Perfectionism and Ethnicity: Implications for Depressive Symptoms and Self-Reported Academic Achievement

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Ethnic differences in perfectionism were examined among Asian American, African American, and Caucasian American college students. Analyses revealed that Asian American students scored significantly higher than the other groups on 3 of 6 perfectionism subscales. Minority students reported significantly higher parental expectations than Caucasian students. Significant correlations emerged for all 3 groups between depressive symptoms and concerns about making mistakes, perceived criticism from parents, and self-doubt. In regression analyses, perfectionism explained significant variance in depressive symptoms for Asian Americans and Caucasians and explained significant variance in cumulative grade point average for Asian Americans and African Americans. Self-doubt emerged as a robust individual predictor in these analyses.
• perfectionism • depression • academic achievement • ethnicity • African American • Asian American • Caucasian

Attempts to further understand perfectionism have resulted in increased attention to this construct in the psychological literature over the past few decades. A large portion of that attention has focused on defining the construct. High personal standards is one characteristic of perfectionism that is consistently mentioned in the literature. Indeed, perfectionists have been described as harboring excessive personal standards both in

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the historical conceptual literature (Adler, 1956; Horney, 1950) and in the more recent empirical literature (Slaney & Ashby, 1996; Slaney, Chadha, Mobley, & Kennedy, 2000; Slaney, Rice, Mobley, Trippi, & Ashby, 2001), though the psychological effects of high standards have not always been detrimental (Dunkley, Blankstein, Halsall, Williams, & Winkworth, 2000; Rice & Mirzadeh, 2000; Slaney et al., 2001). Adler (1956) posited that striving for high personal standards of perfection can be a normal aspect of human growth and development.

Dimensions of Perfectionism

Despite the normality of striving to be perfect, the pervasive perception in the literature is that perfectionism is pathological (Pacht, 1984). Some researchers have extended the view of perfectionism as a multidimensional and generally deleterious construct. Hewitt and Flett (1991) described three dimensions of perfectionism and operationalized them as subscales in their Multidimensional Perfectionism Scale: self-oriented perfectionism, other-oriented perfectionism, and socially prescribed perfectionism. Self-oriented perfectionists are critical of themselves and have difficulty accepting their flaws. They tend to set high, unrealistic personal standards with which they evaluate themselves. Other-oriented perfectionists have unrealistic standards for their significant others, whereas socially prescribed perfectionists believe that other people hold high, unrealistic expectations of them, including expecting them to be perfect. They feel as though these expectations are impossible to meet.

Frost, Marten, Lahart, and Rosenblate (1990) offered a different multidimensional perspective of perfectionism. They identified six dimensions of perfectionism and also developed a Multidimensional Perfectionism Scale to tap the dimensions of high personal standards, concerns about meeting parental expectations, doubts about one's actions, preference for organization and order, excessive concern about making mistakes, and parental criticism. According to Frost et al. (1990), perfectionists are often excessively self-critical as well. Many researchers have found associations between perfectionism and a number of problems, including anxiety (Johnson & Slaney, 1996), depression (Hewitt & Dyck, 1986; Hewitt & Flett, 1990), suicidal ideation (Hewitt, Flett, & Turnbull-Donovan, 1992), procrastination (Ferrari, 1992; Flett, Blankenstein, Hewitt, & Koledin, 1992), low self-esteem (Preusser, Rice, & Ashby, 1994), and poor adjustment (Chang, 2000; Chang & Rand, 2000).

Although several studies have examined perfectionism in a number of areas, few have focused specifically on racial or ethnic differences in perfectionism. Some exceptions include a study by Chang (1998), who compared Asian American and Caucasian American college students, and Nilsson, Paul, Lupini, and Tatem (1999), who explored differences in characteristics of perfectionism between Caucasian and African American students. The following sections provide a brief review of the perfectionism literature on Asian Americans and African Americans. Included in this review are the limited studies that explore differences in the characteristics of perfectionism between Asian Americans and Caucasian Americans and between African Americans and Caucasian Americans. The literature demonstrates a need to extend current conceptualizations of perfectionism to include a better understanding of potential differences and similarities in the characteristics of perfectionism among these three ethnic groups, with an emphasis on Asian American and African American students.

