Paper Title Belonging Fulfillment: Are Universities Fulfilling College Students' Expectations About Belonging?

Author(s) Taiylor Rayford, University of Illinois at Urbana-Champaign; Amos Jeng, University of Illinois at Urbana-Champaign; Nidia Ruedas-Gracia, University of Illinois at Urbana-Champaign; David Shuang Song, University of Oklahoma

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Strayhorn's (2019) theory of sense of college belonging conceptualizes college student belonging as "students' perceived social support on campus, a feeling or sensation of connectedness, and the experience of mattering or feeling cared about, accepted, respected, valued by, and important to the campus community" (p. 4). Students who report high levels of belonging to their university also report greater academic motivation, persistence, and well-being (Han et al., 2017; Hausmann et al., 2007; Suhlmann et al., 2018). Higher-order goals relevant to the positive development of college students—such as self-actualization and learning—may not be possible without first meeting students' fundamental need to belong to campus environments (Strayhorn, 2019). For these reasons, we approach this work with the understanding that belonging plays a critical role in college student development and engenders important learning outcomes. The purpose of this study is to further our understanding of students' sense of college belonging by simultaneously exploring their expectations about and experiences with college belonging. Therefore, we investigate *belonging fulfillment,* or the alignment between students' expectations of and experiences with belonging to their university.

Literature Review

Experienced Belonging

Most existing studies on college students' sense of college belonging have investigated *experienced belonging*, or the degree to which one feels they belong to their college in the present moment. Empirical work has demonstrated that a sense of experienced belonging to college is key to academic success (e.g., Strayhorn, 2019). Studies have highlighted the positive association between students' sense of experienced belonging and important academic outcomes,

including intentions to persist (Gopalan & Brady, 2020; Hausmann et al., 2009), retention (Han et al., 2017; O'keeffe, 2013), and academic performance (Murphy & Zirkel, 2015).

Unfortunately, not all students easily develop a sense of experienced belonging. Students with marginalized sociocultural identities (e.g., low-income students, students of color) typically report lower levels of experienced belonging to their college, when compared to their peers with nonmarginalized identities (Johnson et al., 2007; Spanierman et al., 2013). These lower levels of college belonging result in increased feelings of incompetence and worries about being exposed as an imposter (MacInnis et al., 2019). Furthermore, low belonging is known to negatively impact mental health (Bernard et al., 2017) and lower academic self-efficacy (Cokley et al., 2015), both of which have implications for student success (Ostrove & Long, 2007).

Prospective Belonging

In contrast to experienced belonging, *prospective belonging* is a student's anticipation, expectation, or belief of how well they will belong to an educational setting in a future context (Author, in preparation). There are few studies that investigate prospective belonging, and consequently, we have limited knowledge of its characteristics, relationship to experienced belonging, or associated learning outcomes. However, we know that, like experienced belonging, prospective belonging is related to social identity and influences students' college experiences. Students identifying as women (Murphy et al., 2007; Veldman et al., 2021) and Black (Purdie-Vaughns et al., 2008) typically report lower feelings of prospective college belonging than those identifying as men or white. These low levels of prospective belonging may be related to students' perceptions of representation (Murphy et al., 2007). Therefore, prospective belonging may affect student decision-making for individuals belonging to marginalized social identities,

and it is thus important to explore how early expectations about belonging can affect the student experience.

The Present Study: Belonging Fulfillment

Although existing work has demonstrated that expectations about belonging can influence experienced belonging and student decision-making, we know little about how students experience prospective belonging or its relationship to experienced belonging. For this reason, we investigate belonging fulfillment, defined as how well one's expectations of college belonging align with their experiences of college belonging.

While belonging fulfillment has received little attention, existing work suggests that expectations of social inclusion, when unfulfilled, result in negative consequences for emotional well-being. Wirth et al. (2017) found that individuals experiencing social rejection reported greater feelings of ostracism and lower basic need satisfaction (i.e., belonging and self-esteem) but those who did not expect to be rejected had greater negative feelings than those who anticipated rejection. Thus, the degree to which expectations about belonging are fulfilled may impact student well-being.

The goals of this study are twofold. First, we aim to understand whether college students' expectations about belonging to their college are being fulfilled. Second, we aim to determine whether students within different sociocultural identities experience differing levels of belonging fulfillment. Our research questions (RQs) are as follows:

1. RQ1: To what degree are students' expectations about college belonging fulfilled during college?

2. RQ2: How does demographic background predict the degree to which students' expectations about college belonging are fulfilled during college?

