and failure to meet others' expectations), interpersonal causes (e.g., interpersonal conflicts and a lack of social network), and situational causes (noninterpersonal situational causes, e.g., traumatic events, life transitions, and other events in participants' environment). With regard to the effects of the problem, responses were coded for whether they identified somatic consequences (e.g., poor appetite and health problems). The duration category distinguished between responses that indicated that the problem would last for a long time (coded 0; defined as at least 1 month or a generic reference to a long duration, e.g., "long-term problem") versus a short duration (coded 1; e.g., "it could be for a few days"). Finally, with regard to resolving the problem, responses were coded for whether participants mentioned seeking professional help (e.g., a physician or a mental health professional) as an effective way to resolve the problem. The coding process could not distinguish between seeking help from a medical versus a mental health professional because many participants indicated they would seek professional help without specifying whether they would see a physician or a mental health provider. Responses to the question on the label for the problem were not analyzed because belief about the identity of the problem was not included in the current study's hypotheses.

Two counseling psychology doctoral students, blind to the study hypotheses, coded the data based on the coding manual and a 3-hour training by the first and second authors. The final interrater reliabilities of the beliefs were as follows: .93 for biological causes, .90 for personal failure, .89 for interpersonal causes, .80 for situational causes, .91 for somatic consequences, .84 for duration, and .92 for professional help seeking. Residual coding discrepancies were resolved through discussion and consensus. The following excerpt from a participant's response to the question about the causes of the problem in the vignette illustrates how the coding manual was applied: "Could be a number of things, relational or family problems. Something traumatic that happened recently to trigger the depression. Something stressful that is coming soon (major life change, etc) or possibly an [sic] mental chemical problem." With regard to beliefs about causes, the response was assigned codes of 1, 0, 1, and 1 for biological causes, personal failure, interpersonal causes, and situational causes, respectively.

Preliminary Analyses

The mean AAVS-M score of 4.24 (SD = .60) in our sample was comparable to the mean AAVS-M scores of 4.21 and 3.98 in studies 1 and 2 of Kim et al.'s (2005) project that developed the AAVS-M. The Kolmogorov-Smirnov test statistic indicated no evidence that the distribution of AAVS-M scores in our study was nonnormal, $D(223) = .049$, $p = .200$.

With regard to lay beliefs about depression, 25.1% endorsed biological causes, 35.4% endorsed causes associated with personal failure, 57.4% endorsed interpersonal causes, 52.5% endorsed situational causes, 40.8% endorsed somatic consequences, 41.3% expected the problem to last for a short duration, and 36.3% endorsed seeking professional help. The number of beliefs participants endorsed was not significantly related to AAVS-M, $p > .05$, and was, hence, not included as a variable in subsequent analyses.

To investigate the bivariate relations among the seven lay beliefs, a series of chi-square analyses were conducted using a Bonferroni-corrected significance level of $p < .002$. A belief in biological causes was related to endorsing professional help seeking, $\chi^2(1) = 11.71$, $p = .001$. A belief in situational causes was also related to endorsing professional help seeking, $\chi^2(1) = 10.29$, $p = .001$. All other relationships among lay beliefs were not significant.

Main Analysis

A hierarchical logistic regression analysis was performed to assess factors associated with endorsing professional help seeking. Logistic regression is the statistical method of choice for research involving dichotomous outcome variables (e.g., endorsement versus nonendorsement of professional help seeking), because, unlike linear regression, it does not require the relationship between the predictor and outcome variables to be linear (Cizek & Fitzgerald, 1999). Logistic regression results are interpreted using an odds ratio (OR). An OR of less than 1.00 indicates that a 1-unit increase in the predictor variable is associated with decreased odds of the outcome variable occurring. In contrast, when the OR exceeds 1.00, a 1-unit increase is related to increased odds of the outcome variable occurring. A one-tailed test was used for this analysis because our hypotheses were directional in nature. In step 1, the six lay beliefs—namely, biological causes, personal failure causes, interpersonal causes, situational causes, somatic consequences, and duration—and AAVS-M were added. In step 2, the interactions between AAVS-M and biological causes, personal failure causes, interpersonal causes, situational causes, somatic consequences, and duration were included. Scores were standardized to reduce multicollinearity.