Asian Americans

Despite the growing research on multiple dimensions of perfectionism, surprisingly few studies have examined potential racial/ethnic differences in this construct. In a

comprehensive review of the literature on stereotypes of Asian American students, Yee (1992) suggested that many Asian Americans could be characterized as possessing excessive perfectionistic behaviors. In fact, characteristics of perfectionism emerged for Asian Americans in Peng and Wright's (1994) analysis of data from about 25,000 students in the National Education Longitudinal Study. Specifically, compared with other racial/ethnic groups, Asian Americans reported extreme concerns about meeting high parental expectations, one of the characteristics of perfectionism according to Frost et al.'s (1990) Multidimensional Perfectionism Scale. In their critical consideration of the academic achievements of Asian Americans, Sue and Okazaki (1990) offered cultural and social perspectives to explain achievement patterns. Among other points, they indicated that certain family values, such as demands and expectations for achievement and induction of guilt, account for potential cultural differences in achievement. For example, Asian American college students may feel pressured to meet parental expectations for success and may experience parental criticism if they do not meet those expectations. This could lead many Asian American college students to strive for perfection. As a result of this cultural view, there may be specific differences in the characteristics of perfectionism between Asian Americans and other racial/ethnic groups. However, based on this view, it is unclear whether other characteristics of perfectionism, in addition to parental expectations and parental criticism, may differ by ethnicity.

Chang (1998) used Frost et al.'s (1990) conceptualization and measurement of perfectionism and found that Asian American university students reported more doubts about their actions, concerns about making mistakes, and greater parental expectations, and they perceived more criticism from parents than Caucasian American students. It is interesting to note that he also found that the two groups did not differ significantly in personal standards and organization. Chang also found that Asian Americans reported more hopelessness and higher suicidal risk potential, such as suicidal ideation and negative self-evaluation, although they were less likely to actually attempt suicide when compared with Caucasian Americans.

African Americans

Nilsson et al. (1999) compared African American and Caucasian college students on both Multidimensional Perfectionism Scales (Frost et al., 1990; Hewitt & Flett, 1991). They found that African American students reported significantly higher scores on the Parental Expectations and Other-Oriented Perfectionism subscales and lower scores on Concern Over Mistakes and Parental Criticism subscales, when compared with the Caucasian students. Although this was an important contribution to the literature on measuring perfectionism among racial/ethnic groups, the study did not examine possible racial differences in the way in which perfectionism relates to adjustment indicators.

Two studies have found racial differences on the Perfectionism subscale of the Eating Disorder Inventory (EDI; Garner & Olmstead, 1984; Garner, Olmstead, & Polivy, 1983). The EDI Perfectionism subscale is a unidimensional measure of problematic perfectionism, with items representing very high standards and goals. Striegel-Moore et al. (2000) reported results from a large, longitudinal growth and health study of adolescent girls. Between the ages of 11 and 14 years, African American girls reported significantly higher Perfectionism subscale scores than did Caucasian girls. Likewise, Wassenaar, le Grange, Winship, and Lachenicht (2000) examined EDI differences among South African Black, White, and Asian students (average age was 22 years) and found that Black women obtained the highest scores on the Perfectionism subscale.

Hines and Boyd-Franklin (1996) offered competing conceptual perspectives regarding parental expectations and their influence on work and educational values of African Americans. On the one hand, they suggested that African American parents would expect their children to do better than they did, but "because African Americans place great value on character and generally believe in the basic worth of every individual regardless of his or her success, children who earn an honest living and are self-supporting may win as much parental approval as those who are professionals" (p. 76). On the other hand, African American children of middle-class parents "who often enter the middle class without financial assets and struggle to retain a tenuous hold on their status, are likely to demand high achievement from their children" (p. 76). It would appear as though concern for the future of their children, possibly in light of racism and oppression, might contribute to high parental demands and expectations. On the basis of this perspective, one could argue that, as a result of racism and oppression experienced by their parents, African American children may feel great pressure to succeed. Both views are possibly supported by the studies using the EDI and Multidimensional Perfectionism Scale summarized earlier. It is unclear, however, due to the lack of research, whether African Americans would experience greater depression or other problems as a result of perfectionism. This apparent gap in the literature is an important area of exploration and one of the purposes of this study.

In sum, although the conceptual literature alludes to, and existing studies support, specific differences that exist in characteristics of perfectionism among Asian Americans, African Americans, and Caucasian Americans, there is a paucity of empirical literature that addresses these differences, and even fewer studies examine differences between all three ethnic groups. As a result, we lack a comprehensive perspective of perfectionism that takes into account one's ethnicity. Specifically, we do not have a clear sense of how individuals from different ethnic backgrounds experience perfectionism and how those experiences may relate to depressive symptoms and academic achievement. Consequently, additional research is needed to examine similarities and differences that exist between various ethnic groups with regard to their scores on measures of perfectionism and the different ways in which perfectionism might relate to indicators of adjustment and achievement to provide a more inclusive and comprehensive understanding of this complex construct. To that end, we attempted to replicate and extend the current literature by proposing the following research questions: Are there differences in perfectionism scores between different ethnic groups? Are the associations between the scores on perfectionism and measures of emotional adjustment and academic achievement different for different ethnic groups?

