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ORIGINAL PAPER

College Student Financial Wellness: Student Loans and Beyond

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Abstract
Financial wellness is multidimensional, incorporating all aspects of a person's financial situation, including their awareness of their financial situation, goal setting to maintain or improve their current financial situation, and the capability to put these goals into action. This review explores key aspects of college student financial wellness and financial behavior including use of credit cards and student loans, financial literacy, financial stress, and financial self-efficacy. This review also incorporates new information from the multi-institutional Study on Collegiate Financial Wellness, which adds depth to understanding of college student financial wellness in unique ways. Colleges and universities can and should contribute to the ongoing development of the financial capability of the college student population. To effectively plan and implement financial wellness initiatives on campus, understanding the needs of students on our campuses and how finances influence the day-to-day lives of students is critical.

Keywords Financial capability · Financial wellness · Higher education · Student loans

Introduction

College students are stressed-out about their finances. Data from the Spring 2016 National College Health Assessment (NCHA), a multi-institutional study of student health and wellness at postsecondary institutions across the United States, found that 33.7% of respondents stated that their finances had been traumatic or very difficult for them to handle within the past 12 months [American College Health Association (ACHA) 2016]. Headlines tout rising student debt and financial aid levels that are insufficient to cover the college funding gap (Leonor 2017). Media coverage and much of the research on college student finances focuses on student loans as the major financial concern for today's college students. A strong base of existing research provides evidence of the effectiveness of student loans as vehicles for increasing access to education (Avery and Turner 2012; Dwyer et al. 2012). Prior research suggests that the relationships between student loans and students' academic and economic outcomes are complicated, and whether student loans function as a positive or negative financial factor depends on a student's larger financial and socioeconomic well-being (Baker et al. 2017). In discussions of student finances, it is important to address use of student loans, but also to consider the wide array of factors that encompass financial wellness more broadly. Doing so allows for a nuanced, complex picture of student financial wellness that moves beyond focusing strictly on a single piece of student finances. To understand financial wellness more completely, we must consider how trends in student borrowing relate to issues affecting students' current and long-term financial wellness.

Financial wellness is not only about having individual resources and knowledge to construct a stable financial situation, it is also about having a broad understanding of one's financial situation and the capability to put financial goals into action. Understanding financial situations and resulting behaviors, including use of credit cards and student loans, is a vital component of financial wellness. Having financial knowledge and self-efficacy to plan and pursue strategies that allows one to achieve his/her financial goals are also important. Discussions of financial wellness among college students should consider both the immediate impact of

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financial decisions made by college students on their current well-being as well as the importance of developing sound and responsible financial behaviors in order to increase their future well-being. Responsible financial behaviors are the processes of managing financial resources in ways that are productive and in the best interest of the individual or family.

This review focuses primarily on understanding the student loan literature from a financial wellness lens, which means we consider both student loans in depth and outline how they intersect with and are separate from students' overall financial wellness. First, we review current trends in student loans as they pertain to student financial wellness, including student borrowing decisions, the relationship of loans to persistence and completion, and loan delinquency/default. We then discuss collegiate student financial wellness more broadly, including credit card behavior, financial literacy, financial stress and anxiety, and financial self-efficacy in order to highlight relationships between attitudes, behaviors, knowledge and financial wellness of college students, with attention to how these issues matter for students' finances both immediately and in the future. We conclude with a discussion of next steps in helping students understand their own financial wellness and implications for federal policy related to higher education funding.

Study on Collegiate Financial Wellness (SCFW)

Throughout this review, we highlight information from the Study on Collegiate Financial Wellness (SCFW 2017a). The SCFW is a multi-institutional study led by The Ohio State University that explores, multi-dimensionally, the day-to-day financial lives of college students and provides information on financial behaviors. The SCFW seeks to understand students' financial attitudes, behaviors, and knowledge, with connections to academic success, borrowing decisions, financial stress, and financial self-efficacy. In 2014, the study involved 51 institutions and collected information from 18,795 college students. In 2017, the study involved 65 institutions, encompassing 90 2- and 4-year campuses and collected information from 28,539 college students. While not nationally representative, the SCFW provides important insights into current understandings of student finances. One of its particular strengths is in its multi-dimensional approach to understanding students' financial situations at both 2 and 4-year colleges. By incorporating multi-institutional data from the SCFW as part of this review, we bring in the latest and most comprehensive data available on students' financial situations and their holistic financial wellness[1].

Four-fifths (79.8%) of the 2017 SCFW respondents were traditionally aged college students (18–23 years) and an additional one-tenth (10.5%) were young adults (24–29 years); the remaining respondents ranged from age 30 to over 60 years of age (Table 1). Nationally, 82% of college students are under age 30 (Snyder et al. 2018). Approximately two-thirds (65.4%) of the sample were women compared to 56% nationally (Snyder et al. 2018). The majority of the respondents were White (60.9%), with smaller proportions identifying their race/ethnicity as Hispanic/Latino(x) (15.1%), Asian American/Asian (9.0%), or Black or African American (6.7%). Nationally, 56% of students identify as White, 18% Hispanic, 7% Asian/Pacific Islander, and 14% Black (Snyder et al. 2018). A student is considered first generation if neither parent has a bachelor's degree. Slightly over two-fifths (43.6%) of the SCFW respondents were first generation and nearly half (48.9%) indicated that they qualified for Pell Grants. Over half of the respondents were employed part-time (52.5%) and just over one-third (36.1%) were not employed. Only 11.4% of the respondents reported full-time employment, which is similar to the percentage of respondents who reported part-time enrollment as a student (12%). Nationally, 36% of students are employed part-time, 26% are employed full-time, and 38% are not employed (Snyder et al. 2018).

In 2017, over two-thirds (67.7%) of the SCFW respondents attended 4-year public institutions, with smaller percentages representing 4-year private (10.5%) and 2-year public (21.8%) institutions. The SCFW did not include any students from for-profit institutions and students attending 4-year public institutions are overrepresented. Respondents were evenly distributed by years enrolled with about one-fifth of respondents in the first (24.2%), second (22.3%), third (22.3%), fourth (17.4%) or fifth year or more (13.8%) of post-secondary or higher education (excluding any post-secondary work completed in high school). Two-fifths (41.1%) of respondents lived in a residence outside of walking distance to campus, with the remaining respondents distributed between living on-campus (32.5%) or off-campus within walking distance of campus (26.4%). Throughout this review, data from the multi-institutional Study of Collegiate Financial Wellness will illustrate financial attitudes, behaviors, and knowledge of college students.

