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Perceived social status and learning experiences in Social Cognitive Career Theory

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ABSTRACT

The purpose of this study was to test a model based on Social Cognitive Career Theory (Lent, Brown, & Hackett, 1994) that placed perceived social status as an antecedent of career-related learning experiences, self-efficacy, and outcome expectations. Gender was included in the present model and results indicated that gender related as expected to differential exposure to career-related learning experiences in Holland's (1997) RIASEC domains. After controlling for the effects of gender, results demonstrated that perceived social status related positively to learning experiences in the Investigative, Enterprising, and Conventional areas among 380 college students. Further, these enhanced learning experiences mediated the relationships between perceived social status and self-efficacy, and between perceived social status and outcome expectations, for the Investigative, Enterprising, and Conventional areas. These findings highlight the importance of perceived social status as a predictor of exposure to different types of career-related learning experiences that subsequently shape students' self-efficacy, outcome expectations, and (presumably) interests in particular RIASEC areas. Results are discussed in terms of exposure to career-related learning experiences in RIASEC domains with differing levels of prestige and implications of these results for developing interventions to enhance the learning experiences of students who report lower levels of perceived social status are presented.

1. Introduction

Social Cognitive Career Theory (SCCT: Lent, Brown, & Hackett, 1994, 2000) provides a theoretical framework for understanding vocational interest and decision-making processes. Central to SCCT is the concept that person inputs (e.g., gender, race/ethnicity, health status) and background contextual affordances (e.g., access to social networks) contribute to career-related learning experiences (Lent et al.). Learning experiences (defined as social persuasion, vicarious learning, physiological arousal, and performance accomplishments) are subsequently direct sources of self-efficacy beliefs and outcome expectations, and distal sources of interests, goals, and actions. As such, SCCT focuses on the reciprocity and interactions between individuals' cognitive processes and their environment (Lent et al.).

SCCT has garnered substantial empirical support for the relations of self-efficacy beliefs and outcome expectations to vocational interests and goal formation for career-related pursuits (e.g., Fouad & Smith, 1996; Gainor & Lent, 1998; Lent, Brown, Nota, & Soresi, 2003; Lent, Lopez, & Bieschke, 1991). However, less is known about the specific factors that contribute to career-related learning experiences (Tokar, Thompson, Plaufcan, & Williams, 2007). As a result, researchers have begun to focus on understanding the antecedents of learning experiences. For example, Williams and Subich (2006) demonstrated gender differences in career-related learning

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experiences within Holland's (1997) RIASEC typology. Tokar et al. (2007) extended this work to focus on the relation of three person inputs (i.e., gender, conformity to gender role norms, and personality) to reported learning experiences. Navarro, Flores, and Worthington (2007) focused on the effects of other person inputs (e.g., race/ethnicity) and background contextual affordances (e.g., social class) on specific types of learning experiences.

To date, no empirical evidence exists documenting the relations among perceived social status (PSS) and learning experiences. This is a noteworthy omission because an individual's PSS (i.e., her or his access to economic resources, social prestige, and social power) is proposed to shape that individual's opportunity structure, thereby influencing her or his exposure to different types of career-related learning experiences (e.g., Fouad & Brown, 2000) and subsequently impacting interest in specific career areas (e.g., Lent et al., 1994, 2000). The purposes of this study are, therefore, to (1) examine the direct effect of PSS on career-related learning experiences according to Holland's (1997) RIASEC typology, and (2) test the indirect effects of PSS on outcome expectations and self-efficacy via learning experiences as proposed by SCCT in each RIASEC interest domain for a sample of undergraduate students.

2. Social class-related constructs within SCCT

Although their original conceptualization of SCCT did not specifically include social class-related constructs, Lent et al. (1994) acknowledged the existence of a variety of person factors and contextual affordances proposed to impact self-efficacy and outcome expectations via exposure to learning experiences. In their discussion of contextual affordances, Lent et al. (2000) later noted the importance of attending to the influences of environmental experiences on the individual. In particular, they highlighted the need to consider one's access to opportunity structures within society (e.g., differential opportunities for vicarious learning and role modeling, differential access to financial and emotional support, structural barriers). As such, they pointed to the importance of attending to both objective (e.g., type of school attended, actual household income) and subjective (e.g., appraisal) components of contextual affordances to better understand their impact on career development.

The inclusion of social class and SES within an SCCT framework has, however, been examined only minimally (Diemer & Ali, 2009). Lower SES has been demonstrated to predict lower career aspirations for diverse adolescents and postsecondary students (e.g., Ali & McWhirter, 2006; Ali & Saunders, 2009). Research also has demonstrated that SES and social class are related to particular types of learning experiences (e.g., verbal encouragement and support from others [Ali, McWhirter, & Chronister, 2005; Ali & Saunders, 2006]; and past performance accomplishments [Navarro et al., 2007]). Taken together, there is evidence that objective social class relates to one's learning experiences.

A growing body of literature has supported Fouad and Brown's (2000) proposition that an individual's *perceived* (or subjective) social status relates to career development (e.g., Metz, Fouad, & Ihle-Helledy, 2009; Thompson & Subich, 2006). Perceived social status (PSS) is purported to capture person and contextual inputs (e.g., experiences related to race/ethnicity and social class) that are shaped by one's cultural context and socialization experiences (Fouad & Brown, 2000). PSS has been conceptualized as an assessment of one's internalized social status identity that allows researchers to move beyond categorical and sociological indicators of social class and SES (Fouad & Brown, 2000; Thompson & Subich, 2011).

Perceived social status has been demonstrated to relate to a variety of career outcomes with college student samples, even after taking into account traditional measures of social class. For example, PSS has been demonstrated to account for unique variance in the prediction of career-decision self efficacy, career choice certainty, and comfort with career decisions after controlling for objective social class (Thompson & Subich, 2006). In another investigation, PSS was significantly and negatively related to factors impacting the discrepancy between college students' career aspirations and expectations. Specifically, college students who reported higher PSS reported smaller differences between their career aspirations and expectations (Metz et al., 2009). Results from another investigation demonstrated support for a path model in which PSS mediated several race- and class-based socialization experiences (e.g., objective measure of social class, race/ethnicity, experiences with discrimination) and career decision self-efficacy and career choice anxiety (Thompson & Subich, 2011).

Taken together, this research (e.g., Metz et al., 2009; Navarro et al., 2007; Thompson & Subich, 2006) has documented the important relations of social class, SES, and PSS to several career outcomes. These findings support Lent et al.'s (1994) conceptualization of person inputs and background contextual affordances as critical factors that influence career development even though authors have differed in their conceptualization of social class-related constructs as person inputs (e.g., Ali & Saunders, 2009) versus background contextual affordances (e.g., Navarro et al.; Tang, Fouad, & Smith, 1999) within SCCT. Given Fouad and Brown's (2000) conceptualization of PSS as a mechanism for examining how individuals understand and internalize environmental experiences, we suggest that PSS is best positioned as a background contextual affordance (rather than a person input). We expect that the previously documented relationships of PSS to career outcomes for college students (e.g., Metz et al., 2009; Thompson & Subich, 2011) are a reflection of its earlier and direct effect on career-relevant learning experiences (see Fig. 1). Accordingly, the following hypothesis was proposed:

Hypothesis 1. PSS will have a direct and positive effect on learning experiences within each RIASEC domain.

