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## Adolescents' stigma attitudes toward internalizing and externalizing disorders: Cultural influences and implications for distress manifestations

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### Abstract

**Objective**—This study examined predictors of stigma attitudes toward common youth emotional behavioral problems to test the hypothesis that interdependent cultural values would be associated with differential stigma towards externalizing versus internalizing disorders. Furthermore, we examined whether problem-specific stigma attitudes would predict adolescent's own self-reported manifestations of distress.

**Method**—1224 Vietnamese American and European American adolescents completed measures of social distance stigma attitudes in response to vignettes depicting youth with internalizing (depression, social anxiety, somatization) and externalizing (alcohol use, aggressive behaviors, delinquency) disorders. A subset of 676 youth also provided self-reports on their own adjustment prospectively over six months.

**Results**—Measurement models revealed clear separation of negatively correlated factors assessing stigma toward externalizing versus internalizing problems. Values related to family interdependence were significantly associated with greater tolerance of internalizing disorders and lower tolerance of externalizing disorders. Stigma towards internalizing disorders was associated with lower concurrent self-reported internalizing symptoms, whereas stigma towards externalizing

symptoms was associated with lower concurrent externalizing symptoms and greater decreases in externalizing symptoms over time.

**Conclusions**—The results of the study suggest that stigma attitudes are differentiated by problem type and may represent one cultural factor shaping distress manifestations.

### Keywords

Stigma; cultural values; internalizing and externalizing disorders

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## Stigma attitudes and self-reported internalizing and externalizing symptoms among adolescents across two cultural groups

Stigmatization of individuals with mental illness has adverse effects on life functioning over and above impairment associated with the illness itself (Hinshaw & Stier, 2008). Stigma harms in several ways – blocking opportunities for education, employment, and housing (Corrigan, Markowitz & Watson, 2004); precipitating rejection and social isolation (Wahl, 1999); fueling self-stigma that exacerbates illness through demoralization (Link, 1987); and deterring help seeking or adherence to treatment (Leaf, Bruce & Tischler, 1986, Sirey et al., 2001). Link and Phelan (2001) have argued that stigma arises when people differentiate and label some aspect of human variation, and the label is associated with negative attributes based on dominant cultural beliefs. Yet, little research has studied cultural influences on linkages between stigma and different forms of psychopathology (Pescosolido, 2007). Responses to different kinds of emotional and behavior problems may be linked to and influenced by differing social and cultural meanings (Hinshaw, 2005). Further, little is known about how young people form stigma attitudes within their specific cultural contexts and no published study has examined how this may predict manifestations of psychological distress. The current study examines relations among culture, stigma concerning distinct emotional and behavioral disorders, and prospective associations with self-reported psychopathology among adolescents.

### The Development of Stigma among Adolescents in Cultural Context

Stigma attitudes begin to emerge as early as middle childhood (Hinshaw & Stier, 2008). Accurate knowledge of mental disorders increases from early childhood through adolescence (Wahl, 2002), but at the same time intensity of stigmatizing attitudes also increases. By eighth grade, adolescents' are more wary and prejudiced against those labeled as "crazy" than those labeled as "convicts" (Weiss, 1994). Adolescents ascribe the same highly stigmatizing attributes (i.e., dangerous, low achieving) as adults to individuals with bipolar disorder, schizophrenia, eating disorders, and depression (Penn et al., 2005). Stigma manifests in social exclusion, shaping social control exerted on children with mental health problems (Martin, Pescosolido, Olafsdottir & Mcleod, 2007). By middle childhood, children are less friendly and more negative when interacting with an experimental confederate branded as emotionally disturbed compared to one labeled as ordinary (Gillmore & Farina, 1989).

Adolescence offers an ideal developmental window to the study the formation of social distance attitudes and related internalized cultural values. Stigma is directed towards mental illness when it is perceived as violating sociocultural-specific norms. Thus, stigma attitudes toward different mental disorders may vary across cultures (Rao, Feinglass, & Corrigan, 2007), with different forms of psychopathology being more stigmatized than others depending on the sociocultural values. Within a cultural approach to developmental psychopathology, Weisz and colleagues (1997) argued that societal values shape attitudes toward distinct types of child behavior problems, with internalizing problems being less discordant with collectivistic values and thus less severely stigmatized in contexts such as Thailand (Weisz et al., 1997). Collectivistic societies emphasize interdependent values such as conformity to norms, emotional restraint, family obligation, and subjugation of personal desires to promote group goals (Markus & Kitayama, 1991). Among interdependent cultural groups, youth manifesting internalizing symptoms may engender less social exclusion than youth with externalizing behavior because these manifestations of distress are less likely to disrupt group harmony (Polo & Lopez, 2009). In contrast, individualistic conceptions of the relatively normative nature of rebelliousness and risk taking nature of adolescence in the West (Arnett, 1999) may engender relatively less, although still, negative views of conduct problems than would be observed in collectivistic groups.

However, to date there is little evidence to suggest robust or consistent racial/ethnic or cross-cultural differences in negative attitudes toward different types of youth psychopathology (Corrigan et al., 2007). Weisz and colleagues vignette based studies suggesting that Thai adults were generally less concerned about both internalizing and externalizing child behavior problems than American adults (Weisz et al., 1988, Weisz, Suwanlert, Chaiyasit, Weiss, & Jackson, 1991). In contrast, in a national survey of American children aged 8 to 18, Asian Pacific Islander youth were more likely to endorse negative family attitudes toward both depression and Attention Deficit Hyperactivity Disorder than youth from other racial/ethnic backgrounds (Walker, Coleman, Lee, Squire, & Friesen, 2008). These findings mirror studies of adults which suggest that Asian origin samples hold more globally negative attitudes across a range of adult mental disorders compared to Western samples (e.g., Ngai, Bozza, Zhang, Chen & Bennett, 2014; Rao, Feinglass & Corrigan, 2007; Yang et al., 2013) Thus in this meager literature, cultural group differences in stigma attitudes have not varied according to type of psychopathology, though the internalizing-externalizing dichotomy of youth mental health problems has received little attention. Further still, it is essential to examine the associations between more proximal indicators of cultural orientation than ethnicity or national context. Collectivistic values concerning interdependence and social harmony, and family obligation may be more closely related to differential stigma toward specific manifestations of youth psychopathology that threaten these cultural priorities.

Research concerning the influence of cultural value orientations and mental health stigma is sparse in general (Abdullah & Brown, 2011). In particular, studies have not examined the role of cultural values in shaping problem-specific stigma attitudes. However, studies with college student samples suggest that Asian values measured broadly (including items related to conformity to norms, honoring family through achievement, filial piety, collectivism, emotional self-control, and humility) are associated with greater stigma toward mental health problems in general (Miville & Constantine, 2007; Shea & Yeh, 2008). One study in

the United Kingdom, revealed that collectivistic values were associated with greater perceptions of public mental health stigma in an ethnically diverse sample of community adults (Papadopoulos, Foster, & Caldwell, 2013). An important next step would be to understand whether such values are differentially related to stigma toward externalizing versus internalizing problem presentations, as implicated by theory on culture and developmental psychopathology (Weisz et al., 1997).