[1] Additional information about the Study on Collegiate Financial Wellness is available at https://cfw.osu.edu.

Table 1 Demographics

2017 Study on collegiate financial wellness	%
Age of respondents	
18–23	79.8%
24+	20.2%
Total responses	28,539
Gender	
Female	65.4%
Male	33.0%
Another gender	1.2%
Prefer not to state	0.4%
Total responses	28,487
Race/ethnicity of respondents	
Asian American/Asian (East, South, Southeast)	9.0%
Black or African American	6.7%
Hispanic or Latin(x)	15.1%
White	60.9%
More than one race or ethnicity	3.9%
Native Hawaiian, Pacific Islander, Native American, Middle Eastern, or other	2.1%
Prefer not to answer	2.4%
Total responses	28,468
Number of years enrolled	
1	24.2%
2	22.3%
3	22.3%
4	17.4%
5 or more	13.8%
Total responses	24,207
Enrollment status	
Full-time	86.6%
Part-time	12.0%
Non-degree seeking	1.4%
Total responses	25,056
Current living situation	
On-campus	32.5%
Off-campus within walking distance	26.4%
Off-campus outside of walking distance	41.1%
Total responses	23,423
Employment status	
Employed full-time	11.4%
Employed part-time	52.5%
Not employed	36.1%
Total responses	26,441
First generation status	
Not first generation	55.5%
First generation	43.6%
Don't know	0.9%
Total responses	28,460
Pell grant status	
Yes	48.9%
No	41.6%
I don't know	9.5%
Total responses	21,880
Type of institution attended	
2-year public	21.8%
4-year public	67.7%
4-year private	10.5%
Total responses	28,539
FAFSA completion status	
Yes	85.9%
No	12.5%
Don't know	1.6%
Total responses	25,420

Student Loans

Historical and Current Trends

The history of financial aid is complex and multi-faceted (Fuller 2014), and to understand the current context for student loans, it is important to understand the connections between the federal government, state governments, private businesses, and individuals in the funding of higher education. Over time, the US has normalized government involvement in higher education funding through grants and loans (Fuller 2014). The federal government has also designed financial aid programs and policies that specifically focus on making higher education accessible to as many interested individuals as possible. Programs such as the Stafford Loan and Pell Grant were seen as ways to expand access to higher education and to recruit an increasingly diverse student population into colleges and universities. These trends toward access have continued in recent years, specifically with the 2007 College Cost Reduction and Access Act (US Congress H. R. 2669) and 2008 Higher Education Opportunity Act, which decreased subsidized federal loan interest rates, required colleges to have a net-price calculator on their websites, created income-based repayment options, and implemented loan forgiveness programs (Fuller 2014). The federal government attempted to address emerging trends in student loan default and repayment challenges by creating manageable pathways to repayment for individuals struggling to make their loan payments via income-based repayment options and loan forgiveness programs.

The growth in federal student loan programs over the past 30 years in the United States has been accompanied by increasing college tuition, stagnating family incomes, and slow or no growth in grant aid (Choy 2004). The National Center for Education Statistics (NCES) found that between 2004 and 2005 and 2014–2015, the average price of undergraduate tuition, fees, room and board for full time students increased 33% at public institutions and 26% at private colleges (adjusted for inflation) (Snyder and de Brey 2016). According to Sallie Mae's How America Pays for College study, 86% of parents reported always knowing that their child would go to college, but only 39% made a plan for how they would pay for college (Sallie Mae 2017). The same study found that 23% of parents help their student(s) pay for college (Sallie Mae 2017). As initiatives to increase access to higher education by increasing financial support have expanded, more students without family resources are able to access higher education, but federal programs to help make college affordable may not fully do so. For example, the amount of funding available through the federal Pell Grant program has increased only in small increments. Originally meant to cover the cost of college for low-income students, the Pell Grant now covers only a small portion of college tuition and fees, even at 2-year colleges (Goldrick-Rab 2016) which diminishes its purchasing power. At the same time, Pell Grant utilization among American families has continued to increase, with about 10 million students using the Pell Grant (Goldrick-Rab 2016); yet, the Pell Grant does not cover the full cost of education, which often leads students to take out student loans.

Borrowing Decisions

As the cost of a college education increased amidst slow or no growth in grant aid and family income, student borrowing to pay for a college education increased. Students make many borrowing decisions throughout the course of their college career. Students decide whether and when to take out student loans, and revisit this decision on an annual basis throughout their college careers. Students must also decide what types of loans to use, from federal subsidized and unsubsidized loans to private loans.

The magnitude of student loan debt in the United States reflects both increases in the number of students using student loans, as well as increases in the amount borrowed per student. Undergraduate students can now borrow a maximum of $57,500 in federal student loans, with no more than $23,000 in subsidized loans. Approximately 22 million people apply for federal student aid each year, and roughly $120 billion in grants and loans is awarded annually by the Department of Education (Danilova 2017). Recent estimates place the total student loan debt at $1.31 trillion (Federal Reserve Bank of New York 2017).

During the 2016–2017 academic year, federal loans accounted for 32% of all undergraduate financial aid, a larger percentage than any other type of aid (College Board 2017). A recent estimate suggested that 47% of first-time full-time undergraduate students in 2013–2014 took out a federal loan to pay for their post-secondary education (Kena et al. 2016). These students will graduate with more than $26,000 in student loan debt on average (Kena et al. 2016). In the SCFW, over half of respondents (52.7%) reported ever having had a student loan to pay for college and students reported that they expected to graduate with $23,752 in student loan debt on average (Table 2). Among students with loans, 72.9% reported that they had a federal loan, 4.9% had a private student loan, 18.6% had both federal and private loans, and 3.6% did not know what kind of student loans they had. When asked how much student loan money individual student respondents had borrowed as of spring 2017, 55.3% of students had borrowed less than $20,000, 15.7% had borrowed $20,000–$29,999, and 21.5% had borrowed more than $30,000. Some students (7.5%) did not know how much they had borrowed. As student loan use increases, it becomes vitally important that students understand their options and how to manage student loan use to ensure long-term financial wellness.