3. Indirect effects of perceived social status on self-efficacy and outcome expectations

Lent et al. (1994) posited that learning experiences mediate the pathways between (a) person inputs and contextual affordances and (b) the cognitive processes (i.e., self-efficacy and outcome expectations) that people develop in specific career domains. A growing body of research with undergraduate samples demonstrates support for the paths between learning experiences and self-efficacy

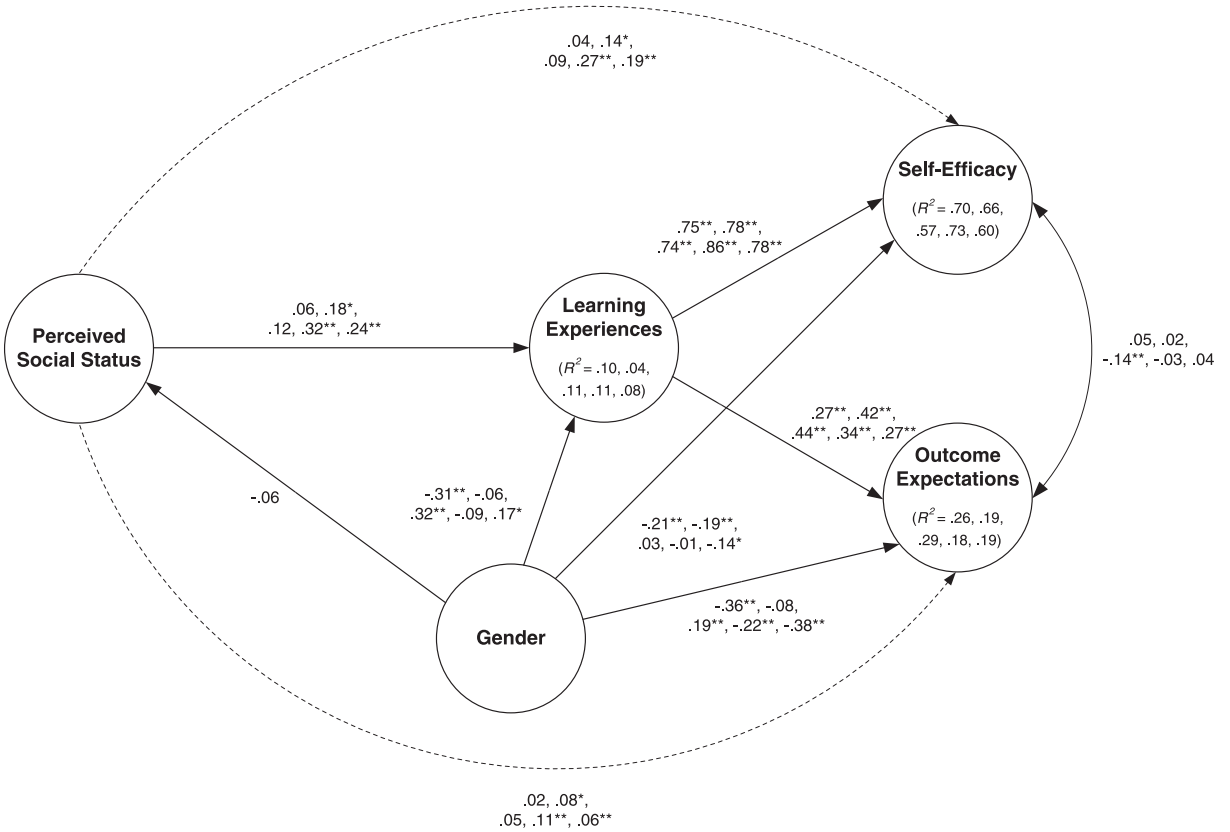

Fig. 1. Results of structural models. Note: path coefficients and effect sizes are shown for five identical models, with each set of results reported in the order of Realistic, Investigative, Social, Enterprising, and Conventional. Artistic path coefficients and effect sizes are not reported due to the poor fit indices observed for the Artistic model (see Table 3). The effect from gender to perceived social status is consistent across all five models; gender is coded such that 1 = male, 2 = female. Dashed lines indicate indirect effects from Perceived Social Status to outcomes via learning experiences. ** $p<.01$; * $p<.05$.

beliefs (e.g., Betz & Schifano, 2000; Hackett, Betz, O'Halloran, & Romac, 1990; Lent et al., 1991; Luzzo, Hasper, Albert, Bibby, & Martinelli, 1999), and between learning experiences and outcome expectations (e.g., Ferry, Fouad, & Smith, 2000; Gainor & Lent, 1998). Research also has indicated that learning experiences are related to self-efficacy and outcome expectations across Holland's RIASEC domains (Schaub & Tokar, 2005; Williams & Subich, 2006). Based on these findings and SCCT's theorized paths, the following hypotheses were proposed (See Fig. 1):

Hypothesis 2. Learning experiences will have a direct and positive effect on self-efficacy within each RIASEC domain.

Hypothesis 3. Learning experiences will have a direct and positive effect on outcome expectations within each RIASEC domain.

Learning experiences are proposed to mediate the pathways between predispositions (i.e., person inputs and contextual affordances) and the rest of the SCCT model (Lent et al., 1994). Consistent with theory, person inputs and contextual affordances have been demonstrated to relate to learning experiences (e.g., Tokar et al., 2007) and learning experiences have been documented to relate to self-efficacy and outcome expectations (e.g., Ferry et al., 2000; Schaub & Tokar, 2005). As such, we tested the indirect effects of PSS on self-efficacy and outcome expectations via exposure to learning experiences (See Fig. 1) and proposed Hypothesis 4.

Hypothesis 4. PSS will have indirect and positive effects on self-efficacy and outcome expectations via learning experiences across all RIASEC domains.

Finally, to provide a stronger test of Hypotheses 1–4, gender was included in our model. Lent et al. (1994) included gender as a critical person input that shapes learning experiences, and research has indicated that gender is related to learning experiences within the context of SCCT. Williams and Subich (2006) demonstrated that differential access to learning experiences leads to women's and men's lower self-efficacy in certain RIASEC domains. Consistent with prior research (Lapan, Adams, Turner, & Hinkelman, 2000), men reported more learning experiences in the R, I, and E domains (those typically associated with male-dominated occupations; Holland, 1997) and women reported more learning experiences in the S domain (which is typically associated with female-dominated occupations; Lapan et al.). Tokar et al.'s (2007) extension of this research indicated that gender differentially related to learning

experiences within RIASEC domains and that the relationships between gender and learning experiences for some domains are mediated, in part, by conformity to gender role norms. Given SCCT's proposed paths and these findings, we modeled effects from gender to all constructs in the study to account for any gender-related variability prior to testing our hypotheses (see Fig. 1).

