A qualitative examination of the impacts of financial stress on college students' well-being: Insights from a large, private institution

SAGE Open Medicine Volume 9: 1-8 © The Author(s) 2021 Article reuse guidelines: sagepub.com/journals-permissions DOI: 10.1177/20503121211018122 journals.sagepub.com/home/smo



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Abstract

Objective: This qualitative research aims to provide deeper insight into college students' experiences by examining the impact of financial stress on their well-being.

Methods: Four focus groups were conducted at a large, private, urban university in the United States over the course of I month, each lasting approximately I h. Facilitators used a structured moderator guide to maintain consistency. Four focus groups were conducted and a total of 30 students participated. Students were primarily Asian (66.7%) and White (30.0%), and a majority were female (86.7%). Student participants were 43.3% undergraduate and 56.6% graduate. Transcripts were analyzed in Atlas.ti 8 software using line-by-line open coding guided by the principles of qualitative content analysis. An inductive approach was utilized to code the data. Emergent categories and concepts were then organized hierarchically into themes and subthemes.

Results: Two overarching themes emerged from the focus group analysis. In these students' perspectives, financial stress impedes their ability to succeed academically. Another major theme is the impact of finances on students' social lives. Students experiencing financial stress find it challenging to navigate relationships with wealthier peers, often leading to feelings of isolation and embarrassment.

Conclusion: Given the reported negative impact on students' well-being, further research is needed to determine methods for mitigating financial stress.

Keywords

Financial stress, well-being, college students, qualitative analysis, focus groups

Date received: 10 November 2020; accepted: 26 April 2021

Introduction

The cost of attending college in the United States has increased by 31% over the last decade, demonstrating a substantial shift in the financial commitment associated with pursuing higher education.¹ Research suggests this rising cost may be cause for concern. According to the 2018 Healthy Minds Survey, US college students report their current financial situation as "stressful" (35%), "often stressful" (24%), "rarely stressful" (20%), "always stressful" (14%), and "never stressful" (7%).² Similarly, data from the National College Health Assessment³ demonstrates that 75% of US students experienced moderate to high financial distress in the past 12 months.

There are many potential sources of financial stress for college students. A large number of students report being concerned about the amount of student loans they have taken out and their ability to repay these post graduation.⁴ In addition to loans related to the cost of tuition and class supplies, many students also require cost-of-living loans because of their inability to work full time while pursuing an education.⁵ Furthermore, many students are financially independent for

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the first time, resulting in an especially stressful time for them.⁶ In fact, many university students struggle to meet basic needs while in school. Data collected by the Hope Center⁷ on students at over 100 American colleges show that almost half of the students (45%) experienced food insecurity in the past 30 days and 17% experienced homelessness in the past year.

Research has demonstrated a link between financial stress and poorer mental health outcomes; for example, worry over finances has been correlated with mental illnesses like depression and anxiety.^{8,9} Similar studies have also reported an association between financial stress and general poor mental health.¹⁰⁻¹² A literature review published by McCloud and Bann¹³ purported students' perceived financial stress is correlated with negative mental health outcomes. However, the link between financial stress and debt was not substantiated, suggesting perceived stress may be a more influential factor in mental health than the amount of debt accrued.^{12,14} As McCloud and Bann¹³ report, much of the existing literature utilizes cross-sectional study design, making it difficult to determine longitudinal impact of financial stress on mental health outcomes and demonstrating the need for more research to determine the relationship between these two factors.

In addition to challenges in students' mental health, there is a link between financial stress and academic success, especially when it comes to student attrition. Studies have shown that students who experience higher levels of financial stress are more likely to discontinue their schooling than more financially secure peers.^{15,16} In addition, data from the National College Health Assessment indicate that almost a quarter of students (24%) reported that finances negatively impacted performance in a class.³ This may be due to having to work more hours to pay bills or for living expenses, which subsequently reduces the number of hours that can be committed to studying.¹⁷ This could also be attributable to higher levels of stress or anxiety having a direct effect on academic performance, among other factors.¹⁸

