FINANCIAL WELLNESS OF FIRST-GENERATION COLLEGE STUDENTS

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Abstract

Among many challenges that first-generation college students face, navigating how to balance the financial costs of college with covering monthly expenses can be particularly challenging. The present study uses the lens of person-in-environment theory to conceptualize how the financial attitudes, behaviors, and resources of first-generation college students contribute to their financial wellness. Data from the multi-institutional Study on Collegiate Financial Wellness are used to compare first-generation students and continuing-generation students at four-year public institutions on sources of educational funding, financial knowledge, financial optimism, financial strain, and financial self-efficacy. First-generation students were significantly more likely to use federal student loans, private student loans, money from a job, scholarships/grants, and credit cards to fund their education, whereas continuing-generation students were more likely to use parent and family income. First-generation students had significantly higher scores on average than continuing-generation students on the financial strain measure; this was reversed for the financial knowledge score, the financial self-efficacy measure, and the financial optimism measure. These results support findings from prior literature that first-generation students may experience greater financial hardship and implicate an impact on attitudes and beliefs around finances.

Key words: financial literacy, first-generation students, financial capability, financial wellness

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College is becoming an increasingly expensive endeavor for American families as college costs rise and federal and state subsidies for higher education decrease (Ma et al., 2020; Pew Charitable Trusts, 2015). The shift of financing education to families and students has exacerbated pre-existing economic inequality as some students are able to rely on parental income and other assets to fund their postsecondary education, whereas other students use alternative funding sources such as student loans and employment that are linked with greater financial stress (Goldrick-Rab, 2016; Houle & Addo, 2019). Several studies have detailed the adverse effects of financial stress on academic performance (Baker & Montalto, 2019; Britt et al., 2016; Letkiewicz et al., 2014) and retention (Britt et al., 2017; Joo et al., 2008). Students who do not complete their degree are more likely to default on student loan debt and face decreased lifetime earnings relative to their peers who completed their degrees (Baker et al., 2017; Gladieux & Perna, 2005). Understanding how the financial aspects of college differ across various student groups is therefore important for researchers and administrators to support degree completion and confront societal inequality.

Within recent decades, first-generation students have emerged as a population of interest, particularly related to college access and retention (Ives & Castillo-Montoya, 2020; Pascarella et al., 2004; Terenzini et al., 1996). First-generation students (i.e., a student whose parents or guardians did not graduate from college) comprise approximately one-third of the college-going student population (Chatelain, 2018). Despite the size of this group, there is a dearth of research specifically examining the financial attitudes, knowledge, and resources of first-generation students. The present study attempts to address first-generation college student experiences through a person-in-environment lens and financial wellness model. In doing so, we aim to highlight the necessity of examining environmental contexts in addition to personal characteristics with any analysis of student finances.

Literature Review

Definitions, Characteristics, and Experiences of First-Generation College Students

Definitions of the first-generation college student identity vary widely between studies (Pascarella et al., 2004; Peralta & Klonowski, 2017; Sharpe, 2017). Researchers have defined first-generation students as first in their immediate families to attend college (Kabaci & Cude, 2015); students whose parents have never attended college (Ishitani, 2006; Trevino & DeFreitas, 2013); or students whose parents attended some college but did not complete a bachelor's degree (Ishitani, 2006). Federal programs tend to define first-generation as a student for whom neither of their parents completed a bachelor's degree (Ishitani, 2006; Espinoza, 2013; National Center for Education Statistics [NCES], 2018). Most first-generation students are people of color (Chatelain, 2018; Kabaci & Cude, 2015; Trevino & DeFreitas, 2013). They are also more likely to work in college (part-time and full-time; Martinez et al., 2012); have familial responsibilities (Garza, 2017); rely on credit cards to subsidize educational expenses (Eitel & Martin, 2009); come from lower income families (Gibbons et al., 2019; Williams & Ferrari, 2015); and tend to have lower college completion rates (Ishitani, 2006; Kabaci & Cude, 2015; Wilbur & Roscigno, 2016; Williams & Ferrari, 2015).