### **Social Distance Attitudes as Differentially Inhibiting Manifestations of Distress**

Stigma attitudes toward mental illness may themselves impact on the development of the types of psychopathology often occurring during adolescence. Weisz and colleagues (1997) posed a suppression-facilitation hypothesis positing that cultural forces shape manifestations of distress by suppressing (via overt or covert punishment) behavioral manifestations that are disapproved and/or facilitating (via teaching, modeling or reward) manifestations considered acceptable. Consistent with this hypothesis, internalizing child behavior problems were more prevalent while externalizing problems were less prevalent in the general community and in clinically referred populations in Thailand than in the United States (Weisz et al., 1987; Weisz, Suwanlert, Chaiyasit, & Walter, 1987). These findings provide indirect support for the contention that interdependent socialization suppresses the development of disruptive, externalizing forms of psychopathology while facilitating the manifestation of inhibited, internalizing psychopathology.

Adolescents may develop syndrome-specific social distance attitudes both as a function of how socialization agents have reacted to their own behavior as well as by observing how others have reacted to the behaviors of their peers. As such, social distance attitudes are a learned product of culturally shaped suppression-facilitation processes that may then influence adolescents' own expressions of distress. In the present study, we predicted that social distance stigma would predict decreases across time in adolescents' self-reports of psychopathology, within a domain of psychopathology (internalizing and externalizing problems); e.g., the higher the level of stigma towards internalizing problems, the greater the decrease across time in internalizing problems. We used self-reports of psychopathology, rather than parent report, because in general self-reports of internalizing psychopathology are seen as likely to be more sensitive than parent-report given the internal nature of depression and anxiety (Angold et al., 1987; DiBartalo & Grills, 2006; Mesman & Koot, 2000), and to avoid confounding cultural differences in parental knowledge of adolescents' functioning with the effects of stigma.

We examined the role of ethnicity (a distal indicator of cultural orientation) and direct measures of internalized interdependent cultural values in predicting problem-specific stigma attitudes and psychopathology in a sample of Vietnamese American and European American adolescents. Vietnamese Americans are the largest refugee group to have been settled in the U.S. since the 1970's. Having East Asian cultural roots, they have been characterized as collectivistic and having interdependent values shaping strong extended kinship ties (Tingvold, Middelthon, Allen & Hauff, 2012), family obligation and assistance (Phinney, Ong & Madden, 2000), with an emphasis on group harmony and expectations to defer personal to group goals (Nguyen & Williams, 1989). They thus represent a valuable

group in which to test our hypotheses regarding cultural factors and stigma. Initial government settlement in conjunction with patterns of secondary migration have resulted in ethnically dense enclaves in a few large metropolitan areas, particularly in California (Zhou, 2001). Although Vietnamese American adolescents may retain traditional values to a lesser extent than their parents (Nguyen & Williams, 1989; Phinney, Ong, & Madden, 2000), community socialization toward interdependence expectations continues to exert a strong influence in ethnic enclaves (Zhou & Bankston, 1998). Vietnamese American youth are described as familistic (Phan, 2004) and more likely than European American youth to endorse the importance of honoring parents and maintaining group harmony (Nguyen & Williams, 1989).

The purpose of the present study then was: (a) to examine cultural influences on adolescents' stigma attitudes regarding internalizing (depression, social anxiety, somatization) and externalizing (alcohol use, aggressive behaviors, delinquency) disorders; and (b) to examine the prospective relationship between adolescents' stigma attitudes and self-reported symptoms over time. In preparation for analyses to assess the role of problem-specific stigma on symptom manifestations, we first evaluated a measurement model of stigma wherein social distance attitudes toward internalizing disorders would be distinct from social distance attitudes toward externalizing disorders. We then evaluated three hypotheses. First, in an indirect test of cultural influence, we examined whether Vietnamese American adolescents would evince lower social distance attitudes toward internalizing youth than European American youth, whereas European American youth would evince lower social distance attitudes toward externalizing youth than Vietnamese American adolescents. Second, based on direct assessment of cultural orientation we hypothesized that adolescent endorsement of collectivistic values (i.e., interdependent self-construal and family obligation) would be associated with differential stigma toward externalizing over internalizing psychopathology. Third, to evaluate tenets of suppression facilitation, we predicted that across cultural groups, problem-specific stigma attitudes would negatively predict concurrent symptoms and growth in symptoms of the same type over time.

## Method

### Participants and Procedures

The present sample was part of a larger study examining cultural variation in stress experiences, coping, and mental health among Vietnamese American and European American 10<sup>th</sup> and 11<sup>th</sup> grade students. Over three academic years (2011–2014), we recruited three cohorts of students from 10 public high schools in the two metropolitan areas with the largest populations of Vietnamese Americans. (U.S. Census Bureau, 2011). In these schools, European American students represented approximately 26% of enrolled students (1.7% to 59.6% across schools) whereas Vietnamese American students represented 36.9% of students (8.1% to 76.0% across schools). The schools served lower- and middle-income communities, with the percent of students qualifying for a free or reduced cost lunch ranging from 12% to 77%, with five schools designated as Title 1 eligible.

Recruitment and sampling included three stages. First, in schools with large enrollments of students from eligible ethnic groups research assistants and/or teachers made brief

announcements in all 10<sup>th</sup> and 11<sup>th</sup> grade classrooms in a given department (e.g., Social Studies; Science) to describe the study and distribute consent packets. Students were instructed to return the packets with a signed parental consent form if they wished to be included in the study. Small incentives were provided to individual students who returned forms and to classrooms with the highest return rates. Among the 5,035 students who returned consent packets, 1,937 (38.5%) declined participation, 3,098 (61.5%) students expressed interest in participating, but 896 (17.8%) were found to be ineligible due to ethnicity. Thus, in total, 2,202 eligible students provided parental consent and adolescent assent for project participation. In schools with smaller numbers of eligible students, targeted recruitment via email was used.

