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Predictors of Career Indecision in Three Racial/Ethnic Groups of College Women

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This study examines the contributions of career-related barrier and social support perceptions, barrier-related coping beliefs, and career decision-making self-efficacy beliefs to the prediction of career indecision in three racial/ethnic groups of college women. Results indicate that although there are no racial/ethnic differences across scores on most of the key measures, African American women perceive significantly greater career barriers than do either White or Hispanic women. Separate within-racial/ethnic group regressions of career indecision scores indicate that the full model collectively accounted for substantial amounts of criterion variance (range of $R^2 = .31$ to $.47$), although the pattern of predictor contributions varies somewhat across the three groups.

Keywords: race/ethnicity; career indecision; college women

Career indecision is generally viewed as a serious problem characterized by the experience of high levels of uncertainty and anxiety regarding one's career choices and by motivational difficulties with career goal-directed activity. Among young adults, high levels of career indecision are thus likely to interfere with educational and career planning and to disrupt normative career development processes. However, despite its status as a significant career-related problem, career indecision has not been a central construct in career development theories (Kelly & Lee, 2002).

Studies have linked career indecision to a wide array of predictors, such as trait anxiety, external locus of control, perfectionism (Fuqua, Blum, & Hartman,

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1988; Leong & Chervinko, 1996), inadequate family support and problematic interaction patterns (Hargrove, Creagh, & Burgess, 2002), identity-related factors (Guerra & Braungart-Rieker, 1999; Tokar, Withrow, Hall, & Moradi, 2003), and perhaps most consistently, weak self-efficacy beliefs regarding one's career planning and decision-making skills (Betz & Klein, 1996; Betz, Klein, & Taylor, 1996; Betz & Luzzo, 1996; Betz & Voyten, 1997; Guay, Senecal, Gauthier, & Fernet, 2003). In short, perceptions of both unfavorable contextual and personal factors appear to contribute to career indecision.

Although findings from some of these studies suggest that gender and ethnic differences in career decision-making confidence and in the perception of career-related barriers may contribute to career indecision, it is noteworthy that few studies of career indecision have used diverse samples. Therefore, it remains unclear whether perceptions of barriers and decision-making confidence function similarly or differently as predictors of career indecision across participants from different cultural groups.

In addressing this gap, it would seem especially important to examine predictors of career indecision within a diverse sample of young adult women. Unlike their male counterparts, young women are more likely to anticipate gender-related barriers to career decision making, such as gender discrimination and potential work-family conflicts (Novack & Novack, 1996). Relative to their White peers, women of color are also likely to anticipate both gender and racial discrimination, suggesting that their beliefs about these barriers and their abilities to cope with them may adversely affect their career decision-making confidence and contribute to their career indecision (Hackett & Byars, 1996). Indeed, evidence from several studies would support these speculations.

For example, Luzzo (1993a) found ethnic differences in career decision-making self-efficacy beliefs and that relative to their European American (White) peers, African American, Asian American, Hispanic, and Filipino college students were more likely to perceive their racial status as a barrier to their own career development (Luzzo, 1993b). Gloria and Hird (1999) similarly reported that relative to a combined group of racial/ethnic minority peers, White students reported stronger career decision-making self-efficacy beliefs; however, the proportionally smaller number of minority students in their sample did not allow them to conduct more precise between- or within-ethnic group analyses. In a comparative study of White and Mexican American high school students, McWhirter (1997) also observed gender and ethnic differences in perceived career barriers, with women and Mexican American students acknowledging more barriers.

Other studies exploring interrelationships among perceived barriers, career decision-making self-efficacy, and career indecision have produced more mixed results. Swanson, Daniels, and Tokar (1996) reported that career barrier perceptions were unrelated to career indecision and vocational identity within a college student sample whose racial/ethnic diversity was not reported. McWhirter, Hackett, and Bandalos (1998) similarly found that barrier perceptions did not explain significant variance in Mexican American high school students' educational plans and career expectations, although perceptions of father support did significantly enhance these outcomes among girls in this sample. By contrast, Luzzo (1996; Luzzo & Jenkins-Smith, 1996) found significant negative relations between future barrier perceptions and career decision-making confidence and that among a sample of Mexican American college students, the perceived number of barriers was significantly related to students' perceived control over their own career decision making. Likewise, Kenny, Blustein, Chaves, Grossman, and Gallagher (2003) reported that perceived barriers were associated with behavioral and attitudinal measures of school engagement, career success aspirations, career goal attainment expectations, and work salience with their samples of urban (and predominantly ethnic minority) high school students.

These inconsistent findings may be related to differences in the ethnic diversity of research samples and to variability across studies in how career barriers were assessed and in whether students' expectations of social support were concurrently considered when examining the impact of perceived barriers on decisional outcomes.