As described, much of the research on first-generation college students focuses on their at-risk disposition relative to continuing-generation college students. However, to fully understand the dynamics underlying differences in retention and success between the groups, one strain of research suggests we must move beyond individual-level deficit analyses and take into account environmental- and institutional-level factors as well. These factors include, but are not limited to, cultural mismatch, sense of belonging, and

academic experiences.

Several scholars contend that cultural mismatch can complicate first-generation students' collegiate experiences (Adams & McBrayer, 2020; Chang et al., 2020; Ives & Castillo-Montoya, 2020; Phillips et al., 2020). American higher education institutions tend to emphasize and reward individualistic norms, meanwhile collectivist worldviews and interdependent behaviors are common among first-generation college students (Adams & McBrayer, 2020; Brown et al., 2020; Chang et al., 2020). In practice, this can manifest in different ways. For instance, although most campuses provide support services to assist with academic, financial, or mental health concerns, first-generation college students are less likely than continuing-generation college students to utilize them due to fear of being judged or burdening others (Chang et al., 2020). Unrecognized or unaddressed cultural misfit between student and institution, where students must straddle between two cultures, can be detrimental to student success (Adams & McBrayer, 2020; Chang et al., 2020; Phillips et al., 2020).

From a broader perspective, sense of belonging has been deemed an especially crucial element to first-generation college student institutional engagement (Gillen-O'Neel, 2021). Numerous studies have found that first-generation students are likely to feel marginalized in college for reasons ranging from microaggressions towards their first-generation identity (Azmitia et al., 2018; Havlik et al., 2020; Phillips et al., 2020) to more overt forms of bias (Adams & McBrayer, 2020). Furthermore, a systematic review of first-generation college students as academic learners highlights the influential role classroom dynamics, such as pedagogy or classroom activities, on learning and success. Classroom environments and exercises that encourage community, incorporate students' lived experiences, and provide explicit tools for navigating academia allow many first-generation students to leverage their strengths and perform well academically (Ives & Castillo-Montoya,

2020). These works provide a glimpse into how factors external to the student can ultimately impact their retention and success.

In examining first-generation college students, it is important to disrupt the conception of them as a monolithic group, or inherently a "problem to be fixed" (Brown et al., 2020, p. 245). While they share similar experiences, first-generation college students are a highly diverse group whose other social identities can uniquely steer their experiences (Ives & Castillo-Montoya, 2020), from socioeconomic status (Goward, 2018) to race (Azmitia et al., 2018). Despite deficit-based narratives, they often enter college with valuable strengths and assets that can promote their success. Persistence, pride, and belief in a greater purpose for pursuing a college education were resounding themes in recent studies examining the persistence of first-generation college students (Azmitia et al., 2018; Brown et al., 2020; Havlik et al., 2020). Even that many first-generation college students are compelled to work during college can help foster critical skills, such as time management, goal focus, self-advocacy, and leadership (Salisbury et al., 2012; Nuñez & Sansone, 2016).

The over-arching implication from the literature is that first-generation college students are more likely than continuing-generation college students to face challenges that can hinder their retention and success. However, institutional structures and environments can, and often do, affect their experiences and outcomes as well. Thus, the more student-ready institutions are—acknowledging first-generation college students' unique experiences, emphasizing their strengths and assets (rather than framing interventions from an at-risk perspective), and aware of the diversity within this population—the more likely they are to drive positive outcomes with this population (Brown et al., 2020; Ives et al., 2020; Goward, 2018). This is the notion that underlies the chosen framework of our present study.

The Person-In-Environment Framework

The present study aims to understand financial wellness as a product of knowledge, attitudes, and environmental context. The person-in-environment theory (also called person-in-situation theory) is a framework for understanding how personal characteristics and aspects of the environment interact to affect behavior and decision-making (Cornell, 2006; Kondrat, 2002). The field of social work uses person-in-environment theory to conceptualize how an individual's environmental context shapes their opportunities; this enables practitioners to move beyond paradigms that view individuals as problematic and instead locate issues within institutions and societal norms (Cornell, 2006). In the present study, employing person-in-environment requires examining first-generation students' subjective experiences around finances amidst external constraints and opportunities.

