

Intentions to Seek Counseling in First-Generation and Continuing-Generation College Students

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The growing socioeconomic diversity of higher education institutions calls for research that addresses the unique mental health needs of first-generation and continuing-generation college students. This study examined associations from environmental supports, personal stigma, self-stigma, and attitudes, to intentions to seek counseling in first- and continuing-generation college students ($N = 610$). Results of structural equation modeling largely supported hypothesized relationships between variables. Furthermore, the relationship between personal stigma and self-stigma was stronger for continuing-generation students while the relationship between self-stigma and attitudes was stronger for first-generation students. The indirect effect from self-stigma to intentions through attitudes was also stronger for first-generation college students, while the indirect effect from personal stigma to attitudes through self-stigma was stronger for continuing-generation students. Results are discussed in terms of enhancing first-generation college students' attitudes toward, and intentions to seek counseling.

Public Significance Statement

This study suggests that views of oneself for seeking counseling may play a stronger role in help-seeking for first-generation college students. Additionally, how one believes others would view them for seeking counseling may play a stronger role in help-seeking for continuing-generation college students. These findings indicate first-generation and continuing-generation college students may benefit from tailored approaches to increase their use of counseling services.

Keywords: first-generation college students, counseling, help-seeking, self-stigma, social class

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Recent estimates suggest that college students are using mental health services with increasing frequency (Center for Collegiate Mental Health, 2016). However, large numbers of students on university campuses still do not receive psychological services when indicated (Zivin, Eisenberg, Gollust, & Golberstein, 2009). Prior studies of college students' intentions to seek counseling have focused on underrepresented and underserved students, such as students of color (Cheng, Kwan, & Sevig, 2013; Choi & Miller,

2014). However, few studies have included social class-related variables to better understand professional help seeking among college students. This is surprising given the potential impact of social class on service use, including issues related to service access, quality of care, and power differentials between client and therapist (Goodman, Smyth, & Banyard, 2010; Thompson, Cole, & Nitzarim, 2012). First-generation student status, or students whose parents have not obtained a bachelor's degree (Davis, 2010), is a significant contributor to social class-related disparities in higher education (Stephens, Hamedani, & Destin, 2014). Research suggests that first-generation college students report higher levels of distress and lower use of psychological services compared to their continuing-generation peers (Stebleton, Soria, & Huesman, 2014). This is concerning, given first-generation students constitute increasingly higher proportions of students matriculating into institutions of higher education (United States Department of Education, National Center for Education Statistics, 2012). Therefore, this study served as an initial examination of first-generation college students' intentions to seek counseling.

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Theoretical Framework

Vogel, Wade, and Hackler's (2007) model of intentions to seek counseling served as the theoretical framework for the present study (see Figure 1). Initially derived from the theory of reasoned action (Ajzen & Fishbein, 1980), the model proposes that personal stigma for counseling—defined as negative reactions from those one interacts with—predicts self-stigma, which predicts attitudes toward counseling. In turn, attitudes toward counseling are hypothesized to predict intentions to seek counseling (Vogel et al., 2007). Research has provided empirical support for the model in college students. Specifically, hypothesized relationships between the aforementioned variables have been confirmed and shown to explain a significant amount of variance in intentions to seek counseling (Vogel et al., 2007).

Because environmental supports have been identified as important to the college experiences of first-generation college students (Garriott, Hudyma, Keene, & Santiago, 2015), support variables were integrated into the conceptual model tested in the present study. In prior research, college environmental supports have been conceptualized as social and personal resources that support one's academic progress (Lent et al., 2005). It has been suggested that perceptions of professional help-seeking may be informed by one's social networks (Pescosolido & Boyer, 1999). Specifically, more positive relationships with friends, family, and college personnel may be associated with lower personal stigma for seeking professional help. For example, a student who has a positive relationship with a faculty mentor may be more inclined to seek help from a counselor if they have had positive experiences receiving help from college personnel in the past or have received encouragement to seek counseling. Feeling supported by family and friends may also protect against the fear of negative evaluation from one's social network for seeking counseling. In a study with college students, researchers found a significant, negative correlation between social support and social stigma—defined as broader perceptions of societal stigma—for seeking counseling (Vogel, Wester, Wei, & Boysen, 2005).

The model tested in the present study included several hypothesized indirect effects. In prior research with college students, significant indirect effects were found from personal stigma to attitudes through self-stigma, self-stigma to intentions through attitudes, and personal stigma to intentions through self-stigma and

attitudes (Vogel et al., 2007). Indirect effects from supports variables to self-stigma, attitudes, and intentions were also examined in this study. It is possible that the association between supports and self-stigma is explained by personal stigma given one's social network may be a reference point when conjuring perceptions of personal stigma for professional help-seeking (Lindsey, Joe, & Nebbitt, 2010). Research has also confirmed a significant indirect effect from social supports to intentions to seek counseling through attitudes toward seeking professional help (Vogel et al., 2005). Based on these findings, we tested all possible indirect effects in our model of intentions to seek counseling and hypothesized that all would be statistically significant.