4. Method

4.1. Participants

Participants were 380 undergraduate students (244 women, 121 men, 15 people who did not identify) at a large, research intensive Midwestern University who ranged in ages from 18 to 30 ($M = 20.91$, $SD = 1.73$). Students self-identified as belonging to the following racial/ethnic groups: European American (71.7%), African American/Black (3.7%), Asian/Asian American (7.1%), Latino/Hispanic (4.7%), Biracial/Multiracial (6.0%), Native American (0.8%), and Other (0.5%). An additional 5.5% of participants opted not to report their race or ethnicity. With regard to sexual orientation, 91.4% students identified as heterosexual. With respect to class standing, 17.4%, 4.4%, 19.1%, 45.5%, and 13.6% students identified as being in their first, second, third, fourth, and fifth years, respectively. Among the 80.6% of students who indicated that they had declared their major, 26.8% were in Business majors, 41.6% were in Social Science majors, 12.4% were in STEM majors, and 19.2% were Humanities or Education majors.

The question "In thinking about your past and present experiences, which label best describes your perceived social class?" was used to understand participants' self-identified social class category. Participants reported belonging to the following categories: lower class (1.9%), working class (6.9%), lower-middle class (11.0%), middle class (34.8%), upper-middle class (39.8%), and upper class (5.5%). With respect to self-reported childhood income, 43 participants indicated incomes of less than $40,000, 38 between $40,000 and $59,999, 65 between $60,000 and $79,999, 45 between $80,000 and $89,999, and 160 of $90,000 or greater. One hundred and fourteen participants (30%) indicated that they were first generation college students.

4.2. Measures

4.2.1. Differential Status Identity Scale (DSIS; Brown et al., 2002)

Participants' PSS was measured using the 60-item DSIS. The DSIS was developed to assess the three facets of PSS (economic resources, social power, and social prestige) initially proposed by Rossides (1997) and consists of four subscales: Economic Resources-Basic Needs and Economic Resources-Amenities, Social Power, and Social Prestige. Items ask individuals to comment on their perceived ability to: "gain high-profile positions of employment", "receive access to a fair trial", "feel valued as an individual", and have access to "material possessions" such as "education" and "medical care" as compared to the "average U.S. citizen". Item responses are obtained using a 5-point Likert-type scale ranging from −2 (*very much below average* for the Economic Resources-Basic Needs, Economic Resources-Amenities, and Social Power subscales or *much less* for the Social Prestige subscale) to +2 (*very much above average* or *much more*). Scores are transformed to a 1 to 5 scale and items are summed. Scores range from 0 to 75 for the Amenities and Social Power subscales (each comprised of 15 items), 0 to 70 for the Basic Needs subscale (14 items), and 0 to 80 for the Social Prestige subscale (16 items). Higher scores for each subscale reflect greater perceived levels of social prestige, social power, economic resources-basic needs, and economic resources-amenities.

Factorial stability, convergent validity, and discriminant validity for the DSIS have been established in previous research (e.g., Thompson & Subich, 2006, 2007). Criterion-related validity evidence for the DSIS has been demonstrated through examination of differences between African American and European American subsamples; European Americans scored higher than their African American counterparts on all subscales except Basic Needs (Thompson & Subich). Further validity evidence has been demonstrated by the DSIS' ability to predict anticipated career-related outcomes (e.g., Metz et al., 2009; Thompson & Subich, 2011). The DSIS has also demonstrated high internal consistency reliability for the total score (.97) across four studies with college students (Metz et al.; Thompson & Dahling, 2010; Thompson & Subich, 2006; 2007). For this study, $\alpha = .98$, .98, .98, and .97 for the Basic Needs, Amenities, Power, and Social subscales (respectively), and .99 for the total score.

4.2.2. Learning Experiences Questionnaire (LEQ; Schaub, 2004)

Career-related learning experiences within RIASEC domains were measured with the LEQ. The LEQ consists of 120 items designed to measure an individuals' self-reported learning experiences according to Bandura's (1986) four sources of self-efficacy information (i.e., personal performance accomplishments, vicarious learning, social persuasion, and physiological arousal). Each of the four sources of self-efficacy information was assessed with five items for each Holland RIASEC domain, so 20 items comprised each of the six RIASEC domains. Participants responded on a 6-point Likert-type scale ranging from (1) *Strongly Disagree* to (6) *Strongly Agree*. Sample items include: "I have made repairs around the house" and "While growing up, I recall seeing people I respected reading scientific articles". Internal consistency reliability for the six LEQ subscales has been demonstrated to range from .70 (Conventional) to .97 (Realistic) across four samples of college students (Schaub, 2004; Schaub & Tokar, 2005; Tokar et al., 2007; Williams & Subich, 2006). Support for the structure of the LEQ was demonstrated by Schaub and construct validity has been supported by the strong positive relation of LEQ scores to corresponding self-efficacy beliefs and outcome expectations in respective Holland's RIASEC domains (Schaub & Tokar, 2005). For the present sample, $\alpha = .76$ to .88 across the six RIASEC domains.

4.2.3. Self-efficacy Questionnaire (SEQ; Lenox & Subich, 1994)

The SEQ is a 30 item measure designed to evaluate participants' reported ability to successfully perform activities across Holland's RIASEC areas (Lenox & Subich). Participants are asked to "Indicate your degree of confidence in completing activities that require you to…" for a variety of activities, including "…do a lot of paper work in a short time" or "…perform a scientific experiment or survey"; five items are included for each of the six RIASEC domain. Responses are made using a 10-point Likert-type scale ranging from (1) *completely unsure* to (10) *completely sure*. Internal consistency reliabilities for the SEQ ranged from .60 to .91 across RIASEC domains in two separate undergraduate samples (Betz & Gwilliam, 2002; Williams & Subich, 2006). Betz and Gwilliam demonstrated evidence for convergent validity between the SEQ and the Skills Confidence Inventory, with *r*'s ranging from .59 to .81 between similar scales (average $r = .74$). Consistent with SCCT (Lent et al., 1994), the SEQ and the Occupational Outcome Expectations Scale (Gore & Leuwerke, 2000) have been demonstrated to relate positively within each RIASEC domain (Williams & Subich, 2006). For this study, $\alpha = .67$ to .87 across domains.

