

RESEARCH ARTICLES

Maladaptive Perfectionism and Depressive Symptoms Among Asian American College Students: Contributions of Interdependence and Parental Relations

Jaimin Yoon and Anna S. Lau
University of California, Los Angeles

Maladaptive perfectionism among Asian Americans may represent a shared social construction socialized within an interdependent cultural script. The authors hypothesized that interdependence concerns and parental relations may explain elevated maladaptive perfectionism and associated depressive symptoms in a sample of 140 Asian American college students. Survey findings revealed that interdependence, maladaptive perfectionism, and parent-driven perfectionism were associated with depressive symptoms. Regression analyses revealed that interdependence moderated the relationship between maladaptive perfectionism and depressive symptoms such that highly interdependent Asian American students appeared more vulnerable to depression when demonstrating perfectionistic tendencies. Parental support buffered subjects from distress associated with parent-driven perfectionism. Processes of heightened cultural vulnerability and sensitization to maladaptive perfectionism are discussed.

Keywords: perfectionism, depression, culture, interdependence

Perfectionism is commonly thought of as a trait that motivates individuals to strive toward important goals and foster excellence. However, a growing literature highlights aspects of perfectionism linked to negative psychological outcomes, including low self-esteem, depression, and suicidality (e.g., Hamilton & Schweitzer, 2000; Hewitt & Dyck, 1986; Hewitt & Flett, 1991). Hamachek (1978) noted the importance of distinguishing *normal perfectionists*, defined as people who establish high standards for themselves but who “feel free to be less precise as the situation permits,” from *neurotic perfectionists*, who adhere rigidly to excessively high standards permitting little room for mistakes. Indeed, theorists contrast maladaptive perfectionism motivated by a fear of failure and the hope of avoiding penalties, with adaptive perfectionism characterized by an approach motivation toward success or positive reinforcement (Frost, Marten, Lahart, & Rosenblate, 1990; Slade & Owens, 1998). Research implicates maladaptive perfectionistic traits as both correlates of concurrent psychopathology (Hewitt & Flett, 1991) and predictors of future distress (Hewitt, Flett, & Ediger, 1996).

Previous studies have revealed that Asian Americans demonstrate perfectionistic tendencies (Peng & Wright, 1994), which

raises the question of whether they are at a heightened risk of psychopathology associated with perfectionism. For example, compared to Caucasian American college students, Asian American college students report feeling more doubtful about their actions and being more concerned about mistakes (Castro & Rice, 2003; Chang, 1998), both indicators of maladaptive perfectionism (Bieling, Israeli, & Antony, 2004). Further, these aspects of perfectionism have been linked to depression and suicidality among Asian Americans (Beevers & Miller, 2004; Castro & Rice, 2003). While the increased risk of perfectionism among Asian Americans has been documented, the cultural factors that account for these ethnic differences have yet to be clarified. In this study we examined whether a cultural emphasis on interdependence and related characteristics of parental relations may explain vulnerability to perfectionism and associated distress among Asian American college students.

Individuals from Asian and other collectivistic cultures tend to value interdependence through a focus on interpersonal relationships, obligations, and responsibilities and a tendency to define the self in reference to these relationships (Markus & Kitayama, 1991). Through socialization within an interdependent cultural script, self-regard becomes tied to one’s ability to fulfill dependency bonds and obligations. Interdependence may foster perfectionism owing to the perception that achievement and failure reflect not only upon the individual, but also upon important collective units. As such, interdependence may heighten adaptive perfectionism driven by the hopes of achievements that can be shared with friends and family to fulfill collective goals. However, interdependence concerns may also confer risk of maladaptive perfectionism through a focus on avoiding the social penalties of public failure, which may include rejection. Perfectionism may be

Jaimin Yoon and Anna S. Lau, Department of Psychology, University of California, Los Angeles.

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Correspondence concerning this article should be addressed to Jaimin Yoon, UCLA Department of Psychology, 1285 Franz Hall, Box 951563, Los Angeles, CA 90095-1563. E-mail: jaiyoon@ucla.edu

a salient concern among Asian American students owing to a strong cultural focus on family obligations for scholastic achievement (Chao & Tseng, 2002; Fuligni & Tseng, 1999; Sue & Okazaki, 1990). Maladaptive perfectionism is thought to have origins in parental socialization characterized by high expectations and criticism (Blatt, 1995; Frost et al., 1990), an association replicated in Asian American samples (Kawamura, Frost, & Hartz, 2002). Comparative studies suggest that Asian American parents expect more effort in schoolwork and higher grades and educational attainment compared to European American parents (Chao & Tseng, 2002). Furthermore, they appear more intolerant of disappointed expectations, displaying more critical and rejecting behavior than European American parents (e.g., Winata & Power, 1989; Wu & Chao, 2005). Poor school performance represents not just individual failure, but a violation of filial duty that precipitates loss of face for the entire family (Stevenson & Lee, 1996).