The Moderating Role of First-Generation College Student Status

The proposed relationships in Vogel et al.'s (2007) model of intentions to seek counseling may also vary depending on first-generation college student status. Specifically, first-generation student status is a stigmatized identity within higher education, where individualistic institutional norms are often incongruent with the interdependent cultural orientations of first-generation and working-class students (Stephens, Fryberg, Markus, Johnson, & Covarrubias, 2012). Research shows that first-generation student status is associated with higher levels of perceived interpersonal and institutional classism on campus (Allan, Garriott, & Keene, 2016). Additionally, first-generation college students report self-imposed pressure to succeed in college to make their families and communities of origin proud, and that this sense of pressure may at times restrict their intentions to disclose personal problems to others (Bryan & Simmons, 2009). These experiences may modify the role of personal and self-stigma in first-generation college students' intentions to seek professional counseling.

For example, first-generation students may not place as much credence on perceptions of stigma from those they interact with because of stigma they may have already faced related to their social class of origin at higher education institutions. First-generation college students have described experiences of alienation, isolation, and invisibility related to their social class identity on college campuses, and how socioeconomic marginalization is viewed as an "individual problem" in our meritocratic society (Warnock & Hurst, 2016). Minimizing the impact of negative

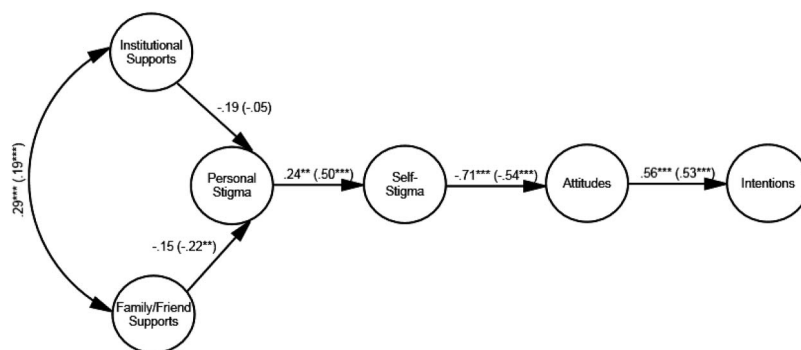


Figure 1. The final structural model. Coefficients represent standardized estimates. Values outside parentheses represent first-generation college students. Values inside parentheses represent continuing-generation students. ** $p < .01$. *** $p < .001$.

social perceptions may be an adaptive coping strategy for first-generation college students to succeed in academic environments where they face negative stereotypes (Stephens et al., 2012). Applied to professional help-seeking, first-generation students may be less likely to internalize stigma for counseling from others in their social network, given they are less likely to feel a sense of belonging with their peers (Ward, Siegel, & Davenport, 2012). In contrast, the relationship between personal and self-stigma may be stronger for continuing-generation students, who are more likely to have been socialized to endorse values and norms of independence (Stephens et al., 2012) and are more socially integrated on campus (Ward et al., 2012). Continuing-generation students may have internalized social messages about the need for one to take initiative to solve problems on their own. The closer alignment between how others view seeking professional help and how they view themselves may strengthen the link between stigma from others and self-stigma for continuing-generation students.

Additionally, the relationship between self-stigma and attitudes toward counseling may be stronger for first-generation college students. Specifically, first-generation college students may enter college with stronger feelings of being an imposter and lower self-efficacy compared to their continuing-generation peers (Ward et al., 2012). While self-doubt may be motivational for some first-generation college students, it may also lead to more negative self-evaluations and hesitancy to seek out professional help for fear of being “found out” as unqualified to receive a bachelor’s degree (Orbe, 2004). Therefore, the need to seek out counseling may be perceived as more threatening to one’s academic self-concept for first-generation college students and strengthen the relationship between self-stigma and attitudes toward counseling for this group.

Purpose of the Present Study

This study served as an initial examination of first-generation college students’ intentions to seek counseling. Consistent with existing conceptual and empirical literature devoted to professional help seeking as well as first-generation college students, the following hypotheses were tested:

Hypothesis 1: Environmental supports would be significant, negative predictors of personal stigma.

Hypothesis 2: Personal stigma would be a significant, positive predictor of self-stigma.

Hypothesis 3: Self-stigma would be a significant, negative predictor of attitudes toward counseling.

Hypothesis 4: Attitudes toward counseling would be a significant, positive predictor of intentions to seek counseling.

Hypothesis 5: All possible indirect effects in the hypothesized model would be statistically significant.

Hypothesis 6: Relationships between variables in the model would be moderated by first-generation student status. Specifically, the relationship between personal and self-stigma would be stronger for continuing-generation students while the relationship between self-stigma and attitudes toward

counseling would be stronger for first-generation college students.

Method

Participants and Procedure

Participants were 610 college students recruited from seven 4-year universities across several regions of the U.S. Approximately 29% ($n = 177$) of the sample reported that they would be the first in their family to receive a bachelor’s degree. The sample identified as White (69.5%), Asian/Pacific Islander (14.4%), Hispanic or Latina/o (11.1%), Black/African American (5.9%), Multiracial (2.3%), Native American/Alaska Native (0.8%), and Arab American (0.5%). Four participants (0.7%) selected, “Do not wish to respond” to this item and six (1%) selected “Option not provided.” These participants self-reported their race/ethnicity as: Afghan, Asian/White, Half Asian, Indian, Persian, and Southeast Asian. In terms of gender, 480 (78.7%) participants identified as female, 127 (20.8%) students identified as male, 2 (0.3%) students identified as “transgender,” and one student (0.2%) identified as “gender fluid.” By class rank, students were in their first ($n = 243$, 39.8%), second ($n = 156$, 25.6%), third ($n = 124$, 20.3%), and fourth ($n = 87$, 14.3%) years of undergraduate study. Demographic characteristics of the sample by generation status are presented in Table 1.