Given the importance of academics and well-being for college students, and the high prevalence of student financial stress, the goal of this study is to better understand the factors driving relationships between these constructs. Recent explorations of college student financial stress have provided valuable insights on this topic, including the impacts of financial stress on academic performance and social functioning.^{11,16,19} However, a majority of this emerging research uses quantitative methodology, which cannot provide the nuance of qualitative research. There have been qualitative studies on university student stressors in general,²⁰ or on the impact of financial stress on more specific outcomes, but to our knowledge, there have not been qualitative data published on the richness of student experiences of financial stress and its relationship to well-being. Therefore, the aim of this research was to better understand the mechanisms, using a qualitative methodology, for the impact of financial stress on college student academic success and well-being. The hope is that this research can be used to uncover findings that university administrators can utilize to better support students. Although there is some variation in the terminology referring to the subjective experience of feeling distressed, worried, or concerned about one's financial situation,^{11–13} we refer to this broadly as "financial stress."

Methods

Participants

A qualitative approach was utilized to gain a deeper understanding into the lived experiences of students with financial stress. Four focus groups were conducted at a large, private, urban university in the United States in September 2019. The student body, comprising 50,000 students, was approximately half undergraduate and half graduate students. About one quarter were international students, primarily from countries in Asia. Public data on family income was not available; however, the university reported that 22% of incoming first-year students were the first in their family to attend college and 18% of undergraduate students were recipients of Pell Grant US federal aid provided to lowincome students.²¹ Purposive sampling was used to recruit student participants who met the following criteria. First, participants had to be currently enrolled in an on-campus academic program at the university. Second, participants had to qualify by completing an online screener, which demonstrated an experience of current financial stress. This was measured using the question, "How would you describe your financial situation right now?" This one-item measure was chosen to align with national surveys investigating college student well-being.^{2,22} Participants answered on a 5-point Likert-type scale from "never stressful" to "always stressful." Those who selected "sometimes stressful," "often stressful," and "always stressful" (115 students) were invited to participate in one of the focus group sessions. Those who selected "never stressful" or "rarely stressful" (21 students) were not invited to participate.

Participants were recruited through distribution of a digital flyer in campus newsletters and student-facing social media accounts. Participants were also recruited from an email database of students who had previously indicated interest in focus group participation. Participants were offered a US\$15 gift card upon completion of the focus group. This study was approved by the Institutional Review Board at this university. Participants were given information about the study and written informed consent was obtained via an online form prior to the focus groups.

Focus groups

Focus groups were facilitated by student Community Health Organizers. The role of the Community Health Organizers is Table I. Focus group moderator guide key questions.

- I. What does it feel like when it's hard to pay for things you need or want?
- 2. When you've had to worry about money, how does this affect your well-being?
- 3. When you think about other students here at [institution name], what does it seem like for them when it comes to paying for things? How similar is your situation to other students at [institution name]?
- 4. When it's hard to pay for things, how does it affect the way you fit in with the university community as a whole?
- 5. When it's hard to pay for things you need or want, how does that affect you academically?

to gather student input via peer focus groups and work closely with cross-departmental committees to shape programming, services, and policies centered on well-being. As student researchers, those who hold the Community Health Organizers roles are particularly invested in well-being and each brings their individual biases as a researcher. The Community Health Organizers completed a 2-day intensive training, which included instruction on qualitative data collection and analysis. Students learned how to organize and conduct focus groups, including recruitment strategies, techniques for facilitating diverse perspectives, and methods for recognizing personal bias in coding and analysis. The fall 2019 cohort of Community Health Organizers comprised seven students, both undergraduate and graduate, and included both male and female students.

The focus groups took place in various buildings on campus over the course of 1 month, each lasting approximately 1 h. At each focus group, two Community Health Organizers were present. One Community Health Organizer served as the primary facilitator and one served as note-taker. There was no one else present during the focus groups besides the participants and Community Health Organizers. Focus group participants did not have any prior relationship with the Community Health Organizers. To maintain consistency, students used a structured moderator guide to facilitate the focus groups (Table 1). The moderator guide was tested internally with the research team prior to the focus groups. Participant demographics were also collected. The recommended sample size for focus group discussions is 5-8 people per group and a minimum of four groups to achieve code saturation.²³ The research team held four focus groups to meet this recommendation.