Perfectionism has been construed as a personality trait, and the focus has largely been on its role as an individual difference in predicting behavior and adjustment (e.g., Enns, Cox, & Clara, 2002). However, the salience of relationship and role expectation concerns in both interdependent cultural traditions and the development of perfectionism warrant increased attention to a sociocultural formulation of perfectionism. Hewitt and Flett (1991) emphasize the social context of perfectionism by contrasting self-oriented perfectionism, an achievement based motivation to strive for perfection, with socially prescribed perfectionism, a need to attain high expectations set by significant others. However, in this model socially prescribed perfectionism is a dispositional tendency to perceive that others are holding one to unrealistic expectations. Considered differently, perfectionism may represent a shared sociocultural construction, as opposed to an inherent and static personality attribute. Perfectionism may be a reasonable response to socialization experiences and actual contingencies in interdependent social networks.

Given these potential sociocultural determinants of perfectionistic behavior, it is possible that perfectionism may impact individuals from different cultural contexts in distinct ways. Although previous research has demonstrated that the relationship between perfectionism and emotional distress may be significant for both Asian Americans and European Americans (Chang, 1998), these studies have not examined whether cultural factors may moderate the strength of this association. It is possible that the degree to which cultural ideals of interdependence are held as primary may influence the emotional sequelae of perfectionism. In the absence of previous empirical findings, we lay out two alternative, yet theoretically plausible, hypotheses about how interdependence may influence the perfectionism-distress link.

First, the relationships of interest may be better characterized by a cultural sensitization process whereby perfectionism is more detrimental among individuals who are highly interdependent. Increased concern for group goals and group integrity could exacerbate the distress associated with a tendency toward perfectionism, since individual failures may be perceived to have lofty consequences for the whole social unit. Because of their focus on interpersonal obligation and responsibility, interdependent individuals may have more distress when they set standards of excellence motivated by the fear of disappointing others. Asian American college students are noted to place more importance on family interdependence than other ethnic groups (Tseng, 2004), which

may increase the risk of depression associated with parental pressures for achievement.

On the other hand, the notion of cultural congruence may be invoked to predict that individuals who are more interdependent may suffer few problems associated with perfectionism. For individuals whose behaviors are regulated by themes of obligation to others and attending to group goals over personal wishes, perfectionism may represent a culturally syntonetic mode of operation. As such, distress may not necessarily be associated with an emphasis on precision, attention to deficiencies, and perceived parental expectations. This is consistent with the cross-cultural finding that although students in Asia perceive higher parental expectations and lower parental satisfaction with their academic performance, they report similar levels of stress and academic anxiety compared to American students (Crystal et al., 1994). In this case, perfectionism may represent an adaptation consistent with prevailing cultural norms and socialization experiences that carries little increased risk of psychopathology.

Furthermore, investigators have noted that high levels of parental control in families of Asian descent are marked not only by high expectations and tendencies toward criticism but also by parental involvement, love, and concern (Chao, 1994). Chinese child-rearing traditions are characterized by a range of discipline techniques including clear expectations, close scrutiny of child behavior, and correction and shaming when children violate expectations (Fung, 1999). However, control strategies including high expectations and criticism hold positive cultural connotations and are correlated with warmth and closeness in Asian families (Chao & Tseng, 2002). To extend our focus on the familial context of perfectionism among Asian American college students, we examined whether perceived parental support offers protection against the psychopathology typically associated with high parental expectations and criticism. Although parental expectations and criticism are known correlates of maladaptive perfectionism, the literature suggests that these features may nonetheless be coupled with parental support in families of Asian descent (Chao, 1994; Chao & Tseng, 2002). The psychological threats associated with disappointing parents may be mitigated by the perception that closeness and support are assured in any eventuality. Among students of Asian descent with traditions emphasizing family interdependence, perceived parental support may be particularly protective (Greenberger, Chen, Tally, & Dong, 2000). Thus, parental support may moderate the negative effects of parenting contributions to perfectionism.

The current study was designed to elucidate the cultural variables that may be responsible for elevated rates of maladaptive perfectionism among Asian American college students. Moreover, we sought to identify how cultural and familial contexts may influence patterns of depression associated with perfectionism. Thus, this study had three objectives. First, we sought to examine the relationship between perfectionism and the cultural dimension of interdependence. We hypothesized that the heightened concern for the social group and an interdependent focus on obligation to others would be related to increased maladaptive perfectionism among Asian American college students. Second, we sought to determine whether the relationship between perfectionism and emotional distress depends on cultural orientation. We chose to examine depression due to the numerous studies that have established its association with perfectionism (Hewitt & Dyck, 1986).

Through moderation analyses, we sought to determine whether the association between perfectionism and depressive symptoms was better explained by a cultural congruence model (perfectionism is culturally normative and thus not a major source of distress) versus a cultural sensitization model (perfectionism is all the more risky in a potentiating cultural context). Third, given observations about the familial contexts of perfectionism and Asian parenting, we examined whether the impact of parental contributions to perfectionism would be buffered by perceived parental support.

Method

Participants

We surveyed 140 Asian American university students (79% women, mean age = 19.8 years, $SD = 2.05$) from introductory psychology classes at a large West Coast university. In return for their participation, each student received credit toward his or her class requirement to participate in a research experiment. Students over 18 years of age who self-identified as Asian American and Caucasian American were eligible to participate, but only data from Asian American students were reported in the present study. The present sample included 16% South East Asian Americans (16 Vietnamese, 2 Cambodian, 1 Hmong, 1 Lu Mien), 69% East Asian Americans (43 Chinese, 4 Japanese, 22 Korean), 6% Filipino American, and 7% Asian Americans who indicated multiethnic heritage. The majority of the sample (77%) was born in the United States.

