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# The Influence of Stafford Loan Debtload on Persistence Among Historically Underserved Populations at a Hispanic Serving Institution

By Mari Ysela Noopila and Henrietta Williams Pichon

*This study presents a mixed methods explanatory analysis of the influence of Stafford loan debtload on persistence among underserved populations attending a Hispanic Serving Institution in the Southwest of the United States. Using data from cohort 2010, fall to fall persistence was examined to assess if debtload was related to persistence for all full-time, first-time undergraduate students based on demographic characteristics. Additionally, in-depth interviews were conducted on undergraduate students during fall 2017 to gain a better understanding of their experiences with debtload and if it played into their persistence decisions. Results of the study revealed statistically significant relationships between debtload and persistence for all first-time, full-time undergraduate students, White non-Hispanic students, Hispanic students, male students, female students, students from low and medium annual household incomes, as well as for first-generation and continuing generation students. Further, low debt was a predictor of non-persistence for each of these groups of students. The findings from the qualitative study showed how debtload influenced students' persistence decisions. Overall, findings suggest that the threshold of debt is extremely low for these particular students attending a Hispanic Serving Institution.*

**Keywords:** Debtload, Hispanic-Serving Institution, Threshold of Debt

The existing research related to financial aid and student persistence clearly identifies a gap in the literature regarding the influence of student loan debtload on persistence for historically underserved groups (e.g., first-generation, low-income, ethnic minorities) in higher education. Recent estimates of student loan debt are reaching critical levels. According to the United States Federal Reserve, the national student loan debt as of 2018 was at 1.48 trillion dollars. Adding to that, the average student loan debt for individuals graduating in 2017 was \$28,650 (The Institute for College Access and Success, 2018). With median entry-level starting salaries of \$44,000 annually for undergraduates, the investment in college degrees is becoming more and more questionable as Millennials (1980-2000) and Gen Z'ers (born after 2000) make critical decisions about remaining enrolled (Federal Reserve Bank of New York, 2018). Since Cofer and Somer's (1999) seminal study asserted that loan debt affected persistence, few researchers have looked deeper into the influence of debtload on persistence decisions. Without careful inquiry of the influence of debtload on persistence, we risk negatively impacting degree attainment by advancing well-meaning programs, i.e., Title IV loans that may do more harm than good. Over the years, Hispanic-Serving Institutions (HSIs) are being looked upon as institutions that foster student success of these historically underserved groups (Borden & Sharpe, 2015; Núñez, Hurtado, & Calderón Galdeano, 2015; Santiago, 2006). Data show that HSIs are second to Historically Black Colleges and Universities (HBCUs) in granting

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baccalaureate degrees to historically underserved groups (Borden & Sharpe, 2015). Though research is replete with stories highlighting degree attainment among historically underserved groups, it lacks demonstration of how finances and persistence for these students impact their chances of success.

Therefore, the purpose of this mixed-methods study was to examine the influence of debtload on persistence (i.e., year-to-year) for undergraduate students at an HSI, with special attention given to historically underserved students. Using archival institutional data and student interviews, this study sought to answer the following research question: How does Stafford loan debtload influence persistence of historically underserved students at an HSI? For the purpose of this study, the researchers focused on the Stafford student loan program because of the shift in financial aid policies in the 1980s from need-based aid to merit-based aid to fund their education, which forced many into borrowing (Behrman, Kletzer, McPherson & Schapiro, 1998; Mumper, 1996; Paulsen, 1998; Paulsen & Smart, 2001; St. John, 1994). Stafford loans have become the largest provider of financial support for millions of college students (Choy & Berker, 2003; Long & Riley, 2007; Mumper & Ark, 1991). According to the U.S. Department of Education, Stafford loan debt alone was at \$767 billion as of 2018 (U.S. Department of Education, 2018). Additionally, Stafford loans are governed under Title IV Aid as a public good and may be more amenable to adjusting policy than private educational loan programs which are governed by capitalistic principles (Page & Scott-Clayton, 2016). Although there are several different funding sources (i.e., scholarships, grants, private loans), we are focusing on the Stafford loan because it is more accessible for historically underserved populations than other forms of aid, this has been due in part to unmet financial need in the way of grant and scholarship aid as well as the unique nature of the federally backed Stafford loan which does not require consideration of traditional financial measures like private loans. This study is a first step in understanding the impact of Stafford loan debtload at an HSI as a means of determining students' perceptions of student loan debtload, especially as it relates to persistence. Findings from this study will have implications for financial aid research, practice, and policy by drawing attention to the effects of cumulative loan debt on persistence behavior for underserved populations.

## **Review of the Literature**

Higher education has been deemed a major contributor of individual, social, and economic opportunity, and increasingly it has served as a crucial component in the national mission for equality and opportunity across gender, racial/ethnic and socioeconomic lines (Anderson & Hearn, 1992; Chen & DesJardins, 2010; Ma, Pender, & Welch, 2016). Research (Le, Mariano, & Faxon-Mills, 2016) has shown that historically underserved students do not persist at the same rates as their peers. With nearly three decades of modification to financial aid policies, the results have merely increased participation in loan programs for many students attending postsecondary schools but may not be as clear with regard to persistence. Mumper and Ark (1991) point to the increasing loan use trend in financial aid, explaining that the Stafford loan was transformed from a small supplemental program into the centerpiece of all student aid in the United States, surpassing the Pell grant as the primary source of federal student aid.

Over time, policies have decreased funding for programs to lower-income families, in turn, these individuals must rely more heavily on Stafford loans to fund their education. The primary intent of federal student aid was to help increase college access for low-income students and families, but now with tuition increase concerns, attention is redirected towards overall affordability of college (Choy & Berker, 2003). Long and Riley (2007) explained that shifts in U.S. financial aid policy curtailed funding and opportunities for low-income students and concentrated efforts on meeting the needs of middle and upper-income families. While examining the Georgia Hope Scholarship, Dynarski (2000) found that for every \$1000 subsidy, the rate of college attendance increased by 4%-6% for middle and upper-income youth. Long and Riley (2007) further explained that need-based financial aid was replaced by loans, merit aid, and tax breaks; this is concerning for students who are disadvantaged and are historically underserved in higher education.

These policies diminish need-based assistance for populations that are already financially burdened and need it the most to pursue higher education.