Despite its stature in social work research and practice, person-in-environment theory has yet to be applied broadly to the student affairs and higher education context; however, there is precedent for contextualizing outcomes within students' environments. Renn and Arnold (2003) used Bronfenbrenner's ecological model of concentric and interacting social systems to explore effects of peer culture on students' academic experiences. We utilize a broader person-in-environment theoretical lens to focus on financial opportunity and align with the literature on financial wellness. As exemplified with the present study, using person-in-environment theory in higher education and student affairs research presents an opportunity to theorize how systemic inequalities are reproduced.

Financial Capability and Wellness

Financial capability is a framework for addressing individuals' financial experiences that utilizes person-in-environment theory to explain the interaction of personal characteristics and environmental agents in producing economic outcomes (Sherraden, 2013; Xiao, 2016). Sherraden (2013) conceptualized financial capability as composed of two fundamental building blocks: the ability to act (i.e., financial literacy) and opportunity to act (i.e., financial inclusion). Financial literacy speaks to an individual's knowledge and perceived ability around financial topics, such as applying for loans, responsibly using credit, and opening a savings account (Lusardi & Mitchell, 2014). Financial literacy has been the target of numerous federal policies, most notably the creation of the United States Financial Literacy and Education Commission (U.S. FLEC) in 2003 to coordinate efforts across different governmental agencies tasked with consumer financial health (U.S. FLEC, 2020). Scholars have noted lower financial literacy among low-income families may originate from fewer opportunities for formal financial education and generational marginalization from financial opportunity (Lusardi & Mitchell, 2014), and that solely focusing on literacy ignores the role of financial institutions in reproducing inequalities (Hutten et al., 2018).

These critiques align with financial inclusion, the second financial capability building block, which focuses on the ability to access financial services and asset-building opportunities (Sherraden, 2013). Low-income families have less excess capital to invest in modern forms of asset-building, such as property acquisition and receiving dividends from stocks, forcing them to rely on an increasingly volatile labor market (Champagne & Kurmann, 2013). Financial institutions have a legacy of racial and ethnic discrimination that persists to the present day, further limiting access for many American families (Morse & Pence, 2020). In 2010, the Obama administration further integrated financial capability into federal policy by establishing the President's Advisory Council on Financial Capability (2013); subsequent federal financial policy frameworks have incorporated considerations of access to institutions and services (U.S. FLEC, 2020).

Financial wellness builds on financial capability to address attitudes and subjective experiences

of finances. Prior literature has emphasized the importance of examining attitudes and beliefs in relation to finances in addition to objective knowledge (Xiao, 2016). In particular, elevated financial stress correlates with undergraduate attrition (Britt et al., 2017; Joo et al., 2008). We therefore use a holistic definition of financial wellness in this study that incorporates financial literacy (i.e., financial knowledge and financial self-efficacy), affective domains of financial well-being (i.e., financial strain and financial optimism), and access to financial institutions (sources of funding for college expenses).

Some existing literature has examined aspects of first-generation student financial experiences, although not explicitly through a financial wellness lens. First-generation students are more likely to work to finance their college education and are particularly likely to be employed off-campus (Gibbons et al., 2019). Off-campus employment has been linked to heightened risk for attrition and lower sense of belonging on-campus (Joo et al., 2008; Martinez et al., 2012), indicating it as a possible risk to first-generation student success. A study of financial education professionals found that these educators assessed first-generation students to be at greater risk of financial strain due to lack of knowledge concerning sound financial management practices and ways of funding education (Kabaci & Cude, 2015). Furthermore, recent data from the NCES (2018) show first-generation students as being less knowledgeable about key financial concepts compared to students whose parents completed a bachelor's degree or higher, indicating possible issues with financial literacy. However, Flores's (2014) study involving 117 college first-generation students found levels of credit card debt and student loan debt to be unrelated to financial literacy among first-generation college students. An implication of Flores' study is that financial literacy level, while important, may be insufficient for gauging overall financial wellness, necessitating research that also examines financial inclusion and subjective experiences around finances.