Method

Participants and Procedure

Participants were initially recruited from undergraduate courses in personal adjustment, substance abuse, and career development, all within colleges or schools of education. Because non-Caucasian students represent relatively small minorities in these courses and at the two universities where participants were recruited, the following procedures were used to establish an adequately representative sample of racial/ethnic minority students. Minority students in seven existing datasets, collected from 1994 to 2000, were culled to establish a sample of 59 Asian American students and 65 African American students. Students representing other racial/ethnic groups were too few in number to analyze (e.g., only 15 Hispanic and 11 American Indian students could be located). A random sample of 65 Caucasian students was also obtained from these datasets. Thus, a total of 189 students from two public universities in the north central

region of the United States were the participants in this study. There were 41 men and 146 women in the sample (2 with missing gender data), a gender distribution typical of the undergraduate courses from which students initially were recruited. The distribution of men and women in the sample varied by ethnicity, with proportionately fewer men in the African American (n = 9, 14%) and Caucasian (n = 13, 20%) groups than in the Asian American group (n = 19, 33%), $\chi^2(2, N = 187) = 6.55$, $p < .04$. The average age of participants was 20.69 years (SD = 3.26), with no statistically significant difference between the ethnic groups, $F(1, 186) = 0.82$, $p > .05$ (Ms = 20.86, 20.95, and 20.28, for Asian American, African American, and Caucasian, respectively). On average, each ethnic group had completed about four semesters at their university, and there were no significant differences in educational level between the groups, $F(1, 158) = 0.22$, $p > .05$ (Ms = 3.82, 4.06, and 3.71, for Asian American, African American, and Caucasian, respectively).

Instruments

MULTIDIMENSIONAL PERFECTIONISM SCALE (MPS; FROST ET AL., 1990). The MPS contains 35 self-report items that correspond to six categories used to measure perfectionism. The MPS can also be used to distinguish maladaptive from adaptive perfectionists (Parker, 1997; Rice & Mirzadeh, 2000). Participants responded to items on the MPS using a 5-point Likert scale ranging from 1 (*disagree strongly*) to 5 (*agree strongly*). The MPS has six subscales: Concern Over Mistakes (9 items; e.g., "I should be upset if I make a mistake"), Personal Standards (7 items; e.g., "I have extremely high goals"), Parental Criticism (4 items; e.g., "As a child, I was punished for doing things less than perfect"), Parental Expectations (5 items; "My parents have expected excellence from me"), Doubts About Actions (4 items; e.g., "Even when I do something very carefully, I often feel that it is not quite right"), and Organization (6 items; e.g., "I try to be an organized person"). As noted earlier as one rationale for the present study, there has been a paucity of ethnicity-specific information in studies of perfectionism. Sample ethnicity was not described in the initial scale development research reported by Frost et al. (1990), and only female participants were used in the four samples initially assessed. However, other studies of university students have generally supported the psychometric qualities of the measure as they were initially described. For example, Frost, Heimberg, Holt, Mattia, and Neubauer (1993) confirmed the psychometric properties of the MPS using a sample of over 500 university students (51% female). Dunkley et al. (2000) did not report sample-specific ethnicity but did indicate their sample of 443 university students were drawn from a campus that was 50% White, with a relatively large proportion of students from Chinese and East Indian descents. They found internal consistency estimates on the MPS to range from .71 to .87. Chang (2000), using a sample of college students and older adults he described as 93% White, reported internal consistency estimates for the MPS subscales ranging from .77 to .91, which were comparable with those reported in the initial scale development research (ranging from.70 to .93; Frost et al., 1990). In earlier research, Chang (1998) reported similar internal consistency estimates for the MPS subscale (.79 to .88) in his study of "self-identified" Asian American and Caucasian American college students. In a study of German university students attending the Free University of Berlin, Stöber (1998) reported internal consistency reliability estimates for the MPS ranging from .73 to .88.

Scores from the MPS have yielded good evidence of both criterion and concurrent validity. Frost et al. (1990, 1993) found evidence for criterion validity in that the Concern Over Mistakes and Doubts About Actions subscales were significantly and positively correlated with depression, with correlations ranging from .28 to .61 in two studies using different measures of depression. Furthermore, most of the MPS

subscales were found to be significantly and positively correlated with measures of psychological symptoms (Frost et al., 1990). In addition, construct validity was evidenced vis-à-vis correlations with other measures of perfectionism, including Burns's measure (Frost et al., 1990, 1993; Rice & Mirzadeh, 2000).