Students use the Free Application for Federal Student Aid (FAFSA) to access federal financial aid. For high school seniors in the class of 2017, the FAFSA completion rate was approximately 61% (NCAN n.d.). The 29% of students who do not complete the FAFSA include students who are not eligible for federal financial aid and students who do not intend to attend college, as well as students who are unaware of the FAFSA or do not believe they need or qualify for financial aid. College access organizations and high schools work diligently to make sure that any student planning to attend a post-secondary institution completes the FAFSA so that they are eligible for aid. Among students in the SCFW, all of whom were currently enrolled in college, the percentage of students who reported that they had ever completed the FAFSA was 85.9%. Students who complete the FAFSA must continue to navigate the paperwork each year to be eligible for and to continue to receive federal financial aid, as well as some institutional aid.

Some students who are eligible for and could benefit from student loans do not take them. Aversion to the use of student loans to finance higher education can reduce educational attainment both through reducing the likelihood of attendance and the likelihood of college completion, particularly if students are not able to meet college costs through grants, scholarships, family support, or other sources (Akers and Chingos 2014; Burdman 2005; Caetano et al. 2011; Cunningham and Santiago 2008; Zerquera et al. 2016). In the 2017 SCFW, approximately 50% of students who said that they had not taken out student loans were offered loans, but chose not to take them. Among these students, about 44% of respondents said that their decision not to take out loans was influenced by not being comfortable taking out loans and 39.2% of students reported that they did not take out loans because their parents or family discouraged loan use. These findings

Table 2 Student loans and borrowing

2017 study on collegiate financial wellness	%
Ever had student loan	
Yes	52.7%
No	43.9%
Don't know	3.4%
Total responses	25,479
Loan type	
Federal loans	72.9%
Private loans	4.9%
Both federal and private loans	18.6%
Don't know	3.6%
Total responses	13,350
Student loans borrowed up to spring 2017	
$1–$9,999	29.4%
$10,000–$19,999	25.9%
$20,000–$29,999	15.7%
$30,000+	21.5%
Don't know	7.5%
Total responses	13,343
When deciding how much money I will need to borrow for the school year, I: (Select all that apply)	
Borrow the maximum amount available in my aid package, regardless of the amount	24.7%
Use a budget and borrow only what I think I will need	40.6%
Try to borrow as little as possible	40.2%
Consider the total amount of debt I will graduate with graduate with	26.1%
Consider the amounts I have borrowed in the past	21.0%
Decide on my own how much I will need to borrow	17.3%
Consult with a parent, guardian or family member to determine how much I will need to borrow	35.5%
Consult with a financial aid counselor to determine how much I will need to borrow	8.6%
Use information obtained from the internet to determine how much I will need to borrow	6.2%
Total responses	13,159
Knows student loan monthly payment upon graduation	
Yes, I have a good idea	18.0%
I have an approximate idea	34.6%
No, I do not have a good idea	47.5%
Total responses	13,337
You indicated that you have not taken out any student loans. Have you ever been offered a student loan?	
Yes	49.8%
No	39.8%
I don't know	10.4%
Total responses	100.0%
Did any of the following reasons influence your decision not to take student loans that were offered? (Select all that apply)	
I don't need student loans to pay for college	52.6%
I am uncomfortable with taking out student loans	43.7%
My parent(s)/guardian(s) or family have encouraged me not to take student loans	39.2%
Total responses	5516

suggest that, while most discussion about student borrowing centers on concerns about taking on too much debt, researchers and educators also need to consider the potential consequences of loan aversion.

In seeking to understand students' multi-dimensional financial situations, the SCFW specifically asks students about the process they use to decide how much to borrow. About one-quarter of respondents (24.7%) said that they

Table 3 Financial socialization

2017 study on collegiate financial Wellness	%
I rely on family members for financial advice	
Strongly disagree/disagree	26.2%
Strongly agree/agree	73.8%
Total responses	27,231
My parents or guardians were comfortable talking about money with me	
Strongly disagree/disagree	21.0%
Strongly agree/agree	79.0%
Total responses	27,274
My parents or guardians told me what I needed to know about money management	
Strongly disagree/disagree	31.2%
Strongly agree/agree	68.8%
Total responses	27,255
My parents or guardians were role models of sound financial management	
Strongly disagree/disagree	30.5%
Strongly agree/agree	69.5%
Total responses	27,232
Prior to college, did your parents or guardians…	
Encourage you to save money?	
Yes	87.9%
No	12.1%
Total responses	27,304
Encourage you to open a bank account?	
Yes	89.3%
No	10.7%
Total responses	27,286
Encourage you to invest your money?	
Yes	36.2%
No	63.8%
Total responses	27,284

borrowed the maximum amount available in their aid package, regardless of the amount. Using a budget and borrowing only what they thought they would need (40.6%) and trying to borrow as little as possible (40.2%) were reported by over two-fifths of the respondents. About one-quarter of the respondents considered the total amount of debt accumulated by graduation (26.1%) and one-fifth considered the amount of past borrowing (21.0%) to inform their decision of how much to borrow.

Less than one-fifth (17.3%) of the student respondents in the SCFW reported that they decided on their own how much to borrow. Nearly twice as many (35.5%) reported that they consulted with a parent, guardian, or family member to determine how much they needed to borrow. Consulting with a financial aid counselor (8.6%) or using information obtained from the internet (6.2%) to determine how much to borrow were less frequently reported.

Parents play an important role in the socialization of their children (Moschis 1987) and research examining various domains of financial behavior provides evidence that parental advice may encourage more responsible borrowing behavior (i.e., use of a budget or spending plan in order to borrow only what is needed). Parents play a role in financial socialization and parental financial attitudes and behaviors may be adopted by children (Fox et al. 2017; Gutter and Garrison 2008; Gutter et al. 2010; Hibbert et al. 2004; Norvilitis and MacLean 2010; Serido et al. 2015; Shim et al. 2010). Responsible parental financial behavior was associated with debt avoidance behavior in children (Hibbert et al. 2004), lower odds of anticipating debt repayment difficulty (Fox et al. 2017), and more responsible credit card behavior (i.e., paying the account balance in full each period) (Gutter and Garrison 2008; Gutter et al. 2010; Norvilitis and MacLean 2010).