In the second stage of recruitment, a stratified random sample was selected from among those who provided parental consent to maximize the gender and ethnicity balance in the Time 1 (T1) survey. In general, because they were less likely to return completed forms, all eligible and consenting male students were included as well as most European American students. This resulted in a sample of 1227 students with a mean age of 15.6 years ( $SD = .62$ ) who completed the T1 online survey in small groups in the school computer labs. Among the T1 sample, 38.8% were male, and 59.7% ( $n = 730$ ) were Vietnamese American, and 40.3% ( $n = 494$ ) were European American. Vietnamese Americans ( $M = 4.03$ ,  $SD = 1.82$ ) had larger family households compared to European American teens ( $M = 3.39$ ,  $SD = 1.32$ ),  $t(1213) = 6.71$ ,  $p < .01$ . Among the Vietnamese American teens, 20.8% were 1<sup>st</sup> generation, 77.4% were 2<sup>nd</sup> generation, and 0.8% were 3<sup>rd</sup> generation or beyond. Among the European American teens, 1.8% were 1<sup>st</sup> generation, 10.7% were 2<sup>nd</sup> generation, and 86.2% were 3<sup>rd</sup> generation or beyond. As such, Vietnamese American teens were more likely to be 1<sup>st</sup> or 2<sup>nd</sup> generation than European American teens,  $\chi^2(2) = 944.39$ ,  $p < .001$ . There were no differences between groups in adolescent reported family financial strain,  $t(1217) = 1.04$ ,  $p > .05$ . Vietnamese American adolescents reported lower levels of parental education than European Americans, specifically their fathers were less likely to have 16 or more years of education,  $\chi^2(4) = 34.48$ ,  $p < .01$ . Among Vietnamese American teens' fathers, 9.9% had less than high school graduation, 15.2% were high school graduates, 15.1% had some college, 21.1% were college graduates, and 10.7% had a graduate/professional degree. Among European Americans, 3.6% of fathers did not complete high school, 21.1% were high school graduates, 19.0% had some college, 24.3% had a college degree, and 21.3% had a graduate or professional degree.

In the third recruitment stage, 676 students were selected for prospective follow-up from the T1 survey of 1224 participants. Selections were made again to balance gender and ethnicity, and to stratify the sample across low, medium and high levels of stressful life events (a measure not used in the present study). In the prospective sample, 55.0% ( $n = 372$ ) were Vietnamese American and 45.0% ( $n = 304$ ) were European American, and 47.9% ( $n = 324$ ) were male. The same group demographic differences were found in the prospective sample as in the T1 survey sample (i.e., Vietnamese American teens were more likely to be 1<sup>st</sup> or 2<sup>nd</sup> generation than European American teens,  $\chi^2(2) = 502.52$ ,  $p < .001$ , were less likely to have a father who attained college education,  $\chi^2(4) = 17.77$ ,  $p < .01$ , but no more likely to report family financial strain than compared to European American teens). T2 and T3 surveys and interviews were completed 3 and 6 months after the initial assessment. Students



received \$20 or \$25 retail gift cards for participation in the first and follow-up assessments, respectively.

In the present study, data from the T1 sample of 1,224 participants were used for cross-sectional analyses to examine the structure of stigma measure and associations with ethnicity, gender, and cultural value orientations. Data from the prospective sample of 676 participants were used for longitudinal analyses examining the associations between stigma attitudes and trajectories of self-reported psychopathology.

## Measures

**Internalizing and externalizing psychopathology**—Participants completed the Youth Self Report (YSR; Achenbach & Rescorla, 2001), which assesses internalizing and externalizing psychopathology with 112 items covering a range emotional and behavioral problems (as well as several positive distractor items). The adolescents rated each item on the 0 (“not true”), 1 (“somewhat or sometimes true”), or 2 (“very true or often true”) Likert scale for functioning over the past three months. The YSR produces a number of subscales including Withdrawn/Depressed, Somatic Complaints, and Anxious/Depressed which are part of the broadband Internalizing scale; the Rule-Breaking Behavior and Aggressive Behavior subscales are part of the broadband Externalizing Problems scale. The YSR has shown good reliability and discriminative validity across a wide range of cultural groups (e.g., De Groot, Koot & Verhulst, 1996).

**Interdependent Self-construal**—The Self-Construal Scale (SCS; Singelis, 1994) was used at T1 to measure the strength of interdependent and independent self-construals. The SCS contains 24 items 12 of which assess the interdependent dimension (e.g., “I have respect for the authority figures with whom I interact”) and 12 of which assess the independent dimension (e.g., “I’d rather say ‘no’ directly, than risk being misunderstood”). Participants rate the extent to which they agree or disagree with each statement on a 7-point Likert scale ranging from “strongly disagree” to “strong agree”. Internal consistency for the Independent and Interdependent subscales in the current samples was adequate for the Vietnamese Americans ( $\alpha$ 's = .61 and .72) and European Americans ( $\alpha$ 's = .61 and .71).

**Family obligation values**—Participants completed the Adolescents’ Attitudes toward Family Obligation scale (Fulgini, Tseng & Lam, 1999) to assess familistic attitudes associated with interdependent cultural contexts. The Current Assistance subscale assesses the frequency with which teens assist their families with household tasks (e.g., “help take care of your brothers and sisters”) The Respect subscale assesses the extent to which the teen respects and follows the wishes of the family (e.g., “show great respect for your parents). The Future Support scale assesses the importance of obligations to support the family in the future (e.g., “help your parents financially in the future”). The current study used the full scale score as an indicator of family interdependence values. The measure had good internal consistency across groups in our sample (alpha = .88 and .85, for European American and Vietnamese Americans, respectively).

**Problem-Specific Stigma**—A vignette-based measure was specifically developed for the present study to assess attitudes toward emotional and behavioral disorders common in adolescence. Seven vignettes depicting adolescents were developed to assess youths' view regarding symptoms associated with: (a) depression, (b) social anxiety, (c) alcohol abuse, (d) somatic complaints, (e) eating disorder, (f) aggression, and (g) delinquency. Because the present study focused on internalizing and externalizing psychopathology, and because eating disorders do not fit clearly into either domain, data from the eating disorders vignette was not used in the present study. The externalizing vignettes depicted youth with both covert (stealing) and overt (physical aggression) conduct problems that were apparent to peers and adults. The internalizing vignettes included symptoms (e.g., social withdrawal, somatic complaints, emotions such as sadness and worry) that were not directly expressed towards others but that were observable (e.g., social withdrawal in the depression vignette; in the anxiety vignette, the individual's voice shakes when he speaks in class). Functional impairment in social and academic domains was included in all vignettes. Because a central part of this study was to link stigma attitudes with psychopathology within participants, gender of the vignette was matched to gender of the participant. After reading each vignette, participants were asked to rate their agreement with seven social distance statements (e.g., "I would try to avoid [John]") about the person depicted in the vignette using a 1 "strongly disagree" to 6 "strongly agree" scale. In the current study we used a composite of these social distance items. Across the six vignettes used in the present study, internal consistency alpha ranged from .74 to .83. Three month test-retest reliability was .84 for internalizing stigma and .76 for externalizing stigma assessed in a subset of 215 participants.