4.2.4. Occupational outcome expectations (OOE, Gore & Leuwerke, 2000)

The OOE assesses the extent to which a chosen occupation is perceived to lead to desirable life outcomes. The measure contains 60 occupations from Holland's Self-Directed Search, with 10 occupations representing each RIASEC domain. Participants respond to the stem "How desirable are the consequences of becoming a(n) …" for the occupations, including "pilot" and "certified public accountant". Respondents rate each occupation on a 9-point Likert-type scale ranging from (1) *not very desirable* to (9) *very desirable*. The OOE has demonstrated high internal consistency reliabilities across RIASEC themes, with coefficients ranging from .91 to .96 across samples of undergraduate students (e.g., Gore & Leuwerke; Williams & Subich, 2006). Consistent with SCCT, the OOE has been demonstrated to relate to self-efficacy, outcome expectations, and occupational interest scores (Gore & Leuwerke). The OOE also has been demonstrated to relate significantly and positively to the SEQ within each of the six RIASEC domains for women and men (Williams & Subich, 2006). For this study, $\alpha = .92$ to .96 across RIASEC domains.

4.3. Procedure

Participants were recruited from general education undergraduate courses offered through the Department of Counseling Psychology and via an email sent to an undergraduate student listserv through the Center for Educational Opportunities (CeO) center at a large Midwestern university. After providing consent, participants completed an online survey (average time was 42 min). Participants recruited from their course ($n = 291$) received extra credit for their participation in the study (non-participation options for receiving course credit were also provided) and those recruited from the student listserv ($n = 89$) were entered into a drawing for a $20 gift card for a local store with one student out of 20 selected as a gift card recipient. Prior to data analysis, we tested for differences among the two subsamples on the primary constructs of interest. As expected based on the demographic characteristics of this sample (i.e., CeO is housed under the federally-funded TRIO program), students from CeO reported lower levels of PSS than their counterparts. This difference, therefore, seemingly indicates evidence of construct-valid variability rather than a motivational confound in our study.

5. Results

Descriptive statistics, sample size, and internal consistency reliability for all scale scores are reported in Table 1, and correlations between all scale scores are reported in Table 2. The internal consistency reliability estimates for all scales fall within the acceptable range and are consistent with, or higher than, previous reports of reliability (e.g., Betz & Gwilliam, 2002; Gore & Leuwerke, 2000; Schaub, 2004; Thompson & Subich, 2006). The only scale score whose alpha was questionable was the SEQ-Conventional scale (alpha = .67); this finding is, however, consistent with previous estimates (e.g., Betz & Gwilliam) of this subscale (alpha = .70). As noted in Table 2, self-reported social class category and home income during childhood correlated as expected with DSIS total and subscale scores (*r*'s ranged from .46 to .60 and were significant at the $p < .01$ level) which is consistent with previous research (e.g., Thompson & Subich, 2006; 2007) demonstrating support for the convergent validity of the DSIS.

5.1. Measurement and structural models

We used structural equation modeling (SEM) with MPlus v. 4.21 (Muthén & Muthén, 1998–2005) to develop and test six models, one for each RIASEC domain. We used a full information maximum likelihood estimation (FIML) to deal with missing data in the measurement and structural models. This method assumes that the data are missing at random (MAR) and therefore is less restrictive than approaches that assume that data are missing completely at random (MCAR). FIML is posited to produce less biased estimates than other conventional approaches to dealing with scale-level missing data (Schafer & Graham, 2002; Sinharay, Stern, & Russell, 2001) and is therefore favored over other methods for dealing with missing data for SEM applications (Raykov, 2007). FIML results are also minimally distorted by moderately non-normal variables (Enders, 2001), an issue of importance in this study given that our sample was collected among upwardly mobile college students (all data were screened for normality and, not surprisingly, results indicated evidence for non-normality for the PSS). Less than 0.8% of our data were missing, and the sample sizes for each of the six measurement models ranged from N = 364–366 (see Table 1 for N sizes for each subscale).

We began by testing each measurement model with a confirmatory factor analysis (CFA). For each CFA, the latent PSS construct was indicated by four parcels that were created by calculating the scale scores associated with each of the four DSIS

Table 1
Descriptive statistics and internal consistency for scale scores.

	M	SD	α	N
DSIS Total	3.14	1.10	.99	376
DSIS-Basic Needs	3.43	1.15	.98	376
DSIS-Amenities	2.98	1.26	.98	376
DSIS-Social Prestige	3.35	1.08	.97	376
DSIS-Social Power	2.82	1.13	.98	376
LEQ-Realistic	3.96	0.71	.88	364
LEQ-Investigative	3.96	0.70	.84	369
LEQ-Artistic	3.67	0.68	.82	366
LEQ-Social	4.53	0.60	.85	366
LEQ-Enterprising	4.10	0.61	.82	366
LEQ-Conventional	4.28	0.52	.76	369
SEQ-Realistic	4.99	2.20	.87	374
SEQ-Investigative	5.57	1.94	.84	374
SEQ-Artistic	4.99	1.75	.75	374
SEQ-Social	7.96	1.25	.77	374
SEQ-Enterprising	6.77	1.64	.83	374
SEQ-Conventional	6.92	1.45	.67	374
OOEQ-Realistic	2.53	1.49	.95	366
OOEQ-Investigative	3.68	1.92	.95	366
OOEQ-Artistic	3.78	1.80	.92	366
OOEQ-Social	5.37	1.85	.92	366
OOEQ-Enterprising	4.46	1.89	.93	366
OOEQ-Conventional	3.58	1.99	.96	366

Note: DSIS, Differential Status Identity Scale; LEQ, Learning Experiences Questionnaire; SEQ, Self-Efficacy Questionnaire; OOEQ, Occupational Outcome Experiences Questionnaire.

subscales (Economic Resources-Amenities, Economic Resources-Basic Needs, Social Prestige, and Social Power), a practice suggested by Hall, Snell, and Foust (1999). We followed the same practice to create four indicator parcels for learning experiences in each RIASEC domain based on the subscales of the LEQ. For example, the latent learning experiences construct for the Realistic model was indicated by four parcels (Realistic performance attainment, Realistic vicarious learning, Realistic social persuasion, and Realistic physiological arousal). The unidimensional outcome expectation and self-efficacy constructs were indicated by their respective individual items in each domain. Gender was modeled as a latent variable with a single indicator following procedures outlined by Anderson and Gerbing (1988); the gender indicator was coded such that 1 = male and 2 = female. Thus, all six models were fully latent with no manifest constructs.

Although all indicators loaded strongly on their hypothesized constructs with minimal cross-loadings, our initial tests of the measurement models suggested that the fit of some models was adversely impacted by five pairs of items in the OOE that spoke to expectations about substantially similar jobs. Given the overlap and the fact that no research to date has modeled the OOE as a latent construct with the items as indicators, we allowed five pairs of residuals to freely co-vary for subsequent models. Residuals covaried for one pair of items in the Realistic subscale ("bus driver/truck driver"), two pairs in the Artistic subscale ("freelance writer/journalist" and "artist/sculptor"), one pair in the Social subscale ("vocational counselor/personal counselor"), and one pair in the Enterprising subscale ("salesperson/real estate salesperson").

