EXPLORING THE ROLE OF SOCIAL BELONGING IN COLLEGE BY RACIAL MINORITY GROUP. AN EXAMINATION OF ACADEMIC AND PSYCHOSOCIAL OUCTOMES

by

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A DISSERTATION

Presented to the Department of Counseling Psychology and Human Services
and the Division of Graduate Studies of the University of Oregon
in partial fulfillment of the requirements
for the degree of
Doctor of Philosophy

September 2021

DISSERTATION APPROVAL PAGE

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Title: Exploring the Role of Social Belonging in College by Racial Minority Group: An Examination of Academic and Psychosocial Outcomes

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DISSERTATION ABSTRACT

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Doctor of Philosophy

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September 2021

Title: Exploring the Role of Social Belonging in College by Racial Minority Group: An Examination of Academic and Psychosocial Outcomes

The present study explored how anticipated social belonging (SB) uncertainty in incoming first-year college students interplayed with precollege context (subjective social status and generational status), academic preparedness (high school GPA and ACT/SAT scores), academic outcomes (end-of-year GPA and second-year retention), psychosocial outcomes (end-of-year perceived stress, life satisfaction, and sadness), and experienced SB uncertainty measured at the end of student's first year of college. The sample in this study included 3,847 incoming first-year college students of varying racial groups at a public institution in the pacific northwest region of the United States. The goal of this study was to examine how the development and role of anticipated SB uncertainty among college students differs as a function of racial group membership. Specifically, we examined racial group differences in how precollege factors and academic preparedness were associated with students' anticipated SB and how anticipated SB predicted students' end-of-year experienced SB, psychosocial outcomes, and academic outcomes. A series of ANCOVAs and regressions were employed to examine these relationships. The results of the analyses examining the association between precollege variables and students'

anticipated SB showed that students' levels of anticipated SB were related to their subjective social status. Significant differences in baseline levels of anticipated SB were also found between students who identified as Asian and students who identified as White. Anticipated SB was further shown to be predictive of end-of-year perceived stress for all students. However, the findings largely failed to find significant differences in outcomes of interest as a function of racial group membership. Potential explanations for these findings and why they differ from existing literature are discussed. Findings suggest that future research would benefit from measuring SB and outcome variables of interest prior to matriculation, shortly after matriculation, and at different points throughout the academic year by racial group to understand how the changes and maintenance of this construct influence students' academic and psychosocial outcomes.

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CHAPTER I

RATIONALE

Social belonging (SB), or the ability to fit in and have positive relationships with others, is a fundamental human need, one which has been linked to numerous beneficial biopsychosocial outcomes (Baumeister & Leary, 1995; Lee & Robbins, 2000). In college settings, past research has tied students' sense of SB to better grades, intentions to persist in degree completion, retention, and multiple facets of psychological wellness (Freeman et al., 2007; Hausmann et al., 2007; Kennedy & Tuckman, 2013). While most of this research has been centered on majority White populations, some findings suggest that SB may be even more influential on the academic and psychological outcomes of underrepresented racial minority college students (URMCS; Hurtado & Carter, 1997; Walton & Cohen, 2007, 2011; Zumbrunn et al., 2014). However, no existing studies have examined how students' *anticipated SB uncertainty* prior to entering college differentially presents in students of different racial backgrounds (Murphy & Zirkel, 2015). The purpose of this study is to explore how anticipated SB, measured prior to college matriculation, uniquely predicts end-of-year experienced SB, grade point average (GPA), college retention rates, life satisfaction, sadness, and perceived stress between different underrepresented racial minority (URM) groups in college.

SB in Academia

Baumeister and Leary's (1995) seminal paper on the importance of belonging defined the construct as the innate and central need for humans to form and maintain stable positive relationships with one another. This paper inspired a large amount of research exploring the effects of SB, and the construct has since been linked to life

satisfaction, depression, self-esteem, loneliness, adjustment, motivation, stress, anxiety, physical health, and countless other biopsychosocial outcomes (Cacioppo et al., 2006; DeWall et al., 2011; Mellor et al., 2008). In response to the multitude of findings articulating the importance of SB, researchers began to examine the role of SB in specific environments such as the workplace (Cockshaw & Shochet, 2010; Shakespeare-Finch & Daley, 2017), neighborhoods (Liu et al., 2017; Maurizi et al., 2013), and schools (Allen et al., 2018). In academic environments, SB can be briefly described as one's feeling of being welcomed, included, and supported in their school (Uslu & Gizir, 2017). Though described simply enough, SB in school environments is a complex phenomenon affected by one's personal characteristics, teacher relationships, peer relationships, class content, campus climate, family's school involvement, student demographics, social context, and the physical environment of the school (Allen et al., 2018; Demanet & Van Houtte, 2012).

Past research has chronicled the importance of SB from elementary school (Osterman, 2000), through high school (Allen et al., 2018; Demanet & Van Houtte, 2012; Uslu & Gizir, 2017), and onto college (Gummadam et al., 2016; Strayhorn, 2019; Zumbrunn et al., 2014), with findings that consistently link SB to better academic and psychosocial outcomes. Research on SB in primary and secondary school environments has linked the construct to school retention, intrinsic motivation to succeed academically, participation in extra-curricular activities, emotional distress, emotional stability, self-efficacy, self-esteem, aggression, rule-breaking behavior, parental, peer, and teacher support, perceived quality of life, and life satisfaction (Allen et al., 2018; Jose et al., 2012; Osterman, 2000; Shochet et al., 2011). Though the role that SB plays in the

biopsychosocial outcomes of K-12 populations has been heavily researched, comparatively this construct has received less attention in college populations.

The disparity in the amount of research on SB between grade levels is noteworthy as the transition to college represents a major life change. For many incoming college students, the transition into college represents a pivotal developmental period where individuals are leaving familiar settings where they may have felt a sense of connection with friends and family and acclimating to a new environment where a sense of SB is not a given (Gummadam et al., 2016; Lee & Robbins, 2000). The developmental process of learning to manage one's own education, finances, health, and other responsibilities can make the transition into college a particularly stressful time for young adults (Cress & Lampman, 2007; Piercall & Keim, 2007; Weinstein & Laverghetta, 2009). Though no existing studies specifically examine anticipated SB, given the challenges of this transitional period, there has been an increase in literature examining how experienced SB influences the academic and psychological outcomes of college students.

Academic Outcomes and SB

Multiple studies have demonstrated a positive relationship between SB and academic outcomes in college populations (Layous et al., 2017; Murphy & Zirkel, 2015; Patterson Silver Wolf et al., 2017; Stephens et al., 2014; Walton & Cohen, 2011). A study by Ostrove and Long (2007) which explored SB and academic outcomes in college students from a small midwestern university indicated that students' SB was associated with both their academic outcomes and academic adjustment in college. In one nationally representative study of first-year college students, SB was shown to be positively associated with both GPA and students' persistence towards degree completion in four-

year institutions (Gopalan & Brady, 2019). Kennedy and Tuckman (2013) further illustrated the importance of SB with their findings that SB was significantly associated with GPA in a sample of first-year college students, even when controlling for ability factors such as high school class rank and standardized test scores.

Multiple theoretical models on student success in college have cited SB as one of the most important predictors of retention (Hoffman et al., 2002; Murphy & Zinkel, 2015; O'Keefe, 2013; Palmer et al., 2014; Shnabel et al., 2013; Strayhorn, 2019; Tinto, 1993) even though there has been limited empirical research supporting this claim. Most existing literature focuses on student intentions to persist in academia as opposed to directly measuring retention as these constructs are theorized to be related. A study by Morrow and Ackermann (2012) initially found a significant relationship between SB, intentions to persist academically, and second-year retention in a sample of first-year college students, but the relationship between these variables became insignificant when peer and faculty relationships were added to the model. Another study by Hausmann et al. (2007) showcased a relationship between SB and intentions for degree completion in first-year college students when controlling for student race, gender, financial background, and SAT scores. Additional research has demonstrated that a student's sense of comfort in their campus environment can also be predictive of their intentions to persist in completing their degree (Wei et al., 2011). The link between SB and retention has been further supported by other findings demonstrating that the existence of social supports, a key component of SB, are strong indicators of retention in college populations (Arbona & Nora, 2007; Baier et al., 2016; Baker & Robnett, 2016; Fischer, 2007). However, as most of this research only examines components of retention as opposed to

the construct itself, more empirical research is needed to truly establish the relationship between SB and retention in college populations.

Psychological Outcomes and SB

Research on the link between SB and psychological outcomes among college students has been explored largely as a means of explaining academic outcomes (Kennedy & Tuckman, 2013; Murphy & Zinkel, 2015). This is a common trend in research on college populations as numerous psychological variables such as self-esteem, self-efficacy, life satisfaction, depression, and stress have all been correlated with academic outcomes (Andrews & Wilding, 2010; Eisenberg et al., 2009; Martin et al., 2017; Ojeda et al., 2014; Richardson et al., 2012). In a study of first-year college students, Freeman et al. (2007) linked higher degrees of SB to feelings of acceptance, improved academic self-efficacy, intrinsic motivation for succeeding academically, and the perception of academic tasks as important and valuable. Another study by Zumbrunn et al. (2014) found that a sense of SB was related to college students' perceptions of academic support from their instructor, social support from their peers, and their level of self-efficacy in the classroom. Kennedy and Tuckman's (2013) findings linking SB and GPA suggested that the underlying cause of this association is attributable to SB's positive association with self-efficacy and negative association with stress. Further, Sollitto et al. (2013) found that a higher degree of connectedness to peers in college classes was associated with higher rates of self-reported competency in completing class tasks.

In their nationally representative study, Gopalan and Brady (2019) showcased a positive relationship between higher levels of SB and improved self-reported mental

health outcomes among students attending four-year colleges. Additional research has linked lower levels of SB in college populations to higher levels of depression, stress, loneliness, and decreases in self-worth (Gummadam et al., 2016; Pittman & Richmond, 2008; Strayhorn, 2019). The potential detriments of deficiencies in SB were further exemplified through a study by Van Orden et al. (2008) that demonstrated that college students' suicidal ideation was largely explained by their degree of SB as measured by the Beck Scale for Suicide Ideation. Additionally, Steger and Kashdan (2009) linked higher SB to reductions in the depression levels of college students, particularly among those with higher initial levels of depressive symptoms.

As research on SB in college environments continues to demonstrate the importance of this construct in the psychological wellness and academic success of college students, there is a need to examine how aspects of identity impact college students' sense of SB. Past research on SB in college populations has shown that SB can be influenced by students' biological sex (Gopalan & Brady, 2019; Hughes et al., 2015; Thompson et al., 2019), gender identity (Lewis et al., 2017; Rainey et al., 2018; Silver, 2020), sexual orientation (Strayhorn, 2019; Wilson & Liss, 2020), socioeconomic status (SES; Ostrove & Long, 2007), and various other aspects of identity. However, many existing studies do not explore how SB uniquely affects URMCS, a population for which there are pronounced disparities related to academic and mental health outcomes due to individual and systemic barriers (Cokley et al., 2011; Fischer, 2007). The limited amount of research focusing on the role of SB on URMCS is surprising as there is a large amount of research which focuses on the numerous unique barriers that URMCS face when navigating college settings. Considering that the number of URMCS entering higher

education continues to grow and racialized disparities in college continue to exist (Fischer, 2007; National Center for Education Statistics, 2018), there is an ongoing need to better understand how SB impacts this population.

Racialized Achievement Gaps in Higher Education

Throughout our country's history, there have been significant enrollment, retention, and achievement gaps between White students and URMCS in higher education (O'Keefe, 2013; National Center for Education Statistics, 2018). While enrollment disparities have lessened in recent years, URMCS remain underrepresented in college environments, especially in more elite or selective institutions (Martin et al., 2017). In addition to enrollment disparities, there remain academic achievement and retention gaps where non-Asian URMCS more commonly fail to complete their degrees, take a longer amount of time to complete their degrees, have lower GPAs, and perform more poorly on the graduate record examination (GRE) than White students, even when controlling for academic background factors (Kugelmass & Ready, 2011; O'Keefe, 2013; Owens & Massey, 2011). In examining data from the National Longitudinal Study of Freshman (NLSF), a commonly used data set exploring the experiences of college students across 28 universities in 2001, Charles et al. (2009) found that, when compared to White students, average GPAs were one third of a letter grade lower for Black students and one quarter of a letter grade lower for Latinx students, respectively. Other research has suggested that Black and Latinx college students may be up to 20% less likely to complete their degrees than White students (Shapiro et al., 2017).

Notably, some findings have suggested that the ethnocultural makeup of the college environment itself may have a lot to do with these achievement disparities. Some

research has suggested that racialized performance, enrollment, and achievement gaps between URMCS and White students can become even more pronounced in more selective predominately White institutions (PWIs) where representation disparities between ethnic/racial groups are greater (Kugelmass & Ready, 2011; Massey & Probasco, 2010; Smith et al. 2014). Conversely, the academic outcomes of URMCS who attend minority serving institutions (MSIs) are generally better. Charles et al. (2009) suggested that this difference is because MSIs provide both a social and academic environment that is more conducive to the needs of URMCS.

The Significance of Precollege Factors

Much of the research dedicated to exploring the underlying reasons for the academic and psychological disparities between URMCS and White students identifies precollege factors such as economic disadvantage, family background, high school context, generational status, socioeconomic status, and educational opportunities as the main impediments to attending and succeeding in college for URMCS (Charles et al., 2009; Dika & Singh, 2002; Klugman, 2012; Museus & Maramba, 2011; Wolniak & Engberg, 2010). Research has shown that a disproportionate amount of URMCS enter college without being sufficiently academically prepared and that this lack of preparation has a deleterious effect on these students' academic outcomes (Strayhorn, 2019). In a study exploring GPA differences between URMCS and White students in selective universities, Martin et al. (2017) found that nearly half of the variance in predicting college GPA was attributable to precollege factors such as academic preparedness and family background characteristics. A study by Flores et al. (2017) exploring the role of precollege characteristics and post-secondary context on degree completion rates showed

that academic preparedness, socioeconomic status, and high school context accounted for 61% of the total variance for URMCS in predicting degree completion. Additionally, findings from this study suggested that these precollege factors were stronger predictors of degree completion for URMCS than they were for White students.

The ethnic/racial diversity of the schools that students attend prior to entering college has been increasingly cited as a predictor of students' perceptions of their anticipated college academic outcomes (Charles et al., 2009). A study of high school seniors in 108 high schools throughout Texas showed that URM students were significantly more likely to have the expectation that they would complete a four-year college program if they came from high schools with a higher percentage of URM peers (Frost, 2007). Research by Goldsmith (2004) demonstrated similar results using the NLSF in highlighting how students that come from high schools with larger percentages of ethnic/racial minorities are more optimistic about their educational outcomes than URM students who come from predominately White schools. These studies suggest that exposure to ethnic/racial in diversity in high school may make students more optimistic about their academic outcomes in college. However, the mismatch between levels of ethnic/racial diversity in high school and levels of ethnic/racial diversity in college may have significant implications on the SB of URMCS who come from diverse high schools as these students may struggle with acclimating to profoundly lower rates of ethnic/racial diversity than they have been accustomed to.

While the relevance of precollege context cannot be ignored, some researchers have disputed that precollege factors are the sole or even most pertinent influences in explaining racialized achievement gaps in higher education settings (Charles et al., 2009;

Farrington et al., 2012; Saunders-Scott et al., 2018). Some research has disputed the saliency of precollege context by demonstrating that achievement and performance gaps between different racial groups continue to exist even when socioeconomic status is controlled for (Arbona & Nora, 2007; Baker & Robnett, 2012; Walton & Cohen, 2011). Using data from the NLSF, Owens and Massey (2011) highlighted that URMCS with similar background characteristics and/or standardized achievement test (SAT) scores as their White peers still underperform academically and have poorer rates of retention than these peers. Further, some evidence demonstrates that preexisting academic gaps between Black and White students become even more pronounced throughout students' time in college (Kugelmass & Ready, 2011; Sax et al., 2018). Findings such as these suggest that there is a need to look at how the college experience uniquely affects URMCS.

The College Experience for URMCS

Murphy and Zirkel (2015) hypothesized that White students are perceived as "the standard" in higher education and are consequently less likely to struggle in college environments than URMCS. Gay (2004) argued that "at every level of academia a person of color is treated, at best, as a guest in someone else's house" (p. 269) and highlighted that simply being in an academic environment as a marginalized person inexorably lessens one's sense of belonging. Further, there remain notable discrepancies in racial diversity among faculty on college campuses with White faculty members making up approximately 84% of all professors in the United States (Wilder et al., 2016). This lack of representation in ethnic/racial diversity among faculty members and students alike can further the message that URMCS do not belong in college environments (Mckenzie & Scheurich, 2004). Moreover, the underrepresentation of URMCS on college campuses

makes it difficult for schools to be aware of and responsive to the needs of these populations (Murphy & Zirkel, 2015).

There is a large body of literature outlining the factors that deleteriously impact URMCS. Due to their minority status, URMCS can face additional barriers over and above the usual struggles of navigating higher education (Fischer, 2007; Palmer et al., 2014; Paukert et al., 2006). URMCS can experience *minority stress* or stress specifically stemming from one's minority status (Cokley et al., 2013; McClain et al., 2016; Wei et al., 2010). In college environments, minority stress can stem from blatant stigmatization, discrimination, and prejudice based on one's ethnic/racial background. The frequency of such experiences was highlighted in a study by Stevens et al. (2018) on the perceived experiences of discrimination among URMCS which found that individuals from every ethnic/racial minority group were all more likely to self-report experiences of racial discrimination on college campuses than White students. In addition, URMCS can face more covert forms of discrimination such as culturally insensitive instructors, educational systems normed for majority populations, and *microaggressions* – unconscious, indirect, or unintentional forms of prejudicial or discriminatory actions, by peers and faculty alike (Keels et al., 2017; Nadal et al., 2014). Current research on URMCS has demonstrated that these unique experiences can play a large role in predicting GPA, college retention, intentions to persist through degree completion, stress, depression, self-efficacy, motivation, and overall happiness of URMCS (Arbona, & Jimenez, 2013; Bauman et al., 2019; Iwamoto, & Liu, 2010; McClain et al., 2016; Robbins et al., 2004). Walton and Cohen (2007) proposed that the awareness of the disparities faced by URMCS in educational environments would naturally lead to uncertainty about these students' SB in

college.

Academic Outcomes of URMCS

Multiple studies have explored how various forms of minority stress can play a role in the academic outcomes of URMCS. In a study of Hispanic females in college, Arbona et al. (2018) found that minority stress negatively predicted students' levels of depression, which in turn predicted academic persistence intentions. A study by Wei et al. (2011) on the outcomes of minority stress between different ethnic/racial groups in college demonstrated that minority stress was negatively associated with intentions to persist in degree completion for every URM group included in their study. Numerous studies have also demonstrated that both the academic effort and academic performance of URMCS can be negatively influenced by *stereotype threat* – the phenomenon where a majority group's negatively held perceptions about the abilities and/or values of marginalized populations (i.e., stereotypes) can lead individuals within those marginalized groups to question their own ability and subsequently underachieve in the domains in which their ability is questioned (Fischer, 2007; Inzlicht & Schmader, 2012; Owens & Massey, 2011; Steele, 1997). In college environments, this can mean that prejudiced stereotypes about the intellectual abilities of Black or Latinx individuals may have a deleterious impact on the academic performance of students from these marginalized groups (Murphy & Zirkel, 2015). In a longitudinal study using data from the NLSF, Massey and Fischer (2005) linked stereotype threat to reductions in weekly study hours and lower GPAs for URMCS. Further, as past research has linked academic performance to attrition in college populations (Fischer, 2007), it is likely that stereotype threat may also indirectly affect the retention rates of URMCS.