CENTER FOR EPIDEMIOLOGIC STUDIES DEPRESSION SCALE (CES–D SCALE; RADLOFF, 1977). The CES–D was used to measure emotional distress. It is a 20-item self-report scale that is designed to measure current levels of depressive symptomatology, which includes depressed mood, feelings of helplessness and hopelessness, loss of appetite, sleep disturbance, feelings of guilt and worthlessness, and psychomotor retardation. Respondents are asked to answer the items on a 4-point Likert scale ranging from 0 (*rarely or none of the time*) to 3 (*most or all of the time*), based on how they have felt or behaved during the past week (e.g., "I had trouble keeping my mind on what I was doing"). Consistently strong psychometric properties of the CES–D have emerged in numerous studies using representative community samples and university students. Radloff (1977) reported high coefficient alphas and Spearman–Brown split-half reliabilities ranging from .85 to .90. In several studies of college students, Cronbach coefficient alphas for the CES–D have ranged from .72 to .87 (Rice & Dellwo, 2001; Rice & Mirzadeh, 2000). Good validity evidence for CES–D scores has been reported using diverse samples in terms of age and gender (Radloff, 1977; Sheehan, Fifield, Reisine, & Tennen, 1995; Weissman, Sholomskas, Pottenger, Prusoff, & Lock, 1977), although limited data have been reported on the factor structure or internal reliability of the CES–D specific to different ethnic groups. Pumariega, Johnson, Sheridan, and Cuffe (1996) reported no significant differences in CES–D scores between African American and White adolescents, nor did they find significant differences between those groups in using the CES–D to predict various outcomes (e.g., school performance, substance use).

GRADE POINT AVERAGE (GPA). Students were asked to report their cumulative university GPA as part of a brief demographic questionnaire. The universities used GPA scales that ranged from 0 to 4.0. In this study, 110 of the students reported their GPA. Most of the students not reporting a GPA were in their first semester at the university and did not yet have a GPA to report. The reported GPAs ranged from 0.09 to 4.00 ($M = 2.78$, $SD = 0.71$).

Results

Means, standard deviations, and Cronbach's coefficient alphas for the Asian American, African American, and Caucasian American groups on the six subscales of the MPS and the total score for the CES–D are summarized in Table 1. A multivariate analysis of variance was conducted with the six MPS subscales as dependent variables and the three ethnic groups as the independent variable. This analysis revealed a significant multivariate effect, Wilks's $\Lambda = 0.79$, $F(12, 362) = 3.84$, $p < .001$, $\eta^2 = 0.11$. Univariate analyses of variance (ANOVAs) revealed significant differences between the three ethnic groups on all but one of these dependent variables. No differences between groups emerged on the MPS Organization subscale. Results from the ANOVAs, also summarized in Table 1, and post hoc (Tukey) comparisons revealed that scores on the Concern Over Mistakes, Parental Criticism, and Doubts About Actions subscales were significantly higher for the Asian American students when compared with the other two groups, and no significant differences on these subscales emerged between the African American and Caucasian American students. Asian Americans also reported significantly higher scores on Personal Standards than did the Caucasian Americans. Asian Americans and African Americans scored significantly

TABLE 1 Descriptive Statistics and Univariate Analyses of Scores on the Multidimensional Perfectionism and CES–D Scales

Measure	*Asian American (n = 59)*	*African American (n = 65)*	*Caucasian American (n = 65)*	*F(2, 186)*	η^2
Concern Over Mistakes					
M	24.19_a	19.25_b	21.22_b	7.47***	.07
SD	7.61	6.29	7.48		
α	.88	.84	.91		
Personal Standards					
M	25.19	24.97	23.02	3.07*	.03
SD	5.56	5.17	5.61		
α	.83	.81	.82		
Parental Expectations					
M	17.03_a	16.23_a	14.38_b	6.36***	.06
SD	4.84	4.06	3.90		
α	.84	.72	.76		
Parental Criticism					
M	10.24_a	7.71_b	7.92_b	10.00**	.10
SD	3.72	3.47	3.20		
α	.75	.82	.83		
Doubts About Actions					
M	11.19_a	9.57_b	9.66_b	4.61*	.05
SD	3.26	3.19	3.44		
α	.65	.67	.81		
Organization					
M	24.27	24.65	22.74	2.70	.03
SD	4.65	5.06	5.07		
α	.92	.95	.90		
CES–D					
M	17.55	15.88	15.07	1.42	.02
SD	9.26	8.24	8.49		
α	.86	.79	.83		
Grade point average					
M	3.03_a	2.46_b	2.79_a	8.32***	.10
SD	0.51	0.82	0.70		

Note. Values with different subscripts indicate significant within-row differences between the clusters (Tukey post hoc comparisons, $p < .05$). For the analysis of CES–D, *df*s = 2, 184; for grade point average, *df*s = 2, 146. Cell sizes for the analyses of grade point average were 53 Asian Americans, 44 African Americans, and 52 Caucasian Americans. CES–D = Center for Epidemiologic Studies Depression scale.