Analysis

All focus groups were audio recorded and files were transcribed verbatim. Transcripts were not returned to participants for comment or correction. Transcripts were analyzed in Atlas.ti 8 software using line-by-line open coding guided by the principles of qualitative content analysis. An inductive approach was utilized to code the data. Each transcript was independently coded by two raters. After each round of independent coding, raters compared codes to discuss discrepancies and reach consensus. Emergent categories and concepts were then organized hierarchically into themes and subthemes.²⁴ The final coding scheme and all transcripts were reviewed by the investigative team to ensure that they accurately captured the topics that were discussed in the focus groups. Participants did not provide feedback on the findings.

Results

A total of 30 students participated in four focus groups (5–9 students per group). A total of 21 additional students met the eligibility criteria and signed up to attend a focus group, but did not show up on the day of the focus groups. Reasons for dropping out are unknown. Of the 30 participants, students were primarily Asian (66.7%) and White (30.0%), and a majority were female (86.7%; Table 2). Student participants were 43.3% undergraduate and 56.6% graduate. Participants were about evenly split into domestic (56.7%) and international (43.3%) students. Similarly, about half (46.7%) were first-generation students and 40.0% of students were receiving financial aid. Participants' annual family income varied, with 16.7% of participants reporting less than US\$25,000 and 13.3% of participants reporting greater than US\$100,000 annual family income. To protect participants' anonymity, information on academic program, age, disability status, grade point average (GPA), and employment status was not gathered.

Two overarching themes emerged from the focus group analysis. First, students felt the effects of financial stress play out significantly in their academic lives. In these students' perspectives, their financial status impedes their ability to succeed academically. Another major theme is the impact of finances on students' social lives. As subsequent data show, students experiencing financial stress find it challenging to navigate relationships with wealthier peers, often leading to feelings of isolation and embarrassment.

Academic consequences

Inability to purchase textbooks

To explore academic challenges associated with financial stress, facilitators asked participants, "When it's hard to pay for things you need or want, how does that affect you academically?" The high cost of textbooks and other online materials was named frequently as a stressor for students. Course materials contributed to "constant worry" about finances, particularly at the beginning of each semester. One

		Count	Percent
Race/Ethnicity	American Indian/Alaska Native	I	3.3
	Asian	20	66.7
	Black or African American	I	3.3
	Native Hawaiian or other Pacific Islander	0	0
	White	9	30.0
	Other	0	0
Gender identity	Male	4	13.3
	Female	26	86.7
	Transgender man/female-to-male	0	0
	Transgender woman/male-to-female	0	0
	Gender queer/gender non-conforming	0	0
	Different gender	0	0
	Decline to answer	0	0
Class standing	Undergraduate	13	43.3
	Masters	6	20.0
	PhD	I	3.33
	Professional doctorate	10	33.33
International/Domestic	International	13	43.3
	Domestic	17	56.7
First generation	Yes	14	46.7
	No	16	53.3
Receiving financial aid	Yes	12	40.0
	No	18	60.0
Annual family income	<u\$\$25,000< td=""><td>5</td><td>16.7</td></u\$\$25,000<>	5	16.7
	US\$25,001–US\$50,000	10	33.3
	U\$\$50,001-U\$\$75,000	4	13.3
	U\$\$75,001–U\$\$100,000	4	13.3
	>U\$\$100,000	4	13.3

Table 2. Demographic characteristics of student focus group participants.

student reported avoiding certain classes because they could not afford the required materials. Others feared if they were unable to pay for course materials, their grades would suffer. It was difficult for many students to decide whether to purchase expensive textbooks or pay for other necessary expenses like rent or even "very basic amenities." When faced with this challenging decision, most students opted to pay for necessities. Without access to course materials, students developed resourceful methods for staying afloat. To avoid purchasing expensive textbooks, one student asked classmates to borrow books so they could take photos of the pages. Another student mentioned purchasing outdated versions of textbooks. While some of the content was similar, there were instances where the old editions did not suffice. The student gave an example where they could not complete practice problems the professor assigned, causing them to fall behind in class.