The Present Study

The present research study seeks to add to the understanding of first-generation college students' experiences by examining their financial wellness. The study is grounded in the following research questions:

1. How does the holistic financial wellness of first-generation students compare to continuing-generation students?
2. How do the sources of funding first-generation students use to pay for college expenses vary from the sources of funding among continuing-generation students?

Methods

Data and Sample

The data used in these analyses are from the 2017 Study on Collegiate Financial Wellness (SCFW), a multi-institutional study examining undergraduate students' financial knowledge, behaviors, and attitudes. In the 2017 administration, 65 U.S. institutions across 24 states participated in the study. A random sample of undergraduate students from each institution was invited to take the survey; the total number of enrolled undergraduate students determined sample size. Among participating institutions, 89% were public and 81% were four-year institutions. The survey had a response rate of 10.5% with 28,539 respondents.

For the purposes of this study, we adopt the first-generation definition generally used by the federal government; that is, neither of the student's parents or legal guardians have completed a bachelor's degree (NCES, 2018). The SCFW determined first-generation identity using two items that asked the student about the highest level of education obtained by their mother/guardian and father/guardian. First-generation students were identified as those students for whom neither mother, father, and/or guardian had received a bachelor's degree. To create a sample for which

this definition of first-generation would be most relevant (Toutkoushian et al., 2019), only students enrolled at four-year public institutions pursuing bachelor's degrees were included in this study.

The sample was further limited to domestic students between the ages of 18-23 who had complete responses on all variables of interest (i.e., completed all demographic items, sources of funding, and financial scale questions) to eliminate potential confounding variables. Additionally, a cleaning process consistent with Dugan et al. (2012) was used to flag potential mischievous respondents: first, students were eliminated from the sample if they selected they obtained "All" of their funding from three or more sources of educational funding; secondly, students were eliminated from the sample if they responded inappropriately to the open-ended option for sources of educational funding (e.g., writing in a racial slur).

The final cleaned sample consisted of 12,295 four-year students, of which 4,205 (34.2%) were first-generation and 8,090 (65.8%) were continuing-generation. Table 1 provides a breakdown of the demographic composition of first-generation and continuing-generation students in this sample. First-generation students were more likely to be Latinx or Black compared to continuing-generation students, whereas continuing-generation students were more likely to be White compared to first-generation students. This is consistent with prior literature on first-generation students, which indicates they are more likely to be people of color (Chatelain, 2018; Kabaci & Cude, 2015; Trevino & DeFreitas, 2013).

Measures

The SCFW instrument was developed to understand undergraduate students' financial attitudes, behaviors, and knowledge. In spring 2017, students were invited to take the 82-item instrument via Qualtrics online survey software. Dependent variables included measures of financial self-efficacy, financial knowledge, financial strain, financial optimism, and educational funding sources. A summary of all scales is provided in Table 2. All Cronbach's alpha values fall within acceptable ranges given the number of items on each scale (Taber, 2016).

Financial literacy was assessed using measures of financial knowledge and financial self-efficacy; both constructs are consistently correlated with financial capability (Xiao, 2016). The SCFW instrument asks six personal finance knowledge questions to understand students' financial knowledge. The financial knowledge module used Lusardi and Mitchell's (2014) financial literacy questionnaire. Participant responses were recoded as incorrect (0) and correct (1) in a dichotomous variable, and then summed to give each respondent a financial knowledge score between 0 and 6. Financial self-efficacy describes an individual's feeling of preparedness to handle financial responsibility and draws from psychological theories of self-efficacy (Montalto et al., 2019); it is part of the literacy block of financial capability (Sherraden, 2013). Responses on the seven item self-efficacy scale were collected on a four-point Likert response scale with responses from Strongly Disagree (1) to Strongly Agree (4).