Other research examining the social context of college has shown that URMCS without close friendships are at a heightened risk of not completing their degrees in comparison to those who report having such friendships (Fischer, 2007). This is noteworthy as other research has suggested that URMCS have more difficulty establishing friendships in higher education than White students in PWIs (Charles et al., 2009; Silver, 2020). Shook and Clay (2012) showcased the benefits of having social supports in their research by demonstrating that the facilitation of intergroup contacts with White students led to improved GPA for the Black first-year college students in their study. Hausmann et al. (2007) further emphasized the importance of having friendships for URMCS through their findings that the availability of peer support had a more pronounced impact on the intentions to persist for Black students than White students in their study.

Psychological Outcomes of URMCS

The same factors that have been shown to be important in predicting the academic outcomes of URMCS have also been linked to psychological wellness for this population. Past research has shown that minority stress can lead to increases in depression, anxiety, and stress levels among URMCS (Arbona et al., 2018; Cokley et al., 2013). Studies by Wei et al. (2010) and Arbona and Jimenez (2013) have linked minority stress to depressive symptoms in URMCS, even when controlling for general types of stress reported by most college students. Other research has demonstrated that encountering microaggressions in college can play a role in altering the anxiety, depression, and self-esteem levels of URMCS (Kim et al., 2017; Nadal et al., 2014; Sanchez et al., 2018). In addition to predicting academic outcomes, stereotype threat has also been shown to

lessen both motivation to persist academically and a sense of SB in URMCS (Inzlicht & Schmader, 2012).

Evidence suggests that the perception of one's campus climate is also related to the psychological wellness of URMCS. This claim can be demonstrated by past findings that URMCS at PWIs report higher rates of loneliness and depression than their White peers (Charles et al., 2009). This finding was supported by the research of Baker and Robnett (2012) which showed that URMCS who attend PWIs are less likely to feel like they are part of the campus environment, more likely to be unsatisfied with their college experiences, and report more feelings of invisibility or discrimination on campus. Smith et al. (2014) suggested that this is a constant for all URMCS regardless of their specific ethnic/racial identity. Fischer's (2007) study found that URMCS with a negative perception of the racial climate of their campus reported less overall satisfaction with their college experience. Hurtado et al. (1999) further emphasized the potentially negative role of racial climate with their findings that that encountering discrimination from students or faculty and the perception of racial tension and conflict in college classrooms, living, and social spaces were all associated with more isolation and less engagement with peer and academic groups for URMCS.

Existing SB Studies on URMCS

Although SB among URMCS has been indirectly explored in literature for some time (Booker, 2004; Charles et al., 2009; Tinto, 1993) most of this literature has focused on how systems of inequality, privilege, under-representation, and discrimination impact the comfort and sense of fit for URMCS (Bauman et al., 2019; Ostrove & Long, 2007). Moreover, nearly all previous research on SB in ethnic/racial minority groups focuses on

primary and secondary school environments (Allen et al., 2008; Faircloth & Hamm, 2005; Shnabel et al., 2013). The limited amount of research focusing on SB on URMCS is surprising as existing research has shown that URMCS often report a lower degree of SB than White students (Gay, 2004; Patterson Silver Wolf et al., 2017; Tinto, 1993). Additionally, some research suggests that SB may be even more influential on the academic and psychological outcomes of ethnic/racial minority groups than White students (Gummadam et al., 2016; Hausmann et al., 2007; Hurtado & Carter, 1997; Mounts, 2004; Murphy & Zirkel, 2015; Walton & Cohen, 2007, 2011). Key studies exploring SB in URMCS include the following.

Mounts (2004) examined how SB predicted various psychosocial outcomes in a sample of 319 African American and White college freshman at a midwestern PWI. Though the mean levels of SB did not differ between African American and White students in this study, the role of SB on the outcome variables did differ on a basis of racial group membership. For the African American students in this study, the relationship between a perception of a hostile campus environment and loneliness, depression, and smoking was mediated by student's sense of SB while SB mediated the relationship between parental support and depression and loneliness for the White students in this study. The results of this study suggest that, even when there are not pronounced differences in levels of SB between racial groups, the role of SB in college populations may differ as a function of racial group membership.

In a nationally representative study of SB in college students by Gopalan and Brady (2019), Black, Hispanic, and Native American students were found to have lower rates of SB than their Asian, White, and Multiracial peers at four-year-colleges.

Interestingly, at two-year colleges the inverse of this was true with Black, Hispanic, and Native American students showing higher rates of SB than their Asian, White, and Multiracial peers. The authors of this study reported that they could not explain the differences in SB between two-year and four-year colleges, but they did highlight that there was generally more URM representation in the two-year colleges included in their study. Notably, this study grouped Black, Hispanic, and Native American students together as a singular URM group which made it so that the differences between these respective URM groups could not be discerned.

Hurtado and Carter (1997) examined the experiences of Latinx sophomores across 127 universities and found that students' SB was strongly associated with their perceived ease in transitioning into college. Additionally, the study found that students' perceptions of a hostile racial environment in academia was associated with a lessened sense of SB. Interestingly, this study conflicted with previous findings, as the authors did not find associations between students' sense of SB and GPA. Guided by Hurtado and Carter's (1997) work, Johnson et al. (2007) conducted a study examining the role of SB among URMCS using a sample of White, Black, Asian, and Multiracial first-year college students from 32 universities. In this study, SB was found to be associated with ease of social transition into college for all ethnic/racial groups, but a perceived academic ease of transition was only significant for the Latinx, Asian, and White students in the study. Their findings also demonstrated that Black, Asian, and Latinx participants reported lower levels of SB in comparison to White college students. It is of note that rates of SB in Multiracial students were not significantly different than the rates of SB among White students in this study. This is surprising as Multiracial individuals have often been

identified in past research as a population that regularly struggles with a sense of community (Bracey et al., 2004; Fischer et al., 2014; Shih & Sanchez, 2009).

Murphy and Zirkel (2015) conducted two experiments on the experiences of URMCS. The first study was an experimental design that took place in a PWI. The study explored how first-year students' perceptions of the ethnic/racial makeup of different majors was associated with their choice of major and anticipated sense of SB about choosing that major. The results of this study highlighted that students' perceived social representation of race in their respective majors was directly related to their sense of SB, regardless of their ethnic/racial group membership. Moreover, the researchers discovered that one's sense of SB was a significant factor in predicting a student's likelihood of choosing a major based on if they felt their ethnic/racial group was well represented in said major. The second study examined how students' sense of SB in their first semester in college was related to their academic performance the following term. The authors found that the relationship between SB and academic performance was not significant for White students, but that it was strongly significant for URMCS. These findings aligned with the authors' hypothesis that a sense of SB would be particularly salient to URMCS due to the numerous barriers that accompany their minority status. However, it is noteworthy that this study did not find significant group differences between White students and URMCS in initial rates of SB when entering college.

In exploring SB and ethnic identity in a sample of URMCS at a PWI, Gummadam et al. (2016) found that SB was negatively associated with depression and positively associated with students' perceived self-worth and academic abilities. Moreover, this study's findings suggest that SB is more strongly associated with the psychological

adjustment of URMCS than ethnic identity. This finding is particularly notable as ethnic identity has historically been one of the most cited protective factors for ethnic/racial minority groups (Bracey et al., 2004; Fischer et al., 2014). However, this study did not find significant differences in SB by racial group.

Notably, some recent SB research has highlighted how the intersection of race and gender identity is an important relationship to examine. In a qualitative study of college seniors in STEM fields across University of North Carolina campuses, Rainey et al., (2018) showcased that both women and URMCS have lower rates of SB in these fields and that, in particular, women of color had even lower rates of SB. In another study examining the role of URM status and gender on SB in introductory computer fields across 15 different private and public universities, Sax et al. (2018) found that both women and URMCS reported lower degrees of SB than men and White students as soon as two weeks into their first semester. Further, the women in this study experienced significant decreases in their sense of SB over time and there were ultimately significant differences in rates of SB between URM women and URM men. As other research has shown that there are differences in SB by gender (Lewis et al., 2017; Rainey et al., 2018; Silver, 2020), there is a need for more research on how the intersection of gender and URM status interplays with students' sense of SB.

SB Interventions for URMCS

In response to findings evidencing the importance of SB, there has been an increase in intervention efforts designed to improve SB in college populations (Layous et al., 2017; Shnabel et al., 2013; Stephens et al., 2014). Many of these interventions have been tailored to URMCS in response to the research demonstrating the importance of SB

within this population. A study by Shook and Clay (2012) examined the outcomes of interracial roommate pairings for incoming first-year students on SB. The authors found that when URMCS were roomed with White students, they demonstrated higher rates of SB and better GPAs than URMCS who were roomed with other URMCS. The findings also showed that SB partially mediated the relationship between roommate type and increases in GPA. In another study, Stephens et al. (2014) implemented a "difference-education" intervention with first-generation incoming college students designed to increase their "social fit", a construct that is analogous to SB. This intervention utilized stories from senior students to frame one's first-generation status as a strength and normalize the college acclimation experience. Students who were exposed to the intervention demonstrated higher GPAs, a heightened likelihood to utilize campus resources, increases in social engagement, and lower levels of stress and anxiety at the end of the year in comparison to the control group. However, while the sample used in this study was ethnically/racially diverse, this study did not examine how outcomes differed between ethnic/racial groups.

In examining SB among White and Black first-year college students at a PWI, Hausmann et al. (2007) implemented a SB intervention which consisted of sending students letters and gifts to affirm their value as a member of the university. The authors found that, though the degree of SB lessened across the span of the year for all students in this study, the rate of this decrease was significantly lessened for those who received the intervention. They also noted that a sense of SB was similarly predictive of intentions to persist in school for both the Black and White students in their study. Additionally, the study showed that the ability of students to integrate into their academic environment was

not associated with student's sense of SB at the beginning of the year, but this relationship became significant later in the year. The authors also found that peer support, peer group interactions, parental support, and interactions with faculty were all associated with higher initial rates of SB for incoming college students. In this study's sample, peer support was more strongly related to SB for Black students than for White students.

In response to the continued need for SB interventions tailored for URMCS, Walton and Cohen (2011) piloted an SB intervention for Black college students that involved exposing first-year students to a set of college transition stories from demographically-diverse upper-year students thematically centered on navigating the transition into a college environment, discovering a sense of community, and finding social supports as part of a marginalized community. Participants exposed to this intervention demonstrated improvements in long-term SB, health, happiness, and GPA. Guided by this study, Patterson Silver Wolf et al. (2017) conducted a pilot study that used a similar SB intervention with multiple different ethnic/racial groups. The authors' findings demonstrated that increases in SB were linked to increases in GPA and non-significant increases in retention for the URMCS in their sample, but differences between unique ethnic/racial minority groups were not explored in this study.

The current literature on SB among URMCS suggests that SB is particularly salient to the academic and psychological outcomes of this population. While this research base has been helpful in articulating the importance of SB for URMCS, there is still a need for further research due to a dearth of research on how anticipated SB affects incoming students, conflicting findings on the effects of SB, limited research on SB's impact on psychological outcomes, and unexplored or underexplored distinctions

between ethnic/racial groups. Existing studies exploring SB among URMCS are largely limited by disproportionately studying only Black students, combining all URMCS into a single "minority" category, not examining how SB presents in Multiracial populations, and design limitations (Murphy & Zirkel, 2015; Gummadam et al., 2016; Walton & Cohen, 2011). In response to the gaps and conflicting findings in past research, the current study aims to explore the role that anticipated SB uncertainty plays in the academic and psychological outcomes of different URM groups. Further examination of the constructs of interest will add to the current body of literature on SB and offer guidance on new ways to approach the racialized systemic inequalities that persist in higher education.

Current Study

Given the call for more research on how SB uniquely impacts different minoritized populations in college settings (e.g., Gummadam et al., 2016; Johnson et al., 2007; Patterson Silver Wolf et al., 2017), in this study I examined the relationship between anticipated SB uncertainty on the academic success, psychological wellness, and experienced SB uncertainty of college students of different racial groups. The examination of anticipated SB uncertainty was a novel approach as all other existing studies examining SB in college populations measure SB after matriculation. This variable was examined to help explain how students SB expectations prior to entering college interacted with their experienced SB uncertainty, academic outcomes, and psychosocial wellness over time. Academic outcomes were measured by examining end-of-year GPA and second-year retention. These variables were selected due to both the established GPA and degree completion disparities between URMCS and White college

students (Charles et al., 2009; O'Keefe, 2013; Shapiro et al., 2017) and the past literature demonstrating a relationship between GPA, college retention, and SB among URMCS (Murphy & Zirkel, 2015; Patterson Silver Wolf et al., 2017, Walton & Cohen, 2007, 2011). Facets of "psychological wellness" were measured by examining the constructs of sadness, perceived stress, and life satisfaction. These variables have all been linked to SB in majority White college populations (Shnabel et al., 2013; Stephens et al., 2014; Steger & Kashdan, 2009) yet they remain underexplored among differing URMCS.

Consistent with the literature on SB, I examined the confounding role of academic preparedness (HSGPA and ACT/SAT scores) and precollege context (generational status and subjective social status) on the outcome variables of interest given previously established links between these variables and college academic and social outcomes (Flores et al., 2017; Kennedy and Tuckman, 2013; Klugman, 2012; Martin et al., 2017; Museus & Maramba, 2011; Wolniak & Engberg, 2010). In addition, I examined how academic preparedness and precollege context was associated with initial anticipated SB uncertainty of the study participants. HSGPA and ACT/SAT scores were all used to quantify academic preparedness as previous research has shown that singular measures of academic preparedness are often unreliable due to the degree of variance between schools (Allensworth & Clark, 2020). Because gender has been linked to academic achievement and has been shown to be associated with students' sense of SB (Fischer, 2007; Massey, & Fischer, 2005; Rainey et al., 2018; Sax et al., 2018), I also examined gender identification as a potential control variable and included this variable in analyses when appropriate. As the data used in this study were paired with varying SB interventions, treatment condition was also examined as a potential control variable in each analysis as

assessment of these interventions was not the goal of the current study.

Research has suggested that SB may be more impactful on the academic and psychological wellness of URM populations in comparison to White populations (Hurtado & Carter, 1997; Murphy & Zirkel, 2015, Shnabel et al., 2013; Walton & Cohen, 2011). Therefore, I hypothesized that anticipated SB uncertainty would be a stronger predictor of academic success and psychological wellness for URMCS than White students. As there is limited and conflicting research on how SB differentially presents in specific URM groups, the analyses examining anticipated SB differences between the respective URM groups in this study were largely exploratory.

Research Questions

1. Do URMCS have higher levels of anticipated SB uncertainty than White students?
2. Are precollege generational status, subjective social status, and academic preparedness (i.e., HSGPA and ACT/SAT scores) associated with anticipated SB differentially for URM and White students?
3. Does anticipated SB predict experienced SB?
    a. Are any observed relationships between anticipated SB and experienced SB moderated by URM group membership (i.e., URM versus White)?
4. Does anticipated SB predict psychological wellness (higher life-satisfaction, lower sadness, and lower perceived stress)?
    a. Are any observed relationships between anticipated SB and psychological wellness moderated by URM group membership (i.e., URM versus White)?

5. Does anticipated SB predict academic outcomes (year one GPA and year two retention)?
    a. Are any observed relationships between anticipated SB and academic outcomes moderated by URM group membership (i.e., URM versus White)?

CHAPTER II

METHODS

Participants

Data were collected as part of the College Wellbeing and Success Initiative (SWaSI), a longitudinal research study designed to examine student wellbeing and success across multiple cohorts at a university in the pacific northwest region of the United States. The initiative received IRB approval prior to data collection (IRB Protocol number: 05292018.036). This study included data from two consecutive cohorts, 2018-19 and 2019-20. For each cohort, baseline data were gathered in the summer prior to matriculation and end-of-year data were gathered in the spring quarter of students' first year. In the 2019-20 cohort, the wording in the initial email was changed so that completing the assessment was framed as an instruction instead of an invite.

After collapsing data across cohorts, the sample for this study originally included 3,987 students who consented to release their admission records and demographic information. Of these, 20 identified as American Indian or Alaska Native, 279 as Asian American, 84 as Black or African American, 602 as Hispanic or Latinx, 20 as Native Hawaiian and Other Pacific Islander, 340 as Multiracial, and 2,542 as White. One hundred students did not provide race/ethnicity information to admissions and were subsequently assigned with an "unknown" ethnic/racial identity. Students with an "unknown" ethnic/racial background were not included in this study due to a lack of demographic information that would be central to analyses. American Indian/Alaska Native students and Native Hawaiian/Other Pacific Islander students also were not included in this study due to an inadequate sample size required to draw meaningful

conclusions about these groups of students. After removing individuals because of small sample size and a lack of demographic information, the analytic sample consisted of 3,847 students.

The racial composition of this final sample was 66% White or European American, 16% Hispanic or Latinx, 9% Multiracial, 7% Asian American, and 2% Black or African American. Female identified participants (58%) made up a larger percentage of the sample than male identified individuals (42%). Approximately 68% of the sample consisted of continuing-generation students and the remaining 32% were first-generation students. A slight majority of the sample were part of the 2019-20 cohort (55%) and the remaining students (45%) were part of the 2018-19 cohort.

Survey Procedures

All students who were 18 years old or older at the time of assessment were invited to complete the baseline assessment through emails from the research team in the Division of Student Life. Following the initial invitation, three reminder emails were sent to students requesting completion of the assessment prior to the start of the Fall quarter. The directions for the baseline assessment indicated that it would take approximately 30 minutes to complete. Those who completed the baseline assessment were invited to complete their end-of-year follow-up assessment during week six of the spring quarter through emails from the research team in the Division of Student Life. Only those who participated in the baseline assessment were invited to complete an end-of-year follow-up assessment during each subsequent spring quarter. Following the initial email invitation to complete the follow-up assessment, three email reminders to complete the survey were sent to students over a four-week-span until the survey closed at the end of week ten of

the spring quarter. On average, the follow-up assessment took 10-15 minutes to complete. All surveys were administered through the Qualtrics online survey platform. The entire survey protocol can be seen in Appendix A.

Compensation

Participants in this study were not compensated for completing the baseline survey. The first 1,000 students in the 2019 end-of-year follow-up and the first 1,100 students in the 2020 end-of-year follow-up to complete the survey were compensated with a $5 Amazon gift code.

Measures

Student Background Data

Admission records were used to obtain demographic information about participant age, gender identification, and racial group membership. Age was recorded at the time of admission. Ethnocultural data were restricted by national standards applied to colleges and universities and related census data categorization. To record race/ethnicity, prospective students were first asked to identify whether they were Hispanic or Latino (yes, no) and then were asked to identify racial categories that apply to them (American Indian or Alaska Native, Asian, Black or African American, Native Hawaiian or Other Pacific Islander, White). If students selected "no" regarding ethnicity (i.e., whether they are Hispanic or Latinx) and selected more than one racial category, they were categorized as "Two or more races." If they selected “yes" regarding ethnicity and selected at least one racial category, they were nonetheless categorized as Hispanic or Latinx. Gender identification was measured as a binary variable (male, female). Missing gender identification data were filled using answers from the “What is your gender identity”

question in the baseline survey. Admission records were also utilized to obtain high school GPA (HSGPA) and ACT/SAT scores. ACT scores were converted to the SAT scale for uniformity of data.