The overall model was significant, $\chi^2(13) = 51.55$, $p < .001$, and the Nagelkerke R^2 indicated that 28.3% of the variance in seeking professional help was accounted for by the predictor variables. In addition, the interaction terms at step 2 contributed significantly to the overall model, block $\chi^2(6) = 16.50$, $p = .011$. The model correctly predicted 89.4% and 46.9% of those who did not endorse seeking professional help and those who did, respectively, resulting in an overall classification success rate of 74.0%. None of the Variance Inflation Factor (VIF) scores exceeded 10, indicating there was no evidence that multicollinearity biased the logistic regression model (Myers, 1990).

The results of the logistic regression analysis are presented in Table 1. At step 1, four predictor variables were significantly related to the likelihood of professional help seeking. Consistent with our hypothesis, participants who endorsed biological causes of depression were 1.65 times ($p = .001$) as likely to endorse professional help seeking than those who did not endorse such beliefs. Similarly, belief in situational causes of depression was positively related to the likelihood of professional help seeking (OR = 1.66, $p = .001$). As predicted, AAVS-M was inversely related to the likelihood of seeking professional help (OR = .66, $p = .004$). Duration was also inversely related to the likelihood of professional help seeking (OR = .78, $p = .048$); that is, participants who believed depression would last for a short duration had reduced odds of endorsing professional help than those who believed in a long duration.

Table 1
Logistic Regression Analysis Predicting the Likelihood of Professional Help Seeking

	Variable	B	SE	Odds ratio
Step 1				
	Biological causes	.50	.15	1.65**
	Personal failure causes	−.15	.16	.87
	Interpersonal causes	−.21	.16	.81
	Situational causes	.51	.16	1.66**
	Somatic consequences	.11	.15	1.12
	Duration (short)	−.26	.15	.78*
	AAVS-M	−.42	.16	.66**
Step 2				
	Biological causes	.55	.17	1.73**
	Personal failure causes	−.10	.17	.90
	Interpersonal causes	−.21	.17	.81
	Situational causes	.50	.17	1.65**
	Somatic consequences	.12	.16	1.13
	Duration (short)	−.32	.16	.73*
	AAVS-M	−.55	.19	.58**
	AAVS-M × biological causes	−.13	.18	.88
	AAVS-M × personal failure causes	−.37	.18	.69*
	AAVS-M × interpersonal causes	.44	.20	1.54*
	AAVS-M × situational causes	−.22	.18	.80
	AAVS-M × somatic consequences	.46	.18	1.59**
	AAVS-M × duration	−.27	.18	.76

Note: AAVSM-M = Asian American Values Scale-Multidimensional.
*$p<.05$, **$p<.01$.

At step 2, three interaction effects, AAVS-M × personal failure causes, AAVS-M × interpersonal causes, and AAVS-M × somatic consequences were significant. To interpret the interactions, the odds ratios for personal failure causes, interpersonal causes, and somatic consequences were examined at high AAVS-M (one SD above the AAVS-M mean) and low AAVS-M (one SD below the AVVS-M mean) scores. Among participants with high AAVS-M scores, the belief that depression was caused by personal failure causes was significantly related to lower odds of endorsing professional help seeking, OR = .63, $p<.05$. In contrast, among low AAVS-M participants, the belief that depression was caused by personal failure was not significantly related to endorsing professional help seeking, OR = 1.30, $p>.05$. Contrary to our hypothesis, among high AAVS-M participants, the belief in interpersonal causes was not significantly related to endorsing professional help seeking, OR = 1.25, $p>.05$. However, the belief in interpersonal causes was significantly and inversely related to endorsing professional help seeking among low AAVS-M participants, OR = .52, $p<.05$. Finally, among high AAVS-M participants, the odds of endorsing professional help seeking were significantly higher if they also endorsed somatic consequences of depression, OR = 1.80, $p<.05$. In contrast, belief in somatic consequences was not significantly related to endorsing professional help seeking among low AAVS-M participants, OR = .71, $p>.05$. None of the other main and interaction effects was significant.

