

# Self-Leadership, Financial Self-Efficacy, and Student Loan Debt

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## Abstract

*Self-leadership examines how individuals can motivate themselves through behavior focused strategies, constructive thought patterns, and natural reward strategies. This study examined the potential influence of self-leadership on financial self-efficacy, credit card debt, and student loan debt among college students. Data were collected from a survey of 197 graduate and undergraduate students at a major Midwestern university. The findings suggest students higher in self-leadership tend to have lower student loan debt. Additionally, financial self-efficacy and credit card debt mediate the relationship between self-leadership and student loan debt. The results have implications for the role self-leadership plays in credit card debt, financial self-efficacy, and student loan debt.*

*Keywords: credit card debt, financial behavior, financial self-efficacy, self-leadership, student loan debt*

The ever-increasing cost of higher education has led to a drastic increase in the amount of student loan debt for students. The College Board (2018) reported a 5-year average increase in tuition and fees in public 4-year universities was 11.80% for the 2018–2019 academic year. This increase outpaced the inflation rate over the same period of time. The result is increased amounts of debt students must take on while in school. Student loan debt now averages \$37,172 per graduating student in 2016 (Picchi, 2016). Students, academics, and governments are increasingly concerned about two factors: (a) the impact of student loans and (b) how to stem their rapid increase among students.

As of 2019, Sallie Mae (2019) reported 24% of higher education costs were financed through loans with another 11% financed through student income. Berman (2015) pointed out that 70% of students graduated with some form of debt, while Sparshott (2015) found 71% of undergraduate students leave college with some form of debt, which is an increase of 7% over the past 10 years. According to The Federal Reserve Bank of New York (2019), student loans

grew to \$1.46 trillion by the end of 2018, which represented a \$79 billion increase for 2018. Of the \$1.46 trillion in outstanding student loan debt, 11.40% was 90+ days delinquent or in default, which is the highest default rate on record. These rising costs of student loans associated with obtaining a collegiate degree are reflected in the increased borrowing for students (Robb, 2017).

In the past, credit card debt was often a main reason for economic instability and financial stress. However, with the rising costs of tuition, it appears that student loan debt has replaced credit card debt in that role. Researchers have highlighted that the level of debt may reduce generational economic stability (Dai, 2013; Letkiewicz et al., 2014). Debt level also is one of the five top financial stressors in college students (Trombitas, 2012). To this end, Robb (2017) found students experiencing financial stress had lower levels of subjective well-being. Robb (2017) suggested incorporating ways to improve financial self-efficacy and overall subjective well-being. Despite the increase in cost of tuition-related debt, limited research has occurred examining how certain constructs may weaken the negative

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effects of student loan debt (Festa et al., 2019; Lim et al., 2014).

The purpose of this study is to examine strategies that may be used to reduce student loan debt, through self-leadership, increased financial self-efficacy, and reduction in credit card debt. The present article provides a unique approach to financial self-efficacy and student loan debt analysis, which incorporates meaningful ways to increase positive outcomes (e.g., lower student loan debt). Since national surveys do not measure self-leadership, the survey methodology provided a distinct advantage to capture its effects. The present study also highlights self-leadership's impact on credit card debt and the subsequent relationship to student loan debt. Additionally, the use of Hayes' (2013) PROCESS macro provides valuable insight to the study. The role of these constructs will help to address the gap that exists in enhancing students' ability to take less tuition-related debt. These strategies will be discussed in greater detail in the literature review the follows.