Generational status was calculated from a combination of admissions data and demographic data collected at the end of baseline wellbeing assessment. In admissions, prospective students were asked what the highest level of education of any parent or guardian was. Response options included none, some grade/primary school, completed grade/primary school, some high/secondary school, graduated from high/secondary school (or equivalent), some trade school or community college, graduated from trade school or community college, some college/university, graduated from college/university, and graduate school. At the end of the baseline wellbeing assessment, prospective students were asked what the highest level of education of each of their parents/guardians was using the response options of some high school, no diploma; high school diploma, GED; some college credit, no degree; 2-year technical/Associate's degree; 4-year college/university degree; graduate degree (Masters, Doctorate, Law); or don't know/not applicable. Students were instructed to use the "don't know/not applicable" option when having two parents/guardians did not fit their family structure. Students who had at least one parent who "graduated from college/university" or had a "4-year college/university degree" were considered continuing-generation and students who did not have any parents who "graduated from college/university" or had a "4-year college/university degree" were considered first-generation. Data from the baseline wellbeing assessment were used to fill missing data from admissions records when possible.

A version of the MacArthur Subjective Social Status Scale (Goodman et al., 2001)

was used to measure participants' self-appraisal of their social status. On this measure, participants were presented with an image of a ladder with ten steps next to a short excerpt explaining that the ladder conceptualized those who are worst off and best off in society. Students were then prompted to rate the level at which they thought their family would be on this ladder. The scale of the ladder ranged from 1-10 with lower numbers indicating lower appraisals and higher numbers indicating higher appraisals. The scale was coded from 1-10 to reflect these appraisals.

Academic Outcomes

Educational records were used to obtain first-year GPA and enrollment status. Enrollment status was used to document second-year retention.

SB Uncertainty

Anticipated SB uncertainty and experienced SB uncertainty was measured using four items adapted from Walton and Cohen's (2007, 2011) 17-item Social Fit Inventory. This measure was originally designed to assess participants' sense of experienced SB (I fit in well at [university name]) using a 5-point Likert-type scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Variations of this measure have been used in past research on diverse college populations with internal consistency scores ranging from $\alpha = .84$ to $\alpha = .89$ (Walton & Cohen, 2007; Walton et al., 2012).

The items from this measure were adapted in two ways in the current study. First, the items were modified to reflect SB uncertainty instead of experienced SB (e.g., I feel confident that I will belong at [university name] vs. I belong at [university name]). Second, the items in the baseline assessment were framed to assess students' prospective uncertainty about their sense of SB prior to matriculation while the end-of-year measures

were framed to measure participants' experienced SB uncertainty (e.g., I worry that I will be an outsider at [university name] vs I worry that I am an outsider at [university name]). The adaptations to these questions were modeled after items from Lewis and Hodges' (2015) Academic Uncertainty Scale so that the SB measures were as similar as possible to the measures of academic uncertainty included in the assessment (see Appendix A). Responses were measured using a 6-point Likert-type scale ranging from 1 (*strongly disagree*) to 6 (*strongly agree*) and coded from 1 to 6 reflect the scores from these scales before being averaged to form a composite. The adapted version of this scale was shown to have good internal consistency in research on students from the 2015-16 cohort of the initiative from which this study's data were gathered (Clark, & Hodges, 2016). For the 2015-16 cohort of this initiative, the internal consistency for each respective cohort was $\alpha = .82$ at baseline and $\alpha = .81$ in the end-of-year follow-up assessment.

Life Satisfaction

The five-item Satisfaction with Life Scale (SWLS; Diener et al., 1985) was used to measure life satisfaction. This scale uses a 6-point Likert-type scale ranging from 1 (*strongly disagree*) to 6 (*strongly agree*) to gauge participant views on their overall life satisfaction (e.g., I am satisfied with my life). The responses were coded from 1 to 6 to reflect the Likert-type scale scores and averaged to form a composite. This scale has been used in past research on URMCS and has been found to demonstrate good validity and reliability with this population, although coefficients were not reported (Ojeda et al., 2014; Vela et al., 2017).

Sadness

A sadness subscale from the Positive and Negative Affect Schedule – Expanded

Form (PANAS-X; Watson & Clark, 1999) was used to measure participant sadness. This measure prompted participants to indicate the extent that they felt five different emotions (i.e., sad, blue, downhearted, alone, and lonely) during the past month using a 5-point Likert-type scale ranging from 1 (*very slightly or not at all*) to 5 (*extremely*). Responses were coded from 1 to 5 to reflect the Likert-type scale scores and averaged to form a composite. This scale has been utilized in past research on college populations and demonstrated good internal consistency in these studies (Ehrenberg et al., 2016; Paukert et al., 2006; Weiss et al., 2018). It has further been shown to have good validity and reliability when used with non-clinical samples (Watson & Clark, 1999).

Perceived Stress

The four-item short form Perceived Stress Scale (PSS-4; Cohen et al., 1983) was used to measure the extent to which participants felt stressed during the past month (e.g., In the last month, how often have you felt that you were unable to control the important things in your life?) using a 5-point Likert-type scale ranging from 1 (*never*) to 5 (v*ery often*). The responses were coded from 1 to 5 to reflect the Likert-type scale scores and two of the items were reverse-scored. The items were then averaged to form a composite. The validity of this measure has been established with college populations (Cohen et al., 1983). Further, a prior review of the PSS-4 across 19 studies of mostly college students found the internal consistency reliability of this measure to be within acceptable ranges (Lee, 2012).

Analysis Plan

To answer the first research question, an ANCOVA was employed to examine if baseline levels of anticipated SB differed between URM and White students. Research

question two was addressed by using three regressions and a two-way ANCOVA to examine relationships between precollege context (generational status and subjective social status) and academic preparedness (HSGPA and ACT/SAT scores) on incoming students' baseline levels of anticipated SB. These analyses also examined the interaction effects of race and the respective predictor variables. In the regressions involving subjective social status, HSGPA, and ACT/SAT scores, predictor variables were centered around their means (Weisberg, 2005). The race moderator was dummy coded to allow for the utilization of multiple categorical predictor variables in these analyses.

To address research questions three, four, and five, a series of linear regressions and a logistic regression were employed. The linear regressions investigated how incoming first-year college students' anticipated SB predicted life satisfaction, perceived stress, sadness, experienced SB, and GPA at the end of their first year. In each of these regressions, predictor variables were centered around their means (Weisberg, 2005). The moderating role of race was employed in each respective regression to explore how the relationships between anticipated SB and the outcome variables differed by racial group membership. A logistic regression was used to examine how incoming first-year college student's baseline levels of SB predicted second-year retention measured in the fall semester of students' second year. The moderating role of race was also employed in this regression to explore how the relationship between anticipated SB and second-year retention outcomes differed by racial group.

In all analyses, theoretically identified covariates were tested and retained if they were found to be significantly predictive in analyses ($p < .05$). Gender identification was considered as a theoretically identified potential covariate in all analyses. In analyses

examining outcomes measured in the end-of-year assessment, treatment condition, subjective social status, HSGPA, ACT/SAT scores, and generational status were examined as potential covariates. In analyses examining end-of-year psychological wellness outcomes, baseline levels of the variable of interest (i.e., baseline sadness when measuring end-of-year sadness) were also examined as potential covariates. In all analyses, retaining all potential covariates yielded similar results for the overall model as retaining only those covariates that were shown to be significant.

The interpretation of effect sizes was informed by Cohen's eta squared *(η^2)* rules (i.e., small = .01, medium = .06, large = .14) in the ANCOVA analyses and Cohen's f^2 rules (i.e., small = .02, medium = .15, large = .35) in the regression analyses (Khalilzadeh & Tasci, 2017; Selya et al., 2012). However, it is worth noting that past research has shown that the magnitude of effect sizes is greatly impacted by large sample sizes (Bakker et al., 2019) and the application of categorical moderators (Aguinis et al., 2005). One study by Cheung and Slavin (2016) showed that, on average, effect sizes with samples of less than 100 were 3.5 times higher than effect sizes in comparable research with samples sizes of over 2000. Further, a research review by Aguinis et al., (2005) showed that the median effect size in moderation analyses with categorical moderators was only .002 and argued that Cohen's f^2 rules may be unrealistically stringent for analyses with categorical moderators. As such, in this study, all significant moderation analyses with an effect size of at least η^2 =.001 or f^2 = .005 will be interpreted due to this study's large sample size and utilization of categorical moderators.

CHAPTER III

RESULTS

Preliminary Analyses

Data were analyzed by using SPSS Statistics for Windows, Version 27. Most missing data were attributable to students participating in the baseline survey and not in the subsequent end-of-year survey (735 of 3,847 students who at least partially participated in the baseline survey at least partially participated in the end of year survey: 19%). The missing data in the end-of-year survey was construed as non-participation instead of attrition. Missing data on measures of precollege context, academic preparedness, and baseline psychological wellness variables were shown not to be missing at random. As the highest percentage of missingness in these variables was 6.5%, missingness in these variables was handled using multiple imputation as Buhi et al., (2008) demonstrated that this procedure is appropriate for data with moderate or low levels of missingness even when the data is shown not to be missing at random. Following the multiple imputation procedure, the OMS Bar Procedure was utilized to multiply the imputed dataset into a single dataset.

Data were screened prior to the analyses to ensure that the assumptions of homogeneity of variance and linearity were met. All scale variables except end-of-year GPA and end-of-year life satisfaction were transformed using a log base 10 plus a constant (lg10 + 1) transformation to reduce skewness and improve the shape of their respective distributions (Weisberg, 2005). To address normality concerns with end-of-year GPA and end-of-year life satisfaction that were not ameliorated using the lg10 + 1 transformation, the inverse distribution function in SPSS was used to transform these

variables to reduce skewness and improve the shape of each respective distribution. Following the transformations, all univariate distributions were examined for skewness and kurtosis and were found to be within acceptable ranges for a normal distribution. The variance inflation factor, tolerance, variance proportions, and condition indices were examined for evidence of multicollinearity. The data supported the assumption of no multicollinearity.

An analysis of diagnostics was conducted on all regressions to examine concerns with cases exerting undue influence on the model. Extreme outliers were removed and treated as missing data when examination of the data indicated that removing these outliers was appropriate. In the analysis of anticipated SB between racial groups, four univariate outliers were identified among Black or African American students. These outliers were examined and retained as they seemed appropriately indicative of the participants' anticipated SB in each case. In the analysis of anticipated SB on end-of-year life satisfaction, five univariate outliers in end-of-year life satisfaction were removed that were drastically different from the scores of other participants. Last, in the analyses examining end-of-year GPA, GPAs that were less than 1.0 (61 cases) were removed from the analyses to improve the shape of the distribution. In each of these cases, data were examined with and without including outliers and there was no significant difference in outcomes when accounting for these outliers.

Descriptive information for the variables included in the study are detailed in Table 1. Correlations between the continuous variables in this study are detailed in Table 2.

Table 1

Descriptive Statistics for Variables of Interest by Racial Group Membership ($n = 3{,}847$)

	White			Multiracial			Hispanic or Latinx			Black or African American			Asian		
Variable	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*	*n*
Subjective social status	0.889	0.090	2542	0.876	0.091	340	0.825	0.053	602	0.838	0.110	84	0.855	0.104	279
ACT/SAT scores	3.097	0.048	2542	3.089	0.035	340	3.065	0.053	602	3.045	0.061	84	3.090	0.051	279
High school GPA	0.671	0.034	2542	0.667	0.035	340	0.662	0.033	602	0.650	0.035	84	0.671	0.033	279
Baseline life satisfaction	0.224	0.053	2542	0.216	0.051	340	0.219	0.054	602	0.200	0.064	84	0.207	0.052	279
End-of-year life satisfaction	0.686	0.201	490	0.641	0.194	71	0.632	0.202	107	0.617	0.145	10	0.606	0.198	53
Baseline perceived stress	0.123	0.053	2542	0.131	0.050	340	0.126	0.054	602	0.132	0.052	84	0.132	0.048	279
End-of-year perceived stress	0.155	0.057	487	0.150	0.061	71	0.164	0.052	109	0.140	0.058	11	0.154	0.058	56
Baseline sadness	0.105	0.071	2542	0.103	0.070	340	0.103	0.073	602	0.108	0.076	84	0.107	0.069	279
End-of-year sadness	0.150	0.083	490	0.146	0.089	71	0.145	0.081	107	0.127	0.095	10	0.135	0.076	53

Table 1, continued.

Descriptive Statistics for Variables of Interest by Racial Group Membership ($n = 3{,}847$)

	White			Multiracial			Hispanic or Latinx			Black or African American			Asian		
Variable	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*	*n*
Baseline SB Uncertainty	0.112	0.070	2542	0.118	0.069	340	0.116	0.071	602	0.127	0.067	84	0.129	0.070	279
End-of-year SB Uncertainty	0.104	0.079	493	0.105	0.078	71	0.111	0.074	107	0.107	0.070	10	0.101	0.078	54
End-of-year GPA	3.308	0.651	2507	3.27	0.722	337	3.11	0.648	580	2.864	0.573	82	3.299	0.691	279
Female identified			1455			201			354			47			175
Male identified			1087			139			248			37			104
First-generation			641			94			338			42			110
Continuing-generation			1901			246			264			42			169
Enrollment in second year			2201			293			500			69			254
Not enrolled in second year			341			47			102			15			25

Table 1, continued.

Descriptive Statistics for Variables of Interest by Racial Group Membership (n = 3,847)

	White			Multiracial			Hispanic or Latinx			Black or African American			Asian		
Variable	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*	*n*
Treatment condition			1797			247			439			60			203
Control condition			745			93			163			24			76

Note. Subjective social status, baseline test scores, high school GPA, baseline life satisfaction, baseline perceived stress, baseline SB uncertainty, end-of-year perceived stress, end-of year sadness, and end-of-year SB uncertainty were transformed using a log base 10 plus a constant transformation. End-of-year life satisfaction and end-of-year GPA were transformed using the inverse distribution function in SPSS.

Table 2

Pearson Correlation Matrix for Continuous Variables

Variable	1	2	3	4	5	6	7	8	9	10	11	12
Subjective social status	1.000											
ACT/SAT scores	.204**	1.000										
High school GPA	.428	.436**	1.000									
Baseline life satisfaction	.291**	.024	.053**	1.000								
End-of-year life satisfaction	.187**	.023	.107**	.434**	1.000							
Baseline perceived stress	-.158*	-.025	-.002	-.474**	-.206**	1.000						
End-of-year perceived stress	-.073*	.039	.040	-.184**	-.442**	.226**	1.000					
Baseline sadness	-.113**	.075**	.029	-.424**	-.267**	.554**	.249**	1.000				
End-of-year sadness	-.060	.092*	.054	-.176**	-.419**	.215**	.652**	.315**	1.000			
Baseline SB uncertainty	-.120**	.046**	.061**	-.281**	-.135**	.333**	.180**	.315**	.165**	1.000		
End-of-year SB uncertainty	-.071	-.042	-.061	-.193**	-.408**	.162**	.300**	.196**	.354**	.261**	1.000	
End-of-year GPA	.074**	.327**	.491**	.078**	.131**	-.051**	-.042	-.027	.010	.030	-.061	1.000

Note. $p < .05$ *, $p < .01$**.

Research Question # 1 - Anticipated SB by Racial Group Membership

To examine group differences in anticipated SB by race, data were analyzed with a one-way ANCOVA to examine the association between race and anticipated SB. Potential covariates of gender identification, generational status, ACT/SAT scores, HSGPA, and subjective social status were originally tested in the analysis and gender identification, subjective social status, and ACT/SAT scores were found to be predictive in the model. As such, these variables were retained as covariates in the model. The independent variable was race with five levels: (a) White, (b) Hispanic or Latinx, (c) Two or more races, (d) Asian, and (e) Black or African American. The dependent variable was baseline anticipated SB scores.

Descriptive statistics for race by anticipated SB are presented in Table 3. There was a significant effect of race on baseline anticipated SB scores after controlling for the effects of gender identification, subjective social status, and ACT/SAT scores, $F(4, 3{,}839) = 3.81$, $p = .004$, $\eta^2 = .004$. Post hoc examination of group differences was conducted using a Bonferroni adjusted alpha level of .01 per test (.05/5). Results showed that the average baseline anticipated SB uncertainty score was significantly higher for Asian students ($M = .13$, $SD = .01$) than White students ($M = .11$, $SD = .01$). However, the average scores for Hispanic or Latinx students ($M = .11$, $SD = .01$), Multiracial students ($M = .12$, $SD = .01$), and Black or African American students ($M = .13$, $SD = .01$) did not significantly differ from the mean scores of the other racial groups.

Table 3

Descriptive Statistics for Social Belonging Uncertainty by Racial Group

Racial group	*n*	*M*	*SD*
White	2542	0.112[a]	0.001
Hispanic or Latinx	602	0.114	0.003
Two or more races	340	0.118	0.004
Asian	279	0.127[a]	0.004
Black or African American	84	0.129	0.008

Note. Group means sharing a common superscript are significantly different using the Bonferroni procedure to control family-wise Type I error.
$p < .01$.

Research Question # 2 - Precollege Factors and SB

To examine the relationship between generational status and anticipated SB, baseline anticipated SB was submitted to a two-way ANCOVA with two levels of generational status (first-generation, continuing-generation) and five levels of race (White, Hispanic or Latinx, Multiracial, Black or African American, and Asian) while controlling for gender identification. The interaction between race and generational status was not significant, $F(4, 3836) = 1.31$, $MSE = 0.01$, $p = .26$. The main effect of race was significant $F(4, 3836) = 2.53$, $MSE = 0.01$, $p = .04$, $\eta^2 = .003$, suggesting that the mean scores differed by racial group membership. The main effect of generational status was not significant $F(1, 3836) = 0.99$, $MSE < 0.01$, $p = .47$ suggesting that generational status did not have a significant effect on anticipated SB.

Race was examined as a moderator of the relationship between subjective social status, HSGPA, and ACT/SAT scores and baseline levels of anticipated SB using three separate regression analyses. In each analysis, gender identification was examined as a potential covariate. Gender was ultimately retained as a covariate in the analyses

examining HSGPA and ACT/SAT scores as it proved to be a significant predictor in these models. When examining potential covariates in these analyses, no covariates were shown to be significant in the analysis examining the relationship between subjective social status and anticipated SB. As such, in this analysis subjective social status was entered into the first step of the regression and the interaction terms between subjective social status and each racial group were entered into the second step.

Detailed findings for the regression of subjective social status predicting anticipated SB uncertainty are reported in Table 4 (see Appendix B). The overall model was significant $R^2 = .01$, $F(5, 3841) = 11.94$, $p < .001$ but the inclusion of interaction effects between subjective social status and race did not explain a significant amount of change in variance above and beyond subjective social status alone $\Delta R^2 < .01$, $F(4, 3841) = 1.26$, $p = .28$. When looking at the unique contribution of the predictors, the results showed that the only significant predictor of anticipated SB was subjective social status $\beta = -0.14$, $t = -6.56$, $p < .001$, $f^2 = .014$. No interactions between subjective social status and race were shown to be significant in the model. These results suggest that lower levels of subjective social status are associated with higher levels of anticipated SB uncertainty and the effect size of this relationship is small. Additionally, the nature of the relationship between subjective social status and anticipated SB was not found to change on a basis of racial group membership.

In the analysis examining the relationship between HSGPA and anticipated SB, the covariate of gender identification was entered into the first step of the model. The predictor variable HSGPA was entered into the second step of the regression and the interaction terms between HSGPA and each racial group were entered into the third step.

Detailed findings for this regression are reported in Table 5 (see Appendix B). The main effect of this model was significant $R^2 = .01$, $F(6, 3840) = 9.19$, $p < .001$ but the inclusion of the interaction effects between race and HSGPA failed to explain a significant amount of change in variance above and beyond HSGPA and gender identification $\Delta R^2 < .01$, $F(4, 3840) = 0.57$, $p = .69$. No interactions between HSGPA and race were shown to be significant and the only significant predictors in this model were the covariate of gender identification $\beta = -0.01$, $t = -6.14$, $p < .001$, $f^2 = .012$ and the predictor variable HSGPA $\beta = 0.06$, $t = 2.86$, $p = .046$, $f^2 = .003$. The effect size of the relationship between HSPGA and anticipated SB fell below the substantial effect size level established in this study. The relationship between HSGPA and anticipated SB was not shown to differ by racial group membership.