The SCFW uses two measures designed to explore financial attitudes: financial optimism and financial strain. The financial strain measure examines stress around financial situations, including worry about monthly finances and general financial stress. This scale is consistent with prior work on students' financial worries (Britt et al., 2017; Robb, 2017). The three-item financial optimism measure examines student attitudes towards their financial futures, including their perspectives on whether the cost of college is worthwhile. Prior work has correlated financial optimism with overall financial health (Prawitz et al., 2013). Responses on the financial strain and financial optimism scales were collected on a four-point Likert response scale with responses from Strongly Disagree (1) to Strongly Agree (4).

Financial inclusion was assessed using the sources of funding that students used to finance

their education. Educational funding sources were determined by a question that asked participants to indicate how much of their total college expenses were paid for by common funding sources. Respondents were supplied with a list of typical educational funding sources and asked to select how much they used that source. For the purposes of our analyses, responses were aggregated into whether the student had used the source (i.e., selected the A little bit, Some, Most, or All options) or not used the source (i.e., selected the None option). We focused on those educational funding sources that are most common to students, such as scholarships and grants, federal student loans, and parent/family income (Salle Mae, 2019), or are linked to higher financial risk, such as credit cards (Andrews, 2021; Montalto et al., 2019).

Analysis

Two sets of analyses were used to compare first-generation and continuing-generation students' financial capability. Chi-square tests of independence were used to contrast first-generation and continuing-generation students on sources of funding for educational expenses. Independent sample *t*-tests were used to compare average scores on the financial strain, financial optimism, financial self-efficacy, and financial knowledge measures.

As person-in-environment framework asks researchers to contextualize experiences as the dynamic interaction of personal characteristic and environmental influences, we offer our positionality to reflect on how our identities shaped our analytic process. Tori Rehr and Dr. Erica Regan identify as continuing-generation White women; both challenged themselves to explore how their privilege affected their understanding of analyses and drew upon authors using critical paradigms. Zayd Abukar identifies as a first-generation Black man and Dr. Jacquelyn Meshelemiah identifies as a first-generation Black woman; both reflected on the ways in which their first-generation status interacted with other aspects of their identity. All four authors contributed substantively in a collaborative dialogue to develop a theoretical framework, conduct analyses, and interpret findings.

Limitations

This research has several limitations. While the SCFW multi-institutional data are useful for examining broad trends across institutions, they are not nationally representative. The response rate for the 2017 SCFW was also low at 10.5%; however, this rate is comparable to response rates for other multi-institutional surveys (Goldrick-Rab, 2016; The Healthy Minds Study, 2019). The SCFW is free for institutions to participate and does not require the use of incentives. While 66% of institutions did provide incentives in the 2017 administration, part of the low response rate may be attributed towards those institutions that were unable to provide incentives. Additionally, a recent study by Fosnacht et al. (2017) illustrated robustness against nonresponse bias with large sample sizes. While the findings of Fosnacht et al. (2017) support the reliability of our analyses, results should be interpreted with caution given the low response rate. The analyses are also limited to domestic students between the ages of 18 to 23 seeking a bachelor's degree at a public four-year institution. As this is the first study to examine financial wellness of first-generation students, we limited the sample parameters to control for extraneous factors. However, this limits the generalizability of our results; we encourage future research that examines financial experiences of first-generation students at two-year institutions, private institutions, among international students, and among students age 24 and older.

Results

Our first set of analyses examined whether there are differences between first-generation and continuing-generation students in financial wellness using a series of measures. Analyses were conducted using independent sample t-tests. Results

are displayed in Table 3. First-generation students (M = 3.15, SD = 1.56) had significantly lower average financial knowledge scores (p < .001, d = .18) than continuing-generation students (M = 3.44, SD = 1.60). First-generation students (M = 2.91, SD = 0.49) also had significantly lower average financial self-efficacy scores (p < .001, d = .14) than continuing-generation students. Both of these findings illustrate differences in financial literacy between first-generation and continuing-generation students; however, in both cases the effect size was very small. For the financial optimism measure, first-generation students (M = 2.76, SD = 0.62) had significantly lower average scores (p < .001, d = .24) than continuing generation students (M = 2.91, SD = 0.61). Furthermore, on the financial strain measure first-generation students (M = 2.63, SD = 0.69) had significantly higher average scores (p < .001, d = .51) than continuing-generation students (M = 2.27, SD = 0.71) with a medium effect size, denoting additional differences between first-generation and continuing-generation students in subjective financial experiences.