## **Literature Review and Hypotheses**

### ***Self-Leadership***

This study introduces self-leadership to the student loan debt literature. Self-leadership is a self-influence process that allow individuals to achieve self-motivation and self-direction (Manz, 1986). Furthermore, self-leadership is often conceptualized as a set of strategies that individuals can use to motivate themselves toward particular goals (Manz, 1986). In fact, self-leadership prescribes strategies that individuals can use to motivate themselves in different situations that increase the likelihood of positive outcomes. These strategies include behavior focused, natural reward, and constructive thought strategies (Neck & Houghton, 2006). Behavior focused strategies strive to positively influence self-awareness and behavior management, through items such as self-goal setting, self-cuing, and self-reward (Neck & Houghton, 2006). As individuals seek to reach their goals and rewards, they are more likely to stay motivated to take actions that will allow them to reach that point. Natural reward strategies attempt to have individuals motivated by the parts of a task that they enjoy (Neck & Houghton, 2006). The purpose of natural rewards is to have individuals motivated by what they are doing because they enjoy it—the focus is on what is inherently pleasing about the task. Finally, constructive thought strategies work to

form positive and habitual ways of thinking that positively impact outcomes (Neck & Houghton, 2006). For example, individuals who engage in positive self-talk are more likely to be able to motivate themselves than individuals who think in more dysfunctional or unmotivational manners. These different strategies work in conjunction to positively influence individuals' outcomes, through higher levels of individual motivation, self-awareness, and positive beliefs.

Most research on self-leadership has occurred within the management literature, focusing on how self-leadership can influence positive employee outcomes (e.g., Prussia et al., 1998). There are a host of different outcomes that self-leadership has been shown to influence, including performance (Neubert & Cindy Wu, 2006), job satisfaction (Roberts & Foti, 1998), and self-efficacy (Prussia et al., 1998). Within the research on self-leadership, there has consistently been positive relationships found with these different outcomes that are often viewed as desirable.

Self-leadership goes beyond other forms of motivation and self-regulation by focusing on how individuals can influence themselves, as opposed to just stating that individuals should motivate themselves. By suggesting actual mechanisms in which self-influence and self-motivation can occur, self-leadership acts in a more prescriptive nature that advises individuals on behaviors, thoughts, and actions that are likely to result in positive outcomes. For example, the role of self-goal setting, self-reward, and positive self-talk all serve as ways that individuals can motivate themselves toward positive outcomes. The strategies and mechanisms provided are ways that individuals can actually motivate themselves, rather than simply saying that individuals should motivate themselves. These positive outcomes can be of personal nature, such as setting and completing goals or self-observation where individuals are more aware of the actions that they engage in (e.g., Neck & Houghton, 2006; Stewart et al., 2011).

In fact, research has shown that higher levels of self-leadership can increase levels of self-efficacy, or one's belief in themselves (i.e., Ho & Nesbit, 2009; Prussia et al., 1998). The nature of self-leadership suggests that individuals will have greater confidence in their ability to complete tasks if they truly exhibit self-influence over themselves.

Thus, there are a wide range of different outcomes that self-leadership can positively impact, including financial decisions relating to debt.

### ***Financial Self-Efficacy***

Self-efficacy is a construct where one has a belief in their own ability to succeed at a specific task or goal (Asebedo & Seay, 2018; Bandura, 1977). High levels of self-efficacy have been found to yield benefits on individual behavioral changes including well-being (Bandura, 1982). Low-levels of self-efficacy yield less effort and surrendering to the task at hand (Bandura, 1982). Self-efficacy is typically studied in management and psychology fields. Additionally, self-leadership has been found to be positively related to self-efficacy (i.e., Ho & Nesbit, 2009; Prussia et al., 1998). These studies have often used social cognitive theory as a framework, where the individuals' attitudes influence their beliefs.

However, self-efficacy, which is the "beliefs in one's capabilities to mobilize the motivation, cognitive resources, and courses of action needed to meet given situational demands," has already traversed into the personal financial field (Wood & Bandura, 1989). Studies have shown that higher financial self-efficacy is linked to positive behaviors and well-being (Grable & Joo, 2006; Gutter & Copur, 2011). Xiao and colleagues (2011) reported financial self-efficacy is a significant predictor of credit card debt. Robb (2017) suggested incorporating ways to improve financial self-efficacy and overall, students subjective well-being. In particular, students who were more confident in their ability to: (a) manage their finances and (b) stick to their budget incurred less debt than those who were less confident (Asebedo & Seay, 2018; Huang et al., 2018). Financial self-efficacy is similar to financial capability as both contribute to helping consumers manage their money to achieve financial well-being (Xiao & Porto, 2017).