As previously mentioned, in the 2017 SCFW, 35.5% of students reported that they consulted with a parent, guardian, or family member to determine how much they needed to borrow (Table 3). Additionally, 73.8% of students agreed with the statement that they rely on family members for financial advice and 68.8% agreed that their parents told them what they needed to know about money management. Students also reported that their parents encouraged them to save money (87.9%) and open a bank account (89.3%), while only about 1 in 3 parents encouraged their children to invest their money (36.2%). When asked if their parents were role models of sound financial management, 69.5% of respondents agreed, and 79% of respondents reported that their parents were comfortable talking with them about money. These results are consistent with the important role that parents and family members may have for their children in modeling and encouraging responsible financial behavior.

Persistence and Completion

While access to student loans is related to increased access to higher education more generally, the research is mixed on how student loans are related to persistence and completion of education once students are enrolled in college. Existing research often encounters methodological issues related to selectivity and endogeneity, precluding the ability to draw casual inference. Additionally, student loan research related to financial wellness is just beginning to emerge. Within this important context, the current review will cover related research that identifies important associations. Many studies show that student loans are positively associated with completion of college (Cofer and Somers 2000; Jackson and Reynolds 2013; Johnson 2013), while others show a negative association with completion of college (Kim 2007; Paulsen and John 2002; John and Starkey 1995), or no association (Alon 2007). Differences in these findings are likely due to differences in definitions and measurement of student loans, time period studied, and the quality of the data used in the studies, leading to a lack of clarity in understanding the relationship between debt and completion of education.

Research has also shown that too much or too little borrowing may deter educational attainment. Using nationally representative data, Dwyer et al. (2012) found that educational debt beyond $10,000 reduced the likelihood of completing a degree. This reduction in likelihood was particularly relevant for students in the lower three quartiles of the parental income distribution (Dwyer et al. 2012). Students at public colleges had a lower likelihood of attaining a degree when student loan debt exceeded $10,000 compared to their counterparts at private institutions (Dwyer et al. 2012). When Dwyer et al. (2012) examined students with more than $10,000 in educational debt, they found that these students were more likely to be working 20 hours or more a week, enrolled as part-time students, and supporting dependent children. Another study found that for some students, a small increase ($1000) in student loan amount was associated with a 2.4% increase in their degree attainment (Hu and Kramer 2015). In other words, there appears to be a fine line between not taking enough loans or taking too many loans in terms of the association between loans and degree persistence and completion of education.

Student loan borrowing also differs by demographic and socioeconomic characteristics. With respect to gender, men were more likely to drop out of college at lower levels of debt than women (Dwyer et al. 2013). As students decide whether to attend college, women may be more likely to see college as the only pathway to a stable middle-class income, whereas men may have more options in the short term in the labor market to attain middle-class earnings without a college degree (Dwyer et al. 2013). These gender differences in debt and loan aversion may then be associated with persistence of students in school based on their gender and the educational credentials required by their desired career.

Additionally, some studies have found that student loans benefit racial minority students. One study found that African American students with federal loans were much more likely to complete degrees within 6 years compared to their counterparts with no federal loans (Jackson and Reynolds 2013). Student loans, especially federal student loans, may make it possible for historically disadvantaged students of color to access and complete a post-secondary credential.

Borrowing too much in student loans is also possible, especially if that amount will not be repayable given a student's predicted labor market outcomes. Particularly when students have high debt levels in their first year of college, some research has shown that their likelihood of graduation is lower compared to their lower-debt peers (Kim 2007; John and Starkey 1995). Students must make borrowing decisions that allow them to be able to repay their loans.

Repayment, Delinquency, and Default

The use of student loans to pay college expenses comes with repayment obligations. Previous research documents the positive relationship between degree completion and successful repayment, as well as the relationship between the borrowed amount and repayment ability (Gross et al. 2009; Hillman 2014). As a result of student loan repayment obligations, decisions made by college students with respect to loan use will influence the allocation of financial resources during adulthood including additional education, family formation, home ownership, and career choice (Addo 2014; Andrew 2007; Dwyer et al. 2012; Houle and Berger 2015; Nau et al. 2015). Understanding factors associated with planned and intentional use of student loans can guide interventions aimed at promoting student success, college completion, and successful loan repayment.

Fox et al. (2017) found that nearly one-quarter of enrolled students anticipated repayment difficulty after graduation. In the 2017 SCFW, over a quarter (28.8%) of students reported that they had concerns about their ability to pay off the debt they acquired as a student after graduation. However, it is very important for students with student loan debt to understand that defaulting on student loans has serious financial implications, including tax return withholdings, lowered FICO credit scores, and wage garnishments (Department of Education n.d.). Additionally, student loans are rarely dischargeable through personal bankruptcy. Defaulting on student loans has serious implications for the financial futures of indebted former students.

Delinquency and default are challenging situations for students to face after they leave school, with a credential or not. Students are classified as being in default on their loans if they have failed to make payments for 270 days (9 months) (Department of Education n.d.). Being delinquent on a student loan begins the first day after a student misses a payment. Recent nationally representative research that looked at student default rates in two cohorts (1995–1996 and 2003–2004) found that fully one-fourth (25%) of borrowers in the 1995–1996 cohort defaulted on a least one loan in the 20 years since beginning their postsecondary education (Woo et al. 2017). In the 2003–2004 cohort, 27% of borrowers defaulted on at least one loan (Woo et al. 2017). A cohort study of graduating students from 2005 found that 41% of borrowers were either delinquent or in default on their student loans (Cunningham and Kienzl 2011). Delinquency and default are serious issues, not only for individual students, but also for the US government, the guarantor of most loans.