## Results

### Sample Characteristics

Table 1 reports means for the main study variables, separately for the two ethnic groups by gender. Vietnamese American teens ( $M = 2.78$ ,  $SD = 0.78$ ) reported significantly more internalizing stigma than European American teens ( $M = 2.57$ ,  $SD = 0.78$ ),  $t(1212) = 4.61$ ,  $p < .001$ , Cohen's  $d = .27$ . European American teens ( $M = 4.19$ ,  $SD = 0.92$ ) reported significantly more externalizing stigma than Vietnamese American teens ( $M = 3.98$ ,  $SD = 0.91$ ),  $t(1213) = 3.90$ ,  $p < .001$ , Cohen's  $d = .23$ . Vietnamese American teens endorsed greater family obligation ( $M = 3.46$ ,  $SD = 0.63$ ) and interdependent self-construals ( $M = 29.58$  and  $SD = 5.17$ ) than European American teens ( $M = 3.25$ ,  $SD = 0.70$  and  $M = 28.80$ ,  $SD = 5.13$ , respectively),  $t(1216) = 5.48$  and  $2.57$ ,  $p < .01$ , Cohen's  $d = .32$  and  $.15$ . In the Vietnamese American sample, 17.84% reported elevated internalizing symptoms ( $t > 70$ ) and 3.59% reported elevated externalizing symptoms. Among the European American participants, the rates were 15.14% and 4.56% for internalizing and externalizing symptoms, respectively. Table 2 reports the Pearson correlations among the study variables at Time 1.

### Factor Structure of Stigma Measure

Confirmatory factor analyses (CFA) were conducted to examine the latent structure of the stigma measure using the T1 sample ( $n = 1217$ ). Goodness of fit was assessed using comparative fit index (CFI), root-mean-square error of approximation (RMSEA), and standardized root-mean-square residual (SRMR). Chi-square difference tests were used to



examine comparative fit where competing models were nested. The CFA assessed the fit of our proposed two factor model, with internalizing stigma and externalizing stigma as two correlated factors. The model provided acceptable fit,  $\chi^2(8) = 137.87, p < .001$ ; CFI = .97, RMSEA = .12, SRMR = .05. In contrast, fit for a single factor solution with all the stigma scores loading onto a single general factor was poor,  $\chi^2(9) = 1156.89, p < .001$ , CFI = .69, RMSEA = .32, SRMR = .14.

Measurement invariance (equal latent form, factor loadings, indicator intercepts) across European Americans and Vietnamese Americans was examined using a multiple-group CFA. The two-group CFA fit the data adequately,  $\chi^2(20) = 161.02, p < .001$ , CFI = .96, RMSEA = .11, SRMR = .05. Given the evidence of equal form across the two ethnicities, we assessed metric invariance by imposing equality constraints on the factor loadings of the European American and Vietnamese American solutions. These constraints did not significantly reduce the fit of the solution, indicating that the factor loadings were equivalent across the two samples,  $\chi_{diff}^2(4) = 3.20, ns$ . Next, we examined the scalar invariance of the stigma measure by placing equality constraints on the intercepts across the two samples. These constraints resulted in a reduction in model fit,  $\chi_{diff}^2(6) = 1955.90, p < .001$ , suggesting scalar invariance.

### **Hypothesis 1: Ethnic Group Differences in Problem-Specific Stigma**

Using the full T1 sample, a mixed analysis of variance (ANOVA) was used to examine the effects of ethnicity, gender, and domain of psychopathology (internalizing vs. externalizing problems, as a repeated measure) on stigma scores, controlling for parental education. The main effect for domain of psychopathology was significant ( $F(1, 1065) = 59.95, p < .001, d = .46$ ), with stigma ratings for externalizing disorders being much higher than for internalizing disorders. The main effect of gender was significant ( $F(1, 1065) = 9.86, p < .01, \eta_p^2 = .01$ ), but this can only be interpreted in light of significant Problem Type x Gender and Problem Type x Ethnicity interactions ( $F(1, 1065) = 8.89$  and  $12.28, ps < .05, \eta_p^2s = .01$  and  $.01$ , respectively). Examination of simple effects revealed that boys gave higher stigma ratings to internalizing disorders than girls ( $d = .29$ ), whereas there was no gender difference in stigma ratings of externalizing disorders ( $d = .03$ ). Contrary to our predictions, Vietnamese American youth gave lower social distance ratings to externalizing problems ( $d = .20$ ) and higher social distance ratings to internalizing problems ( $d = .27$ ) compared to European American participants (see Figures 1a and 1b).

### **Hypothesis 2: Relations between Problem-Specific Stigma and Interdependent Values**

Figure 2 displays the multiple-group CFA model with equality constraints on the factor loadings across the two ethnicities with the independent associations between each cultural value orientation and stigma components considered simultaneously. The model demonstrated adequate fit,  $\chi^2(48) = 181.44, p < .001$ , CFI = .96, RMSEA = .07, SRMR = .04. In predicting internalizing stigma, we found a negative association with family obligation for both European Americans ( $\beta = -.14, p = .004$ ) and Vietnamese Americans ( $\beta = -.17, p < .001$ ). In predicting externalizing stigma, we found a positive association with family obligation for both groups (European American:  $\beta = .20, p < .001$ ; Vietnamese

American:  $\beta = .13, p = .001$ ). Interdependent and independent self-construals were not associated with internalizing or externalizing stigma.

### **Hypothesis 3: Relations between Problem-Specific Stigma and Self-Reported Psychopathology**

Latent growth curve (LGC) analysis (Curran, 2000) was used to examine the association among stigma attitudes and psychopathology over time. To estimate the LGC models, Mplus Version 6.12 (Muthen & Muthen, 1998–2011) was used to identify the initial level and rate of change in adolescent internalizing and externalizing symptoms from Time 1 (baseline) to Time 3 (6-month follow up). Time was fixed incrementally and according to the spacing of assessment points, with a one-unit difference between each successive time point. First, we estimated separate unconditional linear growth models (without covariates) for a) internalizing psychopathology and b) externalizing psychopathology over time. Next, latent stigma factors (i.e., internalizing stigma and externalizing stigma) and observed demographic variables (i.e., gender and ethnicity) were added to the two latent growth models as covariates. Lastly, we combined the conditional models to examine a growth model for parallel processes in internalizing and externalizing psychopathology over time.

**Internalizing psychopathology growth model**—The unconditional linear LGC model for internalizing symptoms across T1 to T3 had good fit,  $\chi^2(1) = 5.30, p = .02, CFI = 1.00, RMSEA = .08, SRMR = .01$ . Mean slope suggested an overall declining trend in internalizing symptoms over time,  $\beta = -.66, p < .001$ . With the inclusion of covariates, the linear LGC model for internalizing symptoms had excellent fit,  $\chi^2(16) = 15.46, p = .49, CFI = 1.00, RMSEA < .001, SRMR = .02$ .

**Externalizing psychopathology growth model**—The unconditional linear LGC model for externalizing symptoms across T1 to T3 had good fit,  $\chi^2(1) = 4.26, p < .001, CFI = 1.00, RMSEA = .07, SRMR = .01$ . Mean slope suggested an overall declining trend in externalizing symptoms over time,  $\beta = -.28, p < .001$ . With the inclusion of covariates, the linear LGC model for externalizing symptoms also had strong fit,  $\chi^2(18) = 53.12, p < .001, CFI = .98, RMSEA = .05, SRMR = .05$ .