### ***Credit Card Debt***

Sallie Mae (2019) reported that 7% of college students used credit cards to pay for tuition and had an average credit card debt of \$1,405. Jones (2006) found that 62% of incoming freshman had access to a credit card before every acquiring student loan debt. Sallie Mae (2019) also reported only 22% of those with at least one credit card pay off that debt monthly. Risky credit card use is related to lower level of student retention through graduation (Robb et al., 2012).

High levels of debt and risky credit card behaviors are associated with a host of negative behaviors (e.g., decreased confidence in money management skills, lower self-esteem, decreased financial well-being, and higher stress; (Gutter & Copur, 2011; Norvilitis et al., 2003). Research has reported a link between debt and financial stress (Chan et al., 2012). However, students viewing themselves as personally responsible for paying their debts are less likely to overspend (Brougham et al., 2011). If forced to prioritize, students repay credit card debt before making student loan payments (Pinto & Mansfield, 2006; Wang & Xiao, 2009).

### ***Hypotheses***

This study looks at how the usage of self-leadership strategies can increase individuals' beliefs about their ability to manage financial behaviors (Robb, 2017). This study is rooted in research about how self-leadership can impact the individuals' outcomes through self-influence and motivation (e.g., Prussia et al., 1998). Based on social cognitive theory (Bandura, 1986), research on self-leadership has found that individuals are better able to recognize the key attitudes, behaviors, and environmental factors that can have interrelations with one another than individuals who do not use self-leadership strategies as frequently. This is through the triadic reciprocal model within social cognitive theory (Bandura, 1986). The triadic reciprocal model argues that an individual's behaviors, cognitive/personal factors, and environmental influences mutually influence one another (Bandura, 1986). The mutual influence that these three areas have on one another allow for self-leadership to impact a variety of different outcomes, including beliefs and behaviors in regard to finances. For example, as an individual uses self-leadership strategies, it is likely that it will impact their behaviors—in this mind, it would be a reduction in loans. In particular, as an individual uses strategies such as self-goal setting, positive self-talk, and more—it is expected to lead to lower levels of student loan debt. As individuals engage in these positive actions, their self-control and motivation to maintain lower levels will be more likely to exist. Thus, we would expect for higher levels of self-leadership to lead to lower levels of student loan debt, particularly from a social cognitive perspective.

By framing self-leadership research in this theoretical lens, it is possible to see how different motivational views drastically influence behaviors individuals can engage in (such as level of debt taking) and attitudes that they have

(financial self-efficacy). For example, it is argued from a social cognitive perspective that as individuals engage in self-leadership, those actions will impact their behaviors. In particular, the more self-leadership strategies that are used, the lower credit card debt will be. One particular strategy that can be used to examine this would be self-goal setting. As individuals set goals for themselves and monitor themselves to not exceed a set goal, they would have lower levels of credit card debt. We also contend self-leadership will have a positive impact on students' financial self-efficacy (attitudes). This is drawn from prior literature on self-leadership and self-efficacy (i.e., Ho & Nesbit, 2009), as well as social cognitive theory. In particular, social cognitive theory would suggest that individuals are able to impact their attitudes and behaviors using self-leadership, which in turn would lead to higher levels of self-efficacy. This is accomplished through the usage of specific self-leadership tactics such as self-goal setting or positive self-talk. The inclusion of these actions can impact the belief that one has over their financial self-efficacy. Because prior literature has established credit card debt as a precursor to student loan debt (Jones, 2006), we argue that this and financial self-efficacy will be mediators in the relationship between self-leadership and student loan debt. It is argued this would occur because individuals who engage in self-leadership strategies exhibit better self-management and self-control over their financial decisions. In regard to credit card debt, prior literature established that it occurs before student loan debt (Jones, 2006). Therefore, it is established that the more proximal outcome (credit card debt) would lead to levels of the more distal outcome (student loan debt) within this model. For example, as individuals engage in self-leadership, it would lead to higher financial self-efficacy—this is established from social cognitive theory. In turn, financial self-efficacy would then decrease the level of student loan debt. This would be frame from attitudes and beliefs driving actions. These hypotheses can be seen in Figure 1 and as follows:

- H1:** Self-leadership is negatively related to student loan debt.
- H2:** Financial self-efficacy mediates the relationship between self-leadership and student loan debt, such that higher levels of self-leadership lead to higher levels of financial self-efficacy, which in turn leads to lower levels of student loan debt.

- H3:** Credit card debt mediates the relationship between self-leadership and student loan debt, such that higher levels of self-leadership lead to lower levels of credit card debt, which in turn leads to lower levels of student loan debt.

## **Methodology**

### ***Data and Sample***

Data were collected from a sample of graduate and undergraduate students at a major Midwestern university during the fall 2017 semester. The survey was developed using past validated measures and was approved by the Institutional Review Board (IRB) prior to being administered in person during scheduled class time to a random sample of accounting and finance undergraduate students and in class to accounting graduate students. Extra credit was given for participation, which was voluntary. Students were given an alternate bonus assignment if they chose not to complete the survey. All study responses were collected using the survey-software Qualtrics. A total of 243 students were invited to participate in the survey and 210 responses were received (a response rate of 86.42%). Data cleaning resulted in a final sample of 197 (81.10%) completed surveys.

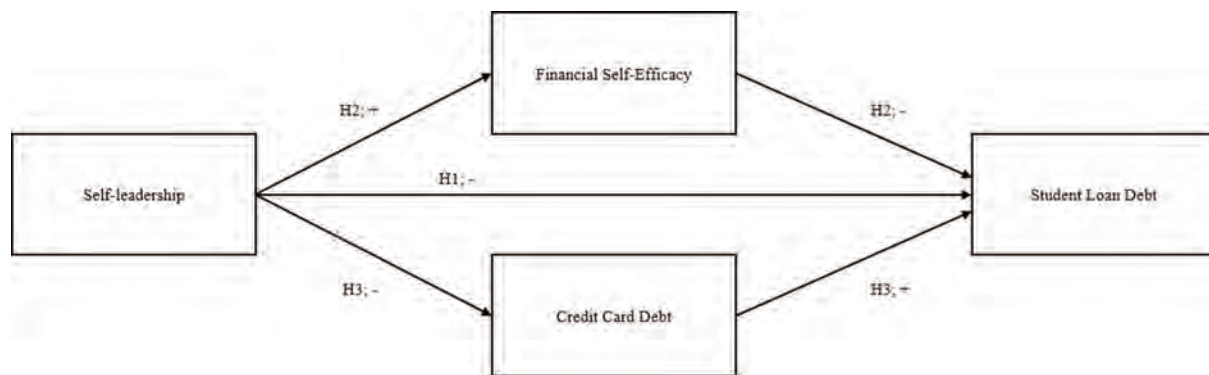
### ***Dependent Variable***

Student loan debt was measured using a single-item continuous variable. The item asked students how much student loan debt they currently have outstanding. This method was adapted from Xiao and colleagues's (2011) measure of outstanding credit card debt.

### ***Independent Variables***

***Self-Leadership.*** Self-leadership was measured using the Abbreviated Self-Leadership Questionnaire (ASLQ) (Houghton et al., 2012). The ASLQ is a nine-item scale that captures the varying dimensions of self-leadership in one universal metric. The ASLQ was specifically developed out of the Revised Self-Leadership Questionnaire (Houghton & Neck, 2002) to examine a global self-leadership construct, rather than the individual dimensions. The nine items were averaged together to arrive at a composite score. The items demonstrated high reliability with a Cronbach's alpha of 0.860.