A link to an online survey was distributed to a faculty or staff member at each institution, who then sent the link with an announcement describing the study to potential participants. The link to the survey was distributed to students voluntarily participating in on-campus programming for first-generation college students at one institution and was distributed to the general student population at all other institutions. Students who followed the link to the online survey were first provided with a description of the study and an explanation of their rights as participants, after which they could agree or not agree to participate. Instruments were counter-balanced such that all participants completed the measures in random order to control for order effects. Restrictions were also placed on the survey to ensure students only participated once. Following completion of the survey, students were eligible to enter their name into a raffle for one of 10 gift cards to an online store. All procedures were approved by the primary investigator’s institutional review board.

Instruments

Attitudes toward seeking counseling. Attitudes were assessed with the Attitudes Toward Seeking Professional Help Scale-Short Form (ATSPPHS-SF; Fischer & Farina, 1995). The ATSPPHS-SF includes 10 items rated on a Likert scale ranging from 0 (*disagree*) to 3 (*agree*). Five items are reverse scored such that higher scores indicate more favorable attitudes toward seeking counseling. A sample item is, “If I believed I was having a mental breakdown, my first inclination would be to get professional attention.” The ATSPPHS-SF has been shown to positively correlate with college students’ prior professional help seeking behavior (Fischer & Farina, 1995). Coefficient α s for scale scores on the ATSPPHS-SF have ranged from .82 (Vogel et al., 2006) to .84

Table 1
Demographic Characteristics of the Sample by Generation Status

Characteristic	First-generation (n = 177)	Continuing-generation (n = 433)
Race/ethnicity		
African American/Black	17 (9.6%)	19 (4.4%)
Asian/Pacific Islander	32 (18.1%)	56 (12.9%)
Arab American	0 (.0%)	3 (.7%)
Hispanic or Latina/o	46 (26%)	22 (5.1%)
Multiracial/Biracial	5 (2.8%)	9 (2.1%)
Native American/Alaska Native	5 (2.8%)	0 (.0%)
Option not provided	2 (1.1%)	4 (.9%)
White	83 (46.9%)	341 (78.8%)
Gender		
Female	138 (78%)	344 (79.7%)
Male	39 (22%)	88 (20.3%)
Transgender	1 (.6%)	1 (.2%)
Gender fluid	1 (.6%)	0 (.0%)
Mother's educational attainment		
Less than high school	37 (20.9%)	3 (.7%)
High school diploma/GED	61 (34.5%)	26 (6%)
Some college	53 (29.9%)	54 (12.5%)
Associate's degree	26 (14.7%)	23 (5.3%)
Bachelor's degree	0 (.0%)	194 (44.8%)
Graduate or professional degree	0 (.0%)	131 (30.3%)
Fathers educational attainment		
Less than high school	45 (25.4%)	3 (.7%)
High school diploma/GED	69 (39%)	22 (5.1%)
Some college	49 (27.7%)	23 (5.3%)
Associate's degree	14 (7.9%)	12 (2.8%)
Bachelor's degree	0 (.0%)	200 (46.2%)
Graduate or professional degree	0 (.0%)	163 (37.6%)
Class Rank		
First year	65 (36.7%)	178 (41.1%)
Second year	46 (26%)	110 (25.4%)
Third year	35 (19.8%)	89 (20.6%)
Fourth year	31 (17.5%)	56 (12.9%)

(Fischer & Farina, 1995). Coefficient α for scale scores in the present study was .77.

Environmental supports. Supports were measured with nine items used in previous research with college students (Lent et al., 2005). Items are rated on a Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*) with higher scores indicating higher levels of support. Sample items include, "I have access to a positive 'role model' (i.e., someone you can look up to and learn from observing)," and "I feel support for my decision to attend college from important people in my life." When used as a unidimensional scale in prior research with first- and continuing-generation college students, scores have shown to be positively correlated with college self-efficacy, outcome expectations, academic progress, and academic satisfaction (Garriott et al., 2015). Coefficient α s for scale scores have ranged from .81 to .84 in prior research with first- and continuing-generation college students (Garriott et al., 2015; Lent et al., 2005). Coefficient α for scale scores in the present study was .83.

Intentions to seek counseling. The Intentions to Seek Counseling Inventory (ISCI; Cash, Begley, McCown, & Weise, 1975) was used to assess participants' intentions to seek counseling. The ISCI includes 17 items rated on a Likert scale ranging from 1 (*very unlikely*) to 4 (*very likely*) with higher scores indicative of greater intentions to seek counseling for psychological and interpersonal

(10 items), academic (4 items), and drug use (2 items) concerns. Participants were asked to answer items on the scale in terms of how likely they would be to seek counseling for each problem. Sample items include, "choosing a major," "personal worries," and "drug problems." In a validation study, significant differences emerged on scores for the ISCI when college students were presented with more or less physically attractive therapists (Cash et al., 1975). Previous research with college students reported a coefficient α for scores on the ISCI subscales ranging from .71 to .90 and .90 for total scale scores (Cash et al., 1975). Coefficient α for total scale scores in the present study was .87 and .85 (psychological and interpersonal), .70 (academic), and .85 (drug use) for subscale scores.