Research has suggested that educational loan debtload influences undergraduate students differently, particularly underserved students, and may play a role in their decisions to persist from year-to-year and complete their degree programs (Bowen, Chingos, & McPherson 2009; Buchmann & DiPrete, 2006; Dwyer et al., 2012; Somers, Woodhouse, & Cofer, 2004). Since Title IV aid has played a pivotal role in access to higher education, student enrollment has increased, yet there remains a lag in degree attainment, especially for historically underserved students (Bowen et al., 2009; Buchmann & DiPrete, 2006; Dwyer et al., 2012; Somers et al., 2004). Somers et al. (2004) found that increasingly, individuals borrowed student loans to fund their education, this was a result of declining scholarship and grant aid availability, thus, there has been growing interest about loan burden for all students, particularly first-generation and lower-income students who may be most vulnerable to these types of changes. For historically underserved groups in higher education, student loan debtload is becoming even more critical in understanding persistence. Examining debt and its effects on student outcomes will help us understand how loans act as an aide or obstacle with regard to student persistence.

### **HSIs Student Demographics**

Núñez et al. (2015) determined that HSIs are the "largest and fastest" growing sector of Minority Serving Institutions (MSIs) in the U.S. that actively pursue the enrollment of underserved groups of students. Núñez et al. (2015) further explained that "in 2012-2013, HSI's enrolled 59% of all Latino/Latina students in higher education, and also enrolled 28% of Asian American, 16% of Black, 14% of American Indian, and 10% of White students nationally" (p. 5). HSIs are found in 13 states, but over half of them (54%) are concentrated in California, Texas, and New Mexico; two-thirds of them are public institutions (Contreras, Malcom & Bensimon, 2008). While the number of Hispanic students attending and attaining degrees at postsecondary institutions is on the rise, Hispanic students lag behind their peers in completing their education (Macy & Terry, 2011; Perna, 2000; Swail & Perna, 2003). Swail and Perna (2003) found that for African American and Hispanic students, educational attainment continues to remain lower than that of their White and Asian peers.

Research concerning minority and low-income students often cite economic circumstances influencing college-related decisions (Nora, 2004; Nora & Crisp, 2009, Tinto, 1992). Nora (2004) asserted that financial assistance and college affordability weigh heavily in the decision to attend a particular institution and persist there. Tuition and fees have been on the rise at public institutions with a substantial increase of near 50% between 1993-2003 (Nora & Crisp, 2009) and continued to increase between 2011-12 and 2016-17 by an additional 9% in public four-year institutions (College Board, 2017). Because of this, students' ability to pay for college is becoming less likely. With no relief in sight, researchers (Nora & Crisp 2009; Santiago & Brown) asserted that Hispanic students may be disproportionately affected by these rising costs because of their dependency on student loans and their receiving far lower aid awards than their peers in other racial/ethnic groups. Interestingly, Santiago and Brown (2004) pointed out that Latino students consistently receive larger loan packages than other minority groups and smaller grant aid and work-study aid than both their White and Asian/Pacific Islander peers. As disparities in grant, work-study and scholarship aid persists for Latino students the rising cost of tuition will drive the need for increased loan packages requiring them to borrow more money to attend school.

Hall (2015) brought attention to the negative impacts of tuition and financial aid trends on Hispanic students. She further called for an inquiry into the inequities in financial aid distribution, which forces these students to borrow more and leave college with more debt than their peers of different racial/ethnic backgrounds. Somers et al. (2004) found that financial aid is important to the retention of first-generation

students'; specifically, Pell and institutional grants positively influenced college access. Somers et al. (2004) found that parents benefit from more financial literacy education, and students, particularly first-generation students who are debt averse, may find smaller loan amounts more appealing and manageable. Thus, the importance of assessing how debt influences persistence and degree attainment decisions cannot be dismissed.

Because of the continued growth in Latino participation at colleges and universities, HSIs stand at the forefront of improving success for this growing demographic; "policymakers, education leaders, and community stakeholders need to understand the history of the HSI designation and the characteristics of HSIs to accurately assess the impact of those institutions on Latino student achievement now and in the future" (Santiago, 2006, p. 5). Because of the inequities that exist for a great number of students at HSIs, it is important to examine aspects that influence their persistence and degree attainment decisions.

### Overview of Methodology

A great amount of research concerning student loan debt and its effects on student persistence and completion is quantitative (e.g., Bettinger, 2004; Cabrera et al., 1993; Cofer & Somers, 2000; St. John, 1989). To gain a better understanding of how debtload affects persistence for underserved undergraduate students, a mixed-methods approach was employed. Mixed methods research is described as "research that combines (truly mixes), both quantitative and qualitative approaches within a single study" (Suter, 2011, p. 80). When both quantitative and qualitative methods are utilized jointly, they balance one another for a more comprehensive analysis (Greene, Caracelli, & Graham, 1989; Tashakkori & Teddlie, 1998). Thus, a two-phase sequential explanatory mixed methods design was utilized. The qualitative data help explain or build upon initial quantitative results (Creswell, Plano, Clark, Gutman, & Hanson, 2003). This study involved the collection of quantitative data using an ex-post facto design; numerical data for all first-time, full-time undergraduate students' who accrued any amount of Stafford loan debt for cohort 2010 were collected from the Office of Institutional Analysis. Further, data were subjected to chi-square tests of independence followed by logistic regression analysis when a relationship between variables existed. This design allowed for the assessment of how increasing debt was related to persistence for the undergraduate population. Interviews were conducted with 20 undergraduate students who were currently enrolled at the institution during Fall 2017, pseudonyms were used in qualitative analysis reporting. The thresholds of debt variables are interval scaled variables, which employ the use of four dummy variables that included: no debt, low debt ( $\leq \$3,000$ ), medium debt ( $\$3,001$  to  $\$7,000$ ), and high debt ( $> \$7,001$ ). Additionally, the persistence variables consist of year-to-year persistence for 2010-2011 and were coded (0=no persist); (1=yes persist). Finally, demographic variables included race/ethnicity (1=White, 2=Hispanic, 3=Other), gender (1=Male; 0=Female), income (Low household income less than \$42,000 annually; Middle-household income between \$42,001-\$125,000 annually; High-household income greater than \$125,001 annually), and first-generation status (0=no; 1=yes). These data were obtained from the Office of Institutional Analysis. Because the numbers were so small for African Americans, Native Americans, and Asian Americans (i.e., other), they could not be included in the analysis.

Following the quantitative inquiry, the collection of qualitative data using a case study design was employed; this allowed for the collection of data through in-depth interviewing. To address this study's central research question, semi-structured interviews were conducted with undergraduate students currently enrolled at the institution during Fall 2017. Participants were asked to complete a demographic form which asked them for specific information about their age, gender, race/ethnicity, household income, class status, and amount of debt.