Procedure

Students completed questionnaires which were administered individually in paper-and-pencil format in a private room in a research laboratory.

Measures

Interdependence. Interdependence was assessed using the Self-Construal Scale (SCS; Singelis, 1994). The Self-Construal Scale is the most cited measure of interdependent self-construal and has been used in numerous studies of samples of Asian and Asian American college students. There are a total of 24 items on the scale, with 12 items measuring independence and 12 items measuring interdependence. Participants rate items on a 7-point Likert-type scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Interdependence items include, "It is important for me to maintain harmony within my group" and "I will sacrifice my self-interest for the benefit of the group I am in." Published internal consistency estimates of the interdependence scale have been in the range of .61 to .74 (e.g., Kim, Li, & Ng, 2005; Singelis, 1994) when used with Asian American samples and the alpha in the current study fell within that range ($\alpha = .64$). The original two-factor structure of the scale has been replicated in a sample of Asian American high school students (Lam, 2005). Convergent validity of the Interdependence scale has been demonstrated with moderate to strong correlations with measures of collectivistic values, loss of face, and family obligations (Kim et al., 2005).

Depressive symptoms. The Beck Depression Inventory II (Beck, Steer, & Brown, 1996) is a 21 item self-report measure

of depressive symptoms experienced within the past week. Participants are asked to report on the presence and severity of depressive symptoms, such as sadness, pessimism, and loss of energy, by selecting from four statements that are ordered in increasing severity. For example, for feelings of worthlessness, participants are asked to choose the statement most representative of their feelings from the following: "I do not feel I am worthless;" "I don't consider myself as worthwhile or useful as I used to;" "I feel more worthless as compared to other people;" and "I feel utterly worthless." The alpha reliability for the BDI-II was .91. In the current sample, 17% of the participants scored above the clinical cut-off for depression; this is in the range of previous estimates for Asian American college student samples but higher than estimates from European American college samples (e.g., 20.6% for Asian Americans, 11.0% for European Americans, from Lam, Pepper, & Ryabchenko, 2004).

Perfectionism. The Multidimensional Perfectionism Scale (MPS; Frost et al., 1990) is a 35-item multidimensional measure of perfectionism consisting of six scales, including Concern over Mistakes, Personal Standards, Parental Expectations, Parental Criticism, Doubts about Actions, and Organization. The MPS has been utilized in previous research examining the relationship between perfectionism and emotional distress among Asian American college students (Chang, 1998). The items are rated on a 5-point Likert-type scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). The items on the measure ask participants to rate items such as "I usually have doubts about the simple everyday things I do" and "My parents wanted me to be the best at everything" (Frost et al., 1990). Two composite scores were used in the current study based on previous factor analytic work supporting a maladaptive perfectionism factor and a parental relations factor (e.g., Purdon, Anthony & Swinson, 1999; Stöber, 1998). Accordingly, a Maladaptive Perfectionism composite was formed by adding the mean of the responses on the nine items from the Concern over Mistakes subscale to the mean of the responses on the four items on the Doubts about Actions subscale ($r = .49, p < .01$). These subscales tend also to be the two most highly correlated with depressive symptoms (Bieling et al., 2004; Enns et al., 2002). Likewise, to examine the contribution of parental relations to perfectionism we used a single composite representing the sum of mean scale scores from the 4-item Parental Criticism and 5-item Parental Expectation subscales ($r = .75, p < .01$). Thus each composite score could range in value from 2 to 10. The resultant 13 items contributing to the Maladaptive Perfectionism composite ($\alpha = .87$), and the nine items contributing to the Parent-Driven Perfectionism composite ($\alpha = .86$) had good internal consistency in the current sample.

Parent support. Participants completed a 26 item self-report measure of perceived parental warmth and acceptance (Greenberger & Chen, 1996). Using a 6-point scale ranging from 1 (*strongly disagree*) to 6 (*strongly agree*), participants were asked to rate their agreement with items such as "My mother doesn't seem to notice when I am unhappy" and "I know that my father will be there for me if I need him." Previous research with Chinese American adolescent populations indicates that parental support functions as a protective factor against depressive symptoms (Greenberger & Chen, 1996). The internal con-

sistency for parent support in the current sample was excellent ($\alpha = .90$).

Results

Descriptive statistics for the main study variables are provided in Table 1¹ and bivariate correlations are reported in Table 2. An examination of the sample descriptive statistics suggest that the mean level of depressive symptoms in the current sample ($M = 12.47$, $SD = 8.96$) was similar to the college student normative sample for the BDI-II ($M = 12.52$, $SD = 12.56$; Beck et al., 1996). Results from the SCS suggests that the current sample may more strongly adhere to an Interdependence orientation ($M = 5.27$, $SD = .57$) than the original normative samples of Asian American students in Hawaii ($M = 4.91$, 4.94; Singelis, 1994), and more samples of college students of Asian heritage at comparable West Coast public universities ($M = 4.82$, $SD = .74$ from Kim et al., 2005; $M = 4.83$, 4.59, $SD = .51$, .69 for first- and second-generation Chinese Canadians respectively from Hsu & Alden, 2007). Results from the MPS suggest that responses showed comparable mean levels of Maladaptive Perfectionism ($M = 5.77$, $SD = 1.57$) to previous Asian American college samples (rescaled $M = 5.64$ and 5.26, Chang, 1998, and Kawamura et al., 2002, respectively), and similar levels of Parent-Driven Perfectionism ($M = 6.44$, $SD = 1.87$; rescaled $M = 6.24$, Chang, 1998).