Personal stigma. Perceived stigma from others for seeking counseling was assessed with the Perceptions of Stigmatization by Others for Seeking Help scale (PSOSH; Vogel, Wade, & Aschman, 2009). The PSOSH includes five items rated on a Likert scale ranging from 1 (*not at all*) to 5 (*a great deal*) with higher scores indicating stronger perceived stigma for seeking counseling from those in an individual's social network. Participants were asked to imagine they had a problem that needed to be treated by a mental health professional. Assuming they sought mental health services, the participant was asked to rate the degree individuals they interacted with would endorse the items that followed. A sample

item is, "Think of you in a less favorable way." Concurrent validity evidence for the PSOSH has been shown through significant correlations in the expected direction with measures of public stigma toward mental illness and self-stigma (Vogel et al., 2009). Coefficient α in prior research with college students have ranged from .78 to .91 (Vogel et al., 2009). Coefficient α for scale scores in the present study was .74.

Self-stigma. Self-stigma for seeking counseling was measured using the Self-Stigma of Seeking Help scale (SSOSH; Vogel, Wade, & Haake, 2006). The SSOSH includes 10 items rated on a Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Five items are reversed scored and higher scores on the measure indicate stronger self-stigma for seeking counseling. A sample item is, "I would feel inadequate if I went to a therapist for psychological help." The SSOSH has been shown to correlate in expected directions with measures of attitudes toward seeking professional psychological help, intentions to seek counseling, disclosure expectations, and social stigma for seeking psychological help in prior research with college students (Vogel et al., 2006). Coefficient α s for scale scores on the SSOSH have ranged from .86 to .91 (Vogel et al., 2006). Coefficient α for scale scores in the present study was .83.

Data Analysis Plan

Structural equation modeling (SEM) with AMOS 19.0 (Arbuckle, 2010) was used to test measurement and structural models. The comparative fit index (CFI), root mean square error of approximation (RMSEA), and standardized root mean residual (SRMR) were used to determine adequacy of model-to-data fit. Researchers have recommended values of $CFI \geq .95$, $RMSEA \leq .06$, and $SRMR \leq .08$ as indicative of close model-to-data fit and values of $CFI \geq .90$ and $RMSEA \leq .08$ to represent adequate model fit (Kline, 2005).

Item parceling was used to create latent variables for unidimensional scales to better account for measurement error. Individual items were used to create latent variables for three of the scales (personal stigma, institutional supports, and family and friend supports), which had a limited number of items (≤ 5). The three subscales comprising the ISCI were used to create a latent variable for intentions to seek counseling. Exploratory factor analyses (EFA) with principle axis factoring and oblimin rotation were performed on self-stigma and attitudes items before the creation of parcels to ensure unidimensional factor structures within the sample (Little, Cunningham, Shahar, & Widaman, 2002). Scree plots and eigenvalues were inspected to determine the appropriate number of factors to extract from items for each scale. After confirming assumptions regarding unidimensionality, items were grouped into parcels such that items with high, medium, and low factor scores were balanced and each variable contained at least three parcels each (Little et al., 2002). Secondary confirmatory factor analyses (CFA) were then conducted to ensure each item and parcel significantly loaded onto its respective latent variable (Hagtvet & Nasser, 2004).

Next, a measurement model was tested across the full sample as well as first- and continuing-generation students to ensure measurement equivalence across subgroups. Once measurement equivalence was established, the hypothesized structural model was fit across the full sample. Within this model, institutional and family

and friend supports were allowed to covary and predicted personal stigma. Personal stigma predicted self-stigma, which in turn predicted attitudes. Attitudes were modeled to predict intentions to seek counseling (see Figure 1).

To test whether first-generation student status moderated relationships between variables in the model, a multiple groups analysis was performed. First, the final structural model was fit across first- and continuing-generation students without constraining any parameters (i.e., unconstrained model). Next, factor loadings for each latent variable were constrained to be equal across first- and continuing-generation students (i.e., constrained measurement model). Finally, the model was fit across first- and continuing-generation students with all parameters constrained to be equal across groups (i.e., fully constrained model). We used statistically significant ($p < .05$) changes in the chi-square statistic ($\Delta\chi^2$) to determine whether generation status moderated relationships in the final structural model.

Results

Preliminary Results

Data screening. In total, 685 students began the online survey. The Missing Values Analysis function in SPSS 22.0 was used to inspect the pattern of missing data and determine if data were missing completely at random (MCAR). Total scales for each individual variable were used for these analyses to determine whether missing responses to items on one instrument were dependent upon missing responses to items on other instruments in the study. There were 65 cases with missing data and a total of 317 missing values out of a possible 3,793 values in the dataset. Results of Little's MCAR test were not significant ($\chi^2 = 75.07$, $p = .055$), indicating data were MCAR. Thirty-seven students who opened the survey, but did not complete any additional items were removed from the dataset. Additionally, 15 students identified their academic rank as "graduate student" and were excluded from future analyses. Twenty-three students completed less than 80% of items for an individual scale and were also removed from the dataset, leaving a final sample of 610 participants. After removal of these cases, there were no missing values in the dataset.