Participants consisted of 20 undergraduate students of all different race/ethnicities, and various class ranks. See table 1 for student demographic information to include: gender, ethnicity, student status, family

education level, income class level and debtload. Of the students who participated 70% were females (n=14), and 30% were male (n=6). Race and ethnicity of the students included 65% Hispanic (n=13), 15% White (n=3), 10% African American (n=2), and 10% Native American (n=2). Of the 20 students, 60% reported having middle annual household income (n=12), 25% reported having low annual household income (n=5), and 15% reported having high annual household income (n=3). Of those numbers, 50% of the students were first-generation students (n=10). To further explore loan debt, the qualitative section of this study aimed to understand student's perceptions of increasing student loan debt on persistence decisions. Sample questions asked included the following: Tell me about your decision to take out a Stafford loan. What is your attitude about borrowing to pay for school?

Table 1

*Student Demographic Characteristics*

Name	Gender	Ethnicity	Student Status	Family Educational Level	Income	Class Level	Debtload
Shanon	Female	Hispanic	Dependent	Continuing	Middle	Freshman	Medium
Aiyana	Female	American Indian	Dependent	First-generation	Middle	Senior	Medium
Taylor	Female	Hispanic	Independent	First-generation	High	Sophomore	Low
Victoria	Female	Hispanic	Dependent	First-generation	Low	Junior	Medium
Jimena	Female	Hispanic	Dependent	First-generation	Middle	Freshman	Medium
Amara	Female	American Indian	Dependent	Continuing	Middle	Freshman	Medium
KC	Male	Black/AA	Dependent	Continuing	Middle	Junior	Medium
Briana	Female	White	Independent	Continuing	Middle	Sophomore	High
Jack	Female	White	Dependent	Continuing	Middle	Junior	Medium
Matthew	Male	Hispanic	Independent	First-generation	Low	Freshman	Medium
Mollie	Female	Hispanic	Independent	Continuing	Low	Junior	High
Christina	Female	White	Dependent	Continuing	Middle	Freshman	Low
Cesar	Male	Hispanic	Dependent	First-generation	Middle	Freshman	Medium
Chavo	Male	Hispanic	Dependent	Continuing	Middle	Sophomore	Unsure
Katie	Female	Hispanic	Independent	First-generation	Low	Sophomore	Medium
John	Male	Hispanic	Independent	First-generation	Middle	Freshman	Unsure
Talia	Female	Hispanic	Dependent	Continuing	Middle	Senior	Medium
Rose	Female	Black/AA	Dependent	First-generation	Low	Senior	High
Amanda	Female	Hispanic	Dependent	Continuing	High	Freshman	Medium
Corey	Male	Hispanic	Independent	First-generation	High	Sophomore	High

## Data Analysis

To gain an understanding of whether students' debtload predicted persistence outcomes, multiple regression was applied to the sample. The predictor variables — no debt, low debt, medium debt, and high debt — were entered one by one for each of the unique student background characteristics (e.g., race/ethnicity, gender, annual income, first-generation or continuing generation student status variables). High debt amounts are greater than \$7001, medium debt is amounts from \$3001-\$7000, low debt (\$1-\$3000), and no debt. Using contingency tables for persistence based on debtload amounts for all full-time first-time undergraduate students, regression analyses were employed to examine the predictive power of debtload on year-to-year persistence. Unlike Cofer and Somers (2000) who assessed debt from multiple sources, this study only considers debt from Federal Stafford loans at a single institution. The Office of Institutional Analysis aggregated the data and categorized accumulated debt from Stafford loans into the four respective categories (e.g., no debt, low debt, medium debt, high debt). Students with these threshold amounts were then compared to each other.

The qualitative portion of the study utilized the analytical procedures outlined by Cresswell (1994) that explained how to guide the development of analysis for qualitative data. The in-person interviews were audio-recorded and transcribed. Creswell (1994) detailed the necessity of reducing and interpreting data; to do so, emergent themes were presented in tables. The tables organized the data to assess the relationship between the information and categories. The next step was the coding of the themes. Themes were coded in clusters of related topics, each of the codes was given a specific color code for ease of use and analysis. Finally, the consolidation of all coded data was entered into one document and preliminary analysis began. Each code was assigned a particular color to allow a visual representation of the emergent themes (e.g., blue-stress, red-scared, green-family). Codes and participant responses were placed into tables to allow for further examination using Comparative Qualitative Analysis (CQA; Patton, 2002). This allowed for a search of specific patterns and similarities within the text and across cases. Further, emergent themes within and across the individual cases were identified. Finally, the information was formatted into narrative text.

## Results

The findings of this study provided insights into how debtload influenced persistence of undergraduate students at an HSI. The quantitative study revealed that for these undergraduate students enrolled during the fall of 2010, debtload played a significant role in student persistence. Regression analysis indicated that for certain students' low debt was a predictor of non-persistence. Further, five themes emerged from the qualitative study which offered an in-depth understanding of how students' perceived debtload influencing their persistence decisions.

### Chi-Square Tests

Chi-square tests of independence were performed to examine if there were relationships between debtload levels and persistence for all first-time, full-time undergraduate students (AFTFTUG), White non-Hispanic, Hispanic, male, female, low income, medium income, first generation and continuing generation students. The results of the chi-square tests of independence indicated that there were statistically significant differences between the observed and expected values. Table 2 presents the observed and expected frequencies for students based on their demographic characteristics.



Table 2

*Observed and Expected Frequencies*

	No Debt	Low Debt	Med Debt	High Debt	Total
<b>AFTFTUG</b>					
Persist Count	1029	77	421	79	1606
Expected Count	965.1	151.4	399.6	89.9	1606
% within Persistence	64.10%	4.80%	26.20%	4.90%	100.00%
Not Persist Count	367	142	157	51	717
Expected Count	430.9	67.6	178.4	40.1	717
% within Persistence	51.20%	19.80%	21.90%	7.10%	100.00%
Total Count	1396	219	578	130	2323
Expected Count	1396	219	578	130	2323
% within Persistence	60.10%	9.40%	24.90%	5.60%	100.00%
<b>White non-Hispanic</b>					
Persist Count	358	17	121	25	521
Expected Count	338.5	36.1	116.3	30.2	521
% within Persistence	68.70%	3.30%	23.20%	4.80%	100.00%
Not Persist Count	102	32	37	16	187
Expected Count	121.5	12.9	41.7	10.8	187
% within Persistence	54.50%	17.10%	19.80%	8.60%	100.00%
Total Count	460	49	158	41	708
Expected Count	460	49	158	41	708
% within Persistence	65.00%	6.90%	22.30%	5.80%	100.00%
<b>Hispanic</b>					
Persist Count	473	49	241	39	802
Expected Count	451.4	88	223.7	39	802
% within Persistence	59.00%	6.10%	30.00%	4.90%	100.00%
Not Persist Count	199	82	92	19	392
Expected Count	220.6	43	109.3	19	392
% within Persistence	50.80%	20.90%	23.50%	4.80%	100.00%
Total Count	672	131	333	58	1194
Expected Count	672	131	333	58	1194
% within Persistence	56.30%	11.00%	27.90%	4.90%	100.00%
<b>Male</b>					
Persist Count	484	35	202	36	757
Expected Count	456.2	69.3	188.1	43.5	757
% within Persistence	63.90%	4.60%	26.70%	4.80%	100.00%
Not Persist Count	188	67	75	28	358
Expected Count	215.8	32.7	88.9	20.5	358
% within Persistence	52.50%	18.70%	20.90%	7.80%	100.00%
Total Count	672	102	277	64	1115
Expected Count	672	102	277	64	1115
% within Persistence	60.30%	9.10%	24.80%	5.70%	100.00%