**Figure 1. Conceptual mediated model of self-leadership and student loan debt including hypothesized directions.**



**Financial Self-Efficacy.** Financial self-efficacy was measured using a single item designed to ascertain how confident the students were in their ability to manage their own finances. The statement read “I am confident in managing my finances” and was anchored on a seven-point scale at “Strongly Disagree” and “Strongly Agree.” This item is similar to the one employed by Xiao et al. (2011).

**Credit Card Debt.** Credit card debt was measured using a single-item continuous variable. The item asked students how much credit card debt they currently have outstanding. This method follows past research (Xiao et al., 2011).

**Control Variables**

Two control variables were measured to account for outside factors that may play a role in the mediated model. The following were included as covariates: (a) education level and (b) grade point average (GPA). Theoretically, the higher the level of education, the higher the amount of student loan debt. Second, the higher the GPA, the more likely students are to have scholarships to attend college. Because these were not main variables of interest to the study, they were used as covariates to isolate the main effects. We also considered other demographic variables based on prior literature including gender and family income (Craig & Raisanen 2014; Festa et al. 2019). These variables were not significant and were not included in the model.

**Data Analyses**

The analysis for this study was conducted using Andrew Hayes’ PROCESS macro (Hayes, 2013). The PROCESS macro has many models built into its programming for mediation analyses. PROCESS provides estimates of

both direct and indirect effects (Hayes, 2013). PROCESS completes this by providing standard errors, *p*-values, and confidence intervals for direct effects, as well as bootstrap confidence intervals for indirect effects (Hayes, 2013). The indirect effects use bootstrapped confidence intervals as the default test for inferences. The default that PROCESS uses creates a 95% bias-corrected bootstrap confidence interval (using 5,000 bootstrap samples) for any indirect effect in models that contain mediation as part of the model. Bootstrapping is an example of resampling methods to help test a hypothesis, which consists of creating an empirically derived representation of the sampling distribution of the indirect effects by creating *n* samples of the data for which the indirect effects will be tested (Hayes, 2013).

**Results**

**Descriptive Statistics of the Sample**

Of the students in the study, 54.82% were male, which is higher than the population of the university (49% male and 51% female). Of the students, 44.17% were between the ages of 18 and 20 while 44.67% were between 21 and 25 with 63.96% being undergraduate level and 36.04% being graduate level. Students indicated that their mother’s highest attained education level was a bachelor’s degree (38.58%), followed by high school diploma (34.01%), master’s degree or higher (21.83%), and junior high school graduate (5.58%). Students indicated that their father’s highest attained education level was a bachelor’s degree (40.10%), followed by high school graduate (38.58%), master’s degree or higher (16.24%), and junior high school graduate (5.08%). A majority of students (34.52%) had a GPA over 3.50 followed by 3.01–3.50 (31.47%),

**TABLE 1. Regression Results for Student Loan Debt**

Variable	B(SE)
Education	0.38 (0.13)**
GPA	-0.04 (0.15)
Self-Leadership	-0.23 (0.11)*
Financial Self-Efficacy	-0.12 (0.05)*
Credit Card Debt	0.15 (0.04)**
Constant	2.11 (0.68)**
$r^2$	0.18
$n$	197

*Notes.* GPA = grade point average; SE = standard error.  
\* $p < .05$ . \*\* $p < .01$ .

**TABLE 2. Estimates for Indirect Effects of Self-Leadership on Student Loan Debt**

Indirect Effect	Estimate (SE) <sup>a</sup>	Confidence Interval
Financial Self-Efficacy	-0.066 (.036)	[-.161, -.014]
Credit Card Debt	-0.050 (.035)	[-.149, -.003]

*Note.* SE = standard error.

<sup>a</sup>Bootstrapped estimates for the SE are presented.