Lastly, in the analysis examining the relationship between ACT/SAT scores and anticipated SB, the covariate of gender identification was entered into the first step of the equation, ACT/SAT test scores were entered into the second step, and the interaction terms between ACT/SAT scores and each racial group were entered into the final step. Detailed findings for this regression are reported in Table 6 (see Appendix B). The main effect of this model was significant $R^2 = .02$, $F(6, 3840) = 2.91$, $p < .001$ but like the previous models, the addition of the interaction effects between race and racial group membership did not result in a significant change to the model $\Delta R^2 < .01$, $F(4, 3840) = 2.30$, $p = .057$. As with the previous model, gender identification was shown to be a significant predictor in the model $\beta = -0.11$, $t = -7.08$, $p < .001$, $f^2 = .013$ along with ACT/SAT scores $\beta = 0.07$, $t = 3.30$, $p = .001$, $f^2 = .003$. In this analysis, one interaction effect between ACT/SAT scores and Hispanic or Latinx group membership was also

found to be significant $\beta = -0.04$, $t = -2.37$, $p = .02$, $f^2 = .001$. The effect sizes of both ACT/SAT scores and the interaction between ACT/SAT scores and Hispanic or Latinx group membership fell below the substantial level set for this study. No other interaction effects between racial group and ACT/SAT scores were shown to be significant.

Research Question # 3 - Anticipated SB and Experienced SB

Race was used as a moderator in the analysis examining the relationship between baseline levels of anticipated SB and end-of-year levels of experienced SB. Potential covariates of treatment condition, gender identification, generational status, ACT/SAT scores, HSGPA, and subjective social status were originally tested in the analysis but none of these variables were found to improve the fit of the model and were ultimately not included in the model. In the regression model, anticipated SB was entered into the first step of the regression as the predictor variable . In the second step, the moderator of race was entered into the equation by adding each dummy coded URM group into the model. At step three, the interaction variables between each racial group and baseline SB were entered into the final block.

Detailed findings for the regression of anticipated SB predicting experienced SB are reported in Table 7 (see Appendix B). Using the moderator of race, the overall model was significant $R^2 = .06$, $F(9, 725) = 6.45$, $p < .001$. However, the variance in the model was not significantly changed when including either race $\Delta R^2 < .01$, $F(4, 729) = 2.30$, $p = .86$ or the interaction between anticipated SB and race $\Delta R^2 = .01$, $F(4, 735) = 2.30$, $p = .46$ indicating that these variables did not significantly alter the model over and above anticipated SB. No interaction effects between baseline anticipated SB and race were significant and the only significant predictor in the model was baseline levels of

anticipated SB $\beta = .28$, $t = 6.33$, $p < .001$, $f^2 = .072$. These results suggest that higher baseline levels of anticipated SB uncertainty are positively associated with higher levels of end-of-year experienced SB uncertainty with a small effect size. The relationship between anticipated SB and experienced SB was not found to differ by racial group membership.

Research Question # 4 - Anticipated SB and Psychological Wellness

A total of three separate regressions were run to examine the role of race as a potential moderator in the relationship between baseline anticipated SB and three separate psychological wellness variables (end-of-year life satisfaction, end-of-year perceived stress, and end-of-year sadness). For each analysis, potential covariates of treatment condition, gender identification, generational status, ACT/SAT scores, HSGPA, subjective social status, and baseline levels of the outcome variable of interest were tested as potential covariates and retained when they were shown to be significant predictors.

End-of-Year Life Satisfaction

When examining potential covariates in the analysis of anticipated SB on end-of-year life satisfaction, the only covariates that were shown to be significantly predictive in this model were baseline life satisfaction and generational status. As such, baseline life satisfaction and generational status were entered into the first step of the model as control variables. In the second step, anticipated SB was entered as the predictor variable. At step three, the levels of the race moderator variable were entered into the regression equation. In the final step, the interaction terms between anticipated SB and race were entered into the model.

Detailed findings for the regression of anticipated SB predicting end-of-year life

satisfaction are reported in Table 8 (see Appendix B). The overall model was significant $R^2 = .19$, $F(11, 715) = 16.57$, $p < .001$. However, the inclusion of any variables over and above the covariates did not result in a significant change in variance in the model as demonstrated by nonsignificant changes to the overall model when adding anticipated SB $\Delta R^2 < .01$, $F(1, 723) = 1.67$, $p = .20$, race $\Delta R^2 < .01$, $F(4, 719) = 1.31$, $p = .27$, and the interaction between race and anticipated SB $\Delta R^2 < .01$, $F(4, 715) = 0.73$, $p = .57$ to the equation. The covariate of baseline life satisfaction $\beta = 0.41$, $t = 11.57$, $p < .001$, $f^2 = .185$ and Hispanic or Latinx group membership $\beta = -0.07$, $t = -2.02$, $p = .04$, $f^2 = .002$ were found to be significant predictors in the model. However, there were no other significant findings when examining the effects of race, anticipated SB, or the interactions between anticipated SB and racial groups on end-of-year life satisfaction.

End-of-Year Perceived Stress

When examining potential covariates in the analysis of anticipated SB on end-of-year perceived stress, the only covariates that were shown to be significantly predictive in this model were gender identification and baseline perceived stress. As a result, both baseline perceived stress and gender identification were included as covariates in the first step of the regression model. In the second step of the model, anticipated SB was entered into the model as the predictor variable. At step three, levels of race were entered into the equation as potential moderators. In the final step, interaction variables between anticipated SB and race were entered into the equation.

Detailed findings for the regression of anticipated SB predicting end-of-year perceived stress are reported in Table 9 (see Appendix B). Overall, this model was significant $R^2 = .07$, $F(11, 722) = 5.67$, $p < .001$. Though the inclusion of the predictor

variable of anticipated SB did result in a significant change in the model $\Delta R^2 = .01$, $F(1, 730) = 8.37$, $p = .004$, the inclusion of race $\Delta R^2 = .01$, $F(1, 726) = 1.46$, $p = .21$, and the interaction between anticipated SB and race $\Delta R^2 < .01$, $F(4, 722) = 0.23$, $p = .92$ did not explain a significant amount of variance over and above baseline perceived stress, gender identification, and anticipated SB. The only significant predictors in the final model were baseline perceived stress $\beta = 0.19$, $t = 4.94$, $p < .001$, $f^2 = .033$, anticipated SB $\beta = 0.10$, $t = 2.11$, $p = .04$, $f^2 = .01$, gender identification $\beta = -0.08$, $t = -2.16$, $p = .03$, $f^2 = .005$, and Multiracial group membership $\beta = -0.02$, $t = -2.25$, $p = .025$, $f^2 = .001$. No other racial groups or interactions between racial groups and anticipated SB were found to be significant predictors of end-of-year perceived stress.

End-of-Year Sadness

When examining potential covariates in the analysis of anticipated SB on end-of-year sadness, the covariates of baseline sadness, gender identification, and ACT/SAT scores were found to be predictive of end-of-year sadness. As a result, the covariates of baseline sadness, gender identification, and ACT/SAT scores were inserted into the first step of the regression model. In the second step, anticipated SB was entered into the model as the predictor variable. At step three, the levels of the moderator variable of race were entered into the regression equation. In the final block, interaction variables between anticipated SB and each racial group were entered into the equation.

Detailed findings for the regression of anticipated SB predicting end-of-year life satisfaction are reported in Table 10 (see Appendix B). In this analysis, the main effect of the model was significant $R^2 = .11$, $F(7, 723) = 8.64$, $p < .001$. Again, while the predictor variable was found to contribute to significant change in the model $\Delta R^2 = .01$, $F(1, 726)$

= 4.13, p = .04, the inclusion of race $\Delta R^2 < .01$, $F(4, 722) = 8.37$, $p = .72$ and the interaction between race and anticipated SB $\Delta R^2 = .01$, $F(4, 718) = 8.37$, $p = .32$ did not help to significantly explain additional variance in the model over and above baseline sadness, gender identification, ACT/SAT scores, and anticipated SB. Examination of the final model showed that the significant variables in this model included baseline sadness $\beta = .29$, $t = 7.85$, $p < .001$, $f^2 = .086$, gender identification $\beta = -0.71$, $t = -2.01$, $p = .045$, $f^2 = .005$, and ACT/SAT scores $\beta = .08$, $t = 2.19$, $p = .03$, $f^2 = .006$. Anticipated SB, race, and the interaction between race and anticipated SB were not shown to be significant predictors of the model.

Research Question # 5 - Anticipated SB and Academic Outcomes

To address the research question about the relationship between anticipated SB and end-of-year GPA, a regression examining the moderating role of race between anticipated SB and end-of-year GPA was employed. Potential covariates of treatment condition, gender identification, ACT/SAT scores, HSGPA, and subjective social status were examined in this analysis and the covariates of gender identification, HSGPA, ACT/SAT scores, and generational status were found to be significant predictors of end-of-year GPA. These respective variables were entered as covariates in the first step of the regression model. In the second step, anticipated SB was entered into the model as the predictor variable. At step three, the levels of the moderator variable of race were entered into the regression equation. In the final block, interaction variables between anticipated SB and each racial membership group were entered into the equation.

Detailed findings for the regression of anticipated SB predicting end-of-year GPA are reported in Table 11 (see Appendix B). The main effect of the model was significant

$R^2 = .35$, $F(13, 3771) = 156.86$, $p < .001$. However, there was no significant change in variance in the model after accounting for the covariates. The addition of anticipated SB $\Delta R^2 < .01$, $F(1, 3779) = 0.63$, $p = .43$, race $\Delta R^2 < .01$, $F(4, 3775) = 1.01$, $p = .40$, and the interaction between race and anticipated SB $\Delta R^2 < .01$, $F(4, 3771) = 1.64$, $p = .04$ to the model did not explain a significant amount of variance over and above gender identification, HSGPA, ACT/SAT scores, and generational status. Examination of the coefficients showed that the covariates of gender $\beta = -0.05$, $t = -3.62$, $p < .001$, $f^2 = .003$, generational status $\beta = -.04$, $t = -3.06$, $p = .002$, $f^2 = .003$, HSGPA $\beta = .45$, $t = 30.19$, $p < .001$, $f^2 = .241$, and ACT/SAT scores $\beta = .20$, $t = 13.04$, $p < .001$, $f^2 = .045$ were significant predictors of end-of-year GPA. Race and anticipated SB alone were not shown to be significant predictors in the model but the interaction between anticipated SB and Hispanic or Latinx group membership was shown to be significant $\beta = -.03$, $t = -2.25$, $p < .03$, $f^2 = .001$. However, the effect size of this relationship fell below the substantial level set in this study. All other interactions between anticipated SB and the other racial groups used in the model were not found to be significant.

In the final analysis, a logistic regression was employed to investigate the relationship between anticipated SB and second-year retention. In this analysis the moderation effects of racial group were also examined. Potential covariates of treatment condition, generational status, ACT/SAT scores, HSGPA, and subjective social status were examined in the analysis. The covariates of generational status, HSGPA, and subjective social status were found to be significant predictors of second-year retention and were included in this model. Detailed results of this regression are reported in Table 12 (see Appendix B). The unstandardized Beta weight for the constant was $\beta = -2.87$, *SE*

= 0.54, *Wald* = 28.40, $p < .001$. The predictor variable, anticipated SB, was not found to significantly contribute to the model $\beta = -0.47$, *SE* = 0.28, *Wald* = 0.03, $p = .86$.

Examination of the interaction effects in the model showed that the only significant interaction between anticipated SB and racial group was between Multiracial and White students $\beta = 2.01$, *SE* = 0.87, *Wald* = 5.29, $p = .02$. This finding suggested that Multiracial students with higher degrees of baseline anticipated SB uncertainty are much more likely to return to school in their sophomore year than White students [Exp (β) = 7.443, 95% CI (1.34, 41.21)]. However, the size of the confidence interval in this estimate likely indicates that there was a lack of precision in this finding and a larger sample size for this subgroup is needed to reliably interpret this finding.

A summary of findings from all analyses included in this study can be seen in Table 13.

Table 13

Outcome Summary of Analyses

Research question	Outcome variables	Significant predictors	Non-significant predictors
Research question # 1	Baseline SB uncertainty	Racial group** Gender identification** ACT/SAT scores** Subjective social status** SB comparison of White and Asian students**	All SB racial group comparisons except the comparison of White and Asian students
Research question # 2 (first analysis)	Baseline SB uncertainty	Gender identification** Racial group*	Generational status Generational status x Multiracial group membership Generational status x Hispanic or Latinx group membership Generational status x Black or African American group membership Generational status x Asian group membership
Research question # 2 (second analysis)	Baseline SB uncertainty	Subjective social status**	Subjective social status x Multiracial group membership Subjective social status x Hispanic or Latinx group membership Subjective social status x Black or African American group membership Subjective social status x Asian group membership
Research question # 2 (third analysis)	Baseline SB uncertainty	Gender identification** High school GPA*[a]	High school GPA x Multiracial group membership High school GPA x Hispanic or Latinx group membership High school GPA x Black or African American group membership High school GPA x Asian group membership
Research question # 2 (fourth analysis)	Baseline SB uncertainty	Gender identification** ACT/SAT scores**[a]	ACT/SAT scores x Multiracial group membership ACT/SAT scores x Black or African American group membership

Table 13, continued.

Outcome Summary of Analyses

Research question	Outcome variables	Significant predictors	Non-significant predictors
		ACT/SAT scores x Hispanic or Latinx group membership*$_a$	ACT/SAT scores x Asian group membership
Research question # 3	End-of-year SB uncertainty	Baseline SB uncertainty**	Baseline SB uncertainty Black or African American group membership Asian group membership Multiracial group membership Hispanic or Latinx group membership Baseline SB uncertainty x Black or African American group membership Baseline SB uncertainty x Asian group membership Baseline SB uncertainty x Multiracial group membership Baseline SB uncertainty x Hispanic or Latinx group membership
Research question # 4 (first analysis)	End-of-year life satisfaction	Baseline life satisfaction** Hispanic or Latinx group membership*$_a$	Generational status Baseline SB uncertainty Multiracial group membership Black or African American group membership Asian group membership Baseline SB uncertainty x Multiracial group membership Baseline SB uncertainty x Hispanic or Latinx group membership Baseline SB uncertainty x Black or African American group membership Baseline SB uncertainty x Asian group membership
Research question # 4 (second analysis)	End-of-year perceived stress	Baseline perceived stress** Gender identification* Baseline SB uncertainty*	Black or African American group membership Asian group membership Hispanic or Latinx group membership

Table 13, continued.

Outcome Summary of Analyses

Research question	Outcome variables	Significant predictors	Non-significant predictors
		Multiracial group membership**[a]	Baseline SB uncertainty x Multiracial group membership
			Baseline SB uncertainty x Hispanic or Latinx group membership
			Baseline SB uncertainty x Black or African American group membership
			Baseline SB uncertainty x Asian group membership
Research question # 4 (third analysis)	End-of-year sadness	Baseline sadness**	Baseline SB uncertainty
		Gender identification*	Multiracial group membership
		ACT/SAT scores*	Hispanic or Latinx group membership
			Black or African American group membership
			Asian group membership
			Baseline SB uncertainty x Multiracial group membership
			Baseline SB uncertainty x Hispanic or Latinx group membership
			Baseline SB uncertainty x Black or African American group membership
			Baseline SB uncertainty x Asian group membership
Research question # 5 (first analysis)	End-of-year GPA	Gender identification**[a]	Baseline SB uncertainty
		Generational status**[a]	Multiracial group membership
		High school GPA**	Hispanic or Latinx group membership
		ACT/SAT scores**	Black or African American group membership
		Baseline SB uncertainty x Hispanic or Latinx group membership*[a]	Asian group membership
			Baseline SB uncertainty x Multiracial group membership
			Baseline SB uncertainty x Black or African American group membership

Table 13, continued.

Outcome Summary of Analyses

Research question	Outcome variables	Significant predictors	Non-significant predictors
			Baseline SB uncertainty x Asian group membership
Research question # 5 (second analysis)	Second-year retention	High school GPA**	Gender identification
		Subjective social status**	Generational status
		Racial group*	Baseline SB uncertainty
		Asian group membership*	Multiracial group membership
		Baseline SB uncertainty x Multiracial group membership*	Hispanic or Latinx group membership
			Black or African American group membership
			Hispanic or Latinx group membership
			Baseline SB uncertainty x Hispanic or Latinx group membership
			Baseline SB uncertainty x Black or African American group membership
			Baseline SB uncertainty x Asian group membership

Note: Significant predictors sharing a common subscript had effect sizes smaller than $\eta^2 = .001$ or $f^2 = .005$.
$p < .05$ *, $p < .01$**.

CHAPTER IV

DISCUSSION

The purpose of this study was to examine how anticipated SB uncertainty informs the academic and psychosocial outcomes of college students of varying racial groups at a PWI in the pacific northwest region of the United States. With some exceptions, the results generally demonstrated that anticipated SB uncertainty measured prior to matriculation was not strongly predictive of the academic and psychosocial outcomes examined in this study. Additional findings showed that the only significant differences in baseline levels of anticipated SB by racial group was between Asian students and White students. Further, the role of anticipated SB uncertainty on the academic and psychosocial outcome variables examined in this study were largely not found to differ on a basis of race. These results did not align with the study hypothesis that anticipated SB uncertainty will be a stronger predictor of academic success and psychological wellness for URMCS than White students.

Before discussing the findings in further depth, it is important to note that one major reason that the results of this study may have differed from the results of previous research is the time of measurement used in this study. The current study measured anticipated SB uncertainty prior to matriculation while all other studies examining SB in college populations, to my knowledge, measured experienced SB as SB data were gathered after matriculation. This is an important distinction as students' early college experiences such as their appraisal of the campus environment (Johnson et al., 2007), early establishment of new peer relationships in college (Hoffman, 2002; Murphy & Zirkel, 2015), and perception of a hostile racial climate (Hurtado & Carter, 1997; Mounts,

2004) have all been shown to predict students' sense of experienced SB. The importance of early college experiences on experienced SB can be further articulated by the success of SB interventions that target students shortly after they begin college (Hausmann et al., 2007; Stephens et al., 2014; Walton & Cohen, 2011). As this study mainly focused on anticipated SB measured prior to matriculation, it is important to remember that there are numerous variables that may have impacted student's sense of experienced SB after matriculation that were not able to be captured in the baseline assessment.

In examining the relationship between precollege factors and anticipated SB, findings from this study showed that subjective social status, HSGPA, and ACT/SAT scores were all found to have a significant relationship with baseline anticipated SB scores although only the effect size for subjective social status fell above the substantial range established in this study ($f^2 > .005$). These results suggest that subjective social status prior to entering college is associated with students' sense of anticipated SB prior to matriculation. These findings support some existing research suggesting that socioeconomic status is associated with college students' experienced SB (Ostrove & Long, 2007). The results were also similar to some past findings which showed that generational status and academic preparedness were not linked to experienced SB in college populations (Gopalan & Brady, 2019; Hausmann et al., 2007; Johnson et al., 2007). However, these findings also conflicted with other research that has demonstrated a relationship between experienced SB and generational status in Filipino populations (Museus & Maramba, 2011) and a relationship between experienced SB and academic preparedness in STEM courses (Sax et al., 2018).