	No Debt	Low Debt	Med Debt	High Debt	Total
<b>Female</b>					
Persist Count	545	42	219	43	849
Expected Count	508.8	82.2	211.5	46.4	849
% within Persistence	64.20%	4.90%	25.80%	5.10%	100.00%
Not Persist Count	179	75	82	23	359
Expected Count	215.2	34.8	89.5	19.6	359
% within Persistence	49.90%	20.90%	22.80%	6.40%	100.00%
Total Count	724	117	301	66	1208
Expected Count	724	117	301	66	1208
% within Persistence	59.90%	9.70%	24.90%	5.50%	100.00%
<b>Low Income</b>					
Persist Count	331	35	171	32	569
Expected Count	298.6	74.2	162.8	33.3	569
% within Persistence	58.20%	6.20%	30.10%	5.60%	100.00%
Not Persist Count	144	83	88	21	336
Expected Count	176.4	43.8	96.2	19.7	336
% within Persistence	42.90%	24.70%	26.20%	6.30%	100.00%
Total Count	475	118	259	53	905
Expected Count	475	118	259	53	905
% within Persistence	52.50%	13.00%	28.60%	5.90%	100.00%
<b>Middle Income</b>					
Persist Count	367	36	212	36	651
Expected Count	342.7	65	197.3	46	651
% within Persistence	56.40%	5.50%	32.60%	5.50%	100.00%
Not Persist Count	102	53	58	27	240
Expected Count	126.3	24	72.7	17	240
% within Persistence	42.50%	22.10%	24.20%	11.30%	100.00%
Total Count	469	89	270	63	891
Expected Count	469	89	270	63	891
% within Persistence	52.60%	10.00%	30.30%	7.10%	100.00%
<b>High income</b>					
Persist Count	153	38	191		
Expected Count	148.8	42.2	191		
% within Persistence	80.10%	19.90%	100.00%		
Not Persist Count	20	11	31		
Expected Count	24.2	6.8	31		
% within Persistence	64.50%	35.50%	100.00%		
Total Count	173	49	222		
Expected Count	173	49	222		
% within Persistence	77.90%	22.10%	100.00%		
<b>First Gen.</b>					
Persist Count	283	31	164	30	
Expected Count	262.7	61	149	35.3	
% within Persistence	55.70%	6.10%	32.30%	5.90%	
Not Persist Count	126	64	68	25	
Expected Count	146.3	34	83	19.7	
% within Persistence	44.50%	22.60%	24.00%	8.80%	
Total Count	409	95	232	55	
Expected Count	409	95	232	55	
% within Persistence	51.70%	12.00%	29.30%	7.00%	

	No Debt	Low Debt	Med Debt	High Debt	Total
<b>Cont. Gen.</b>					
Persist Count	585	40	244	48	917
Expected Count	550.1	79.7	234.1	53.1	917
% within Persistence	63.80%	4.40%	26.60%	5.20%	100.00%
Not Persist Count	181	71	82	26	360
Expected Count	215.9	31.3	91.9	20.9	360
% within Persistence	50.30%	19.70%	22.80%	7.20%	100.00%
Total Count	766	111	326	74	1277
Expected Count	766	111	326	74	1277
% within Persistence	60.00%	8.70%	25.50%	5.80%	100.00%

The tests revealed that there were statistically significant relationships between debtload and persistence for: AFTFTUG:  $\chi^2 = 140.141$ ,  $df = 3$ ,  $p < .001$ , White non-Hispanic:  $\chi^2 = 46.473$ ,  $df = 3$ ,  $p < .001$ , Hispanic  $\chi^2 = 59.872$ ,  $df = 3$ ,  $p < .001$ , Male:  $\chi^2 = 65.218$ ,  $df = 3$ ,  $p < .001$ , Female:  $\chi^2 = 76.589$ ,  $df = 3$ ,  $p < .001$ , Low Income:  $\chi^2 = 66.442$ ,  $df = 3$ ,  $p < .001$ , Medium Income:  $\chi^2 = 66.713$ ,  $df = 3$ ,  $p < .001$ , First-Generation:  $\chi^2 = 52.125$ ,  $df = 3$ ,  $p < .001$ , and Continuing Generation:  $\chi^2 = 81.291$ ,  $df = 3$ ,  $p < .001$ . See Table 3 for chi-square test results for each of the variables in the model. For these students the amount of debt that the student had was related to if the student would persist on to the next semester or not.

Table 3

*Hypothesis Testing: Chi-Square Tests of Independence*

Chi-Square Tests			
	Value	Df	Asymptotic Significance (2-sided)
<b>AFTFTUG</b>			
Pearson Chi-Square	140.141a	3	.000
Likelihood Ratio	128.686	3	.000
Linear-by-Linear Association	8.188	1	.004
N of Valid Cases	2323		
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 40.12.			
<b>White non-Hispanic</b>			
Pearson Chi-Square	46.473a	3	.000
Likelihood Ratio	40.623	3	.000
Linear-by-Linear Association	4.538	1	.033
N of Valid Cases	708		
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 10.83.			
<b>Hispanic</b>			
Pearson Chi-Square	59.872a	3	0
Likelihood Ratio	55.886	3	0
Linear-by-Linear Association	0.067	1	0.795
N of Valid Cases	1194		
a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 19.04.			
<b>Male</b>			
Pearson Chi-Square	65.218a	3	.000
Likelihood Ratio	60.641	3	.000
Linear-by-Linear Association	3.315	1	.069
N of Valid Cases	1115		
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 20.55.			