Objective 1: Associations Between Interdependence, Perfectionism, and Depressive Symptoms

Bivariate correlations revealed significant associations between Interdependence and dimensions of maladaptive perfectionism. Interdependence was positively associated with the Maladaptive ($r = .24$, $p < .01$) and Parent-Driven Perfectionism composites ($r = .17$, $p < .05$), corresponding to small to medium Cohen's d effect sizes between .4 and .5. However, Interdependence was not significantly related to either adaptive dimension of perfectionism, Personal Standards ($r = .06$, ns) and Organization ($r = -.04$, ns). Of additional interest, depressive symptoms were significantly correlated with Interdependence ($r = .21$, $p < .05$), Maladaptive Perfectionism ($r = .57$, $p < .01$), Parent-Driven Perfectionism ($r = .54$, $p < .01$), and Parent Support ($r = -.18$, $p < .01$). Maladaptive and Parent-Driven Perfectionism share approximately 32% and 29% of the variance with depressive symptoms corresponding to large Cohen's d effect sizes between 1.3 and 1.4. In contrast, Parent Support and Interdependence showed more modest associations with depression sharing only 3% to 4% of the variance, approaching a Cohen's d effect size of .4.

Table 1
Descriptive Statistics for Main Study Variables

	<i>M</i>	<i>SD</i>	Minimum	Maximum
1. Interdependence	5.27	.57	4.00	6.58
2. Depressive symptoms	12.47	8.96	0.00	41.00
3. Parental support	3.90	2.00	1.75	5.77
4. Maladaptive perfectionism	5.77	1.57	2.44	9.67
5. Parent-driven perfectionism	6.44	1.87	3.00	10.00

Note. $N = 140$.

Objective 2: Interdependence as a Moderator of the Association Between Perfectionism Composites and Depression

First, a hierarchical regression model was conducted with scores for Maladaptive Perfectionism, Interdependence, and their interaction as predictors of depressive symptoms. Table 3 shows that Maladaptive Perfectionism was significantly associated with depression symptoms ($\beta = .55$, $p < .001$), but there was no significant main effect of Interdependence. In the second step of the model, we mean centered both predictors and computed the interaction term as the product of the two centered predictors to guard against spurious interactions that can be an artifact of multicollinearity owing to scalar properties of the predictors (Aiken & West, 1991). Results indicate that the interaction between Maladaptive Perfectionism and Interdependence was a significant predictor of depression accounting for 2% of the variance ($\Delta R^2 = .02$, $p < .05$).

Post hoc subgroup regression analyses were conducted to describe the nature of this moderation effect. Following Aiken and West (1991), we plotted simple regression lines for depression regressed on Maladaptive Perfectionism. In Figure 1, the three lines depict the simple slopes and intercepts for individuals scoring 1 standard deviation (SD) above, 1 SD below, and at the sample mean on Interdependence. Maladaptive Perfectionism was positively associated with depression for those scoring high on Interdependence ($b = 1.73$, $p < .05$), but this relationship was nonsignificant for those who scored low on Interdependence ($b = -.73$, $p = .45$). Maladaptive Perfectionism and Interdependence together explained 33% of the variance in depression symptoms, representing a large effect size (Cohen's $f^2 = .49$).

Next, we conducted a hierarchical regression model to examine the parental relations contributions to perfectionism and its association with depressive symptoms. We regressed depression symptoms on Parent-Driven Perfectionism, Interdependence, and their interaction term. Table 4 shows that Parent-Driven Perfectionism was significantly associated with depression ($\beta = .42$, $p < .001$), and again there was no main effect of Interdependence. In the second step of the model, the interaction between Parent-Driven Perfectionism and Interdependence did not significantly predict depression. Parent-Driven Perfectionism and Interdependence accounted for 21% of the variance in this model, representing a medium effect size (Cohen's $f^2 = .27$).

Objective 3: Perceived Parent Support as a Moderator of the Association Between Parent-Driven Perfectionism and Depressive Symptoms

To determine whether perceived parental support could buffer the distress associated with Parent-Driven Perfectionism, a hierarchical regression was used to predict depression from Parent-Driven Perfectionism, Parental Support, and their interaction.

¹ Results of a MANOVA revealed no main effects of gender or generation on levels of interdependence, maladaptive perfectionism, parent-driven perfectionism, perceived parental support, or depression. Further, tests of homogeneity of variance-covariance matrices indicated no significant gender differences in the patterns of associations among these variables.