Further examination of the findings between anticipated SB and both precollege

context and academic preparedness showed that the outcomes were not shown to differ on a basis of racial group membership. These findings do not support existing theories that racial discrepancies in SB among incoming college students may be attributable to underlying group differences in socioeconomic status, generational status, or academic preparedness (Charles et al., 2009; Strayhorn, 2019). As such, there are likely other factors not examined in this study that may have played a much larger role in contributing to URMCS' anticipated SB prior to matriculation such as anticipated racial adversity (Walton & Cohen, 2007), anticipated social representation (Murphy & Zirkel, 2015), and the knowledge that previously established social supports will attend the same college.

In examining mean differences in anticipated SB uncertainty among different racial groups, data showed that White students have the lowest level of anticipated SB uncertainty followed by Hispanic or Latinx students, Multiracial students, Asian students, then Black or African American students. However, the only significant difference in this analysis was found to be between Asian and White students. These results supported previous research by Johnson et al. (2007) which showed that Asian students have lower rates of experienced SB than White students in their study. The demonstration of significant differences between White and Asian students in this study articulates the importance of challenging popular research practices measuring Asian students. It demonstrates the flaws in grouping Asian students with all other URM groups or grouping Asian students with White students, two common practices in SB research (Sax et al., 2018; Walton & Cohen, 2012). As the college experience of Asian students is ostensibly different than those of other racial groups (Wei et al., 2011), it is important not to subsume these students into other ethnocultural groups. Further, due to the significant

cultural variations among those who are grouped under the Asian racial category, it is preferable to examine Asian ethnocultural subpopulations independently (Museus & Maramba, 2011).

In this study I also conducted analyses to see if baseline levels of anticipated SB predicted experienced SB measured at the end of students' first year of college. This relationship was shown to be predictive and had a small effect size although the outcomes did not differ on a basis of race. While the predictiveness of anticipated SB on end-of-year experienced SB seems easily understandable, the lack of group differences by race conflicts with past research suggesting that SB uniquely decreases more rapidly among URMCS over the course of the academic year (Kugelmass & Ready, 2011; Sax et al., 2018). These findings also challenge the notion that difficulties with a sense of SB among URMCS may be exacerbated over time in college environments due to minority stress (Cokley et al., 2013; Wei et al., 2010), discrimination, microaggressions, and the lack of ethnic/racial diversity among staff and peers in higher education settings (Inzlicht & Schmader, 2012; Murphy & Zirkel, 2015; Walton & Cohen, 2007). The lack of significant differences in changes in SB over time by racial group may have been attributable to smaller sample sizes in some racial groups in the end-of-year survey that made it so that there was not enough statistical power to pick up on differences between groups. Another potential explanation is that the appraisal of anticipated SB by both URMCS and White students accurately mapped onto their experienced SB after matriculation. As detailed data describing the reasons for these findings is not available, further research is needed to truly understand this lack of variation by racial group.

To examine the relationship between anticipated SB and psychosocial outcomes,

anticipated SB was compared to the end-of-year psychosocial variables of life satisfaction, perceived stress, and sadness. Anticipated SB was found to be a significant predictor of end-of-year perceived stress with a small effect size. The moderation analyses between race and anticipated SB on all end-of-year psychosocial outcome variables indicated that these findings did not differ on a basis of racial group membership. While the findings supported previous research linking SB to stress (Kennedy & Tuckman, 2013), it did not support other research linking SB to life satisfaction (Strayhorn, 2019) and sadness or depression (Gummadam et al., 2016; Mounts, 2004; Steger & Kashdan, 2009). Again, this may be attributable to the reality that this study mainly focused on anticipated SB as opposed to experienced SB. As factors that cannot be established until after matriculation such as social adjustment (Ostrove & Long, 2007), college peer relationships (Hoffman, 2002; Murphy & Zirkel, 2015), loneliness (Mounts, 2004), and scholastic competence (Pittman & Richmond, 2008) may have influenced the psychosocial variables of interest in this study, the measurement of anticipated SB may not have been as predictive of these variables as students' experienced SB.

In the examination of the relationship between anticipated SB and academic outcomes, anticipated SB was compared to end-of-year GPA and second-year retention. The only notable finding here was in the significant interaction between anticipated SB and Multiracial group membership. This finding suggested that higher levels of baseline SB uncertainty were more predictive of second-year retention for Multiracial students than for White students. However, the large confidence interval in this finding indicated a lack of precision that was likely attributable to an inadequate sample size or insufficient

variability in this subpopulation. Though the results highlight the potential that anticipated SB may differentially predict Multiracial students' end-of-year GPA, more precision is needed before this finding can be confidently interpreted.

The results of this study's examination of anticipated SB and GPA conflict with prior research that has linked higher levels of experienced SB to improved GPAs (Gopalan & Brady, 2019; Kennedy & Tuckman, 2013; Ostrove & Long, 2007, Layous et al., 2017). It also contradicts findings from SB interventions that have largely tied increases in SB measured after matriculation to improved GPAs (Patterson Silver Wolf et al., 2017, Shook & Clay, 2012; Stephens et al., 2014; Walton & Cohen, 2011). Further, as these outcomes did not differ between racial groups, the findings did not support prior research suggesting that SB may be more impactful on the academic outcomes of URMCS in comparison to White students (Hausmann et al., 2007; Hurtado & Carter, 1997; Johnson et al., 2007; Murphy & Zirkel, 2015; Shnabel et al., 2013; Walton & Cohen, 2007, 2011). The results did align with other research that failed to find a link between SB and GPA in Hispanic or Latinx college populations (Hurtado and Carter, 1997). The null findings between anticipated SB and second-year retention also did not support previous theories linking these variables (Hausmann et al., 2007; Hoffman, 2002; O'Keefe, 2013; Palmer et al., 2014; Strayhorn, 2019; Wei et al., 2011). Again, the measurement of anticipated SB prior to matriculation may have played a major role in these findings.

Limitations

There are a few limitations in this study that merit discussion. First, the role of the COVID-19 pandemic was particularly salient in this study as the pandemic may have

very well impacted students' experienced SB as well as their levels of end-of-year life satisfaction, perceived stress, and sadness. For students in the 2019-20 cohort, the onset of the COVID-19 pandemic drastically changed the way that students spent the final quarter of their freshman year. Students made the drastic change from attending largely in-person classes to exclusively attending classes virtually. Further, due to the governmental recommendations to self-isolate, many students moved away from campus or otherwise ceased many or all in-person interactions with other students. As this ostensibly resulted in increased isolation, limited options for prosocial activities, and lessened opportunities to build new interpersonal relationships or nurture existing relationships with peers, this pandemic likely had a profound impact on the end-of-year experienced SB, perceived stress, sadness, and life satisfaction of these students.

Another limitation in the study may be attributable to the absence of a requirement for participants to complete either the baseline or end-of-year surveys. As such, response bias is a concern as it is possible that the traits of students who chose to participate in the study were markedly different from those who opted not to participate. Further, the usage of unequal racial group sizes resulted in a loss of statistical power in the analyses. As this study was conducted in a PWI, there were marked differences in sample sizes between racial groups wherein the sample of White students greatly outnumbered the sample of each respective URM group. The study would have been improved with a design that allowed for reductions in response biases and more balanced URM group sizes.

Further limitations in this study stemmed from the utilization of a large sample size and categorical moderators which inhibited this study's ability to establish

substantial effect sizes in significant findings. As usage of a smaller sample size may have very well resulted in larger effect sizes (Cheung & Slavin, 2016) it is possible that some findings deemed not to have a substantial effect size in this study may have actually had a measurable effect that was not well captured by the data. Conversely, the large sample size may have increased the likelihood of finding significant effects that were not truly predictive of outcomes due to small effect sizes. The usage of smaller effect size cut-offs in this study as informed by research on average effect sizes (Aguinis et al., 2005) does not align with Cohen's commonly cited rules for effect size significance (Khalilzadeh & Tasci, 2017; Selya et al., 2012) which can make the interpretation of some of this study's findings debatable. Further, the existence of outliers in some analyses was another limitation in this data. Though data were transformed to try to manage outliers, some outliers were still found and included at times which violated an assumption of the regression analyses.

One of the largest limitations in this study was the significant reduction in sample size between the baseline and end-of-year survey due to non-participation. As a result, concerns with power were even more pronounced in research questions measuring end-of-year psychosocial variables as only 735 of 3,847 (19%) students completed the end-of-year survey which included data on these variables. It is reasonable to conjecture that many students did not participate in the end of year survey as a function of disengagement or disenfranchisement with the university (low sense of experienced SB) as much as due to disinterest in participating in a survey at the end of the year, and this would certainly reduce the range of experience represented in the end-of-year survey responses. Although a relationship between anticipated SB and end-of-year experienced

SB was demonstrated, the effect size of this relationship was small which suggests that the relationships between SB at each respective data point and the outcome variables of interest may have differed if experienced SB was the variable of interest in this study. The relationship between end-of-year experienced SB and the outcome variables of interest in this study were ultimately not examined due to an inability to confidently speak to the predictiveness or directionality of variables measured at the same point in time.

Other limitations in this study stemmed from the utilization of a preexisting dataset. This dataset used a modified and shortened measure of Walton and Cohen's (2007, 2011) Social Fit Inventory which has generally been used to examine experienced SB as opposed to anticipated or experienced SB uncertainty. The adaptation and shortening of this measure resulted in the usage of SB metrics that are not yet psychometrically validated. Further, as this study relied on self-report for multiple measures, there is the potential that students may have conceptualized some items on those measures in very different ways. The usage of qualitative research may have helped with clarification about student responses and the provision of more detailed data about each participant's unique experiences. Reliance on a pre-existing dataset also hindered our ability to examine other constructs that have been shown to be associated with SB in previous research such as academic self-efficacy, loneliness, self-worth, anxiety, peer connectedness, and motivation to succeed academically (Freeman et al., 2007, Gummadam et al., 2016; Pittman & Richmond, 2008; Sollitto et al., 2013; Strayhorn, 2019; Zumbrunn et al., 2014). The inclusion of additional measures shown to be associated with SB as well as the usage of a validated SB measure in its full form would have allowed for a more thorough examination of the role of SB in this sample of college

students.

Another limitation in this study stemmed from the heavy reliance on academic records for demographic descriptors of study participants as this led to concerns with accuracy in identifying both gender and ethnocultural identity. Most gender identification data used in this study were gathered using the dichotomous gender identification option utilized by academic records. It is important to note that this measure could not fairly be considered a measure of gender identity due to the restriction of choosing from only two gender identity options. As such, this construct was instead qualified as gender identification. Similar concerns arose with the capturing of student's ethnocultural identity through the utilization of federal coding options for race. The restrictive nature of federal coding options is particularly salient when considering the selection options of the Multiracial, Hispanic or Latinx, and Asian students included in the study. As genealogically, almost half of the country's population would be Multiracial (Gullickson & Morning, 2011), the variations in ethnocultural self-identification within this population may not have been accurately captured with a reliance on federal coding options for racial identity. Additionally, using the "Hispanic" qualifier in the racial identity options and grouping all students into the Hispanic or Latinx category who selected this qualifier means that other nuances in how these students may have self-identified were not considered. Further, as the Asian racial qualifier includes over 50 ethnocultural subpopulations (Museus & Maramba, 2011), the usage of this qualifier cannot truly account for the breadth of differences between these subpopulations and overlooks potentially important differences between ethnocultural subgroups. As such, this study could only be said to have measured participant's federally coded racial group

membership. Considering the potential variations in ethnocultural identity and gender identity that could not be captured using federal coding options, future research on more clearly defined facets of identity could allow for a more thorough and interesting evaluation of the relationship between SB and students' differing identities.

Implications and Future Research

As racialized academic achievement gaps (O'Keefe, 2013; National Center for Education Statistics, 2018) and disparities in mental health persist in higher education (Charles et al., 2009, Strayhorn, 2019) there is a continued need to better understand the reasons behind this phenomenon. SB has been posited as a potential contributor to these ongoing disparities and the significance of this construct has been evidenced through past research (Gummadam et al. 2016; Murphy & Zirkel, 2015; Walton & Cohen, 2007, 2011). The results of the current study questioned the salience of SB in this context as anticipated SB was not shown to greatly predict GPA, retention, sadness, perceived stress, and life satisfaction of the college students in this study and these outcomes did not differ on a basis of race. However, as previously mentioned, the measurement of anticipated SB in this study as opposed to the more commonly measured variable of experienced SB in other research may have played a significant role in this study's findings.

As previous research has regularly demonstrated that experienced SB may differentially predict the academic and psychosocial outcomes of varying racial groups in college environments, the importance of this construct should not be written off. Since previous research suggests that students' sense of SB may drastically change after starting college, future research may benefit from examining the SB of students prior to, and

immediately following matriculation to learn more about how students' anticipated SB changes upon entering college. Further, examination of students' understanding of their changes in SB after matriculation may help provide insight about how student SB is affected by the college experience itself. It may also be helpful to examine how students' sense of SB develops in high school and if the factors that contribute to high school SB also inform anticipated SB prior to starting college. There also remains the continued need to examine SB differences by specific ethnocultural groups as a large amount of research continues to subsume URMs into a singular group which can minimize the differences between URM populations.

Future studies would benefit from measuring SB and outcome variables of interest prior to matriculation, shortly after matriculation, and at different points throughout the academic year by racial group using validated SB metrics. Additionally, as some recent research has demonstrated that experienced SB is uniquely influenced by the intersection between race and gender (Rainey et al., 2018), more research is needed to better understand how both aspects of identity interplay to predict experienced SB in college populations. The availability of detailed data allowing for the exploration of how changes in SB over time were associated with the academic and psychosocial outcomes of varying populations would help to clarify the mixed findings in the existing literature base and provide a better understanding of SB's unique role in college environments.

Conclusion

This study was a unique contribution to the literature on SB in higher education as it explored the unexamined construct of anticipated SB uncertainty and its relationships with precollege context, academic preparedness, psychosocial outcomes, and academic

outcomes. Further, the design of this study allowed for the examination of how these relationships differed by racial group. Findings showed that subjective social status has a relationship with students' levels of anticipated SB and that this relationship did not differ on a basis of race. The findings also showed that students in this study who identified as Asian demonstrated a significantly higher degree of anticipated SB uncertainty prior to matriculation than students who identified as White. This finding is important as it can serve to further dispel the problematic "model minority" rhetoric that continues to impact Asian students (Museus & Maramba, 2011; Wei et al., 2011). Results also showed that anticipated SB was predictive of end-of-year perceived stress for the students in this study and this relationship did not differ on a basis of racial group membership.

Although there were some significant findings, the overall results demonstrated that anticipated SB had very limited predictive power on most of the end-of-year academic and psychosocial outcomes examined in this study. Though the limitation of utilizing a preexisting data set inhibited this study's ability to explore anticipated SB in greater depth, these findings may suggest that experienced SB may be a better predictor of students' academic and psychosocial outcomes than anticipated SB. Ultimately, this is a good thing as this means that students' sense of SB may be altered by their first-year college experiences and their expectations about SB alone are not strongly predictive of their academic and psychosocial outcomes. This means that colleges have the capacity to make meaningful changes so that first-year college students, particularly first-year URMCS, feel welcomed on campus. Future examination of the constructs of anticipated SB and experienced SB may help to paint a better picture about how student SB is impacted by the college environment over time. Developing a greater understanding of

changes in student SB over time can help campuses respond to the needs of students by developing a more welcoming and supportive environment so that students of all different ethnocultural backgrounds can thrive.

APPENDIX A

SURVEY PROTOCOL

Manipulation Checks (College Transition Collaborative, n.d.)

ITEM

What was the most central message from the Current Students Survey you read about?

RESPONSE

That students worry initially that they don't belong at UO but come to feel at home at UO with time.
That students get used to the physical environment (e.g., campus, location) at UO with time.
That students come to understand social and political issues in a more sophisticated way in college.
None of the above

ITEM

Did you learn anything in reading the "What is it like coming to UO?" materials?

RESPONSE

Yes, I learned something.
No, I did not learn anything.

Display This Question:
If Did you learn anything in reading the "What is it like coming to UO?" materials? = Yes, I learned something.

ITEM

Please describe what you learned from reading these materials in a few sentences.

RESPONSE

open-ended

Sense of Social and Academic Fit (Walton & G. L. Cohen, 2007; 2011)

ITEM

People at UO accept me.
I feel like an outsider at UO.
Other people understand more than I do about what is going on at UO.
I think in the same way as do people who do well at UO.
It is a mystery to me how UO works.
I feel alienated from UO.
I fit in well at UO.
I am similar to the kind of people who succeed at UO.
I know what kind of people UO professors are.
I get along well with people at UO.
I belong at UO.
I know how to do well at UO.
I do not know what I would need to do to make a UO professor like me.

I feel comfortable at UO.
People at UO like me.
If I wanted to, I could potentially do very well at UO.
People at UO are a lot like me.

RESPONSE

strongly disagree
moderately disagree
slightly disagree
slightly agree
moderately agree
strongly agree

Sense of Social and Academic Fit – in Major (Walton, Logel, Peach, Spencer, & Zanna, 2015)

ITEM

I belong in [major] at UO.
I feel comfortable in [major] at UO.
Other people understand more than I do about what is going on in [major] at UO.
I think in the same way as do people who do well in [major] at UO.
It is a mystery to me how [major] at UO works.
I feel alienated from [major] at UO.
I fit in well in [major] at UO.
Compared with most other [major] students at UO, I am similar to the kind of people who succeed in [major].
Compared with most other students at UO, I know how to do well in [major].
Compared with most other [major] students at UO, I get along well with people in [major].

RESPONSE

strongly disagree
moderately disagree
slightly disagree
slightly agree
moderately agree
strongly agree

Prospective Belonging – Immediate (College Transition Collaborative, n.d.)

INSTRUCTION

Think ahead to when you arrive on campus this fall.

STEM

How much do you think you will…

ITEM

…feel you fit in at UO when you arrive on campus this fall?
…feel you belong at UO when you arrive on campus this fall?
…feel at home at UO when you arrive on campus this fall?

RESPONSE

not at all

a little
somewhat
a moderate amount
a lot
a great deal
an extreme amount

Prospective Belonging – End of Sophomore Year (College Transition Collaborative, n.d.)

INSTRUCTION

Think ahead to the end of your sophomore year at UO.

STEM

At the end of your sophomore year, how much do you think you will…

ITEM

…feel you fit in at UO?
…feel you belong at UO?
…feel at home at UO?

RESPONSE

not at all
a little
somewhat
a moderate amount
a lot
a great deal
an extreme amount

Belonging Uncertainty (College Transition Collaborative, n.d.)

ITEM

When you think about UO, how often, if ever, do you wonder: "Maybe I don't belong here?"

RESPONSE

never
hardly ever
sometimes
frequently
always

Adapted Belonging Uncertainty – Prospective (Walton & G. L. Cohen, 2007)

ITEM

I'm not confident that I will belong at UO.
I sometimes feel that people at UO will not accept me.
I worry that I will be an outsider at UO.
I am anxious about whether I will fit in at UO.

RESPONSE

strongly disagree
moderately disagree

slightly disagree
slightly agree
moderately agree
strongly agree

Adapted Belonging Uncertainty Scale (Walton & G. L. Cohen, 2007)

ITEM
I'm not confident that I belong at UO.
I sometimes feel that people at UO do not accept me.
I worry that I am an outsider at UO.
I am anxious about whether I fit in at UO.

RESPONSE
strongly disagree
moderately disagree
slightly disagree
slightly agree
moderately agree
strongly agree

Adapted Ability Uncertainty Scale – Prospective at University (Lewis & Hodges, 2015)

ITEM
I worry my abilities will not be good enough to do well at UO.
I often wonder if I have what it takes to succeed at UO.
I feel confident about my abilities.
I worry that no matter how hard I try, I won't be able to perform successfully at UO.
I'm not sure that I'm cut out for UO.
I feel similar to the kinds of people who have what it takes to succeed at UO.
I'm not certain I will "fit in" intellectually at UO.