The second set of analyses examined educational funding sources to analyze financial inclusion. Table 4 details which sources of funding first-generation and continuing-generation students used, as well as results for chi-square distribution tests. The analyses revealed extensive significant differences; first-generation students were significantly more likely to use both federal student loans (72% used source) and private student loans (28%) than continuing-generation students were (51% and 25%, respectively; p < .001). First-generation students were also significantly more likely to use scholarships and grants (85%) than continuing-generation students were (76%; p < .001), as well as to use money from a job (first-generation = 58%, continuing-generation = 49%, p < .001) and credit cards (first-generation = 14%, continuing-generation = 11%, p < .001). However, continuing-generation students were more likely to use income from parent/family member(s) (78%) to fund their education than

first-generation students were (58%; p < .001). Overall, these data suggest that first-generation students and continuing-generation students use different sources of funding to finance their educations, with first-generation students particularly less likely to use parental income to fund their education.

Discussion

Students' financial experiences have critical relationships with retention and on-campus participation (Baker & Montalto, 2019; Britt et al., 2017; Letkiewicz et al., 2014). This study is the first to apply the financial wellness to first-generation students. First-generation students' financial wellness differs significantly from their continuing-generation peers across all scales and indicators examined in this study, suggesting opportunities to re-examine institutional practices and question assumptions of first-generation students.

Financial Literacy and Attitudes

In our study, first-generation students had significantly lower scores on the financial knowledge and financial self-efficacy scales, suggesting they have lower financial literacy. Partially in response to federal policy encouraging the development of financial literacy among college students, colleges and universities now provide a bevy of financial literacy programming (Cude et al., 2016). However, financial education tends to be largely elective at postsecondary institutions and is offered as standalone workshops, as opposed to high schools where financial education courses are more often mandatory and integrated in the broader curriculum (U.S. FLEC, 2019). Mandatory financial education among high school students promotes positive financial behaviors, including lower-cost student loan financing and decreased likelihood of holding a credit card balance (Harvey, 2017; Stoddard & Urban, 2020). Our findings suggest that additional postsecondary financial education would be beneficial to first-generation

college students, particularly as they may not have had pre-college access.

Other studies have noted that providing students with factual knowledge alone does not suffice to increase financial capability; rather, financial education should attend to beliefs and perceptions around finances to be effective (Carpena et al., 2019; Xiao et al., 2014). Within our study, first-generation students had significantly lower scores than continuing-generation students on the financial optimism measure and had significantly higher scores on the financial strain measure than continuing-generation students. Prior literature has connected financial strain with negative academic outcomes (Baker & Montalto, 2019) and other negative financial indicators, such as low financial self-efficacy (Heckman et al., 2014). This further suggests that financial literacy and attitudes are intertwined.

Paying for College

Our study illuminated several differences between the way first-generation and continuing-generation students fund their education. First-generation students were more likely to use student loans (both federal and private), credit cards, scholarships and grants, and money from a job than continuing-generation students; however, first-generation students were less likely to use income from parents or family members. While student loan aid is pivotal for postsecondary education access (Jackson & Reynolds, 2013), recent scholarship has found that borrowing in high amounts, particularly exhausting subsidized federal financial aid, has a negative effect on retention and increases financial anxiety (Baker et al., 2017; Dwyer et al., 2012; Herzog, 2018). Scholars have also highlighted how the system for awarding federal aid is difficult for students to navigate and that the formula for awarding aid is in drastic need of reform (Kelly & Goldrick-Rab, 2014). This is especially worrisome for first-generation college students, who are among the first in their family to navigate these systems. Alternative methods to

federal loans or borrowing, such as credit cards and private student loans, also carry higher interest rates and may be more difficult for low-income students to obtain (Andrews, 2021; Ionescu & Simpson, 2016).