Additionally, students at most risk of repayment difficulty are those who never complete their degrees—they amass debt but never receive the credential related to higher earnings and thus more ability to repay debt where the debt payment is a reasonable percentage of income (White House Council of Economic Advisors 2016). One study found that approximately 20% of borrowers dropped out of college and had not completed their post-secondary program within 6 years after enrolling (Gladieux and Perna 2005). A recent report found that students who did not complete their degrees were much more likely to default on their loans even though their loan amounts were smaller, with loans of $5000 or less accounting for 35% of defaults (White House Council of Economic Advisors 2016). Other research confirms these findings, suggesting that much of the increase in student loan default is associated with attendance at for-profit schools and 2-year schools, while students at 4-year nonprofit schools have lower default rates on average (Looney and Yanellis 2015).

Previous research also documents variation in repayment difficulty by race and gender. In addition to higher loan default rates among students at 2-year and for-profit colleges, students of color are more likely to enroll in these institutions, and thus also have higher risk of defaulting on their student loans (Gross et al. 2009; Jackson and Reynolds 2013). Women pay off their loans more slowly than men, but men are more likely to default on their loans (Gross et al. 2009). Not all students, though, experience repayment difficulties. About 20% of borrowers in the 2003–2004 cohort paid off their student loans without default (Woo et al. 2017). From the lens of student financial wellness, making sure that students understand the risks and opportunities of student loans from the outset may be useful for ensuring students' awareness of their financial situations.

Building on the value of the federal student loan program in providing access to education and the importance of minimizing default, one important strategy for enabling debt repayment is responsible management of debt while enrolled. Guidelines for student loan borrowing recommend first estimating the full cost of college, then identifying all resources available to pay for college expenses including family contributions, scholarships and grants, savings, and earnings, and then to borrow only what is needed (Hopkins 2012). In short, student loan guidelines recommend that students minimize borrowing. By keeping amount borrowed as low as possible, the ability to repay without undue hardship increases. But students must also be sure that they can meet their needs and living expenses while in college.

While students make many borrowing decisions at the beginning of each semester, many are not fully prepared for student loan repayment. In the SCFW, only 18% of students responded that they had a good idea of what their student loan payment would be when they graduated. About one-third of students (34.6%) said that they have an approximate idea of their loan payment after graduation. Almost half (47.5%) responded that they do not have a good idea of what their monthly student loan payment will be.

Understanding current trends and research surrounding student loans can help researchers understand the ever-changing higher education landscape around loans and paying for college more broadly. Higher education organizations have an opportunity to educate students about personal finances and help students prepare to lead successful financial lives, including responsible financial management.

Credit Cards

Credit card use among college students represents some of the earliest research on college student financial behavior (e.g., Hayhoe et al. 1999; Roberts and Jones 2001). Rising credit card debt among college students raised concerns that college students lacked understanding of responsible credit card use even though they had easy access to credit cards (Danes and Hira 1987). In the early 2000s, excess credit card debt and poor financial management were identified as critical financial issues for college students (Henry et al. 2001; Joo et al. 2003). Research examined factors associated with having credit cards and their use (Hayhoe et al. 1999, 2005) and documented positive relationships between credit card use and compulsive spending (Anderson and Card 2015; Norum 2008; Roberts and Jones 2001; Wang and Xiao 2009) as well as between risky credit card behavior and high-risk health behaviors (Adams and Moore 2007).

Research explored factors associated with credit card use and debt, and variation in risky credit card behavior by demographic characteristics and financial knowledge (Grable and Joo 2006). Findings of low levels of financial knowledge in general and differences in financial knowledge by gender, race, ethnicity, rank and major lead to advocacy for financial education for college students (Borden et al. 2008; Chen and Volpe 1998, 2002; Norvilitis et al. 2006).

Credit cards can have both positive and negative outcomes for college students. In a study of education debt and credit card use, Dwyer et al. (2011) found that debt was positively associated with young adults' mastery or sense of control over their life and self-esteem, with debt viewed as an investment in the future, but the positive associations of debt diminish as individuals age. While credit cards can help students cover costs during times of financial strain or emergencies, they can have adverse consequences, including emotional distress (Hodson et al. 2014).

High levels of credit card debt are a central concern among researchers (Henry et al. 2001; Joo et al. 2003). Among college students, lower financial knowledge, higher numbers of credit cards, lenient attitudes toward credit card use, reliance on needs-based aid and a poor ability to delay gratification were associated with high levels of credit card debt (Lyons 2004; Norvilitis et al. 2003, 2006; Norvilitis 2014). There is some evidence that women and African American students were more likely to have higher levels of credit card debt (Hayhoe et al. 2000; Grable and Joo 2006), but these findings were inconsistent (Norvilitis et al. 2003, 2006; Norvilitis 2014). High credit card debt was associated with poorer academic performance, including lower credit hours per term (Joo et al. 2008), reduced time studying, more class absences, and consideration of dropping out of school (Hogan et al. 2013).

Research has examined the relationship between financial knowledge and several aspects of credit card use. Robb and Sharpe (2009) provided evidence that financial knowledge did not affect credit card ownership but was positively related to credit card balances. Robb (2011) found associations between financial knowledge and responsible credit card behavior, including paying credit card bills on time and in full, and not taking cash advances or maxing out the credit card limit. Xiao, Tang et al. (2011) examined both subjective (self-reported) and objective (percent of questions answered correctly) measures of financial knowledge and found that subjective financial knowledge was associated with larger reductions in risky credit card behavior than objective financial knowledge. Since the Credit CARD Act of 2009 restricted access to credit cards for persons under the age of 21, the number of credit cards and level of credit card debt among college students has declined (Norvilitis 2014). But some students still carry high levels of debt, and these students demonstrate overall lower financial wellness than students with little or no debt (Norvilitis 2014).

As part of the 2017 SCFW's efforts to understand broad financial wellness, students were asked about their use of credit cards, including their use of credit cards to pay for their college tuition (Table 4). More than half (58%) of the respondents had at least one credit card and nearly one-fifth (18.8%) of respondents with credit cards had paid at least a little bit of their college expenses with their credit card. Among the respondents with credit cards, 44.1% paid the full balance due each month, and another 12% had someone who paid their credit card bill. Over two-fifths (44%) of respondents typically carried over a credit card balance each month. Of those respondents who revolved a balance, 11.1% indicated that they did not know their credit card balance and only 23.3% had a balance of $500 or more.