Table 2
Bivariate Correlations for Main Study Variables

	1	2	3	4	5	6	7	8	9	10	11
1. Concern over mistakes	—										
2. Personal standards	.57**	—									
3. Parental expectations	.47**	.40**	—								
4. Parental criticism	.52**	.35**	.75**	—							
5. Doubts about actions	.49**	.25**	.24**	.40**	—						
6. Organization	.03	.15	.12	.04	.11	—					
7. Maladaptive perfectionism	.69**	.38**	.36**	.46**	.72**	—					
8. Parent-driven perfectionism	.49**	.38**	.80**	.82**	.31**	.09	—				
9. Parent support	-.19**	.16	-.29**	-.49**	-.27**	-.06	-.21*	-.40**	—		
10. Depression	.53**	.14	.33**	.47**	.47**	-.08	.57**	.44**	-.18*	—	
11. Interdependence	.20*	.06	.11	.20*	.22*	-.04	.24**	.17*	.08	.20*	—

Note. $N = 140$.

* $p < .05$. ** $p < .01$.

Findings in Table 5 indicated the same association between Parent-Driven Perfectionism and depression observed above ($\beta = .43$, $p < .001$), but no main significant main effect of Parental Support on depression. In the second step, the interaction between Parent-Driven Perfectionism and Parental Support was a significant predictor of depression accounting for 5% of the variance ($\Delta R^2 = .05$, $p < .01$). The total model accounted for 24% of the variance in depressive symptoms, representing a medium to large effect size (Cohen's $f^2 = .32$). Post hoc analysis of simple slopes depicted in Figure 2 indicate that Parent-Driven Perfectionism significantly predicted depression among those who reported low perceived Parent Support ($b = 5.47$, $p < .001$), but not among those reporting high levels of Parent Support ($b = 1.41$, $p = .13$).

Discussion

Consistent with findings from previous studies, maladaptive perfectionism comprised of excessive concern over mistakes and doubting one's actions was strongly correlated with depression (Bieling et al., 2004). In addition, perceptions of high parental expectations and criticism showed strong associations with depression among Asian American college students. As expected, interdependence was also related to depression and maladaptive and

parent-driven perfectionism; however, these associations were more moderate. These findings do help illuminate the cultural basis underlying reports of higher levels of maladaptive perfectionism among Asian American college students relative to their non-Asian peers (Peng & Wright, 1994). The interdependent script calls for the individual to focus on one's relationships, obligations, and responsibilities to others as self-defining. Maladaptive perfectionism among Asian American students may reflect these heightened relational concerns such as duty to parents rather than an autonomous drive for personal striving. The context of achievement settings may provide fertile ground for maladaptive perfectionism to emerge among students socialized within interdependence traditions.

Our findings of the robust associations between interdependent self-construal, parent-driven perfectionism, and depressive symptoms suggest that Asian American college students are vulnerable to distress that can stem from interdependence concerns. This is consistent with previous studies suggesting that higher levels of self-reported social anxiety and depressive symptoms among Asian American college students stem from concerns about making favorable impressions on others due to an interdependent orientation (Okazaki, 1997). Investigators have further noted that Asian American college students appear less likely to mobilize social support to cope with stress due to interdependence concerns about being criticized, saving face, and not burdening others (Taylor et al., 2004). These findings suggest that risk of emotional problems among Asian Americans may result when cultural factors make threats of interpersonal evaluation and rejection particularly salient. Together these studies indicate that relational concerns may be preoccupying across the domains of achievement, social functioning, and in the strategies adopted for coping with stress among interdependent Asian Americans.

In terms of cultural influences on the impact of perfectionism, we found some evidence that interdependence moderates the relationship between maladaptive perfectionism and depressive symptoms. Maladaptive perfectionism was related to depression

Table 3
Maladaptive Perfectionism and Interdependence as Predictors of Depressive Symptoms

	<i>B</i>	<i>SE</i>	β	ΔR^2
Step 1: Main effects				.33**
Maladaptive perfectionism	4.96**	.65	.55	
Interdependence	.70	.59	.09	
Step 2: Interaction				.02*
Maladaptive perfectionism \times Interdependence	1.23*	.59	.15	

* $p < .05$. ** $p < .01$. *** $p < .001$.