**Parallel process model for internalizing and externalizing psychopathology**—The parallel process model had good fit to the data,  $\chi^2(63) = 248.84, p < .001, CFI = .96, RMSEA = .07, SRMR = .03$  (See Figure 3). The covariance between the two psychopathology intercepts and slopes were significant (internalizing:  $\beta = -.17, p = .02$ ; externalizing:  $\beta = -.21, p = .01$ ), suggesting that higher initial internalizing and externalizing symptoms were associated with faster rate of decline in symptoms over time. Initial level of internalizing symptoms was related to initial level of externalizing symptoms,  $\beta = .53, p < .001$ . Likewise, change in internalizing symptoms was correlated with change in externalizing symptoms,  $\beta = .89, p < .001$ . The externalizing symptom intercept was negatively associated with slope of change in internalizing symptoms ( $\beta = -.14, p = .01$ ), and internalizing symptom intercept was negatively related to slope of change in externalizing symptoms ( $\beta = -.12, p = .03$ ).

The latent factor of internalizing stigma was negatively associated with internalizing symptom intercept, such that individuals with higher stigma attitudes toward internalizing problems had lower internalizing symptoms initially ( $\beta = -.10, p = .01$ ). However, internalizing stigma was unrelated to rate of change in internalizing symptoms over time,  $\beta = -.03, ns$ . Externalizing stigma was negatively related to externalizing symptom intercept,  $\beta = -.22, p < .001$ ; individuals with higher stigma attitudes toward externalizing problems had lower externalizing symptoms initially. Externalizing stigma was also associated with slope in externalizing psychopathology, such that individuals with higher stigma attitudes had greater declines in externalizing symptoms over time ( $\beta = .12, p = .01$ ).

Ethnicity was positively associated with both psychopathology intercepts, such that Vietnamese Americans initially had higher internalizing and externalizing symptoms than European Americans (internalizing:  $\beta = .15, p < .001$ ; externalizing:  $\beta = .15, p < .001$ ). However, ethnicity was unrelated to rate of change in psychopathology over time. Gender was only positively associated with internalizing psychopathology intercept, such that females initially had higher internalizing symptoms than males ( $\beta = .11, p = .01$ ).

## Discussion

Within a short term prospective survey of Vietnamese American and European American adolescents, we examined whether stigma toward internalizing and externalizing psychopathology was related to cultural factors and whether stigma attitudes appeared to shape subsequent manifestations of psychopathology. The measurement models revealed that it was indeed essential to differentiate internalizing stigma from externalizing stigma, and that the two were negatively correlated. Next, we found support for two of our three study hypotheses. First, contrary to our predictions, Vietnamese Americans did not evince stronger stigma toward externalizing and lower stigma toward internalizing problems compared to European Americans; in fact the opposite pattern was observed. However, using a more direct assessment of cultural orientation we found that interdependent values related to family obligation were associated with greater stigma toward externalizing psychopathology and lower stigma toward internalizing psychopathology. Finally, our findings revealed support for the contention that endorsing stigma toward attitudes predicted lower concurrent symptoms of the same type. Furthermore, stigma attitudes toward externalizing psychopathology and predicted declines in self-reported externalizing symptoms prospectively.

Our finding that Vietnamese American youth were more intolerant of depictions of internalizing psychopathology and less intolerant of externalizing psychopathology compared to European American teens ran counter to our first hypothesis derived from theory on culture and developmental psychopathology. Although scholars have argued that socialization within interdependent cultural contexts may promote relative acceptance of internalizing versus externalizing psychopathology (Polo & Lopez, 2009; Weisz et al., 1997), empirical research has not supported cultural differences in problem-specific patterns of stigma. Studies indicate that Thai adults rate both internalizing and externalizing problems as less problematic than American adults (Weisz et al., 1988, 1991) and Asian

American youth endorse more intolerance toward both types of problems than youth from other racial/ethnic backgrounds (Walker et al., 2008).

Alternatively, other considerations from cultural psychology may help explain the finding that youth with internalizing disorders was seen more pejoratively by Vietnamese American than European American youth. Research suggests that Asian Americans and other interdependent cultural groups value the use of expressive suppression and refrain from revealing distress in the interest of promoting interpersonal harmony and avoiding burdening others (Butler, Lee & Gross, 2007; Kim, Sherman, & Taylor, 2008; Mauss, Butler, Roberts, & Chu, 2010; Wang, Shih, Fung, & Lau, 2010). Thus, Vietnamese American adolescents may be more likely to disapprove of the overt expression of negative emotion inherent in the forms of internalizing psychopathology depicted. The observed ethnic differences in stigma ratings for internalizing problems may have been driven by negative evaluation of open expression of dysphoric and anxious affect.<sup>1</sup>

Furthermore, cross-ethnic comparisons do not provide an isolated test of proposed cultural influences, and our findings may reflect other determinants of stigma attitudes. In this study, the two ethnic groups are both being raised in America in the same school contexts and their comparison may provide a weak test of cultural influence confounded by other salient differences including minority status stressors and socioeconomic disadvantage. Although we controlled for parental education, the finding that Vietnamese American teens were relatively more tolerant of externalizing disorders than European Americans may reflect the fact that the two groups tend to reside in different neighborhoods even though they attend the same schools. Conduct problems may be more commonplace in the disadvantaged ethnic enclaves where Vietnamese Americans reside and encounter acculturative stress (Kouider, Koglin & Petermann, 2014, McBride Murry et al., 2011). As such, exposure to stress associated with urban, low-income neighborhoods and associated peer deviance<sup>2</sup> may render Vietnamese American youth relatively less averse to antisocial behavior.

However, it is important to note that respondents across both ethnic groups provided higher social distance ratings to externalizing versus internalizing disorders. This is consistent with influential models of mental health stigma in which perceptions of dangerousness and culpability are major determinants (Corrigan et al., 2005; Weiner, Perry, Magnusson, 1988). There is no evidence that this consideration should vary by culture and it is reasonable that externalizing disorders involving aggression, alcohol abuse, and delinquency uniformly invoke greater perceptions of malice and dangerousness than internalizing disorders. Indeed, the strongest effect on stigma ratings was the within-subject factor of problem type ( $d = .46$ ).

Moving beyond ethnicity is essential as such group contrasts do not isolate heritage cultural differences but may reflect other confounding variables, including class, minority status, and

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<sup>1</sup>We investigated this possibility further by unpacking the associations between stigma ratings and trajectories of different types of internalizing symptoms. Internalizing stigma ratings were associated with intercepts of the trajectories of Depressed/Withdrawn and Anxious/Depressed YSR scales ( $\beta = -.12, p < .01$ ), but not with the intercept of the trajectory of the Somatic Complaints scale ( $\beta = -.05, n.s.$ ). Thus, stigma toward internalizing disorders was specifically inversely related to concurrent anxiety and depression that involved experience and expression of negative affect but not to somatic presentations absent of affective disturbance.