2.51–3.00 (22.85%), and up to 2.50 (10.66%). Of the students, 69.54% had no outstanding credit card debt and 59.90% had no student loan debt. A complete listing of the descriptive statistics is available upon request.

### *Hypothesis Testing*

The results from the hypothesis testing can be seen in Tables 1 and 2. Table 1 reports the regression results, including the direct effect of self-leadership on student loan debt. Table 2 reports the mediation results, with estimates of the indirect effect and the confidence intervals surrounding those indirect effects for the mediation analyses involving financial self-efficacy and credit card debt.

Hypothesis 1 stated that self-leadership would be negatively related to student loan debt. As can be seen in Table 1, the self-leadership and student loan debt relationship was statistically significant. Self-leadership was negatively related to student loan debt ( $B = -.226$ , standard error [ $SE$ ] = .110,  $p < .05$ ). Thus, Hypothesis 1 was supported.

Hypothesis 2 and 3 stated that financial self-efficacy and credit card debt, respectively, would partially mediate the relationship between self-leadership and student loan

debt. The bootstrapped analysis (5,000 bootstrap samples) creates simulated datasets using resampling with replacement. When the bias-corrected bootstrap analyses are conducted, there are several key criteria to look for. The confidence interval needs to be examined to see if zero falls between the ends. If zero does not fall between ends of the confidence interval, then  $p < .05$  for the indirect effect and the indirect path is significant.

As can be seen in Table 1, there is a significant indirect effect of self-leadership on student loan debt through financial self-efficacy (-0.066, [-.161, -.014]). Thus, Hypothesis 2 is supported, suggesting that financial self-efficacy mediated the relationship between self-leadership and student loan debt. Additionally, as can be seen in Table 1, there is a significant indirect effect of self-leadership on student loan debt through credit card debt (-0.050, [-.149, -.003]). Thus, Hypothesis 3 is supported, suggesting that credit card debt mediated the relationship between self-leadership and student loan debt.

## **Discussions, Limitations, and Implications**

### *Discussions*

The rising cost of higher education has led to a drastic increase in the amount of student loan debt for students. With graduates compiling debt of \$37,172 per student in 2016, it is important to examine the impact of student loans and how to stem their rapid increase among students (Picchi, 2016). This study posits self-leadership, which is a self-influence process that allow individuals to achieve self-motivation and self-direction, as ways to improve financial self-efficacy and levels of debt (Manz, 1986). The present study examined the potential impacts of self-leadership on the following three items: (a) credit card debt, (b) financial self-efficacy, and (c) student loan debt and a mediated model.

The mediated model was designed such that self-leadership's potential impact on student loan debt could be tested both directly and indirectly through credit card debt and financial self-efficacy. The model accounted for approximately 17.50% of the variance in student loan debt. The findings indicated that self-leadership had a significant indirect effect through both credit card debt and financial self-efficacy. As predicted in Hypothesis 1, self-leadership is negatively associated with student loan debt. This

suggests the higher a student is in self-leadership, the lower the amount of student loans debt they incurred.

The findings indicate financial self-efficacy mediates the relationship between self-leadership and student loan debt, such that higher self-leadership would lead to higher levels of financial self-efficacy. In turn, higher financial self-efficacy would lead to lower levels of student loan debt. The model indicated to a significant degree that this finding was the case. Higher self-leadership had a significant positive effect on financial self-efficacy, which had a negative effect on the amount of student loan debt.