The top half of Table 3 reports the fit statistic and indices associated with each measurement model after making these modifications. Although the model for the Artistic domain exhibited poor fit to the data, the remainder of the models showed acceptable fit when compared to evaluative guidelines provided by previous researchers. For example, RMSEA < .05 is typically considered the threshold for good fit, whereas RMSEA > .10 is the threshold for poor fit (Browne & Cudeck, 1993; Kline, 2011). Only the Artistic model has a 90% confidence interval around RMSEA that exceeds .10; the rest of the models fall between these values with acceptable/fair fit to the data. Similarly, the SRMR values are all equal to or less than .08, another hallmark of acceptable fit (Kline). The TLI and CFI indices indicate that all of the models (except for Artistic) fall near the .90 threshold indicating acceptable fit (Sivo, Fan, Witta, & Willse, 2006).

We proceeded to test our structural models for each RIASEC domain. Due to the high multicolinearity among gender, learning experiences, and self-efficacy as predictors of outcome expectations, we modeled the relation between self-efficacy and outcome expectations as a covariance rather than as a direct path (see Fig. 1). The bottom half of Table 3 reports the fit statistic and indices for these models, which show similar fit to the data as compared to their respective measurement models. Although the Artistic model was not included in the subsequent tests of hypotheses, we did include the fit indices for the Artistic model in Table 3 in order to demonstrate that the problems with the Artistic model are attributable to the measurement, not the structural component. Fig. 1 summarizes the results from the structural models.

5.2. Tests of hypotheses

Hypotheses were evaluated with respect to the path coefficients reported in the structural model in Fig. 1. Hypothesis 1 stated that PSS would positively relate to learning experiences in each RIASEC domain. We found partial support for this hypothesis with

Table 2
Correlations between scale scores for study variables.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	23	25	26
1.Gender	–																									
2.Social class	−12	–																								
3.Home income	−09	69	–																							
4.DSI Total	−06	58	59	–																						
5.DSI-Prestige	−05	54	57	95	–																					
6.DSI-Power	−08	46	47	93	86	–																				
7.DSI-Needs	−03	58	60	97	90	84	–																			
8.DSI-Amenities	−06	59	60	97	89	86	95	–																		
9.LE-R	−22	01	05	09	09	13	08	07																		
10.LE-I	−06	12	19	21	21	22	20	19	44	–																
11.LE-A	19	−05	01	16	15	18	15	15	27	29	–															
12.LE-S	26	08	14	14	16	12	17	09	26	32	39	–														
13.LE-E	−12	28	24	34	30	33	34	31	33	38	23	53	–													
14.LE-C	13	17	24	27	26	24	29	25	34	45	21	50	54	–												
15.OOE-R	−44	−03	02	05	04	10	02	05	28	12	02	−14	00	−03	–											
16.OOE-I	−12	−01	08	06	07	08	05	05	21	36	10	06	01	10	66	–										
17.OOE-A	08	−09	−07	00	−01	06	−02	−02	03	02	39	12	02	00	39	44	–									
18.OOE-S	26	−11	−09	−04	−01	01	−06	−09	02	02	18	42	01	11	22	33	45	–								
19.OOE-E	−29	21	16	24	21	25	21	25	−03	02	−08	−09	31	13	32	21	24	09	–							
20.OOE-C	−33	05	07	10	08	14	06	10	08	10	−18	−20	13	17	43	33	18	05	72	–						
21.SE-R	−42	00	02	05	02	07	03	06	69	24	11	−07	15	10	39	17	00	−11	07	17	–					
22.SE-I	−22	06	09	11	08	12	08	11	44	66	18	06	19	24	24	31	−06	−12	04	16	57	–				
23.SE-A	02	−03	−01	07	05	10	06	08	24	17	62	10	16	09	13	12	35	07	03	−04	42	39	–			
24.SE-S	22	07	05	04	06	00	09	02	10	08	17	50	36	36	−19	−08	05	21	−04	−19	10	09	19	–		
25.SE-E	−11	12	09	16	15	15	16	15	24	19	16	29	62	37	00	−05	01	−01	27	10	34	31	35	66	–	
26.SE-C	04	10	13	16	17	14	16	16	22	26	15	21	34	49	−01	04	00	00	18	19	32	41	32	56	67	–

Note: For correlations greater than or equal to .11 in magnitude, $p<.05$; for those greater than or equal to .13 in magnitude, $p<.01$.
DSI = Differential Status Identity; LE = Learning Experiences; OOE = Occupational Outcome Expectations; SE = Self-Efficacy. Gender is coded 1 = male, 2 = female.

Table 3
Fit statistics and indices for measurement and structural models.

	χ^2	*df*	CFI	TLI	RMSEA	90% CI for RMSEA	SRMR	$\Delta\chi^2$
Measurement models								
Realistic	639.33**	242	.94	.93	.07	.06–.08	.05	–
Investigative	942.76**	243	.89	.88	.09	.09–.10	.06	–
Artistic	1125.21**	241	.84	.82	.11	.10–.11	.07	–
Social	812.87**	242	.89	.88	.08	.08–.09	.07	–
Enterprising	928.92**	242	.88	.87	.09	.09–.10	.08	–
Conventional	743.01**	243	.92	.91	.07	.07–.08	.07	–
Structural models								
Realistic	639.49**	244	.94	.93	.07	.06–.08	.05	0.16
Investigative	946.08**	245	.89	.88	.09	.08–.09	.06	3.32
Artistic[a]	1128.12**	243	.84	.82	.11	.10–.11	.07	2.91
Social	819.78**	244	.89	.88	.09	.08–.09	.07	6.91*
Enterprising	942.25**	244	.88	.87	.09	.09–.10	.07	13.33**
Conventional	743.63**	245	.92	.92	.07	.07–.08	.07	0.62

[a] Although we did not interpret the Artistic structural model in the results due to the poor model fit, we report the results of the structural model here to demonstrate that the poor fit is attributable to the measurement, rather than the structural, components of the model. CFI = comparative fit index; TLI = Tucker-Lewis Index; RMSEA = root mean square error of approximation; SRMR = standardized root mean square residual.
** $p<.01$.
* $p<.05$.

positive relationships in the I, E, and C domains (β = .18, .32, and .24, respectively). The relationship between PSS and learning experiences was not significant for the R domain (β = .06) and approached significance (β = .12, $p = .07$) for the S domain. Consistent with SCCT (Lent et al., 1994), Hypotheses 2 and 3 posited that learning experiences in each RIASEC domain would be related positively to self-efficacy and outcome expectations, respectively, in each domain. Both Hypotheses were fully supported; learning experiences had strong and positive effects on self-efficacy across each structural model (β = .74 to .86) and moderate-to-strong, positive effects on outcome expectations across each structural model (β = .27 to .44).

Lastly, Hypothesis 4 concerned the indirect effects from PSS to self-efficacy and outcome expectations via enhanced learning experiences. These indirect effects are depicted by the dashed lines in Fig. 1; the statistical significance of these coefficients was evaluated with bootstrapping (Shrout & Bolger, 2002; $N = 5000$). PSS had indirect, positive effects on self-efficacy (β = .14, .27, and .19, respectively) and outcome expectations (β = .08, .11, and .06, respectively) in the I, E, and C models, but not in the R or S models (See Table 4). Results, therefore, indicated support for Hypothesis 4 in three of the five structural models.