Chi-Square Tests			
	Value	Df	Asymptotic Significance (2-sided)
<b>Female Students</b>			
Pearson Chi-Square	76.589a	3	0
Likelihood Ratio	69.539	3	0
Linear-by-Linear Association	4.941	1	0.026
N of Valid Cases	1208		
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 19.61.			
<b>Low Annual Household Income</b>			
Pearson Chi-Square	66.442a	3	0
Likelihood Ratio	64.457	3	0
Linear-by-Linear Association	3.305	1	0.069
N of Valid Cases	905		
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 19.68.			
<b>Middle Income</b>			
Pearson Chi-Square	66.713a	3	0
Likelihood Ratio	59.893	3	0
Linear-by-Linear Association	4.534	1	0.033
N of Valid Cases	891		
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 16.97.			
<b>High Income</b>			
Pearson Chi-Square	3.768a	1	0.052
Continuity Correction	2.916	1	0.088
Likelihood Ratio	3.429	1	0.064
Linear-by-Linear Association	3.751	1	0.053
N of Valid Cases	222		
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 6.84.			
b. Computed only for a 2x2 table			
<b>First-Gen</b>			
Pearson Chi-Square	52.125a	3	0
Likelihood Ratio	50.052	3	0
Linear-by-Linear Association	1.296	1	0.255
N of Valid Cases	791		
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 19.68.			
<b>Cont. Gen</b>			
Pearson Chi-Square	81.291a	3	0
Likelihood Ratio	72.552	3	0
Linear-by-Linear Association	4.66	1	0.031
N of Valid Cases	1277		
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 20.86.			

## Regression Analysis

A regression analysis was conducted for each of the independent variables (no debt, low debt, medium debt, and high debt) to examine which levels were predictors of the dependent variable (persistence) for student demographic characteristics-race/ethnicity, gender, household income, and generations status. Table 4 presents the results for the regression analysis.

Based on the logistic regression, no debt, low debt, and medium debt were all statistically significant predictors of persistence among (AFTFTUG). No debt and medium debt levels were significant predictors

of persistence at the  $< .05$  alpha level. Low debt was a significant predictor of not persisting at the  $< .001$  alpha level. Students who had no debt were 1.8 times more likely to persist than those with high debt, those with low debt were 2.9 times less likely to persist than those with high debt, and students with medium debt were 1.7 times more likely to persist than those with high debt.

For White non-Hispanic students', no debt, low debt, and medium debt were all statistically significant predictors of persistence. No debt, low debt, and medium debt levels were significant predictors of persistence at the  $< .05$  alpha level. White non-Hispanic students who had no debt were 2.2 times more likely to persist than those with high debt. Students with low debt were nearly 3 times less likely to persist than those who had high debt. And students with medium debt were 2 times more likely to persist than those with high debt.

Based on the logistic regression, low debt was the only statistically significant predictor of persistence for Hispanic students and this was at the  $p < .001$  alpha level. Hispanic students who had low debt were 3.4 times less likely to persist than those who had high debt.

For male students, each of the debt levels determined to be significant in the model. No debt, low debt, and medium debt levels were significant at the  $< .05$  alpha level. Students who had no debt were 2 times more likely to persist than those who had high debt, students who had low debt were 2.5 times less likely to persist than those with high debt, and students with medium debt were 2.1 times more likely to persist than those with high debt. Conversely, for female students' low debt was the only level that was determined to be significant in the model. No debt was significant at the  $< .001$  alpha level. Female students who had low debt were 3.3 times less likely to persist than those with high debt.

For those with low household income low debt was the only level which determined to be a significant predictor of persistence. Low debt was significant at the  $< .001$  alpha level. Students with low debt were 3.6 times less likely to persist than those with high debt. Of students who had medium household income each of the debt levels determined to be significant predictors of persistence. No debt and medium debt levels were significant at the  $< .001$  alpha level. Low debt was significant at the  $< .05$  alpha level. Students who had no debt were 2.7 times more likely to persist than those with high debt, those with low debt were nearly 2 times less likely to persist than those with high debt, and students with medium debt were 2.7 times more likely to persist than those with high debt.

For first-generation students, a regression analysis revealed that the debt levels were statistically significant predictors of persistence. No debt, low debt, and medium debt levels were all significant at the  $< .05$  alpha level. First-generation students who had no debt were nearly 2 times more likely to persist than those with high debt. Students with low debt were 2.5 times less likely to persist than those with high debt, and students with medium debt were 2 times more likely to persist than those with high debt. Based on the logistic regression for continuing generation students, no debt and medium debt levels determined to be significant predictors of persistence. No debt was significant at the  $< .05$  alpha level. Low debt was significant at the  $< .001$  alpha level. Students who had no debt were nearly 2 times more likely to persist than those with high debt, and those with low debt were 3.3 times less likely to persist than those with high debt.

Table 4

*Logistic Regression*

Variables in the Equation						
	B	S.E.	Wald	df	Sig.	Exp(B)
<b>AFTFTUG</b>						
Step 1 <sup>a</sup> Debt			122.011	3	.000	
No Debt	-.593	.190	9.790	1	.002	.552
Low Debt	1.05	.229	21.068	1	.000	2.857
Medium Debt	-.549	.203	7.343	1	.007	.578
Constant	-.438	.180	5.935	1	.015	.646
<b>White non-Hispanic</b>						
Step 1 <sup>a</sup> Debt			38.702	3	.000	
No Debt	-.809	.339	5.690	1	.017	.445
Low Debt	1.079	.439	6.044	1	.014	2.941
Med Debt	-.739	.371	3.959	1	.047	.478
Constant	-.446	.320	1.943	1	.163	.640
<b>Hispanic Students</b>						
Step 1 <sup>a</sup> Debt			53.676	3	.000	
No Debt	-.147	.292	.252	1	.616	.864
Low Debt	1.234	.333	13.734	1	.000	3.435
Med Debt	-.244	.305	.638	1	.425	.784
Constant	-.719	.280	6.607	1	0.010	.487
<b>Male Students</b>						
Step 1 <sup>a</sup> Debt			57.288	3	.000	
No Debt	-.694	.266	6.802	1	.009	.499
Low Debt	.901	.327	7.582	1	.006	2.461
Med Debt	-.739	.286	6.687	1	.010	.477
Constant	-.251	.252	.995	1	.319	.778
<b>Female Students</b>						
Step 1 <sup>a</sup> Debt			66.179	3	.000	
No Debt	-.488	.272	3.207	1	.073	.614
Low Debt	1.206	.322	13.990	1	.000	3.339
Med Debt	-.357	.289	1.523	1	.217	.700
Constant	-.626	.258	5.867	1	.015	.535
<b>Low Income</b>						
Step 1 <sup>a</sup> Debt			58.143	3	.000	
No Debt	-.411	.298	1.902	1	.168	.663
Low Debt	1.285	.346	13.813	1	.000	3.614
Medium Debt	-.243	.31	.615	1	.433	.784
Constant	-.421	.281	2.250	1	.134	.656
<b>Middle Income</b>						
Step 1 <sup>a</sup> Debt			59.181	3	.000	
No Debt	-.993	.278	12.741	1	.000	.371
Low Debt	.674	.334	4.081	1	.043	1.963
Med Debt	-1.008	.295	11.72	1	.001	.365
Constant	-.288	.255	1.277	1	.258	.750