Methods

Participants

Data came from a longitudinal study that explored college students' sense of college belonging over time at a private university in the western United States. Students were recruited via purposeful stratified sampling, where the final sample was stratified by race/ethnicity. Researchers administered the survey online at seven timepoints. For the purposes of this paper, two timepoints were included: Timepoint 1 (Fall 2017) and Timepoint 2 (Spring 2021). Our final sample of participants consisted of these 100 students.

Measures

Prospective College Belonging

At Timepoint 1, participants completed a five-item scale assessing their prospective sense of belonging in college. These five items were adapted from Walton and Cohen's (2007) Sense of Social Fit Scale (SSFS). Participants indicated their level of agreement to five statements related to their anticipated future levels of belonging and inclusion in the college environment. Possible responses to each item ranged on a 7-point Likert scale from strongly disagree to strongly agree. We used the mean score for analysis; a higher score indicated a higher level of prospective belonging in college ($M = 5.37$, $SD = 0.89$).

Experienced College Belonging

At Timepoint 2, participants completed the full, 17-item version of the SSFS, which assessed their experienced sense of belonging in college as fourth-year students. We restricted analysis to the five items that had corresponding items on the prospective college belonging scale administered at Timepoint 1 to ensure a consistent definition of college belonging across the two timepoints of data, given that instruments comprised of different survey items reflect different

attributes of students' sense of college belonging (Author, in preparation; St-Amand et al., 2017). Like Timepoint 1, responses ranged from 1 to 7. We used the mean score for analysis (M = 5.07, SD = 1.03).

College Belonging Fulfillment

We operationalized belonging fulfillment as the difference between each participant's prospective belonging score at Timepoint 1 and experienced belonging score at Timepoint 2. A positive belonging fulfillment score indicates that experienced college belonging exceeded prospective college belonging, whereas a negative belonging fulfillment score indicates that prospective belonging exceeded experienced belonging (M = -0.30, SD = 1.10).

Demographics

Participants self-reported their demographic information (Table 1). To promote inclusivity, gender identity and race/ethnicity were assessed via open-ended questions, though the study's sample only reported two genders. We collected information on participants' gender, income status, and first-generation college student (FGCS) status. To preserve a statistical power of .8 (Cohen, 1988), race/ethnicity was coded binarily.

Results

Due to limited information on the validity of measures of prospective sense of college belonging, we performed preliminary analyses to evaluate the construct validity of our measures. We used confirmatory factor analysis under maximum likelihood estimation (Kline, 2015) to examine the assessment structure of the prospective college belonging measure, as well as the experienced college belonging measure. The results indicated that both models had acceptable fit and were appropriate to use (Tables 2 and 3).

RQ1

We compared participants' prospective college belonging and experienced college belonging scores to assess the degree to which students' expectations about college belonging were or were not fulfilled during college. Based on the results of a Shapiro-Wilk test ($W = 0.97$, $p = .03$), we opted to use a paired-sample Wilcoxon signed rank test to address RQ1. Results revealed a statistically significant difference in participants' median prospective and experienced belonging scores ($p = .02$) with a medium effect size ($r = .23$) (Cohen, 1988). In other words, on average, participants' experienced sense of college belonging as fourth-year students failed to meet their initial, anticipated level of college belonging as first-years (see Table 4 for descriptive statistics).

RQ2

We performed a multiple linear regression of college belonging fulfillment on gender, income status, race/ethnicity, and FGCS status to address RQ2. Our regression model explained a significant 6.72% of the variance in overall college belonging fulfillment ($F[4, 95] = 2.78$, $p = .03$). While the effect size of this result is considered small (Cohen, 1988), these well-known statistical benchmarks can be arbitrary and problematic and should thus be used cautiously (Correll et al., 2020). Overall, the statistical significance of our finding indicates that demographic background is associated with belonging fulfillment, and thus deserves more attention to fully understand it. Of the included predictors, only income status had a significant effect on college belonging fulfillment. Low-income students were more likely than their non-low-income counterparts were to have experiences with belonging at the university that fulfilled and surpassed their expectations, holding all other variables constant (Table 5).

Discussion

RQ1 explored the extent to which students' expectations of college belonging are fulfilled during their time in college. We found that as first-year students, our participants entered college with high expectations of developing a sense of belonging to their institution, only for the university to fail to meet those expectations by their fourth year. This finding suggests that educational researchers ought to investigate college belonging fulfillment as a unique phenomenon going forward and use longitudinal designs to accurately capture the college belonging experience. If we had employed a cross-sectional design and only considered our participants' experienced sense of college belonging as fourth-year students, then we would have considered participants to have overall positive and fulfilling experiences of college belonging, due to their moderate to high levels of reported experienced college belonging. Our longitudinal study raises important concerns about the university's ability to meet their students' expectations about college belonging, and these concerns would have been obscured in a cross-sectional study of experienced college belonging alone.