<sup>2</sup>In response to a stressful life events checklist, Vietnamese American youth in our sample reported higher levels of exposure to community violence than European American adolescent ( $d = .32$ ).

immigration history (Betancourt & Lopez, 1993). Thus, the test of our second hypothesis included direct measures the cultural dimensions of interest and provided support for predicted associations between stigma ratings and certain collectivistic values. Although independent and interdependent self-construals were unrelated to problem-specific stigma attitudes, adolescents who endorsed family obligation values expressed more tolerance toward internalizing psychopathology and greater intolerance of externalizing behavior problems. These results lend credence to the position that socialization of interdependent values in the family domain may shape adolescents' acceptance of different manifestations of psychological distress irrespective of their ethnic heritage. These observations are consistent with Weisz and colleagues (1997) suppression-facilitation hypothesis, which suggests that socialization can act to suppress behaviors that are disapproved while facilitating other more culturally acceptable manifestations of distress. In fact, differential stigma (for different forms of adolescent psychopathology) may serve as a mediator within the suppression-facilitation model of the effects of culture. Family interdependence values emphasize age veneration, respect, and obedience among youth (e.g., Leyendecker, Harwood, Lamb & Schölmerich, 2002), which may make internalizing psychopathology more acceptable than externalizing psychopathology which involves direct conflict with authority and greater potential for family face loss.

Beyond the main findings of cultural factors related to stigma ratings, our data also suggested more negative attitudes towards gender-atypical forms of psychopathology. There was an interaction between gender and problem type with males being more intolerant of internalizing psychopathology compared to females, but there was no effect of gender on stigma toward externalizing problems. Although there is some research indicating that peers respond most favorably to adolescents who exhibit sex-typed behavior (Hibbard & Buhrmester, 1998), there is little data showing that these effects are stronger boys than for girls. However, boys who violate gendered expectations to minimize displays of sadness are less accepted by peers, whereas sociometric ratings for girls are not affected (Perry-Parrish & Zeman, 2009).

Finally, our prospective analyses lent some support for the notion that stigma attitudes have utility for predicting manifestations of distress and trajectories of self-reported psychopathology. First, stigma toward Internalizing disorders had a specific, significant effect in predicting concurrent reports of Internalizing but not Externalizing symptoms. Moreover, stigma attitudes toward Externalizing disorders specifically predicted lower concurrent self-reported externalizing symptoms and predicted steeper declines in self-reported externalizing symptoms across the follow-up period. Youth who responded more negatively to vignettes depicting antisocial, aggressive behavior and alcohol abuse were less likely to subsequently report or manifest these behaviors. These data provide some support for the contention that cultural values may indirectly shape adolescent's propensity to exhibit distress manifestations as a function of stigma attitude formation. However, stigma attitudes only appeared to suppress later symptoms reports in the externalizing domain.

Thus, this study provides the first evidence of the relevance of culturally shaped problem-specific stigma attitudes for predicting adolescent manifestations of distress. This empirically supports the construct of idioms of distress, albeit not in the sense of culture-

bound syndromes, but with respect to the likelihood that distress manifestations may be more likely to shift toward one or the other broad-band dimension of youth psychopathology that has been validated around the globe. Previous demonstrations have focused on cultural variation in somatic versus affective presentations of youth distress (Weiss, Tram, Weisz, Rescorla, & Achenbach, 2009), however the role of mental health stigma in shaping somatic presentations across cultures is not well established (Ryder & Chentsova-Dutton, 2012).

There are several limitations to this study that should be considered when interpreting the findings. First, our sample of adolescents was recruited from schools. The participants were all recruited from classrooms and self-selection into our voluntary study may have resulted in a bias toward conscientious and highly involved students. The findings that adolescents were much more intolerant of adolescents with externalizing disorders compared to internalizing disorders may be related to the nature of our sample that may more representative of youth who are at lower risk of externalizing psychopathology than a general population sample of adolescents. Second, the study intentionally relied on adolescent self-reports, since stigma, cultural values, etc. involve internalized beliefs that would be difficult to assess via informant reports or behavioral observations. However, as with all studies relying on self-report, there is the possibility that relations among our variables were influenced by hesitancy to report socially undesirable attitudes or symptoms. A third limitation is that because of the structure of our stigma measure, we were not able to fully assess cross-gender stigma effects. That is, because our primary purpose for assessing stigma was to assess its relations to participants' own psychopathology (rather than gender effects), participants rated stigma towards same-sex peers. We thus were not able to assess cross-gender stigma effects, which also meant that we were not able to fully assess whether gender-atypical psychopathology was more stigmatized, as some prior research has suggested (Wirth & Bodenhausen, 2009). Fourth, in the current study we conceptualized stigma attitudes as a predictor of manifestations of distress and thus did not assess stigma attitudes at follow-up. As such, we did not evaluate whether self-reported symptoms at baseline was associated with changes in stigma attitudes. This would help establish temporal precedence in associations between these variables, and represents a direction for future research.

A final limitation is that our samples of Vietnamese American and European American adolescents were obtained from the same schools and regions, and the Vietnamese neighborhoods were of relatively high ethnic density. Thus, our samples may not be fully representative of Vietnamese American adolescents as an ethnic minority group, and European Americans as the majority, since their social contexts likely differ from that of similarly labeled adolescent populations in different regions of the U.S. Our sample of European American youth may be very distinct from adolescents who reside in less diverse areas of the country and attend less diverse schools. Cross-cultural methods may be more likely to reveal group differences across samples socialized in different nation states.

The results of the study suggest potentially useful future directions for research and action. With regard to stigma reduction, the finding that stigma attitudes were clearly separable by disorder type with negative intercorrelations suggests that broad efforts to reduce mental health stigma generally may not be maximally effective. At present, the most promising



interventions rely on increasing positive contact with stigmatized groups to foster empathy (e.g., Hinshaw & Stier, 2008). The results of our analyses suggest that these effects may generalize within broadband disorder type (e.g., anxiety and depression, within internalizing problems) but not across broadband disorder type (e.g., from internalizing to externalizing disorders). This suggests that stigma reduction efforts should be differentiated.

In terms of implications, our results suggest that the socialization of strong family obligation values may protect against development of externalizing disorders in part by modifying social attitudes toward deviant peers (German, Gonzales & Dumka, 2009; Telzer, Gonzales & Fuligni, 2014). However, a novel finding was that valuing family interdependence and filial obligation appears to be linked to lower levels of concurrent internalizing symptoms for European Americans and less stigma toward internalizing disorders for both ethnic groups. This second benefit is important for Vietnamese American youth and other Asian American groups because our data and other studies suggest heightened risk for internalizing disorders (Austin & Chorpita, 2004; Choi & Park, 2006; Huang, Cheng, Calzada, & Brotman, 2012; Lorenzo et al., 1995; Wight, Aneshensel, Botticello, & Sepulveda, 2005), and lower likelihood of seeking help for internalizing distress (Guo, Nguyen, Weiss, Ngo & Lau, 2015) compared to European Americans. Clinicians and intervention developers working with Asian American and Vietnamese American communities could emphasize this culturally protective factor of family connectedness and interdependence to yield returns in promoting both adolescent well-being and also strengthening the help-seeking pathway.