*$p < .05$. **$p < .01$. ***$p < .005$.

higher on the Parental Expectations subscale than did the Caucasian Americans.

Separate univariate ANOVAs were conducted with the CES–D and GPA scores as the dependent variable and ethnicity as the between-subjects variable. No significant differences emerged between the ethnic groups on CES–D scores, $F(2, 184) = 1.42$, $p > .05$, $\eta^2 = 0.02$. Significant differences did emerge between groups on GPA, $F(2, 146) = 8.32$, $p < .001$, $\eta^2 = 0.10$. Post hoc (Tukey) comparisons indicated that the Asian American and Caucasian students reported significantly higher GPAs than reported by the African American students. No significant differences emerged between the Asian Americans and Caucasian Americans on GPA.

Correlation matrices were calculated separately for each of the three ethnic groups to examine the relationship between scores on the perfectionism subscales with

the CES–D and GPA scores. The results of these analyses can be found in Table 2. There was a significant relationship between scores on CES–D and Concern Over Mistakes, Parental Criticism, and Doubts About Actions for all three ethnic groups. Higher scores on Concern Over Mistakes, Parental Criticism, and Doubts About Actions were significantly and positively correlated with scores on the CES–D. In contrast, only one significant correlation emerged between an MPS subscale and GPA. For Asian Americans, there was a significant inverse and moderate correlation between GPA and Doubts About Actions.

Multiple regression analyses were conducted to further explore the relationship between scores on the six MPS dimensions with the CES–D scale and GPA. Separate regression analyses were conducted for each ethnic group and for each criterion variable. In each analysis, all of the perfectionism subscales were entered as a block to predict the criterion. Correlations among the predictor MPS subscales ranged from |.01| to |.71| for Asian Americans, |.01| to |.65| for African Americans, and |.03| to |.68| for Caucasian Americans. In each set of correlations, the largest correlation was between Concern Over Mistakes and Doubts About Actions. The regression analyses are summarized in Tables 3 and 4. In Table 3 the criterion was CES–D, and in Table 4 the criterion was GPA.

For Asian Americans, the multiple regression analyses revealed that the MPS subscales accounted for significant variation in CES–D scores (R^2 = .51; see Table 3). Tests of individual standardized beta coefficients indicated that only Doubts About Actions (β = 0.44) uniquely contributed to the equation. For the African Americans, a more modest and nonsignificant amount of variance in CES–D scores was accounted for by the MPS subscales (R^2 = .18). For the Caucasian Americans, the MPS subscales accounted for significant variation in CES–D scores (R^2 = .29). As with the Asian Americans, Doubt About Actions emerged as the lone unique predictor of CES–D scores after partialing the effects of the other perfectionism dimensions.

The MPS subscales combined to account for significant variation in GPA scores for the Asian American and African American groups (R^2s = .27 and .29, respectively) but not for the Caucasian American group (R^2 = .07; see Table 4). Tests of individual standardized partial beta coefficients revealed that lower scores on Doubts About Actions predicted higher GPA for both groups. Among the Asian Americans, higher scores on Personal Standards also emerged as a significant unique predictor of GPA, after partialing the effects of the other predictors.

Discussion

The purpose of the present study was to extend the literature on perfectionism and

TABLE 2 Correlations Between Perfectionism, Depression, and Grade Point Average

	Asian American		*African American*		*Caucasian American*	
MPS subscale	*CES–D*	*GPA*	*CES–D*	*GPA*	*CES–D*	*GPA*
Concern Over Mistakes	.59**	–.20	.40**	.13	.46**	.21
Personal Standards	.14	.26	.13	.24	.21	.07
Parental Expectations	.19	–.06	.17	–.05	.20	–.02
Parental Criticism	.37**	–.11	.25*	.08	.26*	.05
Doubts About Actions	.67**	–.39**	.33**	–.28	.49**	.13
Organization	–.13	.10	.10	.12	.09	.08

Note. CES–D = Center for Epidemiologic Studies Depression scale; GPA = grade point average.
*$p < .05$. **$p < .01$.