Among the respondents with credit cards, nearly three-fifths (58.4%) expected to graduate without credit card debt, and 10.5% did not know how much credit card debt they expected to have at graduation. About one-third (31.2%) of respondents expected to graduate with credit card debt, and of these respondents, 11.8% expected to have less than $500 in credit card debt at the time of graduation. Research should continue to investigate both the positive and negative consequences of credit card use for college students.

Financial Literacy

College students make important financial decisions, not only about credit card use, but also about the management of day-to-day financial responsibilities. The realization that many college students are assuming these responsibilities for the first time elevates interest in the level of financial literacy of college students. Financial literacy includes the knowledge individuals have about personal financial management, as well as their ability to use that knowledge to enact positive financial behaviors (Hung et al. 2009; PACFL 2008). There are significant gender and racial/ethnic differences in financial literacy. On average, men had higher financial literacy than women (Chen and Volpe 2002; Hung et al. 2009; Lusardi and Wallace 2013; Robb 2011), and African American and Hispanic students had lower financial literacy than Whites (Hill and Perdue 2008; Lusardi 2013; Lusardi et al. 2010). However, controlling for other family, economic, and social factors, Lusardi et al. (2010) found that racial/ethnic gaps in literacy became smaller or not significant. Age, family income, and financial experiences were positively associated with financial literacy (Bartley 2011;

Table 4 Credit cards

2017 Study on collegiate financial Wellness	%
Has credit card	
No	42.2%
Yes	57.8%
Total responses	25,199
When you get a credit card bill, do you usually	
Pay less than the monthly minimum payment	1.8%
Make the monthly minimum payment	15.4%
Pay more than the monthly minimum payment, but not the full balance	26.8%
Pay the full balance	44.1%
Someone else pays my credit card bills	12.0%
Total responses	14,468
What is the typical balance left on your credit cards after making monthly payments?	
$0	36.9%
$1–$499	28.7%
$500+	23.3%
Don't know	11.1%
Total responses	14,441
How much credit card debt do you expect to have at the time you graduate?	
$0	58.4%
$1–$499	11.8%
$500+	19.4%
Don't know	10.5%
Total responses	14,319
Please indicate how much of your total college expenses are paid by the following sources	
Credit cards	
None	81.2%
At least a little bit	18.8%
Total responses	25,572

Hung et al. 2009), which suggests that some demographic differences in literacy could be due to differences in exposure and experience.

Financial education in high school and in college offers the potential to increase financial literacy. Delivery modes for financial education range from formal classes to workshops and group presentations, online platforms, and peer coaching or counseling. Preferences for delivery mode vary by student characteristics; students with debt or who believe that finances will affect college completion exhibited stronger preferences for modes of delivery (Goetz et al. 2011). Maurer and Lee (2011) focused on two delivery modes and found similar knowledge gains for students enrolled in a semester long course and students receiving peer financial counseling. Xiao et al. (2011) found evidence that financial education courses in high school and in college were associated with higher subjective (self-assessed) financial knowledge but were not associated with objective financial knowledge in college students.

Financial literacy encompasses both knowledge and behavior, or the ability to use the knowledge. Related research documents the importance of hands-on or experiential components in the development of responsible financial behaviors (Peng et al. 2007) whereby students are provided with experiences in a real-world context that enhance learning and behavior change. Palmer et al. (2010a, b) found that use of a spending management tool increased awareness of spending behavior and produced modifications in spending behavior to more closely align with college students' personal values. Though not specifically focused on college students, Friedline and West (2016) analyzed data from the National Financial Capability Study, and found that the combination of financial education and savings account ownership produced larger changes in positive financial behaviors of 18 to 34-year old young adults than either financial education alone or savings account ownership alone. Friedline and West (2016) defined financial capability as the purposeful combination of financial education and opportunities for hands-on experience and knowledge operationalization, and concluded that the experiential component is critical to behavior change.

There is much more work to do to understand why differences in financial literacy emerge, how to effectively develop financial literacy, and how financial literacy influences financial decisions and behavioral outcomes for college students. The common call for increasing financial literacy in order to improve financial outcomes has spawned much research, with generally confirmatory results, though with sizeable differences in magnitudes and durations of changes in financial behaviors (Fernandes et al. 2014).

The 2017 SCFW asked students a set of financial knowledge questions and collected information on formal financial education as well as experiential learning opportunities (Table 5). The survey included six questions to assess respondent knowledge of fundamental concepts related to inflation, compound interest, loan repayment, net pay, rates of return, and credit card behavior. Nearly three-fourths of the respondents correctly answered the questions on compound interest (72.7%) and loan repayment (71.3%) and two-thirds (65.8%) answered the credit card behavior question correctly. Slightly less than half (49.1%) of the respondents answered the inflation question correctly. Only one-third of respondents correctly answered the questions on net pay (36.3%) and rates of return (33.2%). On average, respondents answered 3.3 of the 6 financial knowledge questions correctly (SCFW 2017b).

Financial education is increasingly offered in schools, with students reporting higher rates of financial education in high school than in college. Over one-fifth (22.6%) of respondents participated in a one-time personal finance session or workshop while in high school compared to only 16.8% of respondents who participated while in college. Fifteen percent of respondents (15.2%) participated in a recurring personal finance course or workshop while in high school compared to only 10.3% of respondents who participated while in college.

Financial Stress and Anxiety

Financial stress and anxiety among college students is on the rise, with research indicating that over 70% of college students report being stressed about their personal finances in general (Heckman et al. 2014; Ross et al. 1999). Psychological stress due to financial concerns has been linked to academic issues, including whether a student considers dropping out or reducing his/her coursework (Joo et al. 2008), poor physical and mental health (Roberts et al. 2000), and extended time to degree (Letkiewicz et al. 2014). College students reporting higher financial stress scored lower on a subjective well-being scale and were more likely to report difficulty in making satisfactory progress and maintaining enrollment in their academic program (Robb 2017). Higher financial stress and lower financial wellness were associated with less confidence in the ability to complete college, and this association was stronger for employed college students than for non-employed college students (Mukherjee et al. 2017). Furthermore, students under increased financial stress tend to adopt more reactive approaches toward financial management, rather than proactive or preventative strategies (Serido et al. 2014) and have less positive financial planning behaviors along with lower optimism about their financial futures (Shaulskiy et al. 2015).