Discussion

Our findings provide preliminary support for applying the culturally informed illness representation self-regulation model to the study of Asian Americans' lay beliefs about

depression. The first goal of our study was to examine the relations between lay beliefs about depression and professional help seeking. Asian Americans who believed in biological and situational causes of depression had a greater likelihood of endorsing professional help seeking, findings that are consistent with the mind-body holism worldview (Ryder et al., 2002) and the naïve dialectical principle of holism (Spencer-Rodgers & Peng, 2005), respectively. Taken together, our findings on beliefs in biological and situational causes align with Chen and Mak's (2008) study in which Chinese Americans' beliefs in environmental and hereditary causes of mental illnesses were positively related to the likelihood of professional help seeking. Furthermore, in accordance with the naïve dialectical principle of change (Spencer-Rodgers & Peng), Asian Americans who believed that depression would last for a short duration had lower odds of endorsing professional help than those who believed in a long duration.

The second goal of our study was to investigate the association between enculturation to Asian values and the endorsement of professional help seeking. Supporting previous research on Asian Americans' attitudes toward seeking professional psychological help (Kim, 2007b; Kim & Omizo, 2003), enculturation to Asian values was found to be inversely associated with the likelihood of professional help seeking.

Our third goal was to explore interaction effects involving enculturation and lay beliefs about depression. A combination of high enculturation and belief that depression resulted in somatic consequences was associated with a greater likelihood of Asian Americans endorsing professional help seeking. Enculturation to Asian values might reinforce the cultural notion that it is socially acceptable to seek help for problems related to physical illnesses. Further, Asian Americans who believed depression was caused by personal failure causes had reduced odds of endorsing professional help if they were also highly enculturated to Asian values. Enculturation to Asian values might inhibit professional help seeking by drawing attention to the shame of personal failure and the potential for losing face through the disclosure of one's perceived weaknesses. Our findings also revealed a significant enculturation by belief in interpersonal causes interaction effect, although it was contrary to our hypothesis. Among highly enculturated Asian Americans, the belief in interpersonal causes of depression was not related to the endorsement of professional help seeking; instead, a combination of low enculturation and belief in interpersonal causes was significantly and inversely related to seeking professional help. One possible explanation for this finding is that Asian Americans with low levels of enculturation might have been less bothered by interpersonal causes of depression because traditional Asian values, such as interpersonal harmony and family obligations, were less important to them; consequently, the belief in interpersonal causes of depression provided little motivation for them to seek professional help.

To our knowledge, this is the first quantitative study to synthesize previous theoretical and empirical work on Asian conceptualizations of psychopathology with the illness representation self-regulation model, a widely applied theoretical model used in the study of lay beliefs about physical and mental illnesses. Other studies have found that the level of Asian Americans' enculturation to Asian values was related to poorer attitudes toward seeking professional psychological help (Kim, 2007b; Kim & Omizo, 2003). However, as predicted by the CIRSRM, our findings suggest a greater level of complexity in the relation between enculturation to Asian values and professional help seeking. Depending on the type of lay beliefs endorsed by Asian Americans, a high level of enculturation to Asian values could either facilitate help seeking (e.g., when combined with a belief in somatic consequences of

depression) or inhibit help seeking (e.g., when combined with a belief in personal failure causes of depression).

This is also the first known quantitative study to rely on an analysis of Asian Americans' narratives to examine their mental illness lay beliefs. One benefit of using narrative data is that it captures spontaneous and naturalistic explanations that might be difficult to assess through self-report rating scales (Levi & Haslam, 2005). For example, in the question about the most effective way to resolve the problem of depression, participants were not prompted to describe their views of professional help. Nevertheless, 36.3% of participants wrote that they would seek some form of professional help if they experience the problem described in the depression vignette.

Limitations and Recommendations for Future Research

There were several limitations in our study. First, although the CIRSRM proposes a mediation model in which Asian cultural worldviews influences professional help seeking via mental illness lay beliefs, we did not analyze the influence of Asian cultural worldviews on lay beliefs and help seeking. Future studies should explore the possibility that Asian Americans' mental illness lay beliefs mediates the association between Asian cultural worldviews and professional help seeking. Second, our coding of professional help did not distinguish between medical and psychological help seeking. Hence, the number of participants who would have been willing to seek psychotherapeutic services for depression is likely lower than the total number of participants who endorsed seeking professional help.