Variables in the Equation						
	B	S.E.	Wald	df	Sig.	Exp(B)
<b>First- generation</b>						
Step 1 <sup>a</sup> Debt			46.614	3	.000	
No Debt	-.627	.291	4.633	1	.031	.534
Low Debt	.907	.348	6.790	1	.009	2.477
Med Debt	-.698	.307	5.176	1	.023	.498
Constant	-.182	.271	.453	1	.501	.833
<b>Cont. generation</b>						
Step 1 <sup>a</sup> Debt			69.303	3	.000	
No Debt	-.560	.258	4.714	1	.030	.571
Low Debt	1.187	.314	14.319	1	.000	3.277
Med Debt	-.477	.275	3.014	1	.083	.620
Constant	-.613	.244	6.339	1	.012	.542

a. Variable(s) entered on step 1: Debt.

b. Reference category: High Debt

These quantitative findings suggested that for certain undergraduate students enrolled at an HSI there was a statistically significant relationship between debtload and persistence. Further, for an overwhelming majority, low debt predicted non-persistence. In this study, the likelihood of not persisting was associated with having either low debt or high debt. This may indicate that low amounts may not be enough and high debt may be problematic.

### Emergent Themes

Building upon the findings from the quantitative study, analysis of the qualitative interviews with undergraduate students confirmed that debtload influenced persistence decisions for most students. For most students in this study, debtload triggered multiple reactions that played into their persistence decisions. Four themes emerged from the analysis of the interviews which provided insight into the influence of debt on persistence: 1. Scared to Debt, 2. Can't Get It Out of My Head, 3. It's Pushing It, and 4. Fight or Flight? See figure 1 for emergent themes. This research study utilized Cofer and Somers (1999) student debtload response model as the primary theoretical framework. That influence was evident throughout multiple themes in this study.

Figure 1

*Emergent Themes*

Four emergent themes speak to the influence of debt on student persistence. Theme 1 Scared to debt explained the myriad of feelings and emotions participants described when dealing with debt, loans, and finances. Theme 2-Can't get it out of my head- detailed the frequent thoughts students had about paying for school and student loans. Theme 3- It's pushing it- centered around the amount of debt that the students felt comfortable with carrying for their bachelor's degree. Theme 4- Fight or flight which sheds light on how loans and debt influences persistence decisions by triggering a fight or flight response for these students.

**Scared to Debt!**

Scared to Debt was explained by the myriad of feelings and emotions participants described that they encountered when dealing with debt, loans, and finances. For most of the interviewees (n=15), these discussions-initiated feelings of emotion; both negative and positive. Some students referred to feelings of stress, anxiety, and doubt. Others explained that it was stress that ignited motivation. This theme was circumstantial with many factors contributing to the emotion students experienced regarding debt.

Over half of the participants (n=15) described the overwhelming stress that they felt when thinking of the debt. In discussing his feelings about the student loans and debt, Cesar, a first-generation, Hispanic student described "I would stress about it, and it would like freak me out, like oh my God I am going to be in debt, like so much, debt, like \$40,000 or \$50,000, when I graduate". For Cesar, the thought of undertaking loans to attend college was pushing him away, he explained "the only reason I did not want to come is because I did not want to take out loans. I didn't want to be in debt". These fears and anxieties were present long before Cesar ever entered college. They began when he was in high school. He described his thoughts about debt during that time "I didn't want to, like all through high school, I was like I am not going to pay for loans, I am not going to pay for loans to put myself in debt or my parents".

Doubt and uncertainty about accruing debt to pay for school were evident among some of the students. These forms of negative stresses caused students to have doubts. Taylor, a first-generation Hispanic student explained that thinking about the debt made her feel "kind of like sad in a way" and questioned "is this really worth it for me to be spending all of this money, and then getting a career out of it, but at the end am I going to be wasting my money". When Amanda first borrowed, she explained that she was often stressed because she had never borrowed before and the uncertainty of how she would manage the debt was intimidating. She thought to herself "I am going to have debt under my name". For Amanda, this worry was new and initiated feelings of uncertainty. Amid the negative emotions, fears were prevalent in the students' narratives. Shannon expressed a sense of fear stating, "I am in debt so much for this, and it's kind of scares



me a little bit". Jack justified the fear of loans, debt, and tuition arguing that "everybody worries about money and everyone gets scared". The doubt and uncertainty that occurred with debt, loans, and tuition were undeniable among these students.

### **Can't Get It Out of My Head**

Can't Get It Out of My Head emerged as a theme in this study and spoke to the frequency of thoughts about paying for school and student loans. Based on student comments, roughly half of the participants (n=10) expressed the non-stop thoughts that they had about debt and tuition payments. When asked about how often he thinks about the loan Cesar responded:

Pretty much, every day! It comes up in my mind, and I am like oh no.... loans. It pops up every day! That is what I am saying, like how am I going to pay for the \$5,500. If I don't go through with it, like all the way and get that degree and get that job, so that is why.

When asked how often she thought about how she would pay for school, Christina, a White, female, continuing generation student responded:

All the time. I was actually in my last class and we were in lecture and I was on my financial aid page, just making sure that my account was fine. I think about my scholarships all the time too, and I look at my GPA and think oh my gosh, I am going to have to keep my GPA this or higher, or I am not going to be able to keep my scholarship. What scholarships are going to be available next semester? I need to sign up for scholar dollar, and all of this stuff. Because I really do not want to have to borrow anything more.

Jimena, a female, Hispanic, first-generation student also shared that she would think about how she was going to pay for school all of the time. Every time she would get an email reminder stating that a payment was due, she would begin to stress wondering how she would pay for the tuition. Jack, a female, White, continuing generation student described that before she got the loan, she would think about how she was going to pay tuition, all the time. Regarding how often she thought about the student loans she explained:

I honestly think about it all the time because my bank account looks nice and full right now, but it is not all my money so... I think about that every time I get a paycheck. I am like thank God, I had that amount in there before because I'd be barely making it. I think about that all the time. Every time that I get a check because I have worked hard for my money and then I see that, I see how much money I was gifted basically so I am like oh my God how did I get so lucky, I guess.

These interviews shed light on just how often these undergraduate students thought about how they would pay for school, their loans, and debt.

### **It's Pushing It!**

The theme, It's Pushing It, centered on the amount of debt that the students felt comfortable accruing in order to receive their baccalaureates. This theme confirmed the quantitative findings by suggesting that the threshold of debt for these students was very low. The feelings students had about their comfort level did not always match up with the amount of debt that they currently held. Of the 20 participants, two reported having low debt (under \$3,000), twelve had medium debt (\$3,001-\$7,000), four had high debt (\$7,001 and higher), and two were unsure of their debt amount. Students' feelings about what constitutes a reasonable amount of debtload were primarily split between, low debt and medium debt.