6. Discussion

The results of this investigation provided support for several of SCCT's proposed paths (Lent et al., 1994) and indicate that PSS is related to learning experiences, self-efficacy beliefs, and outcome expectations across Holland's (1997) RIASEC domains. These results, therefore, extend previous literature (Schaub & Tokar, 2005; Tokar et al., 2007) by expanding our knowledge of PSS as a contextual affordance that influences access to career-related learning experiences. The results also contribute to the growing body of research supporting the usefulness of the DSIS for measuring PSS from a subjective lens (e.g., Thompson & Subich, 2006; 2007) and the relation of PSS to career development (e.g., Metz et al., 2009; Thompson & Dahling, 2010; Thompson & Subich).

Results from the measurement models indicated adequate support for five of the six models. The Artistic model was the only model that exhibited poor fit to the measurement model. Results of the model suggested that the key sources of poor fit

Table 4
Bootstrap results of indirect effects from perceived social status to self-efficacy and outcome expectations (Hypothesis 4).

Interest area	Indirect effect	*M*	*SE*	LL 95% CI	UL 95% CI	β
Realistic	PSS to self-efficacy via learning experiences	.10	.09	−.09	.28	.04
	PSS to outcome expectations via learning experiences	.03	.03	−.03	.09	.02
Investigative	PSS to self-efficacy via learning experiences	.21	.09	.06	.40	.14*
	PSS to outcome expectations via learning experiences	.15	.06	.04	.28	.08*
Social	PSS to self-efficacy via learning experiences	.08	.04	−.01	.16	.09
	PSS to outcome expectations via learning experiences	.08	.05	−.01	.18	.05
Enterprising	PSS to self-efficacy via learning experiences	.34	.08	.20	.51	.27**
	PSS to outcome expectations via learning experiences	.23	.08	.08	.41	.11**
Conventional	PSS to self-efficacy via learning experiences	.28	.10	.08	.47	.19**
	PSS to outcome expectations via learning experiences	.09	.04	.03	.17	.06*

Note: Bootstrap sample size = 5000. PSS = perceived social status; LL = lower limit; UL = upper limit; CI = confidence interval.

concerned the physiological arousal subscale of the LEQ, which loaded weakly on the Artistic learning experiences construct, and numerous correlations between the error terms of the OOE Artistic items. Additional research is needed to confirm the factor structure of OOE Artistic subscale of the LEQ and to examine if physiological arousal is less relevant to learning in the Artistic domain. Given the poor fit, the Artistic model was dropped from the subsequent analyses.

Consistent with Hypothesis 1, results demonstrated that higher PSS was associated with enhanced learning experiences in the I, E, and C domains even after controlling for gender in the model, which exhibited its own unique effects on learning experiences. The findings related to gender were consistent with previous research demonstrating that men report more career-related learning experiences in R, I, and E domains and women report more experiences in S and C domains (e.g., Lapan et al., 2000; Williams & Subich, 2006). Gender and PSS, in combination, explained 4–11% of the variability in learning experiences, which are noteworthy effect sizes given the wide variety of person inputs and contextual affordances proposed to impact learning experiences in SCCT (Lent et al., 1994). The positive effects of PSS on career-related learning experiences within the I, E, and C domains is consistent with previous conceptual and theoretical works (e.g., Fouad & Brown, 2000; Lent et al., 1994). Indeed, Fouad and Brown posited that PSS (access to economic resources, social prestige, and social power) is shaped by one's cultural context and impacts one's socialization experiences. It therefore seemed likely that individuals who indicated higher levels of PSS would also report more opportunities for career-related learning across a variety of Holland's RIASEC domains.

Further research is needed in order to clarify the non-significant relationship between PSS and career-related learning experiences in the R and S domains. One possible explanation for the lack of a significant relationship within the R domain relates to differing prestige levels. For example, research has demonstrated that career areas tend to be associated with different levels of status and prestigiousness (e.g., I and E are typically associated with higher prestige whereas C and R are typically associated with lower prestige; Tracey & Rounds, 1996). The lack of a significant pathway between PSS and Realistic career-related learning experiences may not be surprising given previous findings that individuals who report higher levels of PSS are more likely to aspire to high status careers than their counterparts who report lower levels of perceived status (Thompson & Dahling, 2010). As such, individuals with higher PSS may be less inclined to take advantage of R learning experiences, despite their opportunities to do so, given the lack of prestigiousness typically associated with these occupations (Tracey & Rounds). The weak relationship between PSS and S learning experiences may exist because learning in this domain (as assessed by the LEQ) is less contingent upon having access to particular resources and opportunities. Specifically, items from the S subscale of the LEQ (Schaub, 2004) speak to activities such as being told the value of good communication, having experiences caring for others, and helping others learn. Because social relationships (another contextual affordance in SCCT; Lent et al., 1994) may be the only real prerequisite for having these types of learning experiences, they may be less contingent upon opportunity structure than experiences in other areas, such as science (I) or business (E).

We also found support for Hypotheses 2 and 3; the direct pathways from learning experiences to both self-efficacy and outcome expectations were positive in each structural model. Lent et al.'s (1994) proposition that learning experiences are sources of career-related self efficacy beliefs and outcome expectations is, therefore, further supported by this research. The magnitude of the path coefficients between learning experiences, self-efficacy, and outcome expectations are also consistent with previous research (Schaub & Tokar, 2005; Williams & Subich, 2006) that has demonstrated that learning experiences have stronger relations to self-efficacy beliefs (.74 to .86, all p's$<$.01) than to outcome expectations (.27 to .48, all p's$<$.01).

Finally, Hypothesis 4 was partially supported. Perceived social status had indirect, positive effects on self-efficacy and outcome expectations via learning experiences in three of the six RIASEC domains. The lack of indirect effects within the R and S domains was likely due to the weak path coefficients (.06 and .12, respectively) between PSS and learning experiences in these two models. Learning experiences mediated the relations of PSS to self-efficacy and outcome expectations within the I, E, and C domains. These results are particularly compelling because they suggest that learning experiences are a mechanism through which PSS shapes cognitive perceptions and outcome expectations, which is consistent with SCCT and previous research (e.g., Gainor & Lent, 1998; Lent et al., 2003; Williams & Subich, 2006). Empirical support for this indirect process is important because it suggests a potential point of intervention when attempting to expand career exploration. Increasing opportunities for career-related learning experiences may help to sever the distal link between low PSS and low career outcome expectations and self-efficacy beliefs that might otherwise exist. Indeed, the effectiveness of career interventions that target specific types of learning experiences have received empirical support for increasing self-efficacy (Betz & Schifano, 2000), enhancing outcome expectations (Diegelman & Subich, 2001), and increasing interest in a specific career area (Luzzo et al., 1999).