Finally, we predicted credit card debt would mediate the relationship between self-leadership and student loan debt, such that higher self-leadership would lead to lower levels of credit card debt. In turn, credit card debt would have a positive relationship with student loan debt. These results build on the growing literature examining student loan debt and credit card debt (Robb, 2017; Xiao et al., 2011). This analysis presents a tool, self-leadership, for academics and administrators to focus on for helping to improve financial self-efficacy and curb the use of credit card debt and student loan debt. One such way that self-leadership could be used to improve financial self-efficacy, as well as reduce the usages of credit card and student loan debt is through self-leadership training activities. A form of self-leadership training has been previously adapted in earlier research (Stewart et al., 1996). The authors focused self-leadership training on the benefits of self-leadership and methods to develop self-leadership skills. The self-leadership training that was developed in that study could be adopted to focus on how self-leadership can influence the outcomes of interest in this study. The results presented here indicate improving students' self-leadership can incrementally lead to positive benefits in the form of lower credit card debt and student loan debt.

### ***Limitations and Future Research***

A number of limitations should be acknowledged. First, analyses were based on cross-sectional data. Since the analyses were limited by the cross-sectional date, we can only add support to the idea that self-leadership leads to higher financial self-efficacy, lower credit card debt, and lower student loan debt. However, while there was cross-sectional

data, it does add support to the relationship between self-leadership and the different outcome variables. Second, the survey methodology led to credit card debt and student loan debt being self-reported. The problems with self-reported data are well known with research methods fields; however, self-report data is best used when the first reporting that information is the one who will have the most accurate interpretation of the question. In regard to credit card and student loan debt, individuals would be the appropriate individuals for reporting that information. Finally, the survey also did not gather types of student loans, credit cards, and guarantors. While the survey captured information on credit card and student loan debt, there are obviously different types of these forms of debt. This lack of information limits the ability to analyze who carries the burden of the types of debt.

There is a multitude of different avenues that future research could expand on from this manuscript. First, future research would benefit from a longitudinal study that truly captures the relationships over a period of time. Future studies could examine self-leadership and subjective well-being as a way to provide additional future benefits. Future research could examine the different forms of each of these debts in conjunction with self-leadership. Differences in subsidized versus unsubsidized student loans could be of potential interest moving forward. Additionally, future research should strive to examine how and when students begin to pay off student loan debt. There could be key differences worth exploring if individuals beginning to pay off student loans early or if they let the loans matriculate until they are required to pay on the debt. Another area of future research that may be beneficial would be to examine the role of self-leadership in reducing student loan debt while examining different universities—choice of location and institution may impact the level of debt. This was not examined in the current article, but future research may benefit from examining this avenue. Finally, future research could examine a combination of more than one method of paying for college by developing a more comprehensive model. For example, a model that includes other forms of loans, Pell grants, and so on could be very beneficial to gain more knowledge on how self-leadership impacts key financial indicators. While this was not the purpose of this study, it could be useful for future research to include these items.

### Implications

Self-control can be thought of as one of the most impactful ways that individuals can positively influence their own actions and behaviors. Specifically, behavioral self-control has been shown to be representative of self-leadership on individuals. Practically, engaging in self-leadership training can be used to help individuals exhibit better self-control and regulation. Research has related dimensions of self-leadership training for employees with positive outcomes (Neck & Manz, 1996). Thus, there is support for the idea that self-leadership training can be implemented to help individuals increase their level of self-leadership practice and positive outcomes. A training exercises can be developed that connects self-leadership strategies with better financial practices leading to better financial education (Kim et al., 2017). This could be framed in a similar lens to Stewart and colleagues (1996) who examined the role of self-leadership training on employee self-directed behavior. By modifying the training to incorporate financial behaviors as the outcome, the framework for a beneficial training on self-leadership is established. Thus, by better understanding the self-control processes used to motivate and control their behaviors, individuals can experience greater sense of financial self-efficacy and lower levels of credit card/student loan debt. These strategies potentially contribute to positive financial behaviors (Moreland, 2018). It can be inferred from this study that actively focusing on self-leadership at a younger age could potentially result in lower levels of debt for students who are graduating from college. This is based on the idea that individuals who can incorporate self-leadership strategies earlier in their college career may be able to better use those skills to reduce overall student debt. Finally, universities can implement these strategies to improve their fit as financial information sources, enhancing the overall accessibility to financial information (Huang et al., 2018).

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