RESPONSE
strongly disagree
moderately disagree
slightly disagree
slightly agree
moderately agree
strongly agree

Adapted Ability Uncertainty Scale – at University (Lewis & Hodges, 2015)

ITEM
I worry my abilities aren't good enough to do well at UO.
I often wonder if I have what it takes to succeed at UO.
I feel confident about my abilities.
I sometimes feel like other students at UO have skills that I don't.
When I'm doing schoolwork, I feel a sense of competence.
My schoolwork requires some abilities that I'm not sure I possess.
I worry that no matter how hard I try, I won't be able to perform successfully at UO.
When doing schoolwork, I feel I have the skills that I need.

I'm not sure that I'm cut out for UO.
I have no doubts that I possess or can acquire the abilities my schoolwork requires.
I feel similar to the kinds of people who have what it takes to succeed at UO.
I'm not certain I "fit in" intellectually at UO.

RESPONSE

strongly disagree
moderately disagree
slightly disagree
slightly agree
moderately agree
strongly agree

Adapted Ability Uncertainty Scale – in Major (Lewis & Hodges, 2015)

ITEM

I worry my abilities aren't good enough to do well in [major].
I often wonder if I have what it takes to succeed in [major].
I feel confident about my abilities in [major].
I sometimes feel like other students in [major] have skills that I don't.
When I'm doing work in [major], I feel a sense of competence.
[Major] requires some abilities that I'm not sure I possess.
I worry that no matter how hard I try, I won't be able to perform successfully in [major].
When doing work in [major], I feel I have the skills that I need.
I'm not sure that I'm cut out for [major].
I have no doubts that I possess or can acquire the abilities [major] requires.
I feel similar to the kinds of people who have what it takes to succeed in [major].
I'm not certain I "fit in" intellectually in [major].

RESPONSE

strongly disagree
moderately disagree
slightly disagree
slightly agree
moderately agree
strongly agree

Self-Efficacy/Ability (College Transition Collaborative, n.d.)

ITEM

Right now, how confident do you feel that you have the ability to do well at UO?

RESPONSE

not at all confident
slightly confident
somewhat confident
moderately confident
quite confident
very confident
extremely confident

Interpersonal Support Evaluation List (S. Cohen, Mermelstein, Kamarck, & Hoberman, 1985)

ITEM

Appraisal
I feel that there is no one I can share my most private worries and fears with.
There is someone I can turn to for advice about handling problems with my family.
When I need suggestions on how to deal with a personal problem, I know someone I can turn to.
If a family crisis arose, it would be difficult to find someone who could give me good advice about how to handle it.
Belonging
If I wanted to go on a trip for a day (for example, to the country or mountains), I would have a hard time finding someone to go with me.
If I decide one afternoon that I would like to go to a movie that evening, I could easily find someone to go with me.
I don't often get invited to do things with others.
If I wanted to have lunch with someone, I could easily find someone to join me.

RESPONSE

definitely false
probably false
probably true
definitely true

Adapted Three-Item Loneliness Scale (Hughes, Waite, Hawkley, & Cacioppo, 2004; Russell, Peplau, & Cutrona, 1980)

ITEM

How often do you feel that you lack companionship?
How often do you feel left out?
How often do you feel isolated from others?

RESPONSE

strongly disagree
moderately disagree
slightly disagree
slightly agree
moderately agree
strongly agree

Place-Based Belonging

INSTRUCTION (presented on first page of survey before consent)

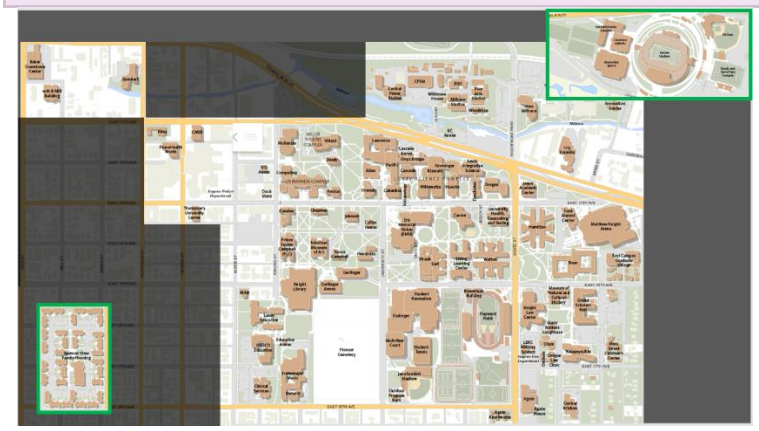
This survey contains pictures, like the one below with which you will interact, and is best completed on a larger screen on which you can zoom in and out easily. If you are using a smaller mobile device, we recommend switching to a device with a larger screen.

ITEM

Please click up to 3 campus locations where you feel like you belong, fit in, are connected, are accepted, etc.

IMPORTANT NOTES: Zoom in on the map to see places better. Click on a dot made by a previous click to remove it.

RESPONSE



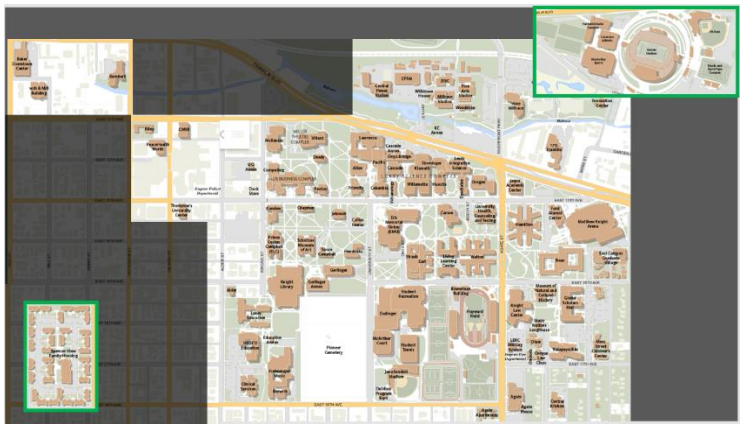
clicks on map

ITEM

Please click up to 3 campus locations where you feel like you **do not** belong, **do not** fit in, are **dis**connected, are **not** accepted, etc.

IMPORTANT NOTES: Zoom in on the map to see places better. Click on a dot made by a previous click to remove it.

RESPONSE



clicks on map

Display This Question:
If Region on map is clicked in.

EXAMPLE ITEM

What specifically about this place makes you feel like you belong, fit in, are connected, are accepted, etc.?

RESPONSE

open-ended

Display This Question:
If Region on map is clicked in.

EXAMPLE ITEM

What specifically about this place makes you feel like you **do not** belong, **do not** fit in, are **dis**connected, are **not** accepted, etc.?

RESPONSE

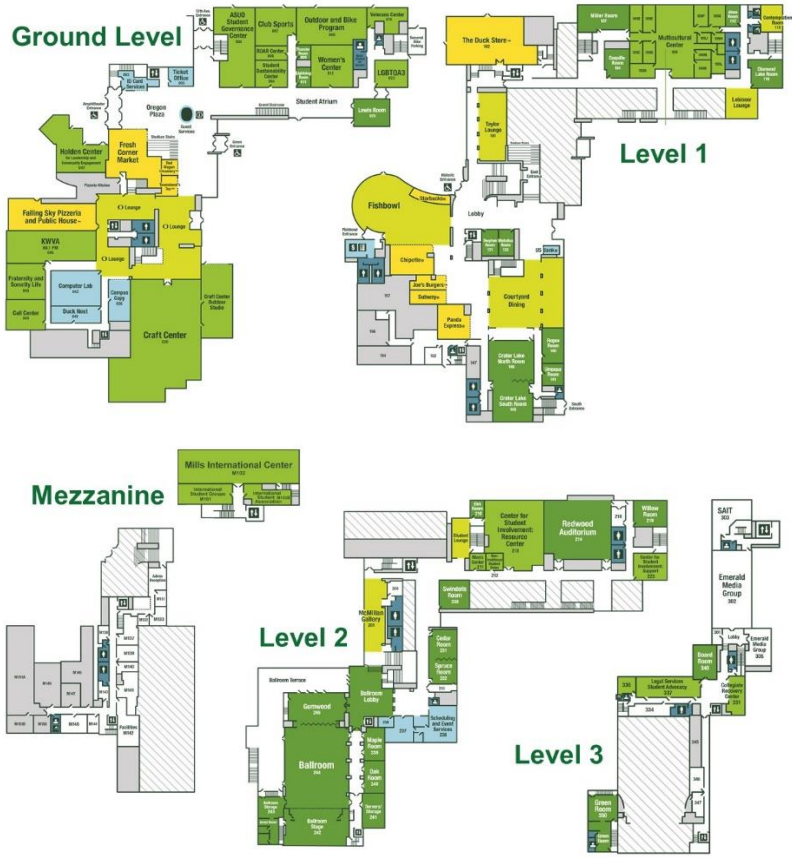
open-ended

ITEM (specific to EMU)

Please click up to 3 EMU locations where you feel like you belong, fit in, are connected, are accepted, etc.

IMPORTANT NOTES: Zoom in on the map to see places better. Click on a dot made by a previous click to remove it.

RESPONSE



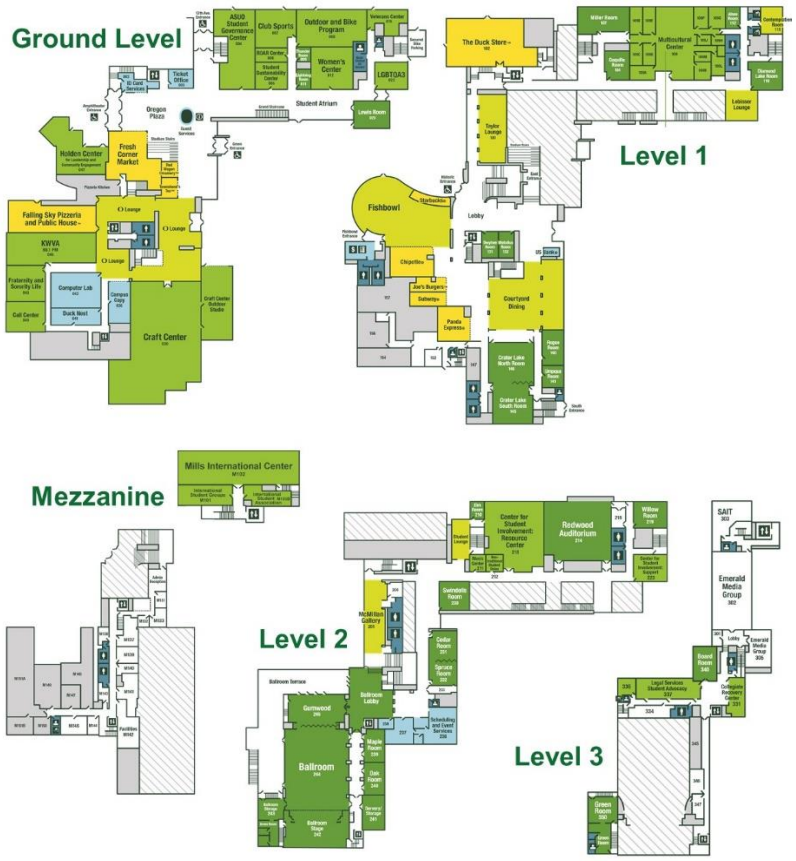
clicks on map

ITEM (specific to EMU)

Please click up to 3 EMU locations where you feel like you **do not** belong, **do not** fit in, are **dis**connected, are **not** accepted, etc.

IMPORTANT NOTES: Zoom in on the map to see places better. Click on a dot made by a previous click to remove it.

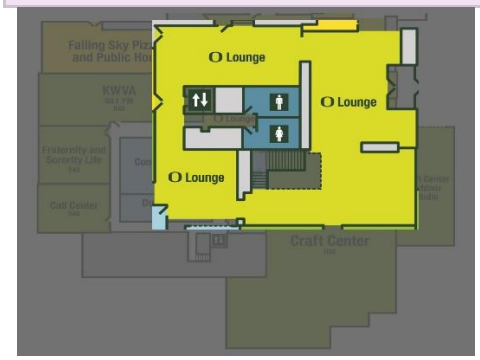
RESPONSE



clicks on map

Display This Question:
If Region on map is clicked in.

EXAMPLE ITEM



What specifically about this place makes you feel like you belong, fit in, are connected, are accepted, etc.?

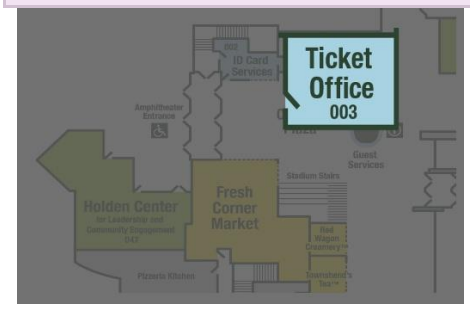
RESPONSE

open-ended

Display This Question:

If Region on map is clicked in.

EXAMPLE ITEM



What specifically about this place makes you feel like you **do not** belong, **do not** fit in, are **dis**connected, are **not** accepted, etc.?

RESPONSE

open-ended

Need to Belong Scale (Leary, Kelly, Cottrell, & Schreindorfer, 2013)

ITEM

If other people don't seem to accept me, I don't let it bother me.
I try hard not to do things that will make other people avoid or reject me.
I seldom worry about whether other people care about me.
I need to feel that there are people I can turn to in times of need.
I want other people to accept me.
I do not like being alone.
Being apart from my friends for long periods of time does not bother me.
I have a strong need to belong.
It bothers me a great deal when I am not included in other people's plans.
My feelings are easily hurt when I feel that others do not accept me.

RESPONSE

strongly disagree
moderately disagree
slightly disagree
slightly agree
moderately agree
strongly agree

Importance of Community

ITEM

It is important to me to feel a sense of community with other people in [community].

RESPONSE

strongly disagree
moderately disagree
slightly disagree
slightly agree
moderately agree
strongly agree

Sense of Community Inventory (Perkins, Florin, Rich, Wandersman, & Chavis, 1990)

ITEM
I think [community] is a good place for me to be.
People in [community] do not share the same values.
[Community members] and I want the same things from [community].
I feel at home in/with [community].
Very few [community members] know me.
I care about what [community members] think of my actions.
[Community members] generally don't get along with each other.

RESPONSE
strongly disagree
moderately disagree
slightly disagree
slightly agree
moderately agree
strongly agree

Sense of Community Inventory – Revised (Chavis, Lee, & Acosta, 2008)

ITEM
I get important needs of mine met because I am part of [community].
[Community members] and I value the same things.
[Community] has been successful in getting the needs of its members met.
Being a [member of community] makes me feel good.
When I have a problem, I can talk about it with [members of community].
People in [community] have similar needs, priorities, and goals.
I can trust people in this [community].
I can recognize most [community members].
Most [community members] know me.
[Community] has symbols and expressions of membership such as clothes, signs, art, architecture, logos, landmarks, and flags that people can recognize.
I put a lot of time and effort into being part of [community].
Being a [member of community] is a part of my identity.
Fitting into [community] is important to me.
[Community] can influence other communities.
I care about what other [community members] think of me.
I have influence over what [community] is like.
If there is a problem in [community], [community members] can get it solved.
[Community] has good leaders.
It is very important to me to be a part of [community].
I am with other [community members] a lot and enjoy being with them.
I expect to be a part of [community] for a long time.
Members of [community] have shared important events together, such as holidays, celebrations, or disasters.
I feel hopeful about the future of [community].
Members of [community] care about each other.

RESPONSE

strongly disagree
moderately disagree
slightly disagree
slightly agree
moderately agree
strongly agree

Brief Sense of Community Scale (Peterson, Speer, & McMillan, 2008)

ITEM
I can get what I need in [community].
[Community] helps me fulfill my needs.
I feel like a member of [community].
I belong in [community].
I have a say about what goes on in [community].
People in [community] are good at influencing each another.
I feel connected to [community].
I have a good bond with others in [community].

RESPONSE
strongly disagree
moderately disagree
slightly disagree
slightly agree
moderately agree
strongly agree

Positive and Negative Affect Schedule (Watson & Clark, 1999)

INSTRUCTION
To what extent you have felt this way during the past month?

ITEM
cheerful
sad
active
angry at self
disgusted
calm
guilty
enthusiastic
attentive
afraid
joyful
downhearted
bashful
tired
nervous
sheepish
sluggish
amazed

lonely
distressed
daring
shaky
sleepy
blameworthy
surprised
happy
excited
determined
strong
timid
hostile
frightened
scornful
alone
proud
astonished
relaxed
alert
jittery
interested
irritable
upset
lively
loathing
delighted
angry
ashamed
confident
inspired
bold
at ease
energetic
fearless
blue
scared
concentrating
disgusted with self
shy
drowsy
dissatisfied with self

RESPONSE

very slightly or not at all
a little
moderately
quite a bit
extremely

Single-Item Self-Esteem Scale (Robins, Hendin, & Trzesniewski, 2001)

ITEM
I have high self-esteem.

RESPONSE
strongly disagree
moderately disagree
slightly disagree
slightly agree
moderately agree
strongly agree

Life Satisfaction (Diener, Emmons, Larsen, & Griffin, 1985)

ITEM
In most ways, my life is close to my ideal.
The conditions of my life are excellent.
I am satisfied with my life.
So far, I have gotten the important things I want in life.
If I could live my life over, I would change almost nothing.

RESPONSE
strongly disagree
moderately disagree
slightly disagree
slightly agree
moderately agree
strongly agree

Flourishing (Diener et al., 2009)

ITEM
I lead a purposeful and meaningful life.
My social relationships are supportive and rewarding.
I am engaged and interested in my daily activities.
I actively contribute to the happiness and well-being of others.
I am competent and capable in the activities that are important to me.
I am a good person and live a good life.
I am optimistic about my future.
People respect me.

RESPONSE
strongly disagree
moderately disagree
slightly disagree
slightly agree
moderately agree
strongly agree

General Health – RAND Medical Outcomes Survey Short-Form (Ware & Sherbourne, 1992)

ITEM
I seem to get sick a little easier than other people. I am as healthy as anybody I know. I expect my health to get worse. My health is excellent.
RESPONSE
definitely false probably false probably true definitely true

General Physical and Mental Health (College Transition Collaborative, n.d.)

ITEM
In general, would you say your physical health is: In general, would you say your mental health is:
RESPONSE
Poor Fair Good Very good Excellent

Illness

ITEM
How many times in the last month have you visited a physician or the university health center for illness?
RESPONSE
numeric

Body Mass Index (College Transition Collaborative, n.d.)

ITEM
What is your height in feet and inches? Round to the nearest half of an inch.
RESPONSE
7 feet or above 6 feet 11.5 inches …<sequence> 4 feet 10.5 inches 4 feet 10 inches or below

ITEM
What is your current weight in pounds?
RESPONSE
90 lbs or below

91 lbs
…<sequence>
499 lbs
500 lbs or above

Exercise (American College Health Association, 2014)

STEM

On how many of the last 7 days did you…

ITEM

…do moderate intensity cardio or aerobic exercise (e.g., walking briskly) for at least 30 minutes?
…do vigorous intensity cardio or aerobic exercise (e.g., running, swimming) for at least 20 minutes?
…do 8-10 strength training exercises (e.g., weightlifting, push-ups, crunches) for 8-12 repetitions each?

RESPONSE

0
…<sequence>
7

Perceived Stress Scale 4 (S. Cohen, Kamarck, & Mermelstein, 1983)

STEM

In the last month, how often have you…

ITEM

…felt that you were unable to control the important things in your life?
…felt confident about your ability to handle your personal problems?
…felt that things were going your way?
…felt difficulties were piling up so high that you could not overcome them?