Lent, Brown, and Hackett (2000) recommended that career decision-making research consider the influence of variables that both constrain (e.g., barriers) and enhance (e.g., support) career choice; they also urged researchers to separately assess perceptions of barriers and persons' "coping efficacy," which "reflects one's perceived capability to negotiate particular situational features that obstruct or complicate performance" (p. 46). Regarding the latter recommendation, they argued that assessments of career barriers typically confound barrier perceptions with coping efficacy.

In line with this guidance, Luzzo and McWhirter (2001) found that women and ethnic minorities anticipated more career barriers than did their male and European American counterparts, respectively; in addition, ethnic minorities perceived more educational barriers and reported lower self-efficacy in coping with these barriers than did their European American peers. More recently, Quimby and O'Brien (2004) found that, controlling for the contribution of perceived barriers, social support perceptions enhanced

the prediction of career decision-making self-efficacy within a sample of nontraditional college women. These findings suggest that barrier and support perceptions may promote the formation of barrier-related coping and decisional confidence beliefs that, in turn, may more proximally affect career indecision.

Summary and Research Objectives

In sum, although career indecision has not been a central construct in career development theories (Kelly & Lee, 2002), it represents a significant career decision-making outcome that, among college women in particular, may reflect the contributions of career-related barrier and support perceptions, barrier-related coping beliefs, and career decision-making self-efficacy perceptions. It is also plausible that the relative contributions of these predictors to career indecision may vary across women from different racial/ethnic backgrounds. Thus far, however, few studies have concurrently examined interrelationships among perceived barriers, social support resources, barrier-related coping beliefs, career decision-making efficacy beliefs, and career indecision, particularly within ethnically and culturally diverse samples wherein such perceptions may exert unique effects on decisional processes (Lent et al., 2003). Given the conceptual overlaps shared by these predictors, it is important to examine their unique and collective contributions to career indecision.

Toward this end, the present study explored these interrelationships within a diverse sample of college women. We first examined between-(racial/ethnic) group differences in scores on our key measures and hypothesized that relative to their White counterparts, African American and Hispanic women would report more career and educational barriers, lower barrier coping beliefs, and lower career decision-making self-efficacy. We did not anticipate racial/ethnic differences in social support perceptions or in overall levels of career indecision. Next, we conducted a series of within-group (racial/ethnic) analyses to explore whether our selected predictors made similar or unique contributions to career indecision among White, African American, and Hispanic women in our sample. More specifically, we tested a model for predicting career indecision that sequentially considered anticipated career barriers and current educational barriers, generalized expectations of social support, barrier-related coping beliefs, and career decision-making self-efficacy. We hypothesized that across all three racial/ethnic groups, the sequential entry of our predictors would make significant and incremental contributions to the prediction of career indecision. Our separate regressions also enabled us to explore whether

the respective contributions of these predictors to career indecision varied across participants in our three groups.

Method

Participants and Procedures

Participants were 359 female undergraduate students recruited from education, psychology, sociology, and human development/family studies classes in a large urban university in the Southwest. All participants were scheduled for one of several group testing sessions during which time they received a brief introduction to the nature of the study, read and signed informed consent forms, and completed a packet containing the survey measures described below. To control for possible order effects, measures were presented in counterbalanced order across three different survey packets that were randomly distributed.

In exchange for their participation, students received some partial course credit. The obtained sample was ethnically diverse and consisted of the following represented groups: White ($n = 176$, 42.2%), Hispanic ($n = 103$, 24.7%), and African American ($n = 80$, 19.2%). Class representation included all year levels, although the sample predominantly consisted of more senior students (first year: $n = 19$, 5.3%; sophomore: $n = 54$, 15%; junior: $n = 149$, 41.5%; senior: $n = 133$, 37%). Four participants (1.2% of the sample) did not indicate a class level. No significant racial/ethnic group differences in class level representation were observed, $\chi^2(6, n = 348) = 5.04, p = .54$. The mean age of the sample was 24.15 years ($SD = 6.27$; range = 18 to 53).

Measures

Demographic questionnaire. This brief form solicited information on participants' age, race/ethnicity, marital status, and year in college.

Perception of Barriers Scale (POB; Luzzo & McWhirter, 2001). This 32-item measure contains two subscales assessing perceived barriers to career development and educational aspirations. The 11-item Career Barrier subscale asked respondents to indicate their level of agreement (using a 5-point Likert-type scale ranging from 1 = *strongly disagree* to 5 = *strongly agree*) that they would likely encounter several specific barriers "in their future careers," such as racial or gender discrimination. The 21-item Educational Barrier subscale asked

respondents to indicate their level of agreement (using the same 5-point Likert-type scale) that each of several concerns (e.g., money problems, not knowing how to study well) was currently experienced as a “barrier to [their] educational aspirations.” Item ratings on each subscale are summed, with higher scores indicative of more perceived barriers in that domain. Luzzo and McWhirter (2001) reported Cronbach alphas of .86 (Career Barrier) and .88 (Educational Barrier) for scores on the two POB subscales. Both POB scales also demonstrated moderate to strong test-retest stability during a 2-month interval ($r_s = .72$ and $.68$). As noted earlier, these researchers found that minority college students expected to face more career and educational barriers than did their White peers.