Prioritizing work over studies

Another common theme among students was the difficult decision to prioritize on- or off-campus jobs over their academics. Students often mentioned how their studies suffered because they had to continue working to earn money. One participant described the challenge of balancing work and academics during exams. The student wanted to take time off to focus on their studies, but had to work instead to maintain basic living expenses. Another expressed a similar sentiment, adding they felt jealous of other students who did not have to work, saying:

... you get things wrong or maybe you didn't so well on this test, but you're like, "Oh, I had to work a lot last week." And then you feel bad, some of these other kids in my class who clearly have a lot of money, you know that they didn't have to work and they could just spend time studying, and that's also something that I think has hurt me and has hurt my grades. [Undergraduate]

Stress as a distraction from academics

Many discussed how constant stress over finances distracted from their academics. Students mentioned the inability to focus on their studies when their thoughts are constantly preoccupied with expenses. One student explained,

... in the back of my mind it's like, "Oh this payment is coming," or like, "I have to pay this," or like, "This is the amount I have in my bank account, oh my god." These thoughts

are constantly in my head, and they prevent me from fully focusing at what's in front of me and doing as well as, the best I can in my classes. [Undergraduate]

Students perceived this stressor as unique to those experiencing financial stress. They often characterized their constant worry as "unfair" when comparing their situation to students of more means.

Unable to further career goals

In all focus groups, students cited their jobs as an impediment to furthering their career goals. Students felt their jobs were necessary to earn money, but prevented them from pursuing other opportunities. Many identified their jobs as "just something to pay the bills" and "not a value add for my career." Students expressed desire to take on extracurricular projects or jobs that would advance career goals, as opposed to working solely to earn money.

Many students reported they could not afford to participate in career-enhancing extracurriculars. These extracurriculars were characterized as having "amazing opportunities" for gaining valuable experience outside the classroom. However, many extracurriculars at the university include membership fees or event expenses for which these students could not pay. For example, one student mentioned their disappointment in missing a service trip, which included travel and mentorship by university staff. Two students perceived financial stress as a barrier to networking opportunities, with one expressing dismay at the expensive dues of a professional fraternity. Another described the university as "all about connections." Wealthy students were seen as already having connections, thus more easily transitioning to a fulfilling job after graduation. Students who were "on the poorer end" had to work even harder to establish professional contacts.

Social consequences

In addition to academic strains, students felt the effects of financial stress strongly in their social lives, which further impacted their sense of belonging and well-being.

Social comparison

Students frequently compared financial status with those of their peers, finding they had to work harder than other students to achieve the same goals. Many made statements like "they're able to do things easily" and "everybody else has an easier time," perceiving other students to be at an advantage due to their socioeconomic status. A few students explicitly mentioned the school's reputation as a school for the wealthy and privileged, describing the university as "for really rich people and legacies" and "where all the wealthy people are." Constant social comparison to wealthier peers caused these students to feel ostracized and not fully part of the university community.

Class separation and its consequences

As a result of perpetual social comparison, students felt a clear class separation between the "haves" and the "have nots." In all four focus groups, participants mentioned a clear social divide at the school based on financial status. One student said,

I feel like all the really, really rich kids tend to just migrate towards each other, and there is this circle, or this little bubble of wealth, and it's kind of impossible to penetrate into it, unless you can afford to do spring break in Cabo. [Undergraduate]

Due to the clear distinction in financial status, many students felt excluded from certain social experiences. Students mentioned their inability to participate in informal social gatherings, like going on trips with friends. These students were typically invited to participate by their friends, but had to decline because they could not afford to go. Some students were upfront with their friends, citing their inability to pay. However, many felt uncomfortable discussing their lack of finances and fabricated other excuses.