RESPONSE

never
almost never
sometimes
fairly often
very often

Adapted Stereotype Threat – General (Walton & G. L. Cohen, 2011)

STEM

At UO, I worry that people will draw conclusions about…

ITEM

…people like me based on my performances.
…people like me, based on the performances of other people with similar identities.
…me, based on what they think about people with backgrounds like mine.
…me, based on the performances of other people like me.

RESPONSE

strongly disagree

moderately disagree
slightly disagree
slightly agree
moderately agree
strongly agree

Adapted Stereotype Threat – Identity-Specific (Walton & G. L. Cohen, 2011)

STEM

At UO, I worry that people will draw conclusions about…

ITEM

…my [racial/ethnic group, gender group, sexual orientation, social/economic class] based on my performances.
…my [racial/ethnic group, gender group, sexual orientation, social/economic class], based on the performances of other people of my [racial/ethnic group, gender group, sexual orientation, social/economic class].
…me, based on what they think about my [racial/ethnic group, gender group, sexual orientation, social/economic class].
…me, based on the performances of other people of my [racial/ethnic group, gender group, sexual orientation, social/economic class].

RESPONSE

strongly disagree
moderately disagree
slightly disagree
slightly agree
moderately agree
strongly agree

Adapted Stereotype Threat (College Transition Collaborative, n.d.)

ITEM

Do you think other people at your school would be surprised or not surprised if you or people like you succeeded in school?

RESPONSE

not surprised
slightly surprised
moderately surprised
very surprised
extremely surprised

ITEM

At UO, how much do you worry that people negatively judge you based on what they think about your [racial/ethnic group, gender group, sexual orientation, social/economic class]?

RESPONSE

never
almost never
sometimes

fairly often
very often

ITEM

Since arriving at UO, how often have you been treated unfairly because of your [race/ethnicity, gender, sexual orientation, social/economic class]?

RESPONSE

never
less than once a year
a few times a year
a few times a month
at least once a week
almost every day

Adapted College Adjustment Test (Pennebaker, Colder, & Sharp, 1990)

INSTRUCTION

In the past month, to what extent have you…

ITEM

…missed your friends from high school
…missed your home
…missed your parents and other family members
…worried about how you will perform academically at college
…worried about love or intimate relationships with others
…worried about the way you look
…worried about the impression you make on others
…worried about being in college in general
…liked your classes
…liked your roommate(s)
…liked being away from your parents
…liked your social life
…liked college in general
…felt angry
…felt lonely
…felt anxious or nervous
…felt depressed
…felt optimistic about your future at college
…felt good about yourself

RESPONSE

never
almost never
sometimes
fairly often
very often

Academic Enjoyment (Asher & Weeks, 2012)

ITEM

I am taking courses this quarter that allow me to study what truly interests me.
I have found topics that I am excited and passionate about in my studies this term.
I am enjoying learning new things and get excited about ideas in my classes this quarter.
I am enjoying talking about course material with my friends outside of class this term.

RESPONSE

strongly disagree
moderately disagree
slightly disagree
slightly agree
moderately agree
strongly agree

Adapted Academic Behaviors (College Transition Collaborative, n.d.)

ITEM

In the past month of school, how often have you…
…met with a professor or graduate employee outside of class?
…met with an academic advisor?
…sought academic tutoring (for example, at the Teaching and Learning Center)?
…participated in a formal or informal study group?

RESPONSE

never
once
2-3 times
4-6 times
7 or more times

Study Time

ITEM

In an average week, about how much time, rounded to the nearest hour, do you spend studying outside of class?

RESPONSE

less than 1 hour
1 hour
…<sequence>
19 hours
20 or more hours

Retention (College Transition Collaborative, n.d.)

ITEM

Do you plan to attend UO next fall?

RESPONSE

Yes
Unsure/Undecided
No

Display This Question:
If Do you plan to attend UO next fall? = No

ITEM

Please select all of the reasons below that have led you to consider stopping your education here.
I am transferring to another school
Financial problems
Academic difficulties
I don't feel like I fit in here
The bureaucracy here is too difficult to navigate
I miss my home/family
Physical/mental health problems
I just don't like being in school
I will be working on a political campaign
I'm going to take some time off to work on a start-up or new business
Other (please specify) <text box>

Adapted Mentorship (College Transition Collaborative, n.d.)

ITEM

Thinking back on this past academic year, have you developed a relationship with a mentor at UO (formal or informal) that has been helpful to you and your academic and/or personal development? (e.g., faculty, staff, graduate student, upper-year undergraduate student, etc.)

RESPONSE

Yes
No

Display This Question:
If Thinking back on this past academic year, have you developed a relationship with a mentor ... = Yes

ITEM

With whom have you developed a mentor relationship? (select ALL that apply)

RESPONSE

a faculty member
another undergraduate student (including residential staff)
an administrator
a staff member
an athletic coach
an alumnus
a graduate student
other (please specify) <text box>

Adapted Growth Mindset (College Transition Collaborative, n.d.; Dweck, 2013; Farrington, Levenstein, Nagoaka, 2013)

ITEM

You have a certain amount of intelligence and you really can't do much to change it.
You can grow your basic intelligence a lot in your lifetime.
You can learn new things, but you can't really change your basic intelligence.
My intelligence is something that I can't change very much.

Challenging myself won't make me any smarter.
There are some things I am not capable of learning.
If I am not naturally smart in a subject, I will never do well in it.
I am always finding something new to learn.
No matter what I do, I am always learning.
I learn a lot even when I am not in class.

RESPONSE

definitely false
probably false
probably true
definitely true

Self-Efficacy (Farrington, Levenstein, & Nagaoka, 2013)

INSTRUCTION

How confident are you about the following at school?

ITEM

I can earn an A in my classes.
I can do well on all my tests, even when they're difficult.
I can master the hardest topics in my classes.
I can meet all the learning goals my teachers set.

RESPONSE

not at all confident
a little confident
somewhat confident
mostly confident
completely confident

Knowhow (College Transition Collaborative, n.d.)

INSTRUCTION

College can be complicated. There are many tasks to complete (e.g. completing paperwork, getting financial aid, figuring out how to get what you need from the administration, learning how college classes work). We're interested in your ideas about navigating college. There are no right or wrong answers. We just want to know how you feel about "doing college." Read each statement and indicate how much you agree or disagree.

ITEM

You either know how to navigate college or not, and there isn't much you can do to change it.
If you can't figure out how to navigate college, you probably can't get much better at it.
You can learn new facts, but you can't really change your basic skills for navigating college.

RESPONSE

strongly disagree
moderately disagree

slightly disagree
slightly agree
moderately agree
strongly agree

Insider Knowledge (College Transition Collaborative, n.d.)

ITEM
I often find I know more about how to do well in college than other students I talk to.
At times I feel lost about how to get things done in college.
I know how to get everything I need in college.
Other students know more than I do about how to succeed in college.
I feel like I don't know much about how college works.

RESPONSE
definitely false
probably false
probably true
definitely true

Family Achievement Guilt (College Transition Collaborative, n.d.)

ITEM
Sometimes my family can't relate to my experience in college.
Sometimes my experiences at college make me feel like I can't relate to my family.
It bothers me when school responsibilities prevent me from helping out at home or participating in family activities.
I often avoid talking about school matters and achievements with my family.
I feel sad because going to college means many sacrifices by my family.

RESPONSE
strongly disagree
moderately disagree
slightly disagree
slightly agree
moderately agree
strongly agree

Ten-Item Personality Inventory (Gosling, Rentfrow, & Swann, 2003)

INSTRUCTION
Here are a number of personality traits that may or may not apply to you. You should rate the extent to which the pair of traits applies to you, even if one characteristic applies more strongly than the other.

ITEM
I see myself as:
extraverted, enthusiastic.
critical, quarrelsome.
dependable, self-disciplined.
anxious, easily upset.
open to new experiences, complex.

reserved, quiet.
sympathetic, warm.
disorganized, careless.
calm, emotionally stable.
conventional, uncreative.

RESPONSE

strongly disagree
moderately disagree
slightly disagree
slightly agree
moderately agree
strongly agree

HEXACO-100 (Lee & Ashton, 2016)

INSTRUCTION

On the following pages, you will find a series of statements about you. Please read each statement and decide how much you agree or disagree with that statement. Please answer every statement, even if you are not completely sure of your response.

ITEM

Honesty-Humility – Sincerity
If I want something from a person I dislike, I will act very nicely toward that person in order to get it.
I wouldn't use flattery to get a raise or promotion at work, even if I thought it would succeed.
If I want something from someone, I will laugh at that person's worst jokes.
I wouldn't pretend to like someone just to get that person to do favors for me.
Honesty-Humility – Fairness
If I knew that I could never get caught, I would be willing to steal a million dollars.
I would be tempted to buy stolen property if I were financially tight.
I would never accept a bribe, even if it were very large.
I'd be tempted to use counterfeit money, if I were sure I could get away with it.
Honesty-Humility – Greed-Avoidance
Having a lot of money is not especially important to me.
I would like to live in a very expensive, high-class neighborhood.
I would like to be seen driving around in a very expensive car.
I would get a lot of pleasure from owning expensive luxury goods.
Honesty-Humility – Modesty
I am an ordinary person who is no better than others.
I wouldn't want people to treat me as though I were superior to them.
I think that I am entitled to more respect than the average person is.
I want people to know that I am an important person of high status.
Emotionality – Fearfulness
I would feel afraid if I had to travel in bad weather conditions.
I don't mind doing jobs that involve dangerous work.
When it comes to physical danger, I am very fearful.
Even in an emergency I wouldn't feel like panicking.
Emotionality – Anxiety
I sometimes can't help worrying about little things.
I worry a lot less than most people do.

I rarely, if ever, have trouble sleeping due to stress or anxiety.
I get very anxious when waiting to hear about an important decision.
Emotionality – Dependence
When I suffer from a painful experience, I need someone to make me feel comfortable.
I can handle difficult situations without needing emotional support from anyone else.
Whenever I feel worried about something, I want to share my concern with another person.
I rarely discuss my problems with other people.
Emotionality – Sentimentality
I feel like crying when I see other people crying.
When someone I know well is unhappy, I can almost feel that person's pain myself.
I feel strong emotions when someone close to me is going away for a long time.
I remain unemotional even in situations where most people get very sentimental.
Extraversion – Social Self-Esteem
I feel reasonably satisfied with myself overall.
I think that most people like some aspects of my personality.
I feel that I am an unpopular person.
I sometimes feel that I am a worthless person.
Extraversion – Social Boldness
I rarely express my opinions in group meetings.
In social situations, I'm usually the one who makes the first move.
When I'm in a group of people, I'm often the one who speaks on behalf of the group.
I tend to feel quite self-conscious when speaking in front of a group of people.
Extraversion – Sociability
I avoid making "small talk" with people.
I enjoy having lots of people around to talk with.
I prefer jobs that involve active social interaction to those that involve working alone.
The first thing that I always do in a new place is to make friends.
Extraversion – Liveliness
I am energetic nearly all the time.
On most days, I feel cheerful and optimistic.
People often tell me that I should try to cheer up.
Most people are more upbeat and dynamic than I generally am.
Agreeableness – Forgiveness
I rarely hold a grudge, even against people who have badly wronged me.
My attitude toward people who have treated me badly is "forgive and forget".
If someone has cheated me once, I will always feel suspicious of that person.
I find it hard to fully forgive someone who has done something mean to me.
Agreeableness – Gentleness
People sometimes tell me that I am too critical of others.
I generally accept people's faults without complaining about them.
I tend to be lenient in judging other people.
Even when people make a lot of mistakes, I rarely say anything negative.
Agreeableness – Flexibility
People sometimes tell me that I'm too stubborn.
I am usually quite flexible in my opinions when people disagree with me.
When people tell me that I'm wrong, my first reaction is to argue with them.
I find it hard to compromise with people when I really think I'm right.
Agreeableness – Patience
People think of me as someone who has a quick temper.
I rarely feel anger, even when people treat me quite badly.

Most people tend to get angry more quickly than I do.
I find it hard to keep my temper when people insult me.
Conscientiousness – Organization
I clean my office or home quite frequently.
I plan ahead and organize things, to avoid scrambling at the last minute.
People often joke with me about the messiness of my room or desk.
When working, I sometimes have difficulties due to being disorganized.
Conscientiousness – Diligence
When working, I often set ambitious goals for myself.
I often push myself very hard when trying to achieve a goal.
Often when I set a goal, I end up quitting without having reached it.
I do only the minimum amount of work needed to get by.
Conscientiousness – Perfectionism
I often check my work over repeatedly to find any mistakes.
When working on something, I don't pay much attention to small details.
I always try to be accurate in my work, even at the expense of time.
People often call me a perfectionist.
Conscientiousness – Prudence
I make decisions based on the feeling of the moment rather than on careful thought.
I make a lot of mistakes because I don't think before I act.
I don't allow my impulses to govern my behavior.
I prefer to do whatever comes to mind, rather than stick to a plan.
Openness – Aesthetic Appreciation
I would be quite bored by a visit to an art gallery.
I wouldn't spend my time reading a book of poetry.
If I had the opportunity, I would like to attend a classical music concert.
Sometimes I like to just watch the wind as it blows through the trees.
Openness – Inquisitiveness
I'm interested in learning about the history and politics of other countries.
I enjoy looking at maps of different places.
I would be very bored by a book about the history of science and technology.
I've never really enjoyed looking through an encyclopedia.
Openness – Creativity
I would like a job that requires following a routine rather than being creative.
I would enjoy creating a work of art, such as a novel, a song, or a painting.
People have often told me that I have a good imagination.
I don't think of myself as the artistic or creative type.
Openness – Unconventionality
I think that paying attention to radical ideas is a waste of time.
I like people who have unconventional views.
I think of myself as a somewhat eccentric person.
I find it boring to discuss philosophy.
Altruism
I have sympathy for people who are less fortunate than I am.
I try to give generously to those in need.
It wouldn't bother me to harm someone I didn't like.
People see me as a hard-hearted person.

RESPONSE

strongly disagree

disagree
agree
strongly agree

International Personality Item Pool version of Industriousness Factor from Temperament and Character Inventory (Cloninger, Przybeck, Svrakic, & Wetzel, 1994)

INSTRUCTION

How accurately can you describe yourself? Describe yourself as you generally are now, not as you wish to be in the future. Describe yourself as you honestly see yourself, in relation to other people you know of the same gender as you are, and roughly your same age. Please rate each statement in terms of how accurately it describes you.

ITEM

Work hard.
Do more than what's expected of me.
Am always busy.
Am exacting in my work.
Set high standards for myself and others.
Am ready to do battle for a cause.
Accomplish a lot of work.
Am always on the go.
Do just enough work to get by.
Put little time and effort into my work.

RESPONSE

very accurate
moderately accurate
neither inaccurate nor accurate
moderately accurate
very accurate

International Personality Item Pool Version of Industriousness Factor from Six Factor Personality Questionnaire (Jackson, Paunonen, & Tremblay, 2000)

INSTRUCTION

How accurately can you describe yourself? Describe yourself as you generally are now, not as you wish to be in the future. Describe yourself as you honestly see yourself, in relation to other people you know of the same gender as you are, and roughly your same age. Please rate each statement in terms of how accurately it describes you.

ITEM

Work hard.
Put work above pleasure.
Am under constant pressure.
Complete tasks successfully.
Am always busy.
Have too many things to do.
Have extra time on my hands.
Have a slow pace to my life.
Feel that work is not an important part of my life.

Put little time and effort into my work.

RESPONSE

very accurate
moderately accurate
neither inaccurate nor accurate
moderately accurate
very accurate

International Personality Item Pool Version of Perseverance Factor from Values in Action Inventory (Peterson & Seligman, 2004)

INSTRUCTION

How accurately can you describe yourself? Describe yourself as you generally are now, not as you wish to be in the future. Describe yourself as you honestly see yourself, in relation to other people you know of the same gender as you are, and roughly your same age. Please rate each statement in terms of how accurately it describes you.

ITEM

Don't quit a task before it is finished.
Am a goal-oriented person.
Finish things despite obstacles in the way.
Am a hard worker.
Don't get sidetracked when I work.
Don't finish what I start.
Give up easily.
Do not tend to stick with what I decide to do.

RESPONSE

very accurate
moderately accurate
neither inaccurate nor accurate
moderately accurate
very accurate

International Personality Item Pool Version of Industriousness Factor from Big Five Aspects Scales (DeYoung, Quilty, & Peterson, 2007)

INSTRUCTION

How accurately can you describe yourself? Describe yourself as you generally are now, not as you wish to be in the future. Describe yourself as you honestly see yourself, in relation to other people you know of the same gender as you are, and roughly your same age. Please rate each statement in terms of how accurately it describes you.

ITEM

Carry out my plans.
Finish what I start.
Get things done quickly.
Always know what I am doing.
Waste my time.
Find it difficult to get down to work.

Mess things up.
Don't put my mind on the task at hand.
Postpone decisions.
Am easily distracted.

RESPONSE

very accurate
moderately accurate
neither inaccurate nor accurate
moderately accurate
very accurate

Grit (College Transition Collaborative, n.d.)

ITEM

I finish whatever I begin.
I stay interested in my goals, even if they take a long time (months or years) to complete.
I am a hard worker.

RESPONSE

Not at all true
Slightly true
Somewhat true
Very true
Completely true

Excitement about Coming to UO (College Transition Collaborative, n.d.)

ITEM

How excited are you about coming to UO?

RESPONSE

not at all
slightly
moderately
very
extremely

ITEM

How much do you think you'll enjoy your time at UO?
How much fun do you think you'll have at UO?

RESPONSE

not at all
a little bit
a moderate amount
a lot
an extreme amount

Adapted Religiosity (Huber & Huber, 2012)

ITEM

How frequently do you take part in religious services?
How frequently do you pray and/or meditate?

RESPONSE

never
less than once a month
once a month
several times a month
weekly
several times a week
daily

Political Ideology

ITEM

Generally, how would you describe your political views?

RESPONSE

very conservative
somewhat conservative
moderate
somewhat liberal
very liberal

Financial Aid

ITEM

Have you received (or will you be receiving) financial aid – such as grants, loans, or scholarships – during the present school year?

RESPONSE

Yes
No

Display This Question:
If Have you received (or will you be receiving) financial aid – such as grants, loans, or scholarshi... = Yes

INSTRUCTION

Please indicate whether or not you have received any of the following kinds of financial aid.

ITEM

Federal Loans (includes Stafford, Perkins, and Graduate and Professional Student PLUS, NOT Parent PLUS)
Federal Pell Grant
Work-Study

RESPONSE

Yes
No

Parent Education

INSTRUCTION

What is the highest level of education completed by each of your parents/guardians? *Please use the* "**don't know/not applicable**" *option to the extent that having 2 parents/guardians doesn't fit your family structure*.

ITEM

Parent/Guardian 1
Parent/Guardian 2

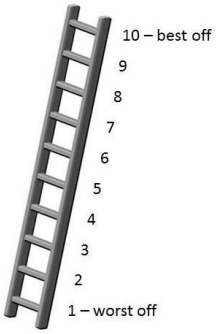
RESPONSE

some high school, no diploma
high school diploma, GED
some college credit, no degree
2-year technical /Associate's degree
4-year college/university degree
graduate degree (Masters, Doctorate, Law)
don't know/not applicable
prefer not to respond

Subjective Social Status (Goodman, Alder, Kawachi, Frazier, Huan, & Colditz, 2001)

INSTRUCTION

Imagine that this ladder represents how society is set up. At the top of the ladder are the people who are the best off – they have the most money, the highest amount of schooling, and the jobs that bring the most respect. At the bottom are the people who are the worst off – they have the least money, little or no education, no job or jobs that no one wants or respects.



ITEM

Now think about your family. Please tell us where you think your family would be on this ladder. Select the number on the scale below that corresponds to the rung that best represents where your family would be on this ladder.