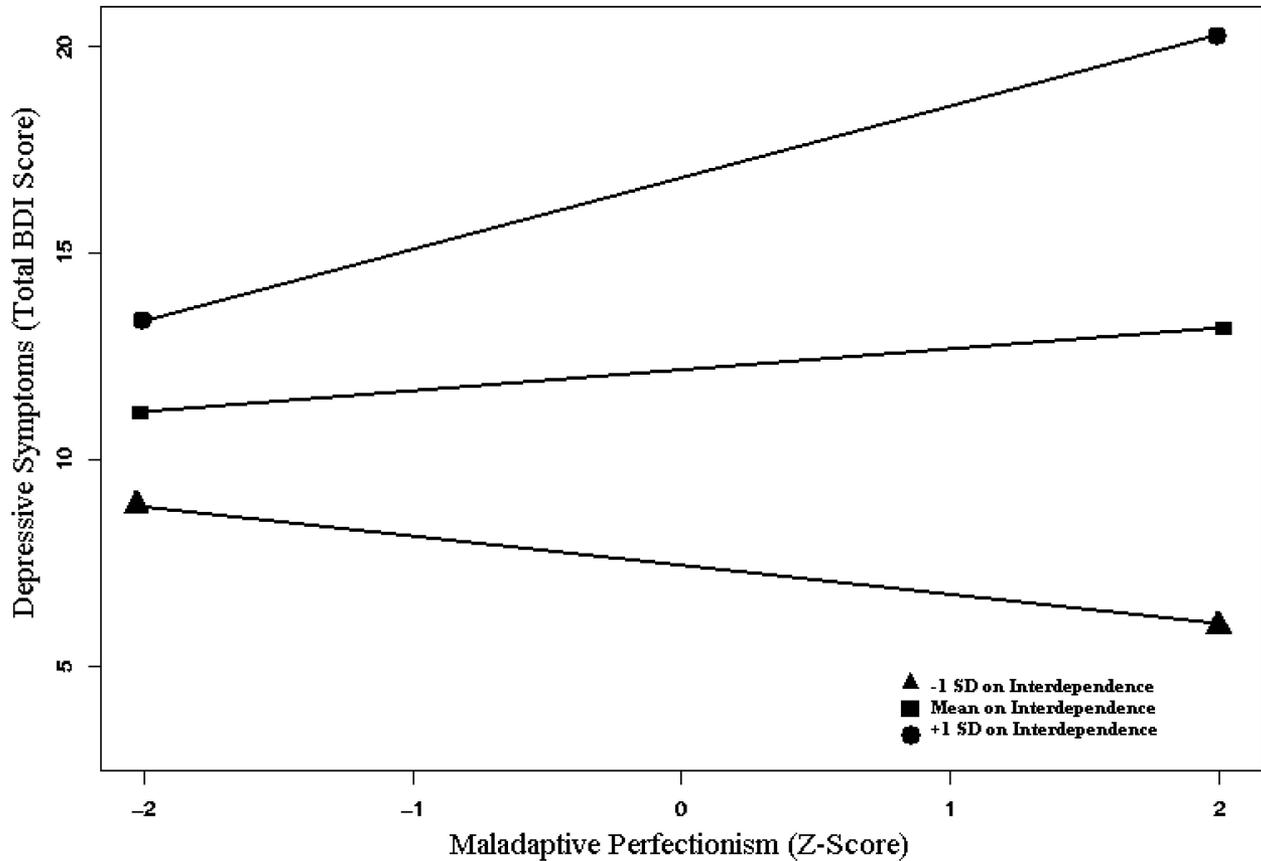


Figure 1. The association between Maladaptive Perfectionism and Depressive Symptoms as a function of level of Interdependence.

overall, but Asian American students scoring highly on interdependence appeared to be particularly vulnerable to distress when they held maladaptive perfectionistic tendencies. The finding that interdependence moderates the association between maladaptive perfectionism and depression stimulates hypotheses about the complex interplay between cultural orientations and emotional distress. Although a behavioral pattern (such as perfectionism) may be cultivated by a cultural ideal (such as interdependence) and socialized by culturally normative parenting practices (such as

parental control), this cultural congruence may not necessarily mitigate the vulnerability associated with the behavioral pattern. While certain dispositions may be normative in contexts where they are facilitated by socialization toward dominant cultural scripts, there may nonetheless be some costs to well-being. Our findings suggest that the cultural orientation of interdependence may foster vulnerability to maladaptive perfectionism and may potentially amplify the distress associated with perfectionism through a process of cultural sensitization. Further research is needed to conclude whether cultural sensitization is a replicable phenomenon that can explain variability in adjustment outcomes. Figure 3 illustrates these potentially distinct pathways of cultural influence on distress that may guide future inquiry. Our data provided some support for a cultural vulnerability pathway and some limited support for a cultural sensitization process.

Consistent with a relational focus on perfectionism, we also focused on familial aspects of perfectionism and individuals' perceptions of adequacy in meeting parental demands. Although interdependence was associated with high parental expectations and criticism, the impact of these characteristics of parental relations did not depend on levels of interdependence. Interdependent values did not appear to heighten the pressures associated with expectations and criticism. Parental relations characterized by intense and negative scrutiny were similarly risky across our sample

Table 4
Parent-Driven Perfectionism and Interdependence as Predictors of Depression

	<i>B</i>	<i>SE</i>	β	ΔR^2
Step 1: Main effects				.21**
Parent-driven perfectionism	3.75***	.70	.42	
Interdependence	1.20†	.64	.15	
Step 2: Interaction				.01
Parent-driven perfectionism × interdependence	.89	.59	.12	

† $p < .09$. * $p < .05$. ** $p < .01$. *** $p < .001$.

Table 5
Parental Support and Parent-Driven Perfectionism as Predictors of Depressive Symptoms

	<i>B</i>	<i>SE</i>	β	ΔR^2
Step 1: Main effects				.19**
Parent-driven perfectionism	3.91***	.76	.43	
Parental support	-.12	.76	-.01	
Step 2: Main effects with interaction				.05**
Parent-driven perfectionism × parental support	-2.03**	.69	-.23	

* $p < .05$. ** $p < .01$. *** $p < .001$.

of Asian American students across levels of interdependence. Of note in the current sample, there was a very strong correlation between perceptions of high parental expectations and parental criticism, over twice that reported by Chang (1998) in his sample of Asian American college students and closer to the correlation reported for European Americans. Our participants tended to perceive high parental demands for achievement being paired with disapproval. Variations in the strength of this association may reflect differences in the extent to which young adults can form

well-differentiated views of their parents, or the extent to which parental expectations indeed covary with negative attention in specific samples. More attention to the cross-cultural equivalence of these parent-driven aspects of perfectionism is warranted. Nonetheless, parenting marked by criticism and stringent expectations has been noted to be common in Asian American family socialization (cf., Chao & Tseng, 2002), and appear to be associated with distress in the present sample. This, however, may be only half the story.