In addition to informal gatherings, others cited exclusion from "official" university social experiences, such as student organizations, Greek life, and football games. Students wanted to participate, but could not justify the associated costs. One student poignantly described the feeling of missing out on these experiences:

... the social factor is such a big part of what makes the [school] experience, so I feel like I really missed out on a big portion of that, so if I graduate, and I were to talk to another [school] graduate, I feel like we wouldn't be able to connect on a really big portion of what's supposed to be a mutual experience. [Undergraduate]

Feeling self-conscious/embarrassed/ashamed

Many students expressed feelings of embarrassment or shame as a result of their financial status. One said, "for the lack of a better word, I would say it feels just bad . . . you feel kind of like a loner at times." Some were afraid of being perceived as "cheap" for their unwillingness to spend money for social outings. Others described specific instances where they felt targeted for their financial status. One student suspected they were rejected from a professional organization because they had to "cobble together some stuff . . . at Goodwill" for the final round interview. The student said they were not explicitly denied based on their financial status, but it left them with a sinking feeling that their suit from Goodwill had played a part. Another reported an instance where they were confronted by a friend who demanded to know why the student was always trying to "take benefits from other people." One student cited an experience where she was the target of gossip in her residence hall because she had complained about the cost of doing laundry.

Navigating the divide

To remain friends with wealthier students, students with financial stress adopted a variety of methods for participating in social outings. Some took on the responsibility of orchestrating plans so they could afford to participate. For example, one student described how they are "strategic about it," suggesting low-cost restaurants and asking friends to go on a hike instead of paying for an expensive event ticket. However, in most cases, students with financial stress end up skipping these social outings altogether. Unable to participate, students reported feelings of disappointment and alienation. One student dejectedly characterized themselves as the friend that "ruins everything."

Bonding with other low-income students

While some friendships with peers were described as hard to maintain, many students formed close relationships with others experiencing financial stress. One student found that these relationships were easier because "it feels like you're not alone in this." Other students echoed this sentiment, adding that these friendships provide "a nice community where I feel I fit in." Together, these students found free events on campus to attend. They also described swapping stories about their financial stress, using humor to cope with tough financial situations. Two students said they developed friendships through the first-generation student union, an on-campus space for scholarship recipients. This student union was described as "a more welcoming space" than other venues on campus and an easy way for students to find like-minded peers.

Discussion

Data from these focus groups illustrate that students experience the effects of financial stress in their academic studies and in their social lives. Financial stress may be a barrier to achieving academic success, as it prevented students from purchasing textbooks, caused them to prioritize jobs over coursework, and stood in the way of furthering career goals. Financial stress was also tied to students' social lives. Students often made social comparisons to peers, perceiving others as having more disposable income. This constant comparison resulted in feelings of shame and frustration. These students also described how those with financial stress encounter a vastly different college experience, as they struggled to maintain friendships with wealthier peers and felt unable to participate in social events. Interestingly, 13% of participants identified their annual family income as greater than US\$100,000. This may suggest financial stress is not necessarily exclusive to low-income students, and middle-class students may also be experiencing similar challenges. Alternately, financial stress may be driven by students' comparison to wealthy peers, rather than their financial status. Future research could seek to better understand the prevalence of these academic and social consequences.

The insights gathered from these focus groups support previous findings on the impact of financial stress on college students. Joo et al.¹⁶ found financially stressed students reported poorer academic performance than their peers. Bennett et al.17 echoed these findings, demonstrating students with financial stress spend more time at work, resulting in significantly lower course grades. Student perspectives from these qualitative findings produced similar themes, detailing how work responsibilities can be a barrier for academic achievement. These findings also point to possible long-term effects of financial stress years after college, with students describing their inability to strengthen their career capital in comparison to their peers. Longitudinal research has shown financial stress can cause students to drop out of college;²⁵ however, for those who persist, future research could explore whether financial stress is a determining factor in students' post-graduation career prospects.

Data from our study also support findings that the inability to participate in activities with peers is one of the most salient financial stressors for students.²⁶ As demonstrated by students' firsthand experiences, their inability to participate in either on-campus events or more informal social gatherings led to feelings of embarrassment, shame, and frustration. These adverse effects on peer-to-peer relationships are striking, as social support is one of the strongest predictors of one's well-being.²⁷ As demonstrated in previous research, students experiencing financial stress report poorer subjective well-being.⁶ Future research could more deeply explore whether financial stress impacts the relationship between social support and overall well-being.