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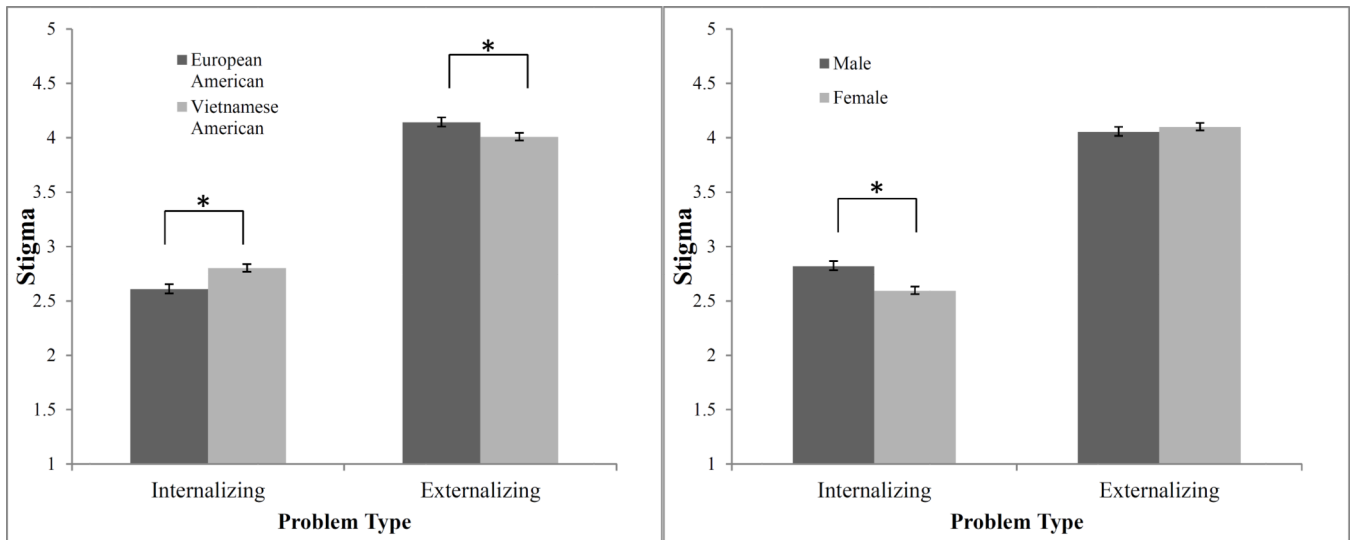
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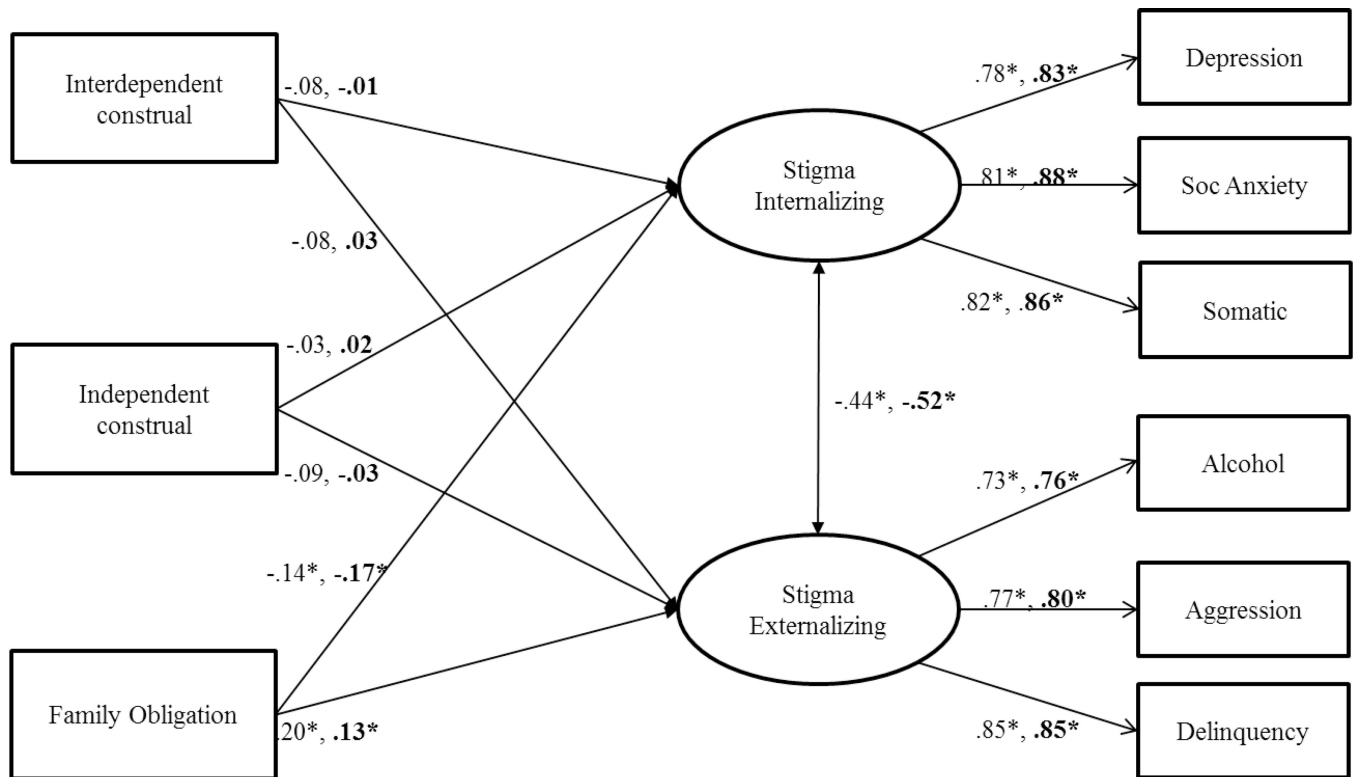
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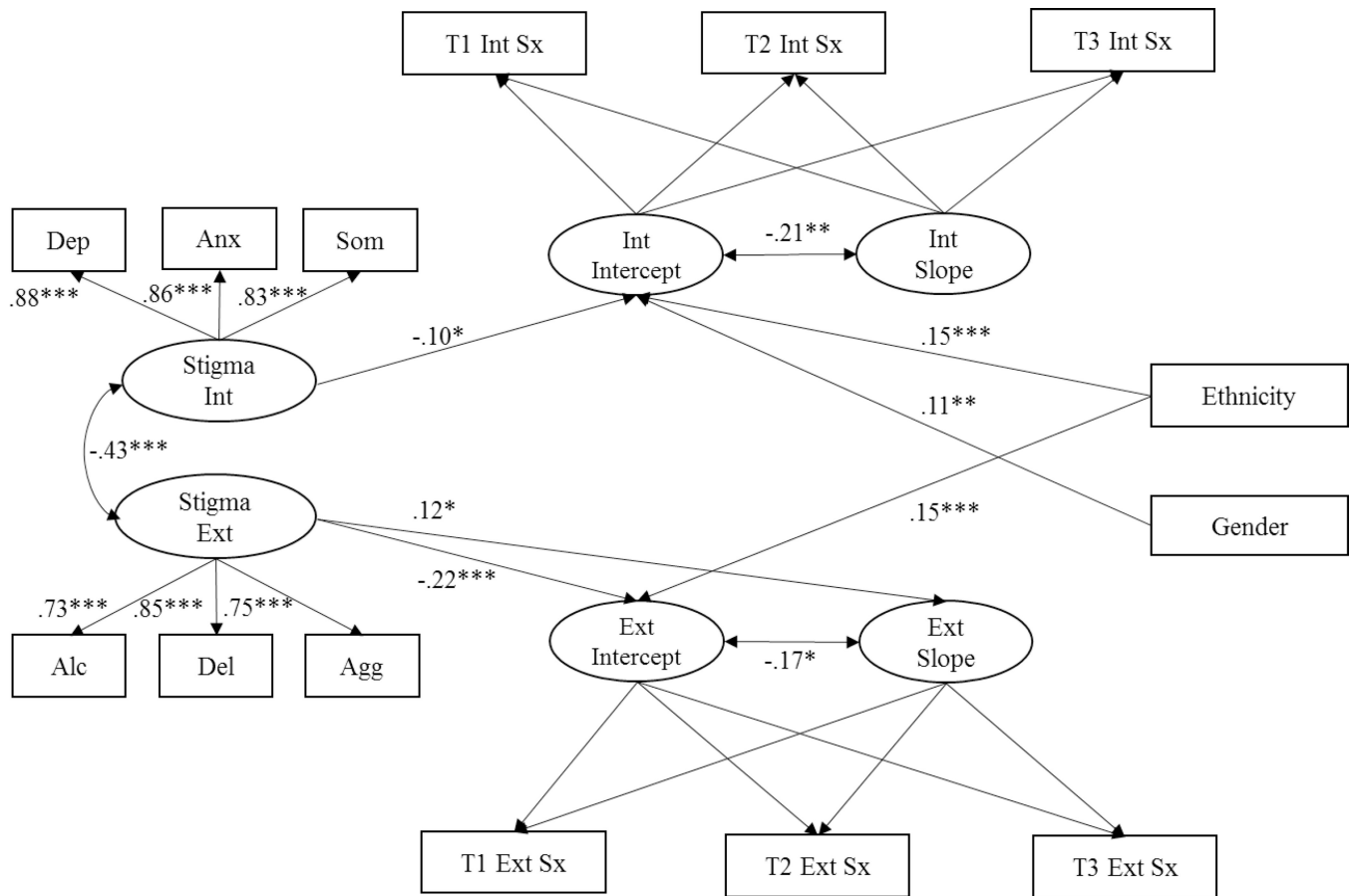
**Figure 1.**  
Race x Problem Type Interaction predicting problem-specific Stigma scores.  
Gender x Problem Type Interaction predicting problem-specific Stigma scores.