Finally, career practitioners are encouraged to consider the role of PSS in clients' career development. For example, it is important to understand how clients make sense of the subtle class-related messages that impact their career decision-making (Diemer & Ali, 2009). Some suggestions for centralizing PSS in career counseling and intervention include using narrative assessment tools such as career autobiographies to highlight the impact of class-related variables on individual's development (Diemer & Ali), exploring clients' experiences with resources and barriers that have influenced their perception of available career options (Dahling & Thompson, 2010), and identifying faulty efficacy beliefs and outcome expectations that have contributed to career decisions (Brown & Lent, 1996; Lent, 2005).

6.1. Limitations and directions for future research

Our findings should be interpreted in light of several limitations. First, our sample was comprised of more women (64%) than men and was relatively homogenous with respect to race/ethnicity (i.e., 71.7% of the sample identified as European American). Future research with more diverse samples could expand our findings by including race and ethnicity as a person input when

evaluating the effect of PSS within the context of SCCT. Although research has examined the applicability of SCCT's pathways to members of non-majority racial and ethnic groups (e.g., Gushue, 2006; Hackett & Byars, 1996), no studies have assessed the role of career-related learning experiences as measured by the LEQ for individuals who are members of different racial/ethnic groups. Given that college-aged students have fairly developed occupational self-concepts (Luzzo, 1992), it also would be beneficial to replicate our results using a younger sample of participants.

Our sample also consisted of college students from a large, research intensive, Midwestern university. Due to the resources required to attend college, individuals from higher social class backgrounds are overrepresented, and all college students are inherently upwardly mobile. Although our sample is fairly diverse in terms of self-identified social class category (i.e., ~19.8% of participants identifying as lower, lower middle or working class; 34.8% identifying as middle class; and 45.3% identifying as upper middle or upper class) and first generation college students comprise 30% of our sample, the range of scores on the PSS measure from this sample may differ substantially from that of a sample of working class adults or of urban or rural adolescents. In particular, restricted variability and the non-normal distribution of the PSS measure may have impacted the observed fit indices and path coefficients depicted in Fig. 1, resulting in an underestimation of the importance of PSS to SCCT constructs.

Third, our participants were recruited from two different sources in the university (i.e., Counseling Psychology classes and the Center for Educational Opportunities) in order to ensure that our sample was representative of the campus population at this particular institution. As such, participants received different forms of compensation that may have differentially impacted their motivation to participate in the study (e.g., course credit versus lottery drawings, respectively). The potential implication of offering different forms of compensation to participants is an issue that needs to be addressed in future research.

Lastly, our data are cross-sectional in nature and caution in implying causal pathways is warranted. Although the pathways in SCCT that formed the basis for our model are well-supported from previous research (e.g., Schaub & Tokar, 2005; Williams & Subich, 2006), our model does depict a longitudinal process. The instructions for the DSIS do not specify a timeframe from which participants are asked to assess their PSS; it therefore seems likely that participants responded to the items from a current, rather than past, perspective. Further, the present analysis relied solely upon participants' self-report for all measures, which introduces the possibility of mono-source bias. Future research that tracks a cohort of individuals over time and examines the impact of PSS on subsequent learning experiences and career outcomes is needed.

Another direction for future research relates to the placement of social class related-constructs within SCCT. The decision to consider these constructs as person inputs or contextual affordances is less important from a statistical perspective because both person inputs and contextual affordances are posited to relate similarly to learning experiences. However, gaining a more sophisticated perspective has implications for possible theory refinement (e.g., Diemer & Ali, 2009). For example, PSS seems to be comprised of a combination of person inputs (e.g., more objective indicators of social class such as income level) and contextual affordances (e.g., neighborhood factors, schools, experiences with oppression related to one's economic standing). Developing a more nuanced understanding of the similarities and differences among a variety of class-related constructs (e.g., social class category, income, SES, PSS) as related to social cognitive constructs will contribute to clarification of SCCT's proposed paths.

References

Ali, S. R., & McWhirter, E. H. (2006). Rural Appalachian youth's vocational/education postsecondary aspirations: Applying Social Cognitive Career Theory. *Journal of Career Development*, *33*, 87–111.

Ali, S. R., McWhirter, E. H., & Chronister, K. M. (2005). Self-efficacy and vocational outcome expectations for adolescents of lower socioeconomic status: A pilot study. *Journal of Career Assessment*, *13*(1), 40–58.

Ali, S. R., & Saunders, J. L. (2006). College expectations of rural Appalachian youth: An exploration of Social Cognitive Career Theory factors. *Career Development Quarterly*, *55*(1), 38–51.

Ali, S. R., & Saunders, J. L. (2009). The career aspirations of rural Appalachian high school students. *Journal of Career Assessment*, *17*, 172–188.

Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin*, *103*, 411–423.

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice-Hall.

Betz, N. E., & Gwilliam, L. R. (2002). The utility of measures of self efficacy for the Holland themes in African American and European American college students. *Journal of Career Assessment*, *10*, 283–300.

Betz, N. E., & Schifano, R. S. (2000). Evaluation of an intervention to increase realistic self efficacy and interests in college women. *Journal of Vocational Behavior*, *56*, 35–52.

Brown, M. T., D'Agruma, H. D., Brown, A., Sia, A., Yamini-Diouf, Y., Porter, S., et al. (2002, August). Differential status identity: Construct, measurement, and initial validation. *Symposium presented during the annual convention of the APA, Chicago, Illinois*.

Brown, S. D., & Lent, R. W. (1996). A social cognitive framework for career choice counseling. *Career Development Quarterly*, *44*, 354–366.

Browne, M. W., & Cudeck, R. (1993). Alternative ways of assessing model fit. In K. A. Bollen, & J. S. Long (Eds.), *Testing structural equation models* (pp. 136–162). Newbury Park, CA: Sage.

Dahling, J. J., & Thompson, M. N. (2010). Contextual supports and barriers to academic choices: A policy-capturing analysis. *Journal of Vocational Behavior*, *77*, 374–382.

Diegelman, N. M., & Subich, L. M. (2001). Academic and vocational interest as a function of outcome expectancies in social cognitive career theory. *Journal of Vocational Behavior*, *59*, 394–405.

Diemer, M. A., & Ali, S. R. (2009). Integrating social class into vocational psychology: Theory and practice implications. *Journal of Career Assessment*, *17*, 247–265.

Enders, C. K. (2001). The impact of nonnormality on full information maximum-likelihood estimation for structural equation models with missing data. *Psychological Methods*, *6*, 352–370.

Ferry, T. R., Fouad, N. A., & Smith, P. L. (2000). The role of family context in a social cognitive model for career-related choice behavior: A math and science perspective. *Journal of Vocational Behavior*, *57*, 348–364.