As evidenced by students' rich perspectives, it may be difficult for students to receive the full benefits of a college education when their social and academic lives are impeded by financial stress. To address these negative outcomes, university administrators who develop policy and allocate resources will need to consider both the downstream effects of financial stress as well as its root causes. Further research is needed to determine the most effective interventions for mitigating financial stress in a university setting. However, the preliminary evidence from this qualitative research suggests there are a few key areas for administrators to consider. First, academic programs can allocate budget dollars to cover the cost of textbooks or require professors to offer low- or no-cost options. This could ensure all students, regardless of financial status, have adequate access to course materials. Universities can also review available student jobs and incentivize departments to develop job opportunities more in line with students' career goals. This could satisfy both students' need to earn money and their desire to gain a valuable experience related to their career aspirations. Colleges may want to consider a policy in which all student worker jobs offer a set amount of paid time off to use in conjunction with major exams, reducing the burden on students who feel they must prioritize work over academics.

While there is no simple solution for addressing the social challenges of a diverse socioeconomic student body, there are ways in which universities can begin to address these issues. University-sponsored events, especially those tied to the "core" experience of the school, could be offered free of cost.¹¹ For example, colleges with large sports programs can either make tickets free of charge or significantly subsidize the cost. This could relieve the pressure on students who worry they cannot afford such expenses. In addition, universities who provide funding to student organizations could consider only allocating funding to groups who offer lowcost events or scholarships for low-income students. This policy may incentivize student organizations to remove the financial barriers to membership, allowing more students to find belonging with their peers. Finally, university policymakers can take steps to normalize diversity in socioeconomic status.²⁶ This could be implemented by mandating training on diversity, equity, and inclusion for the entire university community. Efforts can also be made in official university communications to students. Any message coming from a university leader or academic department could aim to better reflect the experiences of a diverse student body, with particular attention toward socioeconomic status. To tackle the root cause of financial stress, universities could lower the total cost of attendance, including tuition, room and board, and fees.¹⁷ Alternately, colleges can increase the amount of available scholarship funds and communicate these funding opportunities widely to students.

Limitations

This study was conducted in one large, private university in the United States. This institution has a large percentage of international students, which may not be comparable to peer institutions. Student participants did not wholly reflect the diversity of the campus's student body, with a majority of participants identifying as female and Asian. Participants were screened using a limited, subjective one-item measure to describe their financial stress, which makes it difficult to quantify the heterogeneity of financial stress experienced. This institution does not publish annual family income data; thus, participants' socioeconomic status cannot be compared to the student body as a whole. In addition, students experiencing financial difficulty may have been more likely to participate in the focus groups due to the financial incentive provided. As this study sought to examine the impact of financial stress rather than its causes, participant data such as age, GPA, subject of study, and employment were not collected. Future research is needed to explore how these factors may impact financial stress.

Conclusion

This analysis provides insights on the impact of financial stress on students' well-being at a large, private university. Students with financial stress primarily reported challenges with their academic studies and social lives. Considering the rising cost of pursuing higher education in the United States, future research should continue to investigate the impacts of financial stress on college students and aim to identify promising policies and practices to reduce financial stress among students.

Acknowledgements

The authors would like to thank the whole research team for supporting this work. This research was not supported through grant funding. Results from this research have not been published elsewhere.

Declaration of conflicting interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Ethical approval

This study was determined to be exempt from 45 CFR 46 by the University of Southern California Institutional Review Board (Study ID: UP-19-00499) and thus was not subject to requirements for continuing review.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

Informed consent

Written informed consent was obtained from all subjects before the study.

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References

- U.S. Department of Education; National Center for Education Statistics. Average undergraduate tuition and fees and room and board rates charged for full-time students in degreegranting postsecondary institutions, by level and control of institution: selected years, 1963-64 through 2017-18. Report, U.S. Department of Education 2018, https://nces.ed.gov/programs/digest/d18/tables/dt18 330.10.asp
- Healthy Minds Network. The healthy minds study 2018-2019 data report. Report, Healthy Minds Network, 2019, https:// healthymindsnetwork.org/wp-content/uploads/2019/09/ HMS_national-2018-19.pdf
- American College Health Association. National college health assessment III fall 2019 reference group data report. Report, American College Health Association, Silver Spring, MD, 2020.