Social support expectations. The 20-item People in My Life Scale (PIML; Neemann & Harter, 1986) was used to assess the degree to which generalized expectations of social support from multiple sources have been integrated within respondents’ self-concepts. The PIML was chosen for this study because it was especially designed for use with undergraduate college students and because it contains five 4-item subscales that respectively assess peer support, mother support, father support, campus organizational support, and instructor support. Each item presents two contrasting statements connected by a conjunction (e.g., “Some students do feel that they have the support of their instructors” BUT “Other students feel they do not have the support of their instructors”). Respondents self-identify with one or the other item part by rating that part as either “sort of true for me” or “really true for me.” Item ratings can then be summed to produce individual subscale scores or aggregated into a total social support score. The authors reported that Cronbach alpha coefficients for PIML subscales ranged from .76 (Organizational Support) to .90 (Peer Support) and that subscale scores significantly correlated in expected directions with a measure of global self-worth (range of $r_s = .28$ to $.49$, all $p_s < .001$) as well as with independent measures of domain-specific support. Elsewhere, Cosden and McNamara (1997) reported that PIML Organizational Support and Instructor Support were significantly correlated with global self-esteem scores in an independent undergraduate sample, and Hinderlie and Kenny (2002) found that PIML Peer, Organizational, and Instructor Support were each significantly correlated with measures of college adjustment among African American students attending predominantly White universities (range of $r_s = .27$ to $.56$, all $p_s < .01$). In the present study, we used PIML total support scores as our index of generalized social support.

Coping With Barriers Scale (CWB; Luzzo & McWhirter, 2001). Developed to parallel the item content of the POB, the 28-item CWB was used to measure respondents' perceived efficacy in coping with educational and career-related barriers such as negative comments about their racial/ethnic background, lack of educational preparation, and money problems. For each item, respondents were asked to rate (on a 5-point Likert-type scale ranging from 1 = *not at all confident* to 5 = *highly confident*) their level of confidence in overcoming each potential barrier. Item ratings on the Career-Related Coping (7 items) and Educational Coping (21 items) subscales are respectively summed, with higher scores on each subscale indicative of greater coping-related efficacy. Luzzo and McWhirter (2001) reported Cronbach alphas of .88, and .93 for the Career-Related and Educational Coping scores, respectively, as well as moderate (2-month) test-retest stabilities for both subscale scores ($r_s = .50$ and $.49$, respectively); additionally, these authors found that ethnic minority students reported lower career-related coping beliefs than their White counterparts.

Career Decision-Making Self-Efficacy Scale (CDMSE-SF; Betz et al., 1996). This 25-item scale was used to measure respondents' perceived abilities to successfully complete a range of career decision-making tasks such as "accurately assess your abilities" and "change occupations if you are not satisfied with the one you enter." Items were rated on a 5-point Likert-type scale (1 = *no confidence at all* and 5 = *complete confidence*) and summed to produce a total score, with higher scores indicating stronger career decision-making self-efficacy. Betz et al. (1996) reported a Cronbach alpha of .94 for total CDMSE scores, and in their review of several studies of career decision-making, Betz and Luzzo (1996) reported consistently strong (negative) correlations between CDMSE and career indecision scores. Elsewhere, Betz and Voyten (1997) found that CDMSE scores were more efficient predictors of career indecision than were outcome expectations.

Career Decision Scale (CDS; Osipow, Carney, Winer, Yanico, & Koschier, 1987). The 16-item Indecision scale of the CDS was used to measure the extent of respondents' current level of career indecision. Items (e.g., "I want to be absolutely certain that my career choice is the 'right' one, but none of the careers I know seem ideal for me") were rated on a 4-point Likert-type scale (1 = *not like me* and 4 = *like me*), and item ratings were summed to produce a total score, with higher scores indicating greater career indecision. Osipow et al. (1987) reported a Cronbach alpha of .86 for total CDS scores, and that

CDS scores significantly differentiated between decided and undecided groups of students. In a factor analysis of three measures of career indecision (CDS, Career Factors Inventory, and Career Decision Profile), Stead and Watson (1993) observed that all CDS items loaded on an indecision factor. More recently, Kelly and Lee (2002) concluded that relative to other measures of career indecision, "the CDS is unique in reflecting the identity problems that impede career exploration and decision making (p. 323)."

Results

Preliminary Analyses

Seven cases containing outliers on one or more variables were identified and deleted from further analysis, resulting in a final sample size of 352. Mean series substitution was used to replace the negligible amount of missing item-level data. Table 1 presents the intercorrelations of respondents' age and scores on the key measures (as well as their Cronbach alpha reliabilities) within each racial/ethnic group of women. Given the large number of correlations, we report as significant only coefficients with p values less than .01.