Fouad, N. A., & Brown, M. T. (2000). The role of race and class in development: Implications for counseling psychology. In S. D. Brown, & R. W. Lent (Eds.), *Handbook of counseling psychology* (pp. 379–408). (3rd ed.). New York: Wiley.

Fouad, N. A., & Smith, P. L. (1996). A test of a social cognitive model for middle school students: Math and science. *Journal of Counseling Psychology*, *43*, 338–346.

Gainor, K. A., & Lent, R. W. (1998). Social cognitive expectations and racial identity attitudes in predicting the math choice intentions of Black college students. *Journal of Counseling Psychology*, *45*, 403–413.
Gore, P. A., & Leuwerke, W. C. (2000). Predicting occupational considerations: A comparison of self efficacy beliefs, outcome expectations, and person–environment congruence. *Journal of Career Assessment*, *8*, 237–350.
Gushue, G. V. (2006). The relationship of ethnic identity, career decision-making self-efficacy and outcome expectations among Latino/a high school students. *Journal of Vocational Behavior*, *68*(1), 85–95.
Hackett, G., Betz, N., O'Halloran, M. S., & Romac, D. S. (1990). Effects of verbal and mathematics task performance on task and career self efficacy and interest. *Journal of Counseling Psychology*, *37*, 169–177.
Hackett, G., & Byars, A. M. (1996). Social Cognitive Theory and the career development of African American women. *Career Development Quarterly*, *44*, 322–340.
Hall, R. J., Snell, A. F., & Foust, M. S. (1999). Item parceling strategies in SEM: Investigating the subtle effects of unmodeled secondary constructs. *Organizational Research Methods*, *2*, 233–256.
Holland, J. L. (1997). *Making vocational choices: A theory of vocational personalities and work environments* (3rd ed.). Odessa, FL: Psychological Assessment Resources.
Kline, R. P. (2011). *Principles and practice of structural equation modeling* (3rd edition). New York: Guilford Press.
Lapan, R. T., Adams, A., Turner, S., & Hinkelman, J. M. (2000). Seventh graders' vocational interest and efficacy expectation patterns. *Journal of Career Development*, *26*, 215–229.
Lenox, R. A., & Subich, L. M. (1994). The relationship between self efficacy beliefs and inventoried vocational interests. *The Career Development Quarterly*, *42*, 302–313.
Lent, R. W. (2005). A social cognitive view of career development and counseling. In S. D. Brown, & R. W. Lent (Eds.), *Career development and counseling: Putting theory and research to work* (pp. 101–127). Hoboken, NJ: John Wiley & Sons, Inc..
Lent, R. W., Brown, S., & Hackett, G. (1994). Toward a unifying social cognitive theory of career and academic interest, choice, and performance. *Journal of Vocational Behavior*, *45*, 79–122.
Lent, R. W., Brown, S., & 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., Nota, L., & Soresi, S. (2003). Testing social cognitive interest and choice hypotheses across Holland types in Italian high school students. *Journal of Vocational Behavior*, *62*(1), 101–118.
Lent, R. W., Lopez, F., & Bieschke, K. (1991). Mathematics self-efficacy: Sources and relation to science-based career choice. *Journal of Counseling Psychology*, *38*, 424–430.
Luzzo, D. A. (1992). Ethnic group and social class differences in college students' career development. *Career Development Quarterly*, *41*, 161–174.
Luzzo, D. A., Hasper, P., Albert, K. A., Bibby, M. A., & Martinelli, E. A. (1999). Effects of self efficacy-enhancing interventions on the math/science self efficacy and career interests, goals, and actions of career undecided college students. *Journal of Counseling Psychology*, *46*, 233–243.
Metz, A. J., Fouad, N., & Ihle-Helledy, K. (2009). Career aspirations and expectations of college students: Demographic and labor market comparisons. *Journal of Career Assessment*, *17*, 155–171.
Muthén, L., & Muthén, B. (1998–2005). *Mplus v. 3.12 [Computer software].* Los Angeles, CA: Muthén & Muthén.
Navarro, R. L., Flores, L. Y., & Worthington, R. L. (2007). Mexican American middle school students' goal intentions in mathematics and science: A test of social cognitive career theory. *Journal of Counseling Psychology*, *54*, 320–335.
Raykov, T. (2007). Longitudinal analysis with regressions among random effects: A latent variable modeling approach. *Structural Equation Modeling*, *14*, 146–169.
Rossides, D. W. (1997). *Social stratification: The interplay of class, race, and gender* (2nd ed.). Upper Saddle River, NJ: Prentice Hall.
Schafer, J. L., & Graham, J. (2002). Missing data: Our view of the state of the art. *Psychological Methods*, *7*, 147–177.
Schaub, M. (2004). Social cognitive theory: Examining the mediating role of sociocognitive variables in the relation of personality to vocational interests. *Dissertation Abstracts International*, *64*(7-A), 2463.
Schaub, M., & Tokar, D. (2005). The role of personality and learning experiences in social cognitive career theory. *Journal of Vocational Behavior*, *66*, 304–325.
Shrout, P. E., & Bolger, N. (2002). Mediation in experimental and nonexperimental studies: New procedures and recommendations. *Psychological Methods*, *7*, 422–445.
Sinharay, S., Stern, H. S., & Russell, D. (2001). The use of multiple imputation for the analysis of missing data. *Psychological Methods*, *6*, 317–329.
Sivo, S. A., Fan, X., Witta, E. L., & Willse, J. T. (2006). The search for "optimal" cutoff properties: Fit index criteria in structural equation modeling. *The Journal of Experimental Education*, *74*, 267–288.
Tang, M., Fouad, N. A., & Smith, P. L. (1999). Asian Americans' career choices: A path model to examine factors influencing their career choices. *Journal of Vocational Behavior*, *54*(1), 142–157.
Thompson, M. N., & Dahling, J. J. (2010). Image theory and career aspirations: Indirect and interactive effects of status-related variables. *Journal of Vocational Behavior*, *77*, 21–29.
Thompson, M. N., & Subich, L. M. (2006). The relation of social status to the career decision-making process. *Journal of Vocational Behavior*, *69*, 289–301.
Thompson, M. N., & Subich, L. M. (2007). Exploration and validation of the Differential Status Identity Scale. *Journal of Career Assessment*, *15*, 227–239.
Thompson, M. N., & Subich, L. M. (2011). Relations of supports and barriers to social status and vocational behavior. *The Counseling Psychologist*, *39*, 735–763.
Tokar, D. M., Thompson, M. N., Plaufcan, M. R., & Williams, C. M. (2007). Precursors of learning experiences in Social Cognitive Career Theory. *Journal of Vocational Behavior*, *71*, 319–339.
Tracey, T. J. G., & Rounds, J. (1996). The spherical representation of vocational interests. *Journal of Vocational Behavior*, *48*(1), 3–41.
Williams, C. M., & Subich, L. M. (2006). The gendered nature of career related learning experiences: A social cognitive career theory perspective. *Journal of Vocational Behavior*, *69*, 262–275.