There is some evidence of gender and racial/ethnic differences in financial stress among college students, with one study finding that African American college students had significantly higher levels of financial stress than White students (Grable and Joo 2006), and another finding that female college students had significantly higher financial anxiety than males (Archuleta et al. 2013), after controlling for other demographic factors. Furthermore, there is some evidence that financial stress is related to income and debt. Heckman et al. (2014) found in the 2014 SCFW that higher levels of financial stress were associated with expecting greater student loan debt at graduation and feeling as though one did not have enough money to participate in the same activities as peers. Student loan debt is more strongly associated with financial anxiety than other forms for debt, and financial anxiety is inversely related to financial satisfaction (Archuleta et al. 2013). Norvilitis et al. (2006) also found that students with more student loan debt reported greater financial stress and decreased financial wellness. Future research should continue to examine how students experience financial stress and anxiety, as well as the relationship between financial stress and anxiety, financial behaviors and educational outcomes.

The SCFW provides information on several measures for financial stress and strain that can further expand on previous knowledge and research (Table 6). College students worry not only about paying for school (62.8%), but also about paying current monthly expenses (42.9%). Overall, 68.7% of the respondents reported feeling stressed about personal finances in general. Three-fourths (74.8%) of respondents reported that the total amount of money they owe causes a medium, large, or extreme amount of stress. College students reported more stress from student loan debt (78.8%) than from credit card debt (30.2%).

Financial concerns can adversely affect academic performance. Data from the spring 2016 National College Health Assessment (NCHA), a multi-institutional study of postsecondary institutions in the United States that broadly covers student health and wellness, found that 7.3% of respondents stated that finances affected their academic performance in the last 12 months, such as receiving a lower grade on an exam or in a course, receiving an incomplete or dropping a course, or experiencing a disruption to a thesis or research project (ACHA 2016). As self-reported by respondents to

Table 5 Financial knowledge and education

2017 study on collegiate financial wellness	
See the full report, including the financial knowledge questions, at https://cfw.osu.edu	%
Inflation	
Correct	49.1%
Incorrect	22.2%
Don't know	28.7%
Total responses	23,673
Compound interest	
Correct	72.7%
Incorrect	9.1%
Don't know	18.1%
Total responses	23,605
Loan repayment	
Correct	71.3%
Incorrect	12.0%
Don't know	16.6%
Total responses	23,581
Net pay	
Correct	36.3%
Incorrect	38.3%
Don't know	25.4%
Total responses	23,541
Rates of return	
Correct	33.2%
Incorrect	35.4%
Don't know	31.4%
Total responses	23,549
Credit card behavior	
Correct	65.8%
Incorrect	13.1%
Don't know	21.1%
Total responses	23,623
Financial knowledge score	
0 questions correct	6.4%
1 question correct	9.5%
2 questions correct	14.1%
3 questions correct	21.0%
4 questions correct	23.8%
5 questions correct	17.8%
6 questions correct	7.4%
Total responses	23,365
Before enrolling in college, did you ever have any of the following types of financial	
A reoccurring personal finance course or workshop	
No	84.8%
Yes	15.2%
Total responses	28,057
A one-time personal finance session or workshop	
No	77.4%
Yes	22.6%
Total responses	28,069

Table 5 (continued)

2017 study on collegiate financial wellness	
See the full report, including the financial knowledge questions, at https://cfw.osu.edu	%
Since enrolling in college, did you ever have any of the following types of financial	
A reoccurring personal finance course or workshop	
No	89.7%
Yes	10.3%
Total responses	28,123
A one-time personal finance session or workshop	
No	83.2%
Yes	16.8%
Total responses	21,879

the SCFW, financial concerns caused one-third of them to neglect their academic work (33.9%), or consider taking a break from college (33.4%). Approximately one-fourth of these respondents reduced their class load (28.3%) or considered dropping out of college (25.2%) due to financial concerns. Nearly three-fifths of respondents (58.7%) reported that they experienced financial difficulties while enrolled in college, and 28.8% expect to experience difficulty in paying off the debt they are accumulating while in college.

Financial Self-Efficacy

Self-efficacy refers to one's perception of competency in judgment and decision-making. Bandura describes self-efficacy as the feeling of being able to deal with a situation effectively and posits that self-efficacy is influenced by the knowledge possessed related to the situation (Bandura 1977, 1982). This notion of capability has been extended to financial self-efficacy—one's sense of being prepared and able to handle financial responsibility—with interest in understanding the factors associated with financial self-efficacy and the extent to which financial self-efficacy facilitates the acquisition and execution of responsible financial behaviors.

Various approaches have been used to measure financial self-efficacy in previous research, including use of a single item (Heckman and Grable 2011; Heckman et al. 2014; Lim et al. 2014), as well as multi-item scales (Lapp 2010; Lown 2011; Robb 2017). The SCFW asks seven questions that capture the extent to which students perceive that they are able to manage their financial responsibilities effectively; in other words, their financial self-efficacy (Table 7). Over 80% of respondents reported the ability to make good financial decisions (88.1%), the ability to resist urges to make impulse purchases (84.2%) and confidence in managing finances (83.2%). Similar proportions of respondents felt in control of their finances (72.3%), indicated the ability to get the information needed about finances (72%) and felt confident in their ability to plan for their financial future (69.5%). Over one-third of respondents (38%) indicated that when faced with a financial challenge, they have a hard time figuring out a solution. A financial self-efficacy score can be created by summing the responses to these seven items after reverse coding the financial challenge item. The mean score ranges from 1 to 4, with higher means suggesting higher financial self-efficacy. The mean score for all respondents was 2.91 (SCFW 2017b). The mean financial self-efficacy score varied between respondents enrolled at 2-year public institutions (2.89), 4-year public institutions (2.93) and 4-year private institutions (2.83) (SCFW 2017b).

Financial self-efficacy has been found to be positively related to financial knowledge in college students (Heckman and Grable 2011), and a positive association has been documented between financial knowledge and college students' confidence in financial management (Gillen and Loeffler 2012). Research by Lapp (2010) posited that self-efficacy was necessary for knowledge to produce a change in behavior. In an online survey of college students, effortful control was identified as critical for mediating risky behaviors, including misuse of credit cards (Graziano et al. 2015). Both the societal desire for personal financial responsibility and emphasis on the development of responsible financial behaviors among college students contribute to interest in financial self-efficacy.