Correlational results. Observed intercorrelations were generally comparable across all three racial/ethnic groups of participants. Within each racial/ethnic group of women, age was not significantly correlated with scores on any of the key measures and, as expected, Career and Educational Barrier scores were moderately intercorrelated, as were Career-Related Coping and Educational Coping scores. Last, all key predictors were significantly correlated in expected directions with career indecision (CDS) scores.

Examination of group differences among White, African American, and Hispanic women. We then explored racial/ethnic group differences across our seven key measures (Career-Related Barriers, Educational Barriers, Career-Related Coping, Educational-Related Coping, PIML, CDMSE, and CDS scores) in a one-way multivariate analysis of variance (MANOVA). These results yielded a significant multivariate effect for ethnicity, Wilks's $\Lambda = .81$, $F(14, 686) = 5.54$, $p < .001$, $\eta^2 = .10$, indicating the presence of a medium effect size. Follow-up univariate analyses and between-group comparisons using Scheffé's procedure indicated that this effect was limited to Career-Related Barrier scores, with African American women reporting significantly higher career barriers relative to their White and Hispanic peers. Table 2 presents the means and standard deviations associated with these comparisons.

Table 1
Scale Score Reliabilities and Intercorrelations of
Participants' Age and Scores on Key Measures
Within Each Racial/Ethnic Group of Women

White (<i>n</i> = 174)								
Variable	α	2	3	4	5	6	7	8
1. Age	—	.04	-.05	-.09	.08	.17	.17	-.17
2. Career barrier	.87		.39*	-.21*	-.18	-.33*	-.21*	.27*
3. Educational barrier	.86			-.40*	-.18	-.49*	-.40*	.44*
4. Social support	.86				.26*	.35*	.29*	-.20*
5. Career cope	.89					.53*	.25*	-.28*
6. Educational cope	.93						.49*	-.35*
7. Career self-efficacy	.95							-.48*
8. Career indecision	.90							—
African American (<i>n</i> = 78)								
Variable	α	2	3	4	5	6	7	8
1. Age	—	.11	-.02	-.10	.06	.01	.03	-.14
2. Career barrier	.92		.35*	-.28	-.26	-.26	-.42*	.50*
3. Educational barrier	.91			-.52*	-.19	-.51*	-.42*	.46*
4. Social support	.80				.24	.52*	.36*	-.37*
5. Career cope	.90					.54*	.41*	-.36*
6. Educational cope	.93						.51*	-.54*
7. Career self-efficacy	.95							-.53*
8. Career indecision	.90							—
Hispanic (<i>n</i> = 100)								
Variable	α	2	3	4	5	6	7	8
1. Age	—	-.02	-.06	.07	.03	.04	.07	-.02
2. Career barrier	.90		.50*	-.35*	-.30*	-.39*	-.37*	.40*
3. Educational barrier	.89			-.53*	-.29*	-.49*	-.48*	.37*
4. Social support	.88				.34*	.47*	.40*	-.33*
5. Career cope	.88					.61*	.44*	-.41*
6. Educational cope	.92						.45*	-.39*
7. Career self-efficacy	.95							-.43*
8. Career indecision	.92							—

Note: Career barrier = Perception of Barriers Scale [POB] Career Barrier total score; educational barrier = POB Educational Barrier total score; social support = People in My Life total score; career cope = Coping With Barriers Scale [CWB] Career Barrier Coping total score; educational cope = CWB Educational Barrier Coping total score; career self-efficacy = Career Decision-Making Self-Efficacy Scale total score; career indecision = Career Decision Scale total score.

* $p < .01$.

Table 2
Means and Standard Deviations of Scores on Measures of Career and Educational Barriers, Generalized Social Support, Barrier-Related Coping, Career Decision-Making Self-Efficacy, and Career Indecision by Racial/Ethnic Group

Measure	Racial/Ethnic Group						<i>F</i> (2, 349)
	White (<i>n</i> = 174)		African American (<i>n</i> = 78)		Hispanic (<i>n</i> = 100)		
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
1. Career barriers	19.32	7.59	27.85	11.35	21.93	8.77	24.81*
2. Educational barriers	39.21	12.60	39.16	15.57	41.83	14.09	1.32
3. Social support	62.24	10.06	64.79	8.60	62.45	10.53	1.92
4. Career cope	30.01	6.03	28.96	6.72	29.88	5.45	0.86
5. Educational cope	91.15	12.97	93.03	13.51	90.78	12.07	0.77
6. Career self-efficacy	101.08	16.80	104.48	16.24	100.90	16.61	1.33
7. Career indecision	23.92	8.16	24.89	9.15	24.99	9.81	0.59

Note: Career barrier = Perception of Barriers Scale [POB] Career Barrier total score; educational barrier = POB Educational Barrier total score; social support = People in My Life total score; career cope = Coping With Barriers Scale [CWB] Career Barrier Coping total score; educational cope = CWB Educational Barrier Coping total score; career self-efficacy = Career Decision-Making Self-Efficacy Scale total score; career indecision = Career Decision Scale total score.