Third, our findings were limited by the use of a nonclinical, relatively young, educated, and Internet-savvy Asian American sample. Future studies should examine more diverse samples, including Asian Americans who currently experience mental health problems as well as less educated and older Asian Americans. Moreover, the inclusion of other cultural groups (e.g., European Americans) and larger samples of diverse Asian American ethnic groups would enable researchers to study between-group and within-group ethnic differences (e.g., Chinese versus Asian Indian Americans) in mental illness lay beliefs. Fourth, because participants' responses to the depression vignette may have been a function of the types of symptoms described in the vignette, future studies can test whether the presentation of different symptoms (e.g., cognitive-affective versus somatic) elicits different beliefs about depression. Fifth, in using a coding manual to code participants' responses to the open-ended questions, we inevitably left out other findings that may have emerged from a qualitative approach to data analysis. Sixth, mental illness lay beliefs and enculturation are not the only factors that might determine whether Asian Americans seek professional help for mental illnesses. For instance, Asian Americans might perceive mental health services to be culturally insensitive to their concerns (Kung, 2004).

Implications for Clinicians

An overarching clinical implication of our findings is that a one-size-fits-all approach to clinical work with Asian Americans is potentially problematic. Instead, it is important for clinicians to identify within-group differences among their Asian American clients based on their mental illness lay beliefs and level of enculturation. With regard to mental illness lay beliefs, scholars have observed that acknowledging minority clients' beliefs about their presenting concerns would improve therapeutic outcomes by enhancing the therapeutic relationship and increasing levels of

therapeutic collaboration (Fischer et al., 1998). In this regard, therapists could use the CIRSRM as a heuristic to examine similarities and differences between their beliefs and those of their Asian American clients. For example, in the first session of psychotherapy, therapists are encouraged to ask their clients about their perceptions of the causes, consequences, and expected duration of their problems.

In addition, our findings point to the potential value of therapists assessing Asian American clients' level of enculturation to Asian values in conjunction with their mental illness lay beliefs to understand their perceptions of professional help seeking. As suggested by Wong and Poon (in press), an assessment of the clients' level of enculturation can include questions about their role in their families (e.g., do they believe their actions reflect the reputation of their families?), how they relate to loved ones (e.g., are they concerned about preserving interpersonal harmony?), and beliefs about appropriate behavior in interpersonal contexts (e.g., the need to control their emotions when talking to individuals outside their families). Alternatively, clinicians can administer the AAVS-M to their Asian American clients and then discuss the meaning of their scores within the context of their mental health beliefs and perceptions of help seeking.

Further, when working with Asian Americans, therapists can consider appropriate modifications to their therapeutic strategies based on their clients' lay beliefs about mental illnesseses. For example, therapists should treat Asian Americans' somatic complaints as real problems that can be potentially distressing instead of simply viewing them as defense mechanisms (Sue & Sue, 2008). Additionally, when working with highly enculturated Asian American clients who present with somatic complaints, therapists can take advantage of their willingness to seek professional help by prioritizing their somatic complaints in their treatment plans. An understanding of Asian cultural worldviews and mental illness beliefs can also contribute to culturally sensitive medical practice. Given Asian Americans' tendency to underutilize professional services for psychological problems, medical doctors and nurses who work with Asian American patients could explore the possibility that their patients' somatic complaints might be related to psychological distress and that they might benefit from referrals to mental health services (Kung & Lu, 2008).

Finally, our findings provide clues on how clinicians can help increase the likelihood of Asian Americans seeking professional help for psychological problems. Asian Americans who have stigmatizing beliefs about mental illnesses can be invited to consider less stigmatizing etiologies, for example, biological and situational causes that might improve their willingness to seek professional help. Overall, our findings draw attention to the need for clinicians to consider the intersection of culture, mental illness lay beliefs, and help seeking when working with Asian American clients.

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