In an examination of determinants of financial stress in college students, students with high financial self-efficacy were less likely to report financial stressors as unmanageable (Heckman et al. 2014). Financial self-efficacy also affected the help-seeking behavior of students. Students with high financial self-efficacy were more likely to seek help in dealing with financial stress than students reporting similar levels of stress but with lower financial self-efficacy (Lim et al. 2014). Financial self-efficacy was positively related to subjective well-being and negatively associated with credit hour reductions in response to financial stress (Robb 2017). These results suggest that interventions designed to increase confidence in managing financial responsibilities (financial

Table 6 Financial stress and anxiety

2017 Study on collegiate financial wellness	%
I feel stressed about my personal finances in general	
Strongly disagree/disagree	31.4%
Strongly agree/agree	68.7%
Total responses	26,493
I worry about being able to pay my current monthly expenses	
Strongly disagree/disagree	57.1%
Strongly agree/agree	42.9%
Total responses	26,483
I worry about having enough money to pay for school	
Strongly disagree/disagree	37.2%
Strongly agree/agree	62.8%
Total responses	26,502
How much stress does the credit card debt you are accruing cause you?	
None	48.8%
Small amount	20.9%
Medium amount or more	30.2%
Total responses	14,397
How much stress does the student loan debt you are accruing cause you?	
None	6.0%
Small amount	15.2%
Medium amount or more	78.8%
Total responses	13,301
How much stress does the total amount of money you owe cause you?	
None	7.4%
Small amount	17.8%
Medium amount or more	74.8%
Total responses	16,265
Have financial concerns ever caused you to neglect your academic work?	
Never	42.7%
Rarely	23.4%
Sometimes/often	33.9%
Total responses	24,760
Have financial concerns ever caused you to reduce your class load?	
Never	55.6%
Rarely	16.1%
Sometimes/often	28.3%
Total responses	24,740
Have financial concerns ever caused you to consider taking a break from college/university?	
Never	52.8%
Rarely	13.8%
Sometimes/often	33.4%
Total responses	24,707
Have financial concerns ever caused you to consider dropping out of college/university?	
Never	61.0%
Rarely	13.8%
Sometimes/often	25.2%
Total responses	24,695
I have experienced financial difficulties while enrolled at my current institution	
Strongly disagree/disagree	41.3%
Strongly agree/agree	58.7%
Total responses	25,550

Table 6 (continued)

2017 Study on collegiate financial wellness	%
After graduation, I will be able to pay off any debt acquired while I was a student	
Strongly disagree/disagree	28.8%
Strongly agree/agree	71.1%
Total responses	16,247

Table 7 Financial self-efficacy

2017 study on collegiate financial wellness	%
I am confident that I can manage my finances	
Strongly disagree/disagree	16.7%
Strongly agree/agree	83.2%
Total responses	27,627
I am able to make good financial decisions	
Strongly disagree/disagree	11.9%
Strongly agree/agree	88.1%
Total responses	27,611
I feel in control of my finances	
Strongly disagree/disagree	27.7%
Strongly agree/agree	72.3%
Total responses	27,590
I am confident in my ability to plan for my financial future	
Strongly disagree/disagree	30.5%
Strongly agree/agree	69.5%
Total responses	27,601
I am able to get the information I need about finances	
Strongly disagree/disagree	28.1%
Strongly agree/agree	72.0%
Total responses	27,577
When faced with a financial challenge, I have a hard time figuring out a solution	
Strongly disagree/disagree	62.0%
Strongly agree/agree	38.0%
Total responses	27,587
I can resist the urge to make impulse purchases	
Strongly disagree/disagree	15.8%
Strongly agree/agree	84.2%
Total responses	27,605

self-efficacy) may be effective in helping college students manage stress and develop responsible financial behaviors.

Conclusion

As our society balances demands for access and affordability of higher education with the reality of increasing college costs and changes in the relative importance of student loans in financing post-secondary education, understanding the financial wellness of the college student population has never been more important. A full understanding of college students' overall financial wellness includes not only student loans, but also their additional sources of debt (i.e., credit cards and car loans), attitudes, and behaviors that students are bringing to their college experience. Furthermore, this review demonstrates how the use of student loans is interconnected with other aspects of students' financial wellness, including their financial behaviors, literacy, stress, and self-efficacy.

Financial wellness initiatives play an increasingly crucial role in facilitating the financial and academic wellness of today's college students. Regardless of the level of financial knowledge and capability of students entering our college campuses, these initiatives can ensure that students are aware of their financial situations, are setting reasonable financial goals, and are able to develop and implement plans to achieve these goals. Even college students with strong financial education and positive socialization can further increase their financial capability. For college students with relatively low financial capability, collegiate financial wellness initiatives are imperative. In order to effectively plan and implement financial wellness initiatives, we need to understand the broader picture of college student financial concerns and resources. Further, given the interconnected nature of student loans and students' overall financial well-being, we argue that it is essential that financial wellness initiatives are as holistic as possible in considering both the many dimensions of students' financial wellness and how financial wellness is related to students' overall wellness, health, personal, and academic success.

Moving forward, student loans will continue to serve a critical national purpose in helping students access and complete college. Higher education policies must continue to improve access to higher education and the ability to pay for postsecondary credentials. At the federal level in particular, it will be important to consider the ways in which a wide range of policies impact student eligibility for federal student loans and their potential to impact overall student financial wellness, from the potential closure of the Deferred Action for Childhood Arrivals (DACA) program proposed by the Trump administration to changes in Pell Grant eligibility requirements. New changes in the private sector with companies offering re-financing packages to certain low default risk individuals has the potential to further stratify the student loan market. Additionally, items like FAFSA verification and other onerous paperwork requirements for loans will need to continue to be adapted to improve accessibility. With thoughtful and intentional policies, student loans can be used as a vehicle for human capital development and a tool for financial wellbeing in the long term. In addition, campus cultures that value responsible financial behavior and develop financial capability of students are vehicles for student success and financial wellness.

Compliance with Ethical Standards

Conflict of interest The authors declare that they have no conflict of interest.

Ethical Approval All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed Consent was obtained from all individual participants included in the study.

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