* $p < .001$.

Primary Analyses

Prediction of CDS scores within each racial/ethnic group. We then used hierarchical multiple regression to examine the incremental and collective contributions of the key predictors to career indecision scores within each racial/ethnic group. Following Quimby and O'Brien (2004), we entered Career-Related and Educational Barrier scores as a block at the first step prior to entering our composite measure of generalized social support. Next, Career-Related and Educational Coping scores were entered as a block at the third step, followed last by the entry of CDMSE scores. Table 3 summarizes the results of our three within-group regressions of career indecision scores. Across these regressions, the model accounted for substantial and generally comparable proportions of CDS variance (range of total $R^2 = .31$ [Hispanic] to $.47$ [Black]), although the pattern of variable contributions differed somewhat.

Table 3
Summary of Hierarchical Regression Analyses for Variables
Predicting Career Decision Scale Scores Among
Participants Within Each Racial/Ethnic Group

Variable	Racial/Ethnic Group								
	White (<i>n</i> = 174)			African American (<i>n</i> = 78)			Hispanic (<i>n</i> = 100)		
	B	SE B	β	B	SE B	β	B	SE B	β
Step 1									
Career barrier	.12	.08	.11	.31	.08	.39***	.32	.12	.28**
Educational barrier	.26	.05	.40***	.19	.06	.32**	.16	.07	.23*
Step 2									
Career barrier	.12	.08	.11	.30	.08	.37***	.30	.12	.27*
Educational barrier	.25	.05	.39***	.15	.07	.26*	.11	.08	.16
Social support	-.01	.06	-.02	-.14	.12	-.14	-.14	.10	-.15
Step 3									
Career barrier	.09	.08	.08	.28	.08	.34***	.24	.12	.21*
Educational barrier	.23	.05	.36***	.09	.07	.15	.09	.08	.13
Social support	.02	.06	.03	-.01	.12	-.01	-.07	.10	-.07
Career cope	-.23	.11	-.17*	-.07	.15	-.05	-.46	.20	-.26*
Educational cope	-.04	.06	-.07	-.24	.09	-.35**	-.04	.10	-.05
Step 4									
Career barrier	.09	.08	.08	.24	.08	.29**	.22	.12	.20
Educational barrier	.19	.05	.30***	.07	.07	.12	.05	.08	.08
Social support	.05	.06	.06	.00	.12	.00	-.05	.10	-.05
Career cope	-.23	.10	-.17*	-.02	.15	-.02	-.37	.20	-.21
Educational cope	.04	.06	.07	-.20	.09	-.29*	-.03	.10	-.04
Career self-efficacy	-.17	.04	-.36***	-.11	.06	-.20	-.11	.06	-.20

Note: For White group, Step 1 $R^2 = .21$, $p < .001$; Step 2 $\Delta R^2 = .00$, *ns*; Step 3 $\Delta R^2 = .038$, $p < .05$; Step 4 $\Delta R^2 = .09$, $p < .001$. For African American group, Step 1 $R^2 = .34$, $p < .001$; Step 2 $\Delta R^2 = .01$, *ns*; Step 3 $\Delta R^2 = .09$, $p < .01$; Step 4 $\Delta R^2 = .025$, *ns*. For Hispanic group, Step 1 $R^2 = .20$, $p < .001$; Step 2 $\Delta R^2 = .02$, *ns*; Step 3 $\Delta R^2 = .068$, $p < .05$; Step 4 $\Delta R^2 = .024$, *ns*. Career barrier = Perception of Barriers Scale [POB] Career Barrier total score; educational barrier = POB Educational Barrier total score; social support = People in My Life total score; career cope = Coping With Barriers Scale [CWB] Career Barrier Coping total score; educational cope = CWB Educational Barrier Coping total score; career self-efficacy = Career Decision-Making Self-Efficacy Scale total score.

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

Among our White female participants, the initial entry of Career-Related and Educational Barriers accounted for 21% of CDS variance, and the subsequent entry of generalized social support scores did not significantly

enhance this prediction. More in line with expectations, the successive block entry of barrier coping beliefs, followed by the entry of career decision-making self-efficacy scores, accounted for incremental criterion variance ($\Delta R^2 = .04$ and $.09$, respectively, both $ps < .05$). With all variables entered, Educational Barriers ($\beta = .30, p < .001$), Career Barrier coping beliefs ($\beta = -.17, p < .05$), and CDMSE scores ($\beta = -.36, p < .001$) made uniquely significant contributions to the prediction of CDS scores.