Several students (n=7) explained that they felt any amount under \$3,000 for the entire bachelor's degree would be acceptable and manageable. Aiyana, a female, Native-American, first-generation shared that she could handle a low debt amount.

I think for me it would be about \$1500, like that, yeah. It's pushing it if I do a grand. I think that my optimal range for borrowing would be like from \$100 to like \$800, I think that would be reasonable for me, at least.

With somewhat of a similar response to what amount of debt is reasonable, Matthew, a male, Hispanic, first-generation student stated:

Less than three, yeah less than \$3000. If I just think about trying to pay off more than that; like that's not comfortable for me, to go up like up above three grand. Because I know how much I make, so I know how much I have to put in for school.

For these students, anything above \$3,001 worth of debt for an undergraduate degree just seemed unreasonable for them to manage. For Amara, even though she stated that under \$3,000 was manageable, she chuckled and shared that she had already borrowed more than her comfort level. Of each of the students who shared that a low amount of debt was reasonable and manageable, only Taylor reported having borrowed less than \$3,000.

Of the students interviewed, seven indicated that they felt having medium debt (\$3,001-\$7,000) was reasonable and manageable. Victoria, a female Hispanic, first-generation student shared that "Honestly, I think between \$3001-\$7000. I would say honestly that anything above \$10,000; I think that is really a lot". KC, a male, African-American, continuing generation student also felt that amounts above the medium debt threshold, to him, were very high, stating his thoughts: "I mean yes, it is great to borrow the money and all that, but then, that is a lot of money to have to pay back and be in debt for". Rose described that she currently felt that the low debt would be most manageable, but if she thought of it in terms of the long run and considered what others shared, the debtload of medium debt would be acceptable. She explained:

As far as right now, I feel that less than \$3000 would be a little bit easier for me to pay off. Just because the area that we are in, and like my background, it is just really difficult to find jobs and whatnot. Especially with my degree, less than \$3000 would be easier to pay off, but between \$3001-\$7000 is what a lot of people have, so I feel that would be okay, as opposed to greater than \$7000.

All except for two of the students who explained that they were most comfortable with having medium debt reported currently having medium debt in the demographic questionnaire.

### **Fight or Flight?**

Fight or Flight sheds light on how loans and debt influences persistence decisions by triggering a fight or flight response for these students. For this population, an overwhelming majority of students (n=13) expressed that loans and debt did influence their persistence and degree attainment decisions. For some students, the debtload acted as a barrier and/or burden and students would end up leaving. Conversely, for other students, the debtload acted in a motivational way, encouraging persistence to the next semester. Although students gave different accounts of the influence, 13 asserted that loan debt influenced their decision to persist. If the loan debtload gets too high, they are not likely to persist.

For Corey, a male, Hispanic, first-generation student, the debt influenced his decision to persist in somewhat of a motivational way. He explained:

I have already taken out this much and I am not going to take this much out for nothing, so that is like one of my main like I do not want to start paying on that loan. I am not ready for that, so it's also prolonging it but also shows that I don't just waste that money.

Like Corey, Amara cited loan debtload as being a motivational influence stating the following:

I think it makes me want to, you know, get my bachelors at minimum, cause like I think about it and I am like, I am putting so much time and effort and I am in debt now so, I really want to be successful. Cause it kind of like gives you a motivation in a way. Maybe it's not, like, a good motivation, but, it's still there.

When discussing the influence of debtload with KC, a male, African American, continuing generation student, he clearly grappled with the loan and debt, explaining how it is good and bad:

It is the degree that I really want, but at the same time, it is like well, if this is the only route to pay for school, I am still going to have to pay for it over the long run and it's going to put me more and more in debt. I think it hinders me because I don't want to get in debt; but at the same time, it pushes me to go on because that is a way to pay for school that is a way to, you know, be able to keep on going instead of saying I can't afford it, I can't do it you know, I am not going to do it at all. So, it's both good and bad.

Cesar, on the other hand, explained how the debtload initially was a barrier, and it played into his decision to persist negatively. Later, he changed his mind as the load increased. He explained that when he first borrowed, he told himself "I am done, I don't want to go to school anymore". That was how strongly he disagreed with having to borrow to go to school. Later, because he was the first in his family to be accepted to college, he felt a lot of pressure to continue. Cesar explained that he did not want to experience regret, knowing:

The only reason I did not want to come is because I did not want to take out loans. I didn't want to be in debt, so that was the reason. It was always my thing like I don't want to be in debt, I will get scholarships and that stuff, which, it didn't happen.

Now that Cesar is in the middle of his freshman year, he explained that there was no turning around. "I am already here". Additionally, he is already in debt, so he feels like "I am like, I might as well continue. I am already \$9,000 in the hole, so I just gotta keep pushing it". Several students shared the idea that they had already borrowed, and they were in debt, so they might as well finish. Rose, a female, African American, first-generation student felt as if she didn't have a choice stating, "I have already taken out this much, so I need to go ahead and finish it".

Whether it be a positive or negative influence, students cited that loans and debt weigh heavily on their decisions to persist in college. What may be drawn from this influence is that it initiates a fight or flight response for students. Does the student continue to borrow or not? The greatest concern with this response is that for most of these students, student loans were the only option for them to attend college, so the decision to not borrow further resulted in the students not persisting.

## Discussion

The findings from this mixed-methods study identified relationships between debtload and persistence for students at this HSI in the Southwest. Specifically, there were significant relationships between debtload (per Cofer & Somers, 1992) and persistent (year-to-year) for almost all first-time, full-time undergraduate students: White non-Hispanic students and Hispanic students; male and female students; low household

income and medium household income students; and first-generation and continuing-generation students. Historical data indicated that the higher the debtload, the less likely students were to persist. This finding was consistent with existing literature that found that debtload levels are especially significant for underserved student populations (Bowen et al., 2009; Buchmann & DiPrete, 2006; Dwyer et al., 2012; Hall, 2015; Somers et al., 2004). This has stark implications for financial aid research and policy, suggesting that attention must be paid to the relationship between debtload and persistence especially for the underserved population. Adding to that, findings from the study suggested that all students may be negatively impacted by student loan debtload. With over thirty years of policies that shifted from grants to student loans (Gross et al., 2009; Houle, 2013; Paulsen & St. John, 2002), all students are now susceptible to student loan debtload. Although college costs have significantly increased since Cofer and Somers' (1999, 2000) original work on debtload, these findings suggest that threshold categories may still be relevant. For Hispanic students, the financial burden of high tuition may be especially problematic, as many of these students pay for their own education with little to no help from parents; on the contrary, many of these students contributed to their family's finances (Gross et al., 2014; Fuligni & Witkow, 2004). With more and more states moving toward merit-based aid, these findings suggest that student expectations for contributions to their college education may be shifting as well.