TABLE 3 Regression Analyses of Perfectionism Predicting Depression

Group and predictor	R^2	*F*	*df*	*B*	*SE B*	β
Asian American	.51	8.51**	6, 50			
Concern Over Mistakes				0.30	0.22	0.23
Personal Standards				0.14	0.26	0.08
Parental Expectations				–0.28	0.30	–0.14
Parental Criticism				0.56	0.39	0.21
Doubts About Actions				1.35	0.45	0.44**
Organization				–0.20	0.26	–0.10
African American	.18	2.08	6, 58			
Caucasian American	.29	3.86**	6, 58			
Concern Over Mistakes				0.30	0.20	0.26
Personal Standards				0.01	0.20	0.01
Parental Expectations				–0.28	0.34	–0.13
Parental Criticism				0.32	0.40	0.12
Doubts About Actions				0.76	0.39	0.31*
Organization				0.13	0.20	0.07

Note. Tests of individual standardized beta coefficients were only conducted when the overall regression equation was significant.
*$p < .05$. **$p < .01$.

ethnicity by drawing from the empirical and conceptual work of Chang (1998), Nilsson et al. (1999), Sue and Okazaki (1990), and others to examine similarities and differences that exist between various ethnic groups with regard to characteristics of perfectionism, emphasizing the experiences of Asian American and African American college students. In addition, we examined the different ways in which perfectionism might relate to indicators of adjustment and achievement for Asian American, African American, and Caucasian American students. We begin by discussing the differences and similarities between each ethnic group on the MPS subscales, making connections with existing Asian American and African American literature. We then dis-

TABLE 4 Regression Analyses of Perfectionism Predicting Grade Point Average

Group and predictor	R^2	*F*	*df*	*B*	*SE B*	β
Asian American	.27	2.87*	6, 46			
Concern Over Mistakes				–0.01	0.01	–0.09
Personal Standards				0.04	0.02	0.48**
Parental Expectations				–0.02	0.02	–0.21
Parental Criticism				0.03	0.03	0.18
Doubts About Actions				–0.06	0.03	–0.39*
Organization				–0.02	0.02	–0.16
African American	.29	2.53*	6, 37			
Concern Over Mistakes				0.05	0.03	0.35
Personal Standards				0.02	0.03	0.12
Parental Expectations				–0.05	0.04	–0.26
Parental Criticism				0.06	0.05	0.29
Doubts About Actions				–0.15	0.05	–0.58**
Organization				0.03	0.02	0.19
Caucasian American	.07	0.58	6, 45			

Note. Tests of individual standardized beta coefficients were only conducted when the overall regression equation was significant.
*$p < .05$. **$p < .01$.

cuss the similarities and differences on the characteristics of perfectionism and depressive symptoms, as well as academic achievement for all three groups. We conclude this section with a discussion of study limitations and directions for future research.

MPS Subscales

Results revealed differences among the three groups on several of the MPS subscales. Asian American students reported more concern over mistakes than Caucasian and African American students. Asian American students also reported higher parental expectations, parental criticism, and doubts about their actions than the other two groups. Caucasian students reported lower parental expectations than African American students. In terms of similarities, scores revealed comparable levels of concern over mistakes, doubts about actions, and parental criticism between Caucasian and African American students. In addition, all three groups reported comparable levels of personal standards and preferences for organization (although the analyses indicated possible differences between the groups on Personal Standards scores, post hoc comparisons were inconclusive). In other studies, Personal Standards and Organization scores have been identified as indicators of positive achievement striving or adaptive perfectionism, whereas other subscales from Frost et al.'s (1990) MPS have been supported as indicators of maladaptive evaluation concerns or unhealthy perfectionism (Dunkley et al., 2000; Frost et al., 1993; Rice, Ashby, & Slaney, 1998). Thus, although experiences of parental influences may differ between the groups, those differences do not necessarily portend higher or lower overall personal expectations for performance.

Various results from the present study support findings from previous work and provide empirical support for some conceptual arguments in the Asian American and African American literature. For example, in his study comparing Caucasian and Asian Americans, Chang (1998) found that Asian American students reported more concerns about making mistakes, higher parental expectations and criticism, and greater self-doubt than Caucasian students. Our analyses of mean differences were entirely consistent with his results. Taken together, the results from both studies suggest that Asian American students tend to be more wary of making mistakes and to harbor more self-doubt than Caucasian students (and African American students, as revealed in the present study), possibly in response to the high demands placed on them by their parents and increased criticism when those expectations are not fulfilled. Although we did not directly assess culture, this explanation is consistent with Sue and Okazaki's (1990) conceptual view that suggested that parents of Asian American students tend to place great demands on their children and induce guilt about the importance of meeting those expectations. As a result, Asian American students not only set high standards for themselves but also begin to doubt themselves and become excessively concerned with making mistakes, perhaps for fear of potentially disappointing their families. Sue and Okazaki (1990) also suggested that these cultural differences pertaining to increased demands might best be explained by familial values within Asian American cultures. Still, the Asian American students in this sample did not evidence significantly greater emotional distress compared with the other groups. However, they did report significantly higher GPAs. Although the Asian American students reported more of the perfectionism dimensions that typically are considered to be maladaptive, they did not appear to be at increased risk for depressive symptoms and, perhaps in terms of academic achievement, might even be better advantaged than the African American or Caucasian American students.