Among African American women, Career-Related and Educational Barriers accounted for 34% of CDS variance, and when entered at the next step, generalized social support perceptions did not significantly enhance this prediction. Career-Related and Educational Barrier coping beliefs, however, did account for significant incremental variance in career indecision ($\Delta R^2 = .09, p < .01$), and the final step contribution of CDMSE scores to this prediction approached but fell short of significance ($\Delta R^2 = .025, p = .07$). In the full model within this group, only Career Barriers ($\beta = .29, p < .01$) and Educational Barrier coping ($\beta = -.29, p < .05$) uniquely and significantly predicted CDS scores.

Finally, among Hispanic women, the initial entry of Career and Educational Barriers collectively and significantly accounted for 20% of CDS variance, and the subsequent entry of generalized social support scores did not enhance this prediction. As expected, the subsequent block entry of Career and Educational Barrier Coping scores explained significant and incremental variance in career indecision ($\Delta R^2 = .07, p < .05$), and the final step entry of CDMSE scores once again approached but fell short of statistical significance ($\Delta R^2 = .024, p = .08$). With all variables in the model, no single predictor uniquely predicted CDS scores within this racial/ethnic group, although anticipated Career Barriers approached significance ($\beta = .20, p = .06$).

Discussion

We examined multiple predictors of career indecision within a diverse sample of college women. This sample also enabled us to examine ethnic differences across the key predictor and criterion variables in advance of testing a model for predicting career indecision within each racial/ethnic group that sequentially controlled for anticipated career and current educational barriers, generalized social support, barrier-related coping beliefs, and career decision-making self-efficacy perceptions.

Although we did not anticipate racial/ethnic differences in generalized social support or career indecision, we did expect differences on the remaining

measures; however, the findings indicated that the three groups significantly differed only with respect to anticipated career barriers, with African American women expecting more of these barriers than either their White or Hispanic counterparts. Luzzo (1993b) found that a mixed (combined) group of minority college students were more likely than their White peers to view their racial status as a barrier to their own career development, and McWhirter (1997) found that relative to their White peers, Mexican American high school students reported more career barriers. We believe that the three group comparison in the present study adds to these findings. Contrary to expectations, we found no significant between-racial/ethnic-group differences with respect to currently experienced educational barriers, barrier-related coping beliefs, or career decision-making self-efficacy scores. It should be recalled here, however, that the majority of our participants were in their 3rd or 4th year of college at a major urban university in the Southwest. It is plausible that minority students with less favorable scores on these other measures either do not pursue college or else discontinued their college experience much earlier, resulting in greater similarity in career-related beliefs across racial/ethnic groups as students persist with their college education. To explore this possibility, prospective studies examining the contributions of these predictors to college persistence and career decision-making processes within diverse samples are clearly needed. Regardless, our finding that African American women nearing college graduation still perceived significant barriers to their career development despite their educational attainment is troubling.

The regressions of career indecision scores within each racial/ethnic group illuminated some commonalities yet also some noteworthy variations in the contributions of the selected predictors. First, across all three groups of women, the block of perceived career and educational barriers explained substantial amounts of career indecision when entered at the first step, and generalized perceptions of social support did not incrementally enhance this prediction. The latter finding stands in contrast to Quimby and O'Brien (2004), who found that social support added to the prediction of career decision-making efficacy within a sample of nontraditional college women (mean age = 38 years, 45% of whom had at least one child living with them). It is possible that our younger (mean age = 24) and predominately single (76%) participants were comparatively less reliant on immediate sources of social support in forming and implementing their career decisions. Significant childcare responsibilities more likely represented actual versus anticipated barriers among participants in the Quimby and O'Brien study, and this distinction may have substantially affected the ability of social support resources to promote career decision making.

A final consistency across all three groups was that, as expected, career- and education-related barrier coping beliefs incrementally enhanced the ability of perceived barriers to predict career indecision. This finding supports Lent et al.'s (2000) call for a separate assessment of barrier perceptions and barrier coping beliefs. Discrepant findings in the literature regarding associations between perceived barriers and career-related outcomes may in part be attributable to inconsistent efforts to differentiate (either conceptually or statistically) barrier perceptions and barrier coping beliefs. Our findings affirm that these are nonredundant sources of information that uniquely contribute to career indecision.