**Figure 2.**  
Structural equation model of cultural values predicting stigma.

Note: Estimates in bold depict Vietnamese Americans;  $*p < .05$ ,  $\chi^2(48) = 181.44$ , CFI = .96, RMSEA = .07, SRMR = .04



**Figure 3.**

Stigma attitudes predicting trajectories of self-reported internalizing and externalizing psychopathology.

*Note:* Int = Internalizing, Ext = Externalizing, Sx = Symptoms, Dep = Depression, Anx = Social Anxiety, Som = Somatic, Alc = Alcohol, Del = Delinquency, Agg = Aggression; Non-significant paths and auto-correlations between intercepts and slopes are omitted for clarity.  $*p < .05$ ,  $**p < .01$ ,  $***p < .001$ .

**Table 1**  
Mean differences for Time 1 (T1) Study Variables between Ethnic Groups (N = 1227)

Variables	Vietnamese American		European American		<i>t</i>	<i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
1. T1 Internalizing Stigma	2.78	0.78	2.57	0.75	4.61 <sup>***</sup>	.27
2. T1 Externalizing Stigma	3.98	0.91	4.19	0.92	3.89 <sup>***</sup>	.23
3. T1 Internalizing Symptoms	60.77	10.07	58.79	10.87	3.25 <sup>***</sup>	.19
4. T1 Externalizing Symptoms	53.68	8.92	51.98	9.60	3.15 <sup>**</sup>	.18
5. T1 Family Obligation	3.46	0.63	3.25	0.70	5.48 <sup>***</sup>	.32
6. T1 Independent Self-Construal	25.72	4.19	25.36	4.39	1.45	.08
7. T1 Interdependent Self-Construal	29.58	5.17	28.80	5.13	2.57 <sup>**</sup>	.15

Note.

\*  $p < .05$ ,

\*\*  $p < .01$ ,

\*\*\*  $p < .001$

**Table 2**  
Pearson correlations between Stigma and Cultural Values Measures at T1 (N = 1227)

	1	2	3	4	5	6	7
1. Stigma Int	--						
2. Stigma Ext	-.36 <sup>***</sup> (-.46 <sup>***</sup> )	--					
3. Interdependence	-.08 (-.03)	-.07 (.05)	--				
4. Independence	-.05 (-.00)	-.06 (-.01)	-.05 (.12 <sup>**</sup> )	--			
5. Family Obligation	-.14 <sup>**</sup> (-.16 <sup>***</sup> )	.16 <sup>**</sup> (.12 <sup>**</sup> )	.06 (.19 <sup>***</sup> )	.16 <sup>***</sup> (.13 <sup>***</sup> )	--		
6. YSR Int	-.06 (-.12 <sup>**</sup> )	-.04 (.04)	.03 (.13 <sup>**</sup> )	-.34 <sup>***</sup> (-.15 <sup>***</sup> )	-.16 <sup>***</sup> (-.05)	--	
7. YSR Ext	.12 <sup>**</sup> (.05)	-.27 <sup>***</sup> (-.15 <sup>***</sup> )	-.02 (-.05)	-.02 (.05)	-.23 <sup>***</sup> (-.18 <sup>***</sup> )	.46 <sup>***</sup> (.49 <sup>***</sup> )	--

Note: Stigma Int = internalizing stigma; Stigma Ext = externalizing stigma; YSR Int = self-reported internalizing symptoms; YSR Ext = self-reported externalizing symptoms. Coefficients in parentheses are for Vietnamese Americans, and those without are for European Americans;

\*  $p < .05$ ,

\*\*  $p < .01$ ,

\*\*\*  $p < .001$