The finding that more than half of first-generation students reported using money from a job to pay for their postsecondary education is also a useful insight for college administrators. This research confirms the findings of other studies that have shown that first-generation students work more than their continuing-generation counterparts do (Pascarella et al., 2004; Terenzini et al., 1996; Goldrick-Rab, 2016). Previous studies have demonstrated that working full-time and off-campus could have negative effects on academic engagement and degree completion (Joo et al., 2008; Martinez et al., 2012). This can further have implications for varied facets of the student experience, including course schedules, involvement on campus, and availability for group coursework.

A potential auspicious finding is that first-generation students in our study had higher use of scholarships and grant aid than their continuing-generation peers did, with over 85% of first-generation students using a scholarship or grant in some form. These findings indicate that the first-generation students in our sample were successful in navigating institutional and policy systems to receive grant aid and scholarships. Focusing on how first-generation students are able to secure adequate funding and successfully complete their degrees while facing financial and institutional barriers fits with current discourse encouraging researchers and practitioners to consider the unique assets and cultural wealth that first-generation students bring to their education (Ives & Castillo-Montoya, 2020).

Implications

In designing educational interventions for first-generation college students, it is critical for administrators and researchers to recognize that first-generation students may struggle with nega-

tive cognitions and emotions around finances that can pose an additional barrier to achieving financial stability. Collaborations between financial educational offices and mental health practitioners may therefore be one promising opportunity to explore. In designing financial education curriculum for first-generation students, practitioners should attend to underlying assumptions around first-generation students and recognize that negative attitudes may be an adaptive response to ongoing financial marginalization. Involving first-generation students in financial education curriculum design would be beneficial for avoiding assumptions and perpetuating biases, as first-generation students will best be able to speak to areas where additional knowledge is needed given the financial constraints they experience. Stewart and Nicolazzo (2018) provide a framework for integrating students' lived experience and unrecognized strengths into curriculum design in student affairs that can be applied to financial education, including by developing a research team that reflects identities of study participants, utilizing critical paradigms in assessment, and subjecting curricula to continual revision.

We further recommend that administrative staff and institutions interrogate financial aid policies and practices, particularly with attention to how a first-generation student will navigate these challenges. Prior studies have articulated recommendations for institutions, including: critically analyzing the requirements for aid (e.g., GPA and minimum number of enrollment hours) and if these are feasible for students managing commitments outside of academics (Goldrick-Rab, 2016; Kelly & Goldrick-Rab, 2014); clearly stating the funding source and stipulations in financial aid packages (Goldrick-Rab, 2016; Scott-Clayton, 2015; U.S. FLEC, 2019); and developing strong partnerships between financial aid offices and academic advising offices (Scott-Clayton, 2015). We add to this literature a call to proactively support first-generation applicants during recruitment and orientation, particularly in navigating

the financial aid system and balancing the many financial pressures of college. While our findings do not speak to the efficacy of these interventions, the high use of risky funding sources in our study reinforces the importance of making financial aid accessible and adequate to cover college expenses.

This study represents an important addition to the growing body of literature around the experiences of first-generation college students in: 1) examining how first-generation students subjectively experience their financial situations alongside their financial knowledge, and 2) highlighting the role of environmental contexts on first-generation students' financial situations. As this is the first study to specifically address first-generation student financial wellness, we have limited our analyses to describe overall trends. However, first-generation students present numerous and diverse experiences with regards to family background, nationality, gender, race, ethnicity, language, institution type, and (dis)ability (Trevino & DeFreitas, 2013). Future research can attempt to parse how these unique identities and experiences affect the financial situations of first-generation students through more advanced statistical analyses. We encourage the use of qualitative research studies to analyze how first-generation students conceptualize finances in relation to their academics and on-campus activities, as well as to highlight personal strengths and campus resources that support first-generation students in their collegiate journeys. Furthermore, we urge universities to attend to the nuances and intersectionality of first-generation student identity by fostering collaboration between departments and units in supporting these students.