RESPONSE

10 - best off
9
…<sequence>
2
1 - worst off
prefer not to respond

Social Class (College Transition Collaborative, n.d.)

ITEM

How would you describe your family's social class?

RESPONSE

working class
lower-middle class
middle class
upper-middle class
upper class

High School Advantage (College Transition Collaborative, n.d.)

ITEM

How do you think the high school you attended compares to the high schools attended by most other incoming UO students?

RESPONSE

My high school is less advantaged than the high schools attended by most other incoming students.
My high school is neither less advantaged nor more advantaged than the high schools attended by most other incoming students.
My high school is more advantaged than the high schools attended by most other incoming students.

Display This Question:
How do you think the high school you attended compares to the high schools attended by... = less advantaged Or more advantaged

ITEM

Please briefly describe why you think your high school is relatively more or less advantaged.

RESPONSE

open-ended

Adapted Bureaucratic Frustration (College Transition Collaborative, n.d.)

INSTRUCTION

Think about your experiences with UO so far.

STEM

In general, how complicated has it been for you to…

ITEM

…figure out which courses you need for your degree or your future career goals?
…get accurate information about courses or financial aid from the counselors and advisors at UO ?
…actually receive the financial aid and scholarships that you were eligible for at UO?

…go through the application and enrollment process at UO?
…figure out which courses you need for your degree or your future career goals?
…get accurate information about courses or financial aid from the counselors and advisors at UO?
…apply for financial aid (if applicable)?
…receive the financial aid and scholarships that you were awarded (if applicable)?
…register for your courses?
…complete important paperwork or forms?

RESPONSE

extremely simple
mostly simple
kind of simple
kind of complicated
mostly complicated
extremely complicated
not applicable

ITEM

Think about your overall experience of trying to get what you need from the offices and administration
at UO, such as filling out paperwork, getting housing, getting information about your classes or degree plans, or getting financial aid. In general, how frustrating has your experience been with the offices and administration at UO?

RESPONSE

not at all frustrating
slightly frustrating
somewhat frustrating
very frustrating
extremely frustrating

Gender Identity

ITEM

What is your gender identity?

RESPONSE

Fluid
Gender Queer
Man
Trans Man
Trans Woman
Woman
None of these describe me well; this is better: [text box]
Prefer not to respond

ITEM

My gender identity is an important part of who I am.

RESPONSE

not at all true
slightly true
moderately true
very true
extremely true

Sexual Orientation

ITEM

Which term best describes your sexual orientation?

RESPONSE

Asexual
Bisexual
Gay or lesbian
Queer
Straight or heterosexual
None of these describe me well, this is better: [text box]
Prefer not to respond

ITEM

My sexual orientation is an important part of who I am.

RESPONSE

not at all true
slightly true
moderately true
very true
extremely true

Ethnic Identity

ITEM

What is your ethnic group? (please select ALL that apply)

RESPONSE

American Indian / Alaskan Native
Asian / Asian-American
Black / African-American
Hispanic / Latina(o) / Chicana(o)
Middle Eastern
Pacific Islander
White / European-American
None of these describe me well; this is better: [text box]
Prefer not to respond

ITEM

When people ask you about your racial or ethnic background, and you feel like answering, what

do you usually say?

RESPONSE

open-ended

ITEM

My racial/ethnic identity is an important part of who I am.

RESPONSE

not at all true
slightly true
moderately true
very true
extremely true

First Language

ITEM

Is English your first language?

RESPONSE

Yes
No

Display This Question:
If Is English your first language? = No

ITEM

What is your first language?

RESPONSE

open-ended

Distraction and Technical Difficulties (College Transition Collaborative, n.d.)

ITEM

How distracted were you as you completed the materials? (e.g., by interruptions, other people, social media, etc.)

RESPONSE

not distracted at all
slightly distracted
somewhat distracted
very distracted
extremely distracted

ITEM

Did you have any technical difficulties as you completed the materials? For instance, did you have to restart the materials, did your computer freeze up, did the internet stop working, or did anything else happen that interfered with your ability to complete them?

RESPONSE

Yes, I had some technical difficulties with the activity. Please explain what happened. <text box>
No, everything worked fine.

Feedback

ITEM

Would you prefer to be contacted about doing the sort of thing we're asking you to do here through email or text message? We don't actually have the technical capability to do SMS for this sort of thing yet. We're just trying to gauge interest at this point.

RESPONSE

I would prefer email
I would prefer text message

ITEM

We would like to learn more about what UO has been like for you this year. Please spend the next few minutes writing about your experience this year. There's no need to write at length but please write enough so that we have an overall sense of what your experience has been like. Don't worry about spelling or punctuation.

Thank you for taking your time. Learning more about your experience will help us understand more
about what it is like for students to come to UO and how we can improve this transition for future students. (The "NEXT" button will appear after 90 seconds. You may continue writing as long as you like. When you are done, click "NEXT.")

RESPONSE

open-ended

ITEM

What advice would you give an incoming student next year to help them have a successful/positive
experience at UO?

RESPONSE

open-ended

ITEM

What are your reasons for participating in this research?

RESPONSE

open-ended

ITEM

If you have any comments or feedback about the study, we want to hear it! Please leave that here:

RESPONSE

open-ended

APPENDIX B

ADDITIONAL ANALYSES TABLES

Table 4

Summary of Hierarchical Regression Analysis for Subjective Social Status Predicting Baseline SB Uncertainty (*n* = 3,847)

Variable	Model 1			Model 2		
	B	SE B	β	B	SE B	β
Subjective social status	-0.083	0.011	-0.118**	-0.101	0.015	-0.143**
Subjective social status x Multiracial students				0.014	0.044	0.005
Subjective social status x Hispanic or Latinx students				0.043	0.027	0.031
Subjective social status x Black or African American students				-0.034	0.068	-0.008
Subjective social status x Asian students				0.072	0.042	0.029
R^2		.014			.014	
F for change in R^2		54.652			1.261	

Note: Subjective social status scores were centered at their means.
p < .05 *, p < .01.*

Table 5

Summary of Hierarchical Regression Analysis for High School GPA Predicting Baseline SB Uncertainty (n = 3,847)

Variable	Model 1			Model 2			Model 3		
	B	SE B	β	B	SE B	β	B	SE B	β
Gender identification (1, female; 0, men)	-0.015	0.002	-0.109**	-0.014	0.002	-0.101**	-0.014	0.002	-0.100**
High school GPA				0.088	0.033	0.043**	0.081	0.041	0.040*
High school GPA x Multiracial students							0.144	0.114	0.022
High school GPA x Hispanic or Latinx students							-0.050	0.093	-0.009
High school GPA x Black or African American students							-0.054	0.199	-0.004
High school GPA x Asian students							0.032	0.133	0.004
R^2		.012			.013			.013	
F for change in R^2		45.847			6.937**			0.570	

Note. High school GPA was centered at its mean.
*p < .05 *, p < .01**.

Table 6

Summary of Hierarchical Regression Analysis for ACT/SAT scores Predicting Baseline SB Uncertainty (*n* = 3,847)

Variable	Model 1			Model 2			Model 3		
	B	SE B	β	B	SE B	β	B	SE B	β
Gender identification (1, female; 0, men)	-0.015	0.002	-0.109**	-0.016	0.002	-0.112**	-0.016	0.002	-0.114**
ACT/SAT scores				0.068	0.022	0.050**	0.094	0.029	0.069**
ACT/SAT scores x Multiracial students							0.075	0.081	0.016
ACT/SAT scores x Hispanic or Latinx students							-0.137	0.058	-0.044*
ACT/SAT scores x Black or African American students							-0.146	0.106	-0.023
ACT/SAT scores x Asian students							0.024	0.086	0.005
R^2		.012			.014			.015	
F for change in R^2		45.847			9.570**			2.298	

Note. ACT/SAT scores were centered at their means.
*$p < .05$ *, $p < .01$**.

Table 7

Summary of Hierarchical Regression Analysis for Baseline SB Uncertainty Predicting End-of-Year SB Uncertainty (*n* = 735)

Variable	Model 1			Model 2			Model 3		
	B	SE B	β	B	SE B	β	B	SE B	β
Baseline SB uncertainty	0.296	0.040	0.261**	0.297	0.041	0.262**	0.319	0.050	0.281**
Black or African American (1, yes; 0, no)				0.004	0.024	0.006	0.004	0.024	0.007
Asian (1, yes; 0, no)				-0.002	0.011	-0.007	-0.001	0.011	-0.005
Multiracial (1, yes; 0, no)				-0.002	0.010	-0.006	-0.003	0.010	-0.013
Hispanic or Latinx (1, yes; 0, no)				0.008	0.008	0.038	0.008	0.008	0.038
Baseline SB uncertainty x Black or African American students							0.022	0.318	0.003
Baseline SB uncertainty x Asian students							-0.179	0.147	-0.046
Baseline SB uncertainty x Multiracial students							0.138	0.148	0.036
Baseline SB uncertainty x Hispanic or Latinx students							-0.113	0.112	-0.040

Table 7, continued.

Summary of Hierarchical Regression Analysis for Baseline SB Uncertainty Predicting End-of-Year SB Uncertainty ($n = 735$)

Variable	Model 1			Model 2			Model 3		
	B	SE B	β	B	SE B	β	B	SE B	β
R^2		.067			.063			.063	
F for change in R^2		53.375			0.321			0.911	

Note. Baseline SB uncertainty scores were centered at their means.
*$p < .05$ *, $p < .01$**.

Table 8

Summary of Hierarchical Regression Analysis for Baseline SB Uncertainty Predicting End-of-Year Life Satisfaction (*n* = 727)

Variable	Model 1			Model 2			Model 3			Model 4		
	B	SE B	β	B	SE B	β	B	SE B	β	B	SE B	β
Baseline life satisfaction	1.672	0.113	0.422**	1.633	0.137	0.412**	1.601	0.139	0.404**	1.607	0.139	0.406**
Parent education level (0, first-generation, 1 continuing-generation)	-0.033	0.015	-0.075*	-0.032	0.015	-0.074*	-0.026	0.015	-0.060	-0.026	0.015	-0.060
Baseline SB uncertainty				-0.130	0.100	-0.044	-0.144	0.101	-0.049	-0.167	0.125	-0.057
Multiracial (1, yes; 0, no)							-0.018	0.023	-0.027	-0.021	0.023	-0.031
Hispanic or Latinx (1, yes; 0, no)							-0.039	0.020	-0.069*	-0.040	0.020	-0.071*
Black or African American (1, yes; 0, no)							-0.027	0.058	-0.016	-0.027	0.058	-0.016
Asian (1, yes; 0, no)							-0.034	0.027	-0.044	-0.035	0.027	-0.045

Table 8, continued.

Summary of Hierarchical Regression Analysis for Baseline SB Uncertainty Predicting End-of-Year Life Satisfaction (*n* = 727)

Variable	Model 1			Model 2			Model 3			Model 4		
	B	SE B	β	B	SE B	β	B	SE B	β	B	SE B	β
Baseline SB uncertainty x Multiracial students										0.216	0.347	0.023
Baseline SB uncertainty x Hispanic or Latinx students										-0.219	0.270	-0.031
Baseline SB uncertainty x Black or African American students										0.401	0.765	0.018
Baseline SB uncertainty x Asian students										0.398	0.356	0.040
R^2		.190			.191			.192			.191	
F for change in R^2		86.134			1.667			1.301			0.731	

Note. Baseline life satisfaction and SB uncertainty scores were centered at their means.
*$p < .05$ *, $p < .01$**.

Table 9

Summary of Hierarchical Regression Analysis for Baseline SB Uncertainty Predicting End-of-Year Perceived Stress (*n* = 734)

Variable	Model 1			Model 2			Model 3			Model 4		
	B	SE B	β	B	SE B	β	B	SE B	β	B	SE B	β
Baseline perceived stress	0.239	0.038	0.266**	0.200	0.040	0.189**	0.200	0.040	0.189**	0.200	0.040	0.189**
Gender identification (1, female; 0, men)	-0.010	0.004	-0.082*	-0.009	0.004	-0.073*	-0.009	0.004	-0.079*	-0.009	0.004	-0.078*
Baseline SB uncertainty				0.091	0.031	0.110**	0.094	0.031	0.114*	0.080	0.038	0.098*
Multiracial (1, yes; 0, no)							-0.008	0.007	-0.041*	-0.009	0.004	-0.046*
Hispanic or Latinx (1, yes; 0, no)							0.010	0.006	0.065	0.010	0.006	0.065
Black or African American (1, yes; 0, no)							-0.010	0.017	-0.021	-0.010	0.017	-0.021
Asian (1, yes; 0, no)							-0.003	0.008	-0.013	-0.003	0.008	-0.014
Baseline SB uncertainty x Multiracial students										0.065	0.106	0.024
Baseline SB uncertainty x Hispanic or Latinx students										0.006	0.082	0.003

Table 9, continued.

Summary of Hierarchical Regression Analysis for Baseline SB Uncertainty Predicting End-of-Year Perceived Stress (n = 734)

Variable	Model 1			Model 2			Model 3			Model 4		
	B	SE B	β	B	SE B	β	B	SE B	β	B	SE B	β
Baseline SB uncertainty x Black or African American students										-0.041	0.231	-0.006
Baseline SB uncertainty x Asian students										-0.398	0.356	-0.040
R^2		.059			.068			.071			.067	
F for change in R^2		23.943			8.368*			1.456			0.234	

Note. Baseline perceived stress and SB uncertainty scores were centered at their means.
*p < .05 *, p < .01**.

Table 10

Summary of Hierarchical Regression Analysis for Baseline SB Uncertainty Predicting End-of-Year Sadness (*n* = 731)

Variable	Model 1			Model 2			Model 3			Model 4		
	B	SE B	β	B	SE B	β	B	SE B	β	B	SE B	β
Baseline sadness	0.353	0.041	0.306**	0.330	0.042	0.285**	0.330	0.042	0.286**	0.334	0.042	0.289**
ACT/SAT scores	0.126	0.057	0.078*	0.124	0.057	0.077*	0.123	0.059	0.076*	0.129	0.059	0.080*
Gender identification (1, female; 0, men)	-0.014	0.006	-0.078*	-0.012	0.006	-0.071*	-0.013	0.006	-0.073*	-0.013	0.006	-0.071*
Baseline SB uncertainty				0.090	0.044	0.074*	0.089	0.044	0.074*	0.034	0.054	0.028
Multiracial (1, yes; 0, no)							-0.001	0.010	-0.004	-0.002	0.010	-0.007
Hispanic or Latinx (1, yes; 0, no)							0.002	0.009	0.009	0.002	0.009	0.008
Black or African American (1, yes; 0, no)							-0.014	0.025	-0.019	-0.014	0.025	-0.019
Asian (1, yes; 0, no)							-0.015	0.011	-0.045	-0.015	0.011	-0.048

Table 10, continued.

Summary of Hierarchical Regression Analysis for Baseline SB Uncertainty Predicting End-of-Year Sadness (n = 731)

Variable	Model 1			Model 2			Model 3			Model 4		
	B	SE B	β	B	SE B	β	B	SE B	β	B	SE B	β
Baseline SB uncertainty x Multiracial students										0.117	0.154	0.029
Baseline SB uncertainty x Hispanic or Latinx students										0.094	0.118	0.031
Baseline SB uncertainty x Black or African American students										0.484	0.332	0.052
Baseline SB uncertainty x Asian students										0.237	0.154	0.058
R^2		.109			.113			.111			.112	
F for change in R^2		30.819			4.130*			0.518			1.181	

Note. Baseline sadness, ACT/SAT scores, and SB uncertainty scores were centered at their means.
*p < .05 *, p < .01**.

Table 11

Summary of Hierarchical Regression Analysis for Baseline SB Uncertainty Predicting End-of-Year GPA (n = 3,785)

Variable	Model 1			Model 2			Model 3			Model 4		
	B	SE B	β	B	SE B	β	B	SE B	β	B	SE B	β
Gender identification (1, female; 0, men)	-0.069	0.018	-0.051**	-0.067	0.018	-0.050**	-0.066	0.018	-0.049**	-0.067	0.018	-0.049**
Parent education level (0, first-generation, 1 continuing-generation)	-0.063	0.019	-0.044**	-0.064	0.020	-0.045**	-0.060	0.020	-0.042**	-0.061	0.020	-0.043**
High school GPA	8.840	0.292	0.454**	8.836	0.292	0.454**	8.823	0.292	0.453**	8.821	0.292	0.453**
ACT/SAT scores	2.717	0.198	0.209**	2.709	0.198	0.209**	2.653	0.202	0.204**	2.633	0.202	0.203**
Baseline SB uncertainty				0.100	0.126	0.011	0.103	0.126	0.011	0.225	0.154	0.024
Multiracial (1, yes; 0, no)							0.017	0.031	0.007	0.015	0.031	0.006
Hispanic or Latinx (1, yes; 0, no)							-0.023	0.026	-0.012	-0.022	0.026	-0.012
Black or African American (1, yes; 0, no)							-0.098	0.061	-0.022	-0.097	0.062	-0.021
Asian (1, yes; 0, no)							0.015	0.034	0.006	0.017	0.035	0.007

Table 11, continued.

Summary of Hierarchical Regression Analysis for Baseline SB Uncertainty Predicting End-of-Year GPA (n = 3,785)

Variable	Model 1			Model 2			Model 3			Model 4		
	B	SE B	β	B	SE B	β	B	SE B	β	B	SE B	β
Baseline SB uncertainty x Multiracial students										0.355	0.455	0.011
Baseline SB uncertainty x Hispanic or Latinx students										-0.790	0.352	-0.033*
Baseline SB uncertainty x Black or African American students										-.311	0.887	-0.005
Baseline SB uncertainty x Asian students										-0.307	0.483	-0.009
R^2		.348			.348			.348			.349	
F for change in R^2		506.690			0.634			1.012			1.635	

Note. High school GPA, ACT/SAT scores, and SB uncertainty scores were centered at their means.
*p < .05 *, p < .01**.

Table 12

Summary of Binary Logistic Regression Analysis for Baseline SB Uncertainty Predicting Second-Year Retention (*n* = 3,847)

Variable	β	SE β	Wald's X^2	Exp (β)	95% CI for Exp (β)
Gender identification	0.156	0.098	2.539	1.169	0.965-1.416
Generational status	0.216	0.111	3.803	1.241	0.999-1.542
High school GPA	1.067	0.134	63.668	2.906**	2.236-3.776
Subjective social status	0.091	0.033	7.494	1.095**	1.026-1.169
Baseline SB uncertainty	-0.047	0.277	0.29	0.954	0.555-1.640
Racial group			10.896		
Multiracial	-0.557	0.292	3.641	0.573	0.324-1.015
Hispanic or Latinx	0.257	0.236	1.180	1.293	0.814-2.054
Black or African American	-0.345	0.561	0.377	0.709	0.236-2.127

Table 12, continued.

Summary of Binary Logistic Regression Analysis for Baseline SB Uncertainty Predicting Second-Year Retention (*n* = 3,847)

Variable	β	SE β	Wald's X^2	Exp (β)	95% CI for Exp (β)
Asian	0.972	0.452	4.632	2.644*	1.091-6.410
Baseline SB uncertainty x Racial group			10.845		
Baseline SB uncertainty x Multiracial	2.007	0.873	5.285	7.443*	1.344-41.211
Baseline SB uncertainty x Hispanic or Latinx	-0.871	0.575	2.290	0.419	0.136-1.293
Baseline SB uncertainty x Black or African American	1.100	1.472	0.558	3.003	0.168-53.821
Baseline SB uncertainty x Asian	-1.164	0.987	1.391	0.312	0.045-2.160
Constant	-2.871	0.539	28.397	0.057**	

Note. CI = confidence interval
*$p < .05$ *, $p < .01$**.

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