Parcels. Results of EFAs and second-order CFAs suggested that the factor structures for the personal and self-stigma scales were unidimensional. Each of these variables were assigned two parcels with three items and one parcel with four items. In contrast, the scree plot and eigenvalues for the environmental supports items suggested a two-factor structure in which three items related to family and friend supports loaded onto one factor, five items related to institution-specific supports loaded onto a second factor, and one item cross-loaded onto both factors. A second-order CFA for the environmental supports items indicated that a two-factor model with the eight items loading onto one of two identifiable factors fit the data well, $\chi^2(26) = 5.75$, $p < .001$; $CFI = .942$; $RMSEA = .080$ (90% CI = .07, .10); $SRMR = .051$. All items significantly loaded onto their respective factors with factor loadings ranging from .79 to .82 for the friend and family support scale and .46 to .72 for the institutional supports scale. An alternative model in which all items were forced to load on a single factor resulted in a poor fit to the data, $\chi^2(27) = 18.81$, $p < .001$; $CFI = .769$; $RMSEA = .171$ (90% CI = .158, .184); $SRMR = .101$.

Cumulatively, these findings suggested a two-factor structure was a better representation of the items on the environmental supports scale.

Primary Results

Table 2 includes means, *SDs*, and correlations for the observed main study variables for the full sample. A correlation matrix by generation status is available in the online supplementary materials. We first examined the data to determine whether it met assumptions of normality required for SEM analyses. Mardia's coefficient was 120.55, suggesting the data was not multivariate normal. To correct for nonnormality, maximum-likelihood (ML) estimation with Bollen-Stine bootstrapping was used. The Bollen-Stine bootstrap method produces corrected standard errors and *p* values for model test statistics under conditions of nonnormality (Kline, 2016). Research has shown that Bollen-Stine bootstrapped estimates are less biased than those produced through default ML estimation, particularly in larger ($N > 200$) sample sizes (Nevitt & Hancock, 2001).

Measurement model. The measurement model provided an adequate fit to the data, $\chi^2(174) = 401.95, p < .001$; CFI = .958; RMSEA = .046 (90% CI = .040, .052); SRMR = .047. Furthermore, all items and parcels significantly loaded onto their respective factors (see Table 3).

Structural model. Next, the hypothesized structural model was tested for the full sample. The fit statistics indicated the model was an adequate fit to the data, $\chi^2(183) = 443.92, p < .001$; CFI = .952; RMSEA = .048 (90% CI = .054, .067); SRMR = .048. Specifically, the CFI was above .95, the RMSEA was below .05, and the SRMR was below .08. Within this model, all path coefficients, with the exception of the path from friend and family supports to personal stigma ($\beta = -.05, p = .417$) were statistically significant. Institutional supports predicted personal stigma ($\beta = -.18, p = .006$), personal stigma predicted self-stigma ($\beta = .67, p < .001$), self-stigma predicted attitudes ($\beta = -.59, p < .001$), and attitudes predicted intentions to seek counseling ($\beta = .54, p < .001$). The covariance between friend and family supports and institutional supports was also statistically significant ($\beta = .19, p < .001$). The model explained 4% of the variance in personal stigma, 18% of the variance in self-stigma, 35% of the variance in attitudes, and 29% of the variance in intentions to seek counseling.

Multiple groups analyses. To test whether first-generation student status moderated relationships between variables in the model, a multiple groups analysis was performed. Comparison of

an unconstrained model in which all parameters were allowed to vary between first- and continuing-generation students and a model in which factor loadings were constrained to be equal across the two groups did not result in a statistically significant chi-square change (see Table 4). Therefore, it was determined that the measurement of the latent variables was equivalent across the two groups. When the model with constraints placed on factor loadings was compared to a model in which additional constraints were placed on the structural paths between variables, the chi-square change was statistically significant. That is, first-generation status moderated relationships between the variables in the model. To determine which specific paths varied between the two groups, each individual structural path constraint was released and comparisons were made between this model and the invariant model. Results of these analyses demonstrated that the path from personal stigma to self-stigma was stronger for continuing-generation students ($\beta = .50, SE = .10, p < .001$) than first-generation students ($\beta = .24, SE = .14, p = .011$). Furthermore, the path from self-stigma to attitudes was stronger for first-generation students ($\beta = -.71, SE = .06, p < .001$) than continuing-generation students ($\beta = -.54, SE = .03, p < .001$).

Indirect effects. In total, 10,000 bias-corrected bootstrap samples were requested in AMOS to estimate indirect effects. The 95% CIs of these bootstrap estimates were examined to determine significant indirect effects in the model. If a confidence interval (CI) did not include zero, it was deemed to be statistically significant at the $p < .05$ level (Shrout & Bolger, 2002). Results of mediation analyses for the full sample suggested all indirect effects in the model, with the exception of indirect effects from family and friend supports to other criterion variables, were statistically significant (see Table 5).