RQ2 asked whether students' demographic characteristics predict the degree to which their expectations of college belonging are fulfilled during their time in college. We found that low-income students were more likely than their non-low-income counterparts to have experiences with college belonging that met or surpassed their expectations. This result was surprising, given that existing literature suggests low-income students struggle to develop a sense of belonging to their university (Means & Pyne, 2017; Nguyen & Herron, 2021). However, our participants' university context was unique in that low-income students had access to an office dedicated to supporting first-generation and low-income students. The office has a strong presence on the campus and provides low-income students with community, resources, and

social and academic support as well as student-led initiatives at the institution that worked toward eliminating negative stereotypes of first-generation low-income students. Research has shown that community (Spanierman et al., 2013) and academic and social support (Means & Pyne, 2017) are highly related to a sense of college belonging. Thus, we believe that the presence of an office dedicated to supporting low-income students may partially explain why low-income students were more likely to develop a sense of college belonging beyond what they had originally anticipated.

The findings of the current study should be interpreted with caution because data collection occurred between 2017 and 2021, meaning that the student participants experienced the COVID-19 pandemic during school. With research currently underway to understand the effects of the global pandemic, it remains unclear how students' sense of college belonging has changed because of this pandemic. Nevertheless, our findings suggest that education practitioners should make greater efforts to foster a campus climate that is inclusive and welcoming of students of diverse backgrounds. Higher education marketing teams should ensure that promotional materials reflect the true nature of a university's campus climate. We expect that such practices would result in greater alignment between students' expectations of and experiences with college belonging. (1,988/2000)

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Table 1

Participant Demographic Breakdown

	N
Gender	
Man	41
Woman	59
Income	
Non-low-income	60
Low-income	40
Race/Ethnicity	
Person of Color	65
White	35
First-generation college student (FGCS)	
Non-FGCS	64
FGCS	36
Total	100

Table 2

Confirmatory Factor Analysis – Fit Indices

Model	χ2	df	p-value	RMESA	TLI	CFI	SRMR
PB	8.44	5	.13	.08	.97*	.99*	.03*
EB	6.90	5	.23	.06	.98*	.99*	.03*

Note. "*" indicates significant, acceptable fit based on the following parameters: RMSEA < 0.06,

TLI >.95, CFI > .95, and SRMR < .08 (Hu & Bentler, 1999).

Table 3

Confirmatory Factor Analysis – Loadings, Standard Errors, and Error Variance

Item	Std. Loading	Unstd. Loading	Loading *SE*	Std. Error Variance
PB				
PB1	0.89	1.00	—	0.20
PB2	0.88	0.93	0.08	0.23
PB3	0.73	1.24	0.14	0.47
PB4	0.64	0.95	0.14	0.60
PB5	0.58	0.61	0.10	0.67
EB				
EB1	0.75	1.00	—	0.44
EB2	0.67	1.46	0.23	0.55
EB3	0.89	1.74	0.21	0.21
EB4	0.52	1.06	0.21	0.73
EB5	0.77	1.41	0.19	0.41

Note. "std." = standardized. "unstd." = unstandardized.

Table 4

Means, Standard Deviations, and Pearson Correlations of Measures in Analysis

Variable	Mean	SD	1	2	3	4	5	6
1. Gender	—	—	—					
2. Income status	—	—	0.06	—				
3. Race/Ethnicity	—	—	0.02	-0.51***	—			
4. FGCS status	—	—	-0.01	0.45***	-0.25*	—		
5. PB	5.37	0.89	-0.22*	-0.33***	0.31**	-0.25*	—	
6. EB	5.07	1.03	0.01	0.001	0.19	-0.10	0.35***	—
7. BF	-0.30	1.10	0.18	0.27**	-0.08	0.10	-0.48***	0.65***

Note. "PB" = prospective college belonging. "EB" = experienced college belonging. "BF" = college belonging fulfillment.

*p < .05

**p < .01

***p < .001

Table 5

Results of Multiple Regression

Variable	*b*	*SE*	β	*t*	95% Confidence Interval
(Constant)	-0.84	0.24	0.00	-3.56**	[-1.30, -0.37]
Gender	0.37	0.22	0.17	1.69	[-0.06, 0.80]
Income status	0.68	0.28	0.30	2.47*	[0.13, 1.23]
Race/Ethnicity	0.17	0.26	0.08	0.67	[-0.34, 0.69]
FGCS status	-0.03	0.25	-0.01	-0.13	[-0.53, 0.46]

*$p < .05$

**$p < .001$