Declaration of Interest Statement

We have no known conflict of interest to disclose.

For researchers interested in using the data that support the findings of this study, please contact the corresponding author.

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Table 1: First-Generation and Continuing-Generation Student Demographics

		Continuing-Generation Students (n = 8,090)		First-Generation Students (n = 4,205)	
		n	%	*n*	%
Race and Ethnicity	White	6,385	78.9%	2,736	65.1%
	Black	353	4.4%	314	7.5%
	Latinx	449	5.6%	679	16.1%
	Asian	451	5.6%	230	5.5%
	Multiracial	320	4.0%	170	4.0%
	Other	92	1.1%	50	1.2%
	Prefer not to say	40	0.5%	26	0.6%
Gender Identity	Cisgender man	2,820	34.9%	1,222	29.1%
	Cisgender woman	5,180	64.0%	2,930	69.7%
	Trans-spectrum	72	0.9%	48	1.1%
	Prefer not to state	18	0.2%	5	0.1%
Employment Status	Not employed	3,167	39.1%	1,392	33.1%
	Employed part-time	4,568	56.5%	2,552	60.7%
	Employed full-time	355	4.4%	261	6.2%

Table 2: Reliabilities and Factor Loadings for Composite Measures

Measures	Factor Loading[1]	α[2]
Financial Self-Efficacy		.82
I am confident that I can manage my finances	.849	
I am able to make good financial decisions	.827	
I feel in control of my finances	.828	
I am confident in my ability to plan for my financial future	.827	
I am able to get the information I need about finances	.658	
When faced with a financial challenge, I have a hard time figuring out a solution*	.411	
I can resist the urge to make impulse purchases	.461	
Financial Optimism		.68
When I think about my financial situation, I am optimistic about the future	.822	
After graduation, I will be able to support myself financially	.831	
I think that the cost of college is a good investment for my financial future	.661	
Financial Strain		.86
I have enough money to participant in most of the same activities as my peers*	.782	
I have enough money to participate in most activities that I enjoy*	.832	
I feel stressed about my personal finances in general	.755	
I worry about being able to pay my current monthly expenses	.817	
I worry about having enough money to pay for school	.816	

*Item was reverse coded.

[1] Factor levels were calculated using the full dataset after cleaning for completion and mischievous responders (*n* = 19,362).

[2] Cronbach's alpha levels were calculated using the subset of data employed in this study.

Table 3: Independent *t*-Tests Analyses for Measures Comparing First-Generation and Continuing-Generation Students

	Continuing-Generation Students (*n* = 8,090)		First-Generation Students (*n* = 4,205)				
	M	*SD*	*M*	*SD*	*t*		Cohen's *d*
Financial Knowledge	3.44	1.60	3.15	1.56	9.42	***	.18
Financial Self-Efficacy	2.98	0.50	2.91	0.49	7.17	***	.14
Financial Optimism	2.91	0.61	2.76	0.62	13.05	***	.24
Financial Strain	2.27	0.71	2.63	0.69	-27.49	***	.51

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

Table 4: Chi-Square Analyses of Sources of Funding for Continuing-Generation and First-Generation Students

	Continuing-Generation Students (*n* = 8,090)	First-Generation Students (*n* = 4,205)		χ^2
Federal loans	51.1%	72.1%	***	501.99
Private loans	25.1%	28.1%	***	66.82
Scholarships and grants	75.8%	85.4%	***	156.50
Money from job	48.7%	57.6%	***	87.94
Parent/family income	78.1%	57.6%	***	566.30
Credit Cards	10.5%	14.0%	***	33.13

* p < .05 ** p < .01 *** p < .001
Note. Values listed above represent the percentage of participants using a given funding source.