Because first-generation student status moderated two of the paths in the model, we examined whether indirect effects from personal stigma to attitudes through self-stigma and self-stigma to intentions through attitudes were dependent upon first-generation status. The procedures outlined by Edwards and Lambert (2007) for moderated mediation analyses with latent variable structural equation models were used to test for moderated mediation. The unstandardized coefficients for indirect, first-order, second-order, and total direct effects derived from multiple groups analyses with bootstrapped estimates and 95% bias-corrected CIs were used for first- and continuing-generation subgroups. These estimates were entered into a macro developed by Edwards and Lambert (2007)

Table 2
Means, *SDs*, and Correlations Among Observed Study Variables

Variable	1	2	3	4	5	6
1. Family and friend supports	—	.43***	-.11**	-.12**	-.01 ns	-.01 ns
2. Institutional supports		—	-.14***	-.19***	.11**	.14***
3. Personal stigma			—	.33***	-.13**	.02 ns
4. Self-stigma				—	-.52***	-.27***
5. Attitudes					—	.47***
6. Intentions						—
<i>M</i>	4.65	3.97	2.26	2.58	2.72	2.33
<i>SD</i>	.61	.75	.58	.66	.52	.55

Note. $N = 610$. ns = not statistically significant.
* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 3
Means, SDs, and Factor Loadings of Observed Variables

Variable	Full sample			First-generation students			Continuing-generation students		
	<i>M</i>	<i>SD</i>	Factor loading	<i>M</i>	<i>SD</i>	Factor loading	<i>M</i>	<i>SD</i>	Factor loading
Family and friend supports									
Item 1	4.63	.69	.79	4.41	.90	.80	4.72	.56	.75
Item 2	4.68	.72	.81	4.44	.96	.79	4.78	.56	.83
Item 3	4.66	.69	.82	4.51	.77	.79	4.71	.65	.86
Institutional supports									
Item 1	4.15	.94	.67	4.00	.94	.64	4.21	.94	.68
Item 2	4.18	1.00	.63	3.89	1.16	.60	4.29	.90	.65
Item 3	3.93	1.01	.66	3.84	1.10	.71	3.97	.97	.62
Item 4	3.77	1.16	.46	3.72	1.16	.58	3.79	1.15	.40
Item 5	3.84	1.13	.71	3.71	1.13	.75	3.89	1.13	.69
Personal stigma									
Item 1	2.70	.76	.56	2.54	.81	.64	2.76	.76	.56
Item 2	2.37	.78	.82	2.33	.80	.79	2.39	.78	.83
Item 3	1.96	.78	.56	1.84	.75	.76	2.01	.79	.57
Item 4	2.04	.77	.62	1.98	.76	.59	2.06	.78	.64
Self-stigma									
Parcel 1	2.48	.79	.85	2.42	.81	.83	2.50	.78	.86
Parcel 2	2.46	.81	.87	2.45	.81	.84	2.46	.82	.88
Parcel 3	2.75	.67	.75	2.70	.67	.74	2.78	.66	.76
Attitudes									
Parcel 1	2.66	.58	.80	2.73	.64	.84	2.64	.56	.77
Parcel 2	2.77	.62	.74	2.75	.64	.81	2.77	.61	.71
Parcel 3	2.73	.62	.77	2.74	.68	.77	2.73	.59	.77
Intentions									
PIC	2.20	.62	.82	2.27	.63	.80	2.17	.61	.82
AC	2.44	.60	.83	2.51	.57	.95	2.42	.61	.82
DUC	2.32	.60	.91	2.44	.59	.93	2.27	.59	.91

Note. All factor loadings are statistically significant at the $p < .001$ level. PIC = psychological and interpersonal concerns; AC = academic concerns; DUC = drug use concerns.

that calculated 95% bias-corrected bootstrap estimates to determine whether differences between indirect effects for first- and continuing-generation students were statistically significant. In total, 1,000 bootstrap samples were used to calculate CIs and CIs not containing zero were deemed statistically significant at the $p < .05$ level (Edwards & Lambert, 2007).

These analyses showed that the indirect effect from personal stigma to attitudes through self-stigma was moderated by first-generation student status ($\Delta B = -.08$, 95% CI = $-.227, -.010$). Examination of the conditional indirect effect for first- and continuing-generation students revealed that the indirect effect was stronger for continuing-generation ($B = -.28$, $SE = .05$) than first-

generation students ($B = -.20$, $SE = .11$). Generation status also moderated the indirect effect from self-stigma to intentions through attitudes ($\Delta B = .08$, 95% CI = $.106, .115$). Specifically, the indirect effect was stronger for first-generation ($B = -.32$, $SE = .05$) than continuing-generation students ($B = -.23$, $SE = .02$).

Discussion

This is the first study to examine predictors of intentions to seek counseling among first- and continuing-generation college students. Results suggested the hypothesized model tested in this study provided an adequate representation of how environmental

Table 4
Goodness-of-Fit Indicators for the Multiple Groups Analyses

Model	χ^2	<i>df</i>	CFI	RMSEA	95% CI	SRMR	$\Delta\chi^2$	Δdf
Measurement model								
Unconstrained	726.01*	366	.935	.040	.036, .044	.057		
Constrained	759.50*	381	.934	.040	.036, .044	.056	24.39	15
Structural model								
Fully Constrained	767.71*	386	.931	.040	.036, .044	.077	17.31*	5
Partially constrained (PS→SS)	750.40*	382	.934	.040	.036, .044	.077	5.88*	1
Partially constrained (SS→INT)	760.85*	382	.932	.040	.036, .045	.078	10.44*	1

Note. CFI = comparative fit index; RMSEA = root-mean-squared error approximation; CI = confidence interval; SRMR = standardized root mean residual; $\Delta\chi^2$ = chi-square change; Δdf = degree of freedom change; PS = personal stigma; SS = self-stigma; INT = intentions.

* $p < .05$.