Our findings also suggest a role of Asian American parents in protecting their children from the distress associated with these forms of parental pressure. Parental support was inversely related to levels of depression. Furthermore, parental support appeared to buffer against negative outcomes typically associated with high expectations and criticism. Among those who felt supported by parents, high expectations and criticism did not appear to precipitate distress. Perhaps, Asian American students are at greatest risk when they feel pressured by parental expectations and when they are wary that parental support will be withdrawn when expectations are disappointed. Our findings reflect the observations of scholars describing indigenous and adaptive Asian American parenting practices. Parenting in Asian families often involves demands on the child to conform closely to parental expectations, but these demands may be understood as expressions of concern and support (Chao & Tseng, 2002). In contrast, these same control

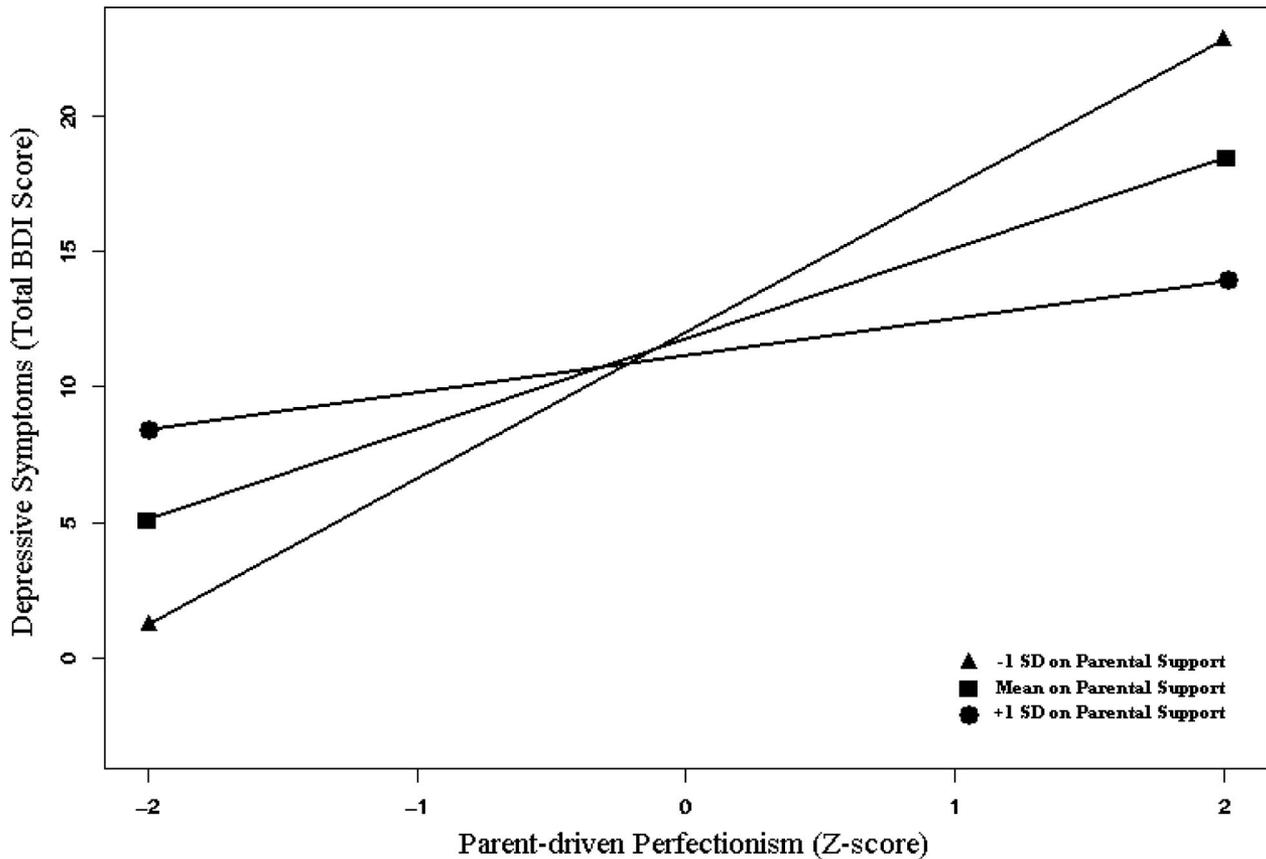


Figure 2. The association between Maladaptive Perfectionism and Depressive Symptoms as a function of level of Interdependence.