The regression analyses also revealed some potentially noteworthy variations in the contributions of our predictors to career indecision within each racial/ethnic group. With all variables in the model, career decision-making self-efficacy scores uniquely and significantly predicted career indecision only among White women. Among our women of color, when perceived barriers and barrier-related coping scores were controlled, the contributions of career decision-making self-efficacy beliefs scores to career indecision approached but failed to reach significance. Indeed, within our sample of African American women, anticipated career barriers and current educational barrier coping beliefs were considerably more robust predictors of career indecision. Among our Hispanic women, the predictive model was less definitive as no single predictor emerged as unique contributor to career indecision, although the contribution of perceived career barriers approached significance, and the full model accounted for a substantial amount of criterion variance. Variables not measured or controlled in this study (e.g., acculturation level, outcome expectations) may have affected observed interrelationships among barrier-related perceptions, coping beliefs, career decision-making self-efficacy, and career indecision within this group. Indeed, it is plausible that despite having confidence in their own coping and decision-making capabilities, many women of color may view career barriers as fairly intractable impediments and thus hold low outcome expectations regarding their coping efforts. If so, such beliefs may more directly contribute to their career indecision. These possibilities merit additional inquiry perhaps within a more comprehensive path-analytic study.

In sum, among both groups of minority women, when anticipated career-related barriers and barrier-related coping beliefs were controlled, career decision-making self-efficacy scores did not significantly enhance the prediction of career indecision. By contrast, among our White participants, perceptions of current educational (but not career) barriers, career barrier coping beliefs, and career decision-making self-efficacy perceptions emerged as

unique predictors of career indecision. One plausible explanation for these differential findings is that career barriers are more salient in the lives of women of color and that, as such, they may already subsume much of the variance associated with career decision-making self-efficacy beliefs.

Although these findings augment the available literature by concurrently examining multiple predictors to career indecision within an ethnically diverse sample of college women and by assessing their unique and collective contributions, several limitations to the current study potentially constrain their interpretation and generalizability. First, given the nature of this sample, the observed findings may not represent the full range of career barriers, coping resources, or self-efficacy percepts that might be obtained from a more diverse sample that included young adults who did not pursue college. As a result, the range of observed scores on our key measures may have been restricted, which in turn may have influenced our regression findings in unknown ways. This study's restricted focus on the career indecision of college women at a single public university in the Southwest also constrains the generalizability of these findings to college men or to students at other universities in other regions of the country. As noted earlier, studies have found gender differences in perceived career-related barriers (Luzzo & McWhirter, 2001; McWhirter, 1997), suggesting that the perception of barriers (especially gender discrimination) may be less consequential in predicting career indecision among men. In addition, given the correlational nature of this study, cause-effect inferences regarding our key variables cannot be established. Such inferences require longitudinal studies capable of tracking the impacts of these barrier, coping, and efficacy-related predictors on college persistence (vs. dropout), career indecision, and choice behavior within particular cohorts of students throughout time. Inclusion of objective assessments of educational persistence and career choice commitment in such studies would also offset limitations associated with the present study's exclusive reliance on self-report measures.

Despite these limitations, these findings offer some tentative implications for career counseling and assessment. First, they strongly suggest that the experience of career indecision is not reducible to low levels of career decision-making self-efficacy. Rather, the influence of perceived career and educational barriers and current barrier coping beliefs may be more substantively implicated in their experiences of career choice-related ambivalence and uncertainty. Among African American women, in particular, anticipated career barriers and uncertainties about coping with educational barriers appear to contribute notably to career decisional anxiety and thus should be carefully assessed. As part of such assessment, counselors should gauge the

strength of associations between perceived barriers and students' beliefs about both their barrier coping-related abilities and about the expected value of these coping behaviors in promoting their career decision-making activities and outcomes. Strengthening positive links between barrier perceptions and barrier-related coping beliefs may be crucial to promoting decision-making confidence and reducing career indecision. In short, our findings suggest that interventions for treating career indecision may be insufficient if they focus solely on teaching decision-making skills and reinforcing decision-making self-efficacy beliefs without exploring both real and perceived barriers to career choice and addressing and (if necessary) restructuring maladaptive coping beliefs.

References

- Betz, N. E., & Klein, K. L. (1996). Relationships among measures of career self-efficacy, generalized self-efficacy, and global self-esteem. *Journal of Career Assessment, 4*, 285-298.
- Betz, N. E., Klein, K. L., & Taylor, K. M. (1996). Evaluation of a short form of the Career Decision-Making Self-Efficacy Scale. *Journal of Career Assessment, 4*, 47-87.
- Betz, N. E., & Luzzo, D. A. (1996). Career assessment and the Career Decision-Making Self-Efficacy Scale. *Journal of Career Assessment, 4*, 413-428.
- Betz, N. E., & Voyten, K. (1997). Efficacy and outcome expectations influence career exploration and decidedness. *The Career Development Quarterly, 46*, 179-189.
- Cosden, M. A., & McNamara, J. (1997). Self-concept and perceived social support among college students with and without learning disabilities. *Learning Disability Quarterly, 20*, 2-12.
- Fuqua, D. R., Blum, C. R., & Hartman, B. W. (1988). Empirical support for the differential diagnosis of career indecision. *Career Development Quarterly, 36*, 364-373.
- Gloria, A. M., & Hird, J. S. (1999). Influences of ethnic and nonethnic variables on the career decision-making self-efficacy of college students. *The Career Development Quarterly, 48*, 157-174.
- Guay, F., Senecal, C., Gauthier, L., & Fernet, C. (2003). Predicting career indecision: A self-determination theory perspective. *Journal of Counseling Psychology, 50*, 165-177.
- Guerra, A. L., & Braungart-Rieker, J. M. (1999). Predicting career indecision in college students: The roles of identity formation and parental relationship factors. *The Career Development Quarterly, 47*, 255-266.
- Hackett, G., & Byars, A. M. (1996). Social cognitive theory and the career development of African American women. *The Career Development Quarterly, 44*, 322-340.
- Hargrove, B. K., Creagh, M. G., & Burgess, B. L. (2002). Family interaction patterns as predictors of vocational identity and career decision-making self-efficacy. *Journal of Vocational Behavior, 61*, 185-201.
- Hinderlie, H. H., & Kenny, M. (2002). Attachment, social support, and college adjustment among Black students at predominantly White universities. *Journal of College Student Development, 43*, 327-340.