Perhaps a cultural perspective also accounts for the effects observed pertaining to the African American students. The present study lends some support to one of the competing hypotheses proposed by Hines and

Boyd-Franklin (1996). They suggested that African American parents, specifically those from middle-class families, would place high demands on their children to achieve. Although we did not identify class background of the students in our study, our results revealed that African American parents appear to have high expectations for their children, as evidenced by the African American students' scores on parental expectations. This finding was consistent with results reported by Nilsson et al. (1999) and others (e.g., Solorzano, 1992).

Although African American parents have high expectations for their children, possibly as the result of their own struggles to obtain and maintain their status (Hines & Boyd-Franklin, 1996), in this study, their children did not experience them as excessively critical, at least insofar as the Parental Criticism subscale of the MPS can be considered an adequate measure of parental criticism in diverse groups. This may account for less concern with making mistakes and fewer doubts about their actions exhibited by those students. As indicated in other studies (Rice & Mirzadeh, 2000), it appears as though the role of the family may be critical in the development of perfectionism, perhaps even more so among ethnic minority groups.

Although we were able to replicate Nilsson et al.'s (1999) significant difference in Parental Expectations scores between African American and Caucasian students, we did not find African American students to report less parental criticism or fewer concerns about making mistakes. One possible explanation for this discrepancy can be traced to the sample sizes in each study, and related issues of statistical power and significance. For instance, Nilsson et al. based their study on approximately twice as many African Americans and over four times as many Caucasian students as surveyed in the present study. Nilsson et al. found a statistically significant difference between African American and Caucasian students' scores on Concern Over Mistakes (*M*s = 18.32 and 21.12, respectively). In the present study, the Concern Over Mistakes subscale, compared with Nilsson et al.'s study, indicated a slightly higher score for our African American students and nearly identical score for the Caucasian students (M = 19.25 and 21.22, respectively). In both sets of comparisons, the African Americans scored lower than the Caucasians, but the nearly 2-point difference in this study did not reach statistical significance, whereas the nearly 3-point difference in Nilsson et al. did reach significance. Future studies should examine the practical importance of such sample variations, perhaps by exploring potential moderators to these associations (e.g., socioeconomic status, regional influences, and other sample characteristics).

Depressive Symptoms and Academic Achievement

Significant relationships were found between some of the characteristics of perfectionism and depressive symptoms for all three groups of college students.[1] Specifically, significant positive correlations with depressive symptoms were observed with scores on Concern Over Mistakes, Parental Criticism, and Doubts About Actions for each ethnic group. Consequently, it is possible that the more these students doubt their actions or become excessively concerned about making mistakes, the greater the possibility they might experience depressive symptoms. In addition, increased parental criticism may increase susceptibility for depressive symptoms as well. Of course, directional causality cannot be determined with these data, and the converse of these interpretations is equally plausible, namely, that depressive symptoms among students, regardless of ethnic group, may increase the likelihood that the students will be more sensitive to perceived failings (e.g., concerns with mistakes and self-doubt) and may perceive their parents (accurately or not) as

[1]A full correlation matrix of all subscales is available on request.

more critical of them. Future longitudinal or experimental research that tracks these variables over time or in different conditions could clarify these competing causal directions. It is important to emphasize, however, that in this study the variables significantly associated with depressive symptoms were the same for each ethnic group.

In regression analyses, the combined effects of the MPS subscales accounted for significant variation in depressive symptoms for the Asian American and Caucasian groups but not for the African American group. Indeed, for the Asian American group, the combined effect of the perfectionism predictors explained approximately 50% of the variance in depressive symptoms. Follow-up tests of standardized partial regression coefficients indicated that Doubts About Actions was a significant predictor of depressive symptoms for both groups. Thus, partialing the effects of the other perfectionism dimensions revealed that perfectionistic self-doubt was the most important predictor of depressive symptoms for these two groups. As noted earlier, the Asian American group scored significantly higher on Doubts About Actions than the other groups, and no differences emerged on that variable between the African Americans and Caucasians. Therefore, as a group, Asian Americans may not be any more likely to report significant depressive symptoms than the other groups in this study, but they do acknowledge more risk, in terms of maladaptive perfectionism, and those Asian American students with higher scores on Doubts About Actions are likely to experience depressive symptoms. Alternatively, Caucasian Americans report comparatively lower self-doubt than the Asian Americans but seem comparably affected. The pattern of significant and nonsignificant prediction of CES–D scores suggests that the link between perfectionism and depressive symptoms is more salient for some ethnic groups than others. Perhaps, in the case of African Americans, other social and contextual variables could prove to be more salient predictors of depressive symptoms (e.g., socioeconomic status, experiences with racism). Also, although African American parents appear to place high expectations on their children, they do not appear to engage in excessive criticism. The combination of high expectations and low criticism may serve as a buffer to psychological distress such as depressive symptoms.