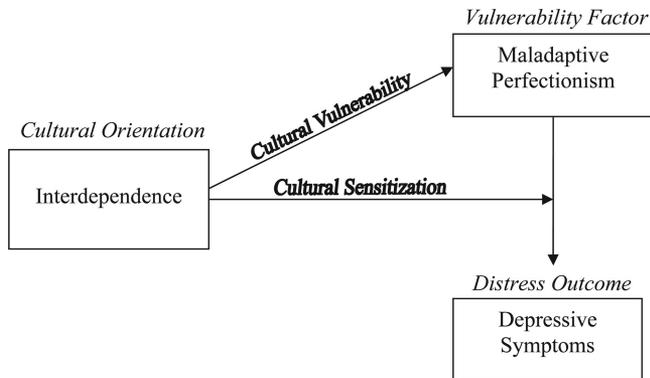


Figure 3. Interdependence may contribute to depression as source of cultural vulnerability to maladaptive perfectionism as well through a process of cultural sensitization heightening the distress associated with maladaptive perfectionism.

strategies are more robustly associated with perceived parental rejection in Western cultures (Chao & Tseng, 2002). Asian American college students who perceive stringent expectations and criticism as hostile are vulnerable to distress, while those who perceive demands as reflective of parental investment and care are not impacted in the same way.

In interpreting our findings of the risk associated with interdependence and parent-driven perfectionism, we do not intend to pathologize a normative system of values and socialization practices in Asian cultures. We propose that culturally driven processes may have important mental health consequences when Asian American college students are under stress. Conversely, it is important to mention that the vulnerability factors under study may also be related to positive outcomes in certain domains. Although studies have confirmed the relationship between maladaptive perfectionism and distress, associated traits may facilitate adaptive behavior, such as studying (Brown et al., 1999). In the current study, there was no bivariate association between interdependence and measures of adaptive perfectionism involving high personal standards or a penchant toward organization. However, previous literature indicates that specific facets of interdependence may be protective. For example, values of family obligation are robustly associated with achievement striving and educational motivation among Asian American students (Fulgini & Tseng, 1999), and certain interdependence concerns, such as loss of face, are negatively associated with antisocial outcomes, including sexual aggression, among Asian American men (Nagayama Hall, Teten, DeGarmo, Sue, & Stevens, 2005). Future research is needed to identify the range of possible psychological benefits associated with aspects of interdependence and associated socialization practices.

Certain limitations of the current study may complicate our interpretation of the results. First, because the study was cross-sectional, we cannot be certain of the direction of causality. It is possible that depression tends to heighten maladaptive components of perfectionism and colors perceptions of parental relations. Depressed individuals may be more attuned to the possibility that they are not meeting parental expectations and may have heightened sensitivity to criticism. Likewise, those who are perfection-

istic may be more likely to attend to perceived demands of others fostering an emphasis on interdependence concerns. Longitudinal studies would help to examine the transactional relationships between depression, perfectionism, and interdependence.

Moreover, as previously noted, numerous facets comprise interdependence, but our study was limited to consideration of interdependence as a global construct. The low internal consistency of the interdependence measure obtained may reflect problems capturing a multidimensional set of values and motivations in a singular scale. The influential review and meta-analyses carried out by Oyserman, Coon, and Kimmelmeir (2002) highlights that the measurement of the allied concept of collectivism reflects at least eight distinctive domains represented in the item content of scales such as the SCS. Example domains include a relational concept of the self (e.g., “My relationships are more important than my own accomplishments”), sense of duty (e.g., “I will sacrifice my self-interest for the benefit of the group I am in”), respect for hierarchy (e.g., “I have respect for authority figures with whom I interact”), and concern for group harmony (e.g., “It is important for me to respect decisions made by the group”). Specific components of interdependence, such as the focus on one’s obligation and duty to others, may be more salient in predicting maladaptive perfectionism compared to other components, such as considering relationships as an integral part of self-definition. Other dimensions of interdependence may relate to positive outcomes, such as feelings of well-being associated with a sense of belonging to a group. Although the present study went beyond the examination of ethnic group differences, an important next step will be to determine what processes, attitudes, and values involved in interdependence are most relevant to the development or maintenance of maladaptive perfectionism and related distress. A differentiated examination of interdependence may also help to identify aspects that promote healthy adaptation and adjustment. Identification of these dimensions may permit a better understanding of the social conditions under which interdependence may motivate achievement with fewer psychological costs.

Finally, the sample of Asian American college students represented in the current study was diverse in terms of nativity, ethnicity, and gender. However, sample size limitations precluded an examination of how variables such as ethnicity, generation, acculturation, and gender may have influenced the relationships under study.

Practice Implications

Our findings may have important practice implications for depression and adjustment among Asian American college students. These results suggest that Asian American students who are oriented toward interdependence may be at highest risk for emotional distress related to perfectionism. Therefore, it may be helpful for counselors to address the relational context of perfectionistic beliefs and tendencies among Asian American students. Treatment might explore the cultural underpinnings of cognitions and related affect surrounding interdependence, familial, and achievement concerns. It would be important to both acknowledge realistic perceptions of parental demands for excellence, while also introducing strategies for coping with unrealistic appraisals of the consequences of being less than perfect. Counselors may also

encourage cognitive restructuring to help reframe perceived parental pressure and modify perceptions of parenting style. For example, Asian American perfectionists may be taught to reconsider high parental expectations as a culturally normative parental expression of hope and support. In light of the buffering process evident in the current study, it would also be important to mobilize support from parents or significant others when Asian American college students evince depressive symptoms associated with achievement concerns.

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