Table 5
Statistically Significant Indirect Effects for the Full Sample

Path/effect	Bootstrap estimates			<i>p</i> value
	Mean <i>B</i>	Mean <i>SE</i>	95% CI	
Institutional Supports → Personal Stigma → Self-Stigma	-.079	.032	-.148, -.019	.008
Institutional Supports → Personal Stigma → Self-Stigma → Attitudes	.047	.020	.012, .089	.007
Institutional Supports → Personal Stigma → Self-Stigma → Attitudes → Intentions	.025	.011	.006, .049	.007
Personal Stigma → Self-Stigma → Attitudes ^a	-.258	.030	-.317, -.201	<.001
Personal Stigma → Self-Stigma → Attitudes → Intentions	-.140	.018	-.179, -.107	<.001
Self-Stigma → Attitudes → Intentions ^a	-.322	.030	-.381, -.266	<.001

Note. All estimates are standardized. CI = confidence interval.

^a Indirect effect moderated by generation status.

supports, personal stigma, self-stigma, and attitudes relate to intentions to seek counseling for both these student groups. Hypothesis 1—that environmental supports would be a significant, negative predictor of personal stigma—received partial support. Specifically, institutional supports, but not family and friend supports, significantly predicted personal stigma for the full sample. When examined across first- and continuing-generation students, family and friend supports were found to significantly predict personal stigma for only continuing-generation students. Conversely, institutional supports did not significantly predict personal stigma when tested separately for the two student groups. These findings suggest that access to institutional supports is modestly associated with perceptions of personal stigma toward counseling for university students in general and that family and friend support for attending college may be more closely linked to personal stigma for continuing-generation students. This latter finding may be reflective of increased levels of parental involvement and social integration on campus for continuing-generation students, and the likelihood that greater access to these social networks may serve as a stronger reference point for perceptions of counseling among continuing-generation students.

Stephens et al. (2012) have proposed that many U.S. universities adopt a culture of independence that undermines the academic achievement of first-generation students, as first-generation students may struggle with reconciling cultural values around interdependence with the college environment. However, studies with first-generation students have also emphasized the importance of individual-level factors in predicting their academic outcomes (Dennis, Phinney, & Chuateco, 2005; Raque-Bogdan & Lucas, 2016). Perhaps first-generation students feel the need to adopt the value of independence to successfully navigate the college culture, and this may spillover to their perceptions of help-seeking. In the current sample, over 60% of the sample was in their second year of college and beyond and may be more representative of first-generation students who have identified successful strategies for managing the challenges of the college culture, including an integration of independent and interdependent values.

In support of Hypothesis 2, personal stigma significantly predicted self-stigma for the full sample as well as for first- and continuing-generation students. Invariance tests revealed that the relationship between personal stigma and self-stigma was stronger for continuing- compared with first-generation students. It is possible that first-generation college students, who may have already had to challenge the status quo and move past societal expectations

(i.e., getting into college), are less likely to internalize social perceptions about seeking professional help. Silencing or minimizing negative evaluations from others may be adaptive for first-generation college students to believe in themselves and achieve their educational and career goals.

Similarly, Hypothesis 3—that self-stigma would significantly predict attitudes—was supported for the full sample and when tested separately for first- and continuing-generation students. Invariance tests revealed that the relationship between self-stigma and attitudes was stronger for first-generation college students. It is possible that first-generation students have to rely more on internal resources or beliefs (e.g., grit, self-efficacy) during college and therefore, attitudes about seeking professional help are more closely linked to self-stigma for these students. The increased social isolation that is sometimes connected to the experience of being a first-generation college student may enhance these students' tendency to focus inward and on self-evaluative judgments.

Hypothesis 4 was supported, as attitudes significantly predicted intentions to seek counseling for the full sample and across student groups. In support of Hypothesis 5, several indirect effects were found from predictor to criterion variables, with the exception of friend and family supports to other variables. Analyses testing conditional indirect effects showed that the indirect effects from personal stigma to attitudes through self-stigma and self-stigma to intentions through attitudes were conditional upon first-generation student status. Specifically, these analyses suggest that self-stigma may better explain the relationship between personal stigma and attitudes toward seeking counseling for continuing-generation students. That is, continuing-generation students may be more likely to internalize negative messages about seeking counseling, and the messages that they receive from others may more strongly relate to how they think of themselves. This may also be reflective of first-generation students' need and greater capability to fend off personal stigma compared to their continuing-generation peers. Conversely, attitudes toward counseling appeared to better explain the relationship between self-stigma and intentions to seek counseling for first-generation students.

Limitations and Implications

Results of the present study have several implications for research and practice. Contrary to expectations, environmental supports variables assessed in this study did not significantly predict personal stigma for first-generation college students. Although this

measure has been previously used with first-generation students (e.g., [Garriott et al., 2015](#)), it was not developed for the purpose of assessing environmental supports for this student group. Instruments aimed at measuring supports for first-generation college students, with this student groups' specific needs in mind, would be a welcome addition to the literature. Additionally, the items used to assess family and friend support in this study were primarily written to address support for the decision to attend college, and over 60% of the current sample was more than a year away from having made the decision to attend college. While important for first-generation students, other forms of support beyond the decision to attend college were omitted from the scale. Examples include emotional support and encouragement, which in lieu of practical knowledge about college campuses, might be particularly important for first-generation students ([Ward et al., 2012](#)).