- Fox JJ, Bartholomae S, Letkiewicz JC, et al. College student debt and anticipated repayment difficulty. *J Stud Fin Aid* 2017; 47(2): 111–135.
- Christie H and Munro M. The logic of loans: students' perceptions of the costs and benefits of the student loan. *Br J Sociol Educ* 2003; 24(5): 621–636.
- Robb C. College student financial stress: are the kids alright? J Fam Econ Issues 2017; 38(4): 514–527.
- Goldrick-Rab S, Baker-Smith C, Coca V, et al. College and university basic needs insecurity: A national #realcollege survey report. Report, the Hope Center for College, Community, and Justice, 2019, https://hope4college.com/ college-and-university-basic-needs-insecurity-a-national-realcollege-survey-report/#:~:text=The%20%23RealCollege%20 survey%20is%20th,to%20affordable%20food%20and%20 housing.&text=Nearly%2086%2C000%20students%20participated%20in%20the%20survey.
- Karyotaki E, Cuijpers P, Albor Y, et al. Sources of stress and their associations with mental disorders among college students: results of the World Health Organization world mental health surveys international college student initiative. *Front Psychol* 2020; 11: 1759.
- Andrews B and Wilding JM. The relation of depression and anxiety to life-stress and achievement in students. *Br J Psychol* 2004; 95(Pt4): 509–521.
- Ross S, Cleland J and Macleod MJ. Stress, debt and undergraduate medical student performance. *Med Educ* 2006; 40(6): 584–589.
- 11. Adams DR, Meyers SA and Beidas RS. The relationship between financial strain, perceived stress, psychological symptoms, and academic and social integration in undergraduate students. *J Am Coll Health* 2016; 64(5): 362–370.
- Cooke R, Barkham M, Audin K, et al. Student debt and its relation to student mental health. *J Furth High Educ* 2004; 28: 53–66.
- McCloud T and Bann D. Financial stress and mental health among higher education students in the UK up to 2018: rapid review of evidence. *J Epidemiol Community Health* 2019; 73(10): 977–984.
- Richardson T, Elliott P and Roberts R. The impact of tuition fees amount on mental health over time in British students. J Public Health 2015; 37(3): 412–418.

- Britt SL, Ammerman DA, Barrett SF, et al. Student loans, financial stress, and college student retention. *J Stud Fin Aid* 2017; 47(1): 25–37.
- Joo SH, Durband DB and Grable J. The academic impact of financial stress on college students. *J Coll Stud Ret* 2008; 10(3): 287–305.
- Bennett D, McCarty C and Carter S. The impact of financial stress on academic performance in college economics courses. *Acad Educ Leadersh J* 2015; 19(3): 23–25.
- 18. Seipp Bettina. Anxiety and academic performance: a metaanalysis of findings. *Anxiety Res* 1991; 4(1): 27–41.
- Vaughn NA. The relationship between financial stress and academic and social functioning of undergraduate residential college women. Master's Thesis, Smith College, Northampton, MA, 2013.
- Hurst CS, Baranik LE and Daniel F. College student stressors: a review of the qualitative research. *Stress Health* 2013; 29(4): 275–285.
- University of Southern California Office of Institutional Research. Common data set 2019-2020. Report, Office of Institutional Research, 2020, https://www.dartmouth.edu/oir/ pdfs/cds 2019-2020.pdf
- Center for Collegiate Mental Health. Standardized data set. Report, Penn State University, University Park, PA, 2017, https://sites.psu.edu/ccmh/files/2017/08/SDS-Manual-v.4.2-1060h2h.pdf
- Hennink MM, Kaiser BN and Weber MB. What influences saturation? Estimating sample sizes in focus group research. *Qual Health Res* 2019; 29(10): 1483–1496.
- 24. Hsieh HF and Shannon SE. Three approaches to qualitative content analysis. *Qual Health Res* 2005; 15(9): 1277–1288.
- Choy SP. Access & persistence: Findings from 10 years of longitudinal research on students. *Report, American Council* on Education, 2003, https://eric.ed.gov/?id=ED466105
- Lim H, Montalto C and Heckman S. Factors related to financial stress among college students. *J Fin Ther* 2014; 5(1): 3.
- Uchino B. Social support and health: a review of physiological processes potentially underlying links to disease outcomes. J Behav Med 2006; 29(4): 377–387.