- Kelly, K. R., & Lee, W.-C. (2002). Mapping the domain of career decision problems. *Journal of Vocational Behavior, 61*, 302-326.
- Kenny, M. E., Blustein, D. L., Chaves, A., Grossman, J. M., & Gallagher, L. A. (2003). The role of perceived barriers and relational support in the educational and vocational lives of urban high school students. *Journal of Counseling Psychology, 50*, 142-155.
- Lent, R. W., Brown, S. D., & Hackett, G. (2000). Contextual supports and barriers to career choice: A social cognitive analysis. *Journal of Counseling Psychology, 47*, 36-49.
- Lent, R. W., Brown, S. D., Schmidt, J., Brenner, B., Lyons, H., & Treistman, D. (2003). Relation of contextual supports and barriers to choice behavior in engineering majors: Test of alternative social cognitive models. *Journal of Counseling Psychology, 50*, 458-465.
- Leong, F. T., & Chervinko, S. (1996). Construct validity of career indecision: Negative personality traits as predictors of career indecision. *Journal of Career Assessment, 4*, 315-329.
- Luzzo, D. A. (1993a). Reliability and validity testing of the Career Decision-Making Self-efficacy scale. *Measurement and Evaluation in Counseling and Development, 26*, 137-142.
- Luzzo, D. A. (1993b). Value of career decision-making self-efficacy in predicting career decision-making attitudes and skills. *Journal of Counseling Psychology, 40*, 194-199.
- Luzzo, D. A. (1996). Exploring the relationship between the perception of occupational barriers and career development. *Journal of Career Development, 22*, 239-248.
- Luzzo, D. A., & Jenkins-Smith, A. (1996). Perceived occupational barriers among Mexican-American college students. *Texas Counseling Association Journal, 24*, 1-8.
- Luzzo, D. A., & McWhirter, E. H. (2001). Sex and ethnic differences in the perception of educational and career-related barriers and levels of coping efficacy. *Journal of Counseling & Development, 79*, 61-68.
- McWhirter, E. H. (1997). Perceived barriers to education and career: Ethnic and gender differences. *Journal of Vocational Behavior, 50*, 124-140.
- McWhirter, E. H., Hackett, G., & Bandalos, D. L. (1998). A causal model of the educational plans and career expectations of Mexican American high school girls. *Journal of Counseling Psychology, 45*, 166-181.
- Neemann, J., & Harter, S. (1986). *Manual for the self-perception profile for college students*. Unpublished manuscript, University of Denver.
- Novack, L. L., & Novack, D. R. (1996). Being female in the eighties and nineties: Conflicts between new opportunities and traditional expectations among White, middle class, heterosexual college women. *Sex Roles, 35*, 57-78.
- Osipow, S. H., Carney, C. G., Winer, J. L., Yanico, B., & Koschier, M. (1987). *The Career Decision Scale* (3rd rev.). Odessa, FL: Psychological Assessment Resources.
- Quimby, J. L., & O'Brien, K. M. (2004). Predictors of student and career decision-making self-efficacy among nontraditional college women. *Career Development Quarterly, 52*, 323-339.
- Stead, G. B., & Watson, M. B. (1993). How similar are the factor structures of the Career Decision Scale, the Career Decision Profile, and the Career Factors Inventory? *Educational and Psychological Measurement, 53*, 281-290.
- Swanson, J. L., Daniels, K. K., & Tokar, D. M. (1996). Measuring perceptions of career-related barriers: The Career Barriers Inventory. *Journal of Career Assessment, 4*, 219-244.
- Tokar, D. M., Withrow, J. R., Hall, D. J., & Moradi, B. (2003). Psychological separation, attachment security, vocational self-concept crystallization, and career indecision: A structural equations analysis. *Journal of Counseling Psychology, 50*, 3-19.

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