Based on recent estimates, participants in this study were also not reflective of the racial/ethnic makeup of first-generation college students nationally. While White students constitute the majority (50%) of first-generation students, African American (20%) and Latina/o/x (23%) students are disproportionately represented among this student group ([United States Department of Education, National Center for Education Statistics, 2012](#)). Thus, the sample in this study included disproportionate numbers of African American and Asian/Pacific Islander participants. In addition to including more representative samples, future research on intentions to seek counseling among first-generation college students should utilize larger samples of first-generation students and adopt an intersectional approach to examining help seeking behavior. The current study's sample of 177 first-generation students did not provide the statistical power necessary to conduct analyses based on intersecting identities. Research with racial and ethnic minority college students has shown that perceived racial/ethnic discrimination predicts higher levels of perceived stigmatization from others for seeking psychological help ([Cheng et al., 2013](#)). Examining how such experiences coupled with other forms of discrimination, such as classism, inform first-generation college students' attitudes and intentions to seek counseling would provide a more complete picture of how marginalization may contribute to decisions to seek professional help.

The sample in this study was also predominantly female (78.7%). Previous research has shown that women have more positive attitudes toward counseling than men and that men report higher levels of self-stigma for seeking counseling than women ([Fischer & Farina, 1995](#); [Vogel et al., 2006](#)). Therefore, the levels of self-stigma and attitudes endorsed by the sample in this study may not be reflective of the general population of first-generation college students. It is also possible that women were more likely to participate in the study given the subject matter. However, we were unable to determine the response rate to the survey because of the sampling procedures used. Thus, it is possible that the sample obtained for this study represents a very small number of those who were contacted, which also limits generalizability of the findings.

Participants in the present study were also all attending 4-year colleges and universities. While it is important to examine factors that may support first-generation college students in persisting at these institutions, the majority of first-generation undergraduate students attend community college and for-profit institutions ([United States Department of Education, National Center for Ed-](#)

[ucation Statistics, 2012](#)). These institutional settings may provide unique contexts and challenges to first-generation students seeking psychological help. For example, surveys of community college counseling centers have shown that many of these centers either contract outsourced services or refer students to off-campus providers ([Edwards, 2015](#)). These logistical barriers may play a role in first-generation students' attitudes toward seeking counseling. Therefore, studies that examine both supports and barriers to first-generation students' intentions to seek counseling in the educational settings where they are more likely than their peers to attend are needed. Students in this study were also nested within different institutional contexts, which likely offer varying levels and forms of support. Thus, we did not account for an important environmental variable, which may also influence attitudes toward counseling, in this study. Finally, a cross-sectional design was used in this study and thus, mediation cannot be inferred from the findings ([Hayes, 2013](#)). Experimental studies are needed to confirm mediation based on the indirect, correlational effects found in this study.

Despite the aforementioned limitations, this study has implications for practice. First, the relatively stronger relationship between self-stigma and attitudes for first-generation students suggests that interventions targeting these two variables might be particularly beneficial for this student group. Although the ability to minimize personal stigma and to focus more on one's own self-perceptions may be adaptive for first-generation students at times, perhaps resulting in grit and resilience, it is also important to consider the potential for this internal focus to be isolating and pressure-filled. The strong connection between self-stigma and attitudes for first-generation students suggests they may be in more direct control of these links, yet also implies they may not have other accessible sources of support that provide a broader perspective on how they view help-seeking. It could be helpful for academic affairs professionals to explore with first-generation students what may feel threatening about allowing others to influence their opinions of help-seeking, and then design interventions accordingly.

Research has shown that interventions providing information on how first-generation students' unique backgrounds may inform their college experiences increases their utilization of college resources and improves academic outcomes ([Stephens et al., 2014](#)). It is conceivable that these kinds of interventions—which rest upon the assumption that raising awareness of one's social location and identity is beneficial to adjustment—could be used to decrease the self-stigma associated with first-generation students' use of counseling services. Social networks have been implicated in individual's attitudes toward seeking counseling. Research suggests that having a relationship with someone who recommends seeking psychological help and knowing another person who has sought help are each associated with more positive attitudes toward counseling ([Vogel, Wade, Wester, Larson, & Hackler, 2007](#)). Thus, interventions targeting first-generation students' attitudes toward counseling may use social networking or social norming interventions to improve attitudes and increase intentions to seek counseling. Testimonials or disclosures from other first-generation students' who have sought counseling services might be helpful in this regard.

Additionally, interventions aimed at the stronger relationship between personal stigma and self-stigma may help improve con-

tinuing generation students' intentions to seek help. Given the ambiguities of who contributes to one's sense of personal stigma using the measure in the present study (e.g., "People you interact with"), it may be most beneficial to provide continuing-generation students with information on the type of students who seek counseling, their presenting issues, and their outcomes. To decrease personal stigma around seeking counseling and instill hope, academic affairs professionals could share information on how the majority of college students seeking counseling are not severely distressed (Smith et al., 2007) and that of those asked how their counseling experience helped them, 59% reported it helped them stay in school and 60% reported it improved their academic performance (Gallagher, 2010). Students could be prompted to empirically evaluate the assumptions that they may hold about how others perceive and have experienced counseling services.

In conclusion, this study points to the importance of examining students' intentions to seek counseling, with a specific focus on how students' social class identities may influence their experience of help-seeking stigma. Understanding the unique role that cultural identities, including social class, may play in utilizing counseling services could help improve routes to access for the growing number of first-generation students.

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