Finally, correlations and regression analyses were used to examine the association between perfectionism and academic achievement, operationalized by student self-reported GPA. The findings indicated that the prediction of GPA with perfectionism was more prominent for the minority groups than the Caucasian group, accounting for nearly 30% of the variance in each minority group but only 7% of the variance in the Caucasian group. Thus, perfectionism does not appear to accord any particular academic advantage or disadvantage for the Caucasian students. However, for both the Asian American and African American groups, lower scores on Doubts About Actions were associated with higher cumulative GPA. For the Asian American group, higher scores on Personal Standards also predicted higher GPA. For the African American group, the impact of perfectionistic self-doubt may be a particularly detrimental experience in terms of academic achievement; recall that the African American group also reported the lowest GPA compared with the other groups.

It is interesting to note that Personal Standards emerged as a significant predictor of GPA only for the Asian American group and was not a significant predictor of depressive symptoms for any of the ethnic groups. Although high personal standards has been described as a defining feature of perfectionism, the research to date has not consistently supported a link between standards and psychological difficulties. Perhaps the inconsistency across these studies can be linked to methods and conceptualizations of perfectionism. For instance, Slaney et al. (2001) argued that the discrepancy between high standards and perceptions of current performance was a defining feature of mal-

adaptive perfectionism, whereas high standards without perceived discrepancy could indicate adaptive perfectionism. Cluster-analytic studies have found high standards to be indicative of both adaptive and maladaptive perfectionism, with other dimensions of perfectionism further differentiating the clusters (e.g., concerns about making mistakes indicates maladaptive but not adaptive perfectionism). Indeed, in numerous studies using Frost et al.'s (1990) MPS, including the present investigation, certain dimensions of perfectionism (e.g., doubts about actions) have played a more important role in predicting psychological problems, such as depression (Blatt, 1995). Other dimensions, such as high personal standards, have predicted psychological health and well-being (Parker, 1997; Rice & Mirzadeh, 2000) and have not been significantly associated with indicators of psychological maladjustment (Rice et al., 1998).

Limitations and Future Directions

In light of the relatively small sample sizes, additional research should attempt to replicate these findings using larger samples for each ethnic group. In addition, the sample for this study consisted of a small number of male participants. Future researchers might obtain larger male samples, and possibly examine potential gender differences as well as ethnic differences. Future research should examine whether the relationships between characteristics of perfectionism and depression affect additional areas of functioning for each ethnic group as well, and whether there are ethnic differences in those relationships. For example, the results reported here indicated that certain characteristics of perfectionism are predictive of depressive symptoms and GPA. However, this study did not examine any impact on variables such as social integration on campus.

The possibility of greater within-group than between-groups variation should also be considered. A limitation in the present findings was an inability to differentiate between various subgroups within our larger ethnicity categorizations because we did not assess within-group variables such as generational status or acculturation. In fact, acculturation may have moderated findings from the present study. For example, perfectionism, as understood and operationalized in mainstream U.S. society, may play a more salient role in emotional and academic adjustment for individuals who are more acculturated to U.S. society and less a role for more traditional or marginalized individuals. Future research, then, could consider generation and culture as potentially salient within-ethnic-group differences when examining associations between perfectionism and various indicators of psychological adjustment.

Because this was a correlational field design study, external validity was gained at the expense of internal validity. For example, it is difficult to discern the causal direction of effects observed in this study. Second, the measures that were used might also affect the results. All of the measures were based on self-report. Therefore, there may have been distortions and inconsistencies in what students were willing to report. One of the MPS subscales (Doubts About Actions) yielded conspicuously lower reliability coefficients for the minority ethnic groups in this study than the Caucasian group, although all other subscales yielded comparable reliabilities between the groups. It should be noted that, in the original development study of the MPS, Frost et al. (1990) found Doubts About Actions to have lower reliability compared with the other MPS subscales. Cheng, Chong, and Wong (1999) similarly reported a lower reliability estimate (.67) compared with other reliabilities for the MPS subscales in their study of Chinese secondary students in Hong Kong. Another measurement limitation in the present study was that the indicator of academic achievement was based on a single item: self-reported GPA. Future studies might examine other aspects of academic adjustment and achievement (e.g., academic integration, study skills) based on more compre-

hensive indicators, such as individually administered achievement tests. Furthermore, other measures of perfectionism exist that tap related and distinct aspects of that construct (e.g., Hewitt & Flett, 1991; Slaney et al., 2001). Despite these limitations, the results from this study offer an important, multicultural perspective on perfectionism and its association with depressive symptoms and academic achievement.

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