The qualitative findings from this study provided descriptions of what aversion to loan debtload looked like. Students at this HSI exhibited an aversion to even low thresholds of debt regarding Stafford loans and shared experiences of stress, anxiety, and fear, related to accruing such debt. Participants interviewed described how debtloads (even low amounts) influenced their decisions to not want to persist. These reactions triggered a fight or flight response when deciding whether to persist to the next semester or not. For students who respond by flight, there is no other option for funding their college education; therefore, they leave the institution. Although participants in this study varied in classification and were attempting to persist, they remained vulnerable to attrition. As Britt, Ammerman, Barrett, and Jones' (2017) work suggested that financial stress contributes to an increased likelihood of attrition. Therefore, this stress must be monitored.

Coco (2013) detailed that increased tuition was driven by politics that rejected education as a public good, resulting in state and federal governments continued cuts to the investments in higher education. This was especially noticeable when talking to students about how they pay for college. Some students stressed how important it was to obtain a scholarship but pointed to the scarcity and competitiveness nature of scholarships. Cuts in scholarship aid have come directly from the state.

Houle (2013) expressed how policy shifts have forced students into borrowing student loans to fund their education. Students at this HSI expressed their anxiety over having to borrow money to attend school. Often, borrowing was an unfamiliar concept that came with added pressures and concerns. Nora and Crisp (2009) point out that of research concerning minority and low-income students, economic circumstances are cited as an influencer of college-related decisions. This was evident when speaking with students about their persistence decisions. Most all students in this study cited monetary factors influencing decisions. In terms of access, Nora (2004) explains that financial assistance and college affordability weigh heavily on decisions made by these students; this holds true today.

Considering debt, Long and Riley (2007) described that to understand student debt, we must take a closer look at cumulative debt, and this is the amount that students accumulate from borrowing over the course of attending school to earn their degree. While this examination was one of the main purposes of the study, findings suggest that debt does not have to accumulate to great levels before it begins to negatively impact persistence decisions for the students under consideration. Hall (2015) explained the negative impacts of tuition and financial aid trends on Hispanic students; pointing out inequities in financial aid distribution persists. This study was crucial in understanding the influence of debt on Hispanic students and indicated

that for Hispanic students, there is a relationship between debtload and persistence. Additionally, low debt was a predictor of non-persistence for Hispanic students, this confirms that the borrowing to fund higher education trend has negative impacts on underserved populations, such as our Hispanic students. Beyond influencing non-persistence these findings confirm Hall's (2015) claim that these students leave college with more debt than their peers of different racial/ethnic backgrounds. It is important to recognize that low levels of debt can indicate a risk of non-persistence, especially for underserved populations, this issue should be addressed from a policy advocacy perspective as well as a student counseling perspective.

When considering social justice implications and educational equity, current financial assistance programs encourage excessive borrowing for individuals who are already financially burdened. This, in turn, perpetuates social inequities, which can be seen in this study when we look specifically into the impact of debt on Hispanic, female and lower SES students. Practitioners need to be aware of which financial aid programs are offered to students and if these efforts make sense. It is important to seek out an understanding of the relationship between debtload and persistence to guide future financial aid policy that promotes academic achievement for our underserved populations.

### **Limitations**

Though the findings in this study offer new and current insights into the influence of student debtload, there are several limitations of this study that should be taken into consideration when interpreting the findings. First, the investigation in this study aimed to examine how increasing student loan debt from Stafford loans affected persistence and degree attainment for undergraduate students at an individual, public, four-year, HSI. Because this study took place at a single institution and persistence was only assessed from fall to fall for cohort 2010, the generalizability of the findings is significantly limited.

Further, the sample selected for the quantitative study was limited to the data granted by the Office of Institutional Analysis. Because this study only tracked data from students who had borrowed from the Stafford loan program, it was not reflective of students who borrowed using other types of student loans. Pell grants and other forms of financial aid were not examined in this study. Other types of aid could have contributed to persistence decisions for students, but those forms of aid were not included in the study.

This study focused primarily on student loan debt from Stafford loans; certain background variables such as high school GPA and act/sat scores were not included in this model. The results of this study did not consider the percentage of students that were expected to leave the institution. Therefore, the results of this study should be interpreted cautiously not to draw conclusions that debt causes non-persistence. Rather the results should encourage research that explores in more detail debtload and its relationship to persistence.

Finally, it should be noted that quantitative and qualitative studies did not capture the same student sample. The quantitative portion of the study examined cohort 2010 while the qualitative study was conducted on students who were currently attending the university in 2017. Because of the sensitive nature of financial aid data at the institution availability was extremely limited.

## Nexus

Implications of this study reach far and wide, this knowledge is useful to policymakers, researchers, and practitioners. These findings suggest that future research should explore the effects of debtload on student populations further, multi-institutional and large-scale longitudinal studies may provide a clearer picture as to what extent debtload may be influencing persistence for students. Policymakers may seek more creative ways of reducing debtload for students historically underserved in higher education. One idea is to consider progressive loan programs that provide some type of in-school loan forgiveness for students as they make progress toward baccalaureate attainment. Additionally, policymakers should consider increasing funding for the Department of Education to offer more funding for TRIO programs that work to increase access and retention of historically underserved students in higher education. Also, findings from this study have implications for research. This study sought to examine if the Cofer and Somers debtload threshold model are useful for looking into debt today. Findings from this study suggest that the model needs to be adjusted for inflation to provide a more realistic threshold of debt. Finally, for practitioners, findings suggest that more can be done to address students understanding of Stafford Student Loan debtload. One, the institution can go beyond free money management courses for student loan recipients to help provide wrap-around, high touch money management programming. This includes consumer counseling, reducing and avoiding debt, and building wealth. These wrap-around services could also emphasize how using services could positively impact persistence. Because the threshold of debt varies dependent on student demographic characteristics, it is very important to take into consideration underserved populations in financial aid studies. Neglecting to recognize differences in the influence of financial aid programs runs the risk of generalizing effectiveness and excluding our most vulnerable students. This, in turn, perpetuates inequities in financial aid program delivery. Every opportunity to shed light on underserved populations and work towards breaking down barriers that exist in the way of financial aid can ensure that our efforts encourage meaningful change.

## References

- Akers, B., & Chingos, M. M. (2014). Is a student loan crisis on the horizon? *Brown Center on Education Policy, Brookings Institution*.
- Anderson, M. S., & Hearn, J. C. (1992). Equity issues in higher education outcomes. *The economics of American higher education* (pp. 301-334). Springer Netherlands.
- Astin, A. W. (1975). *Financial aid and student persistence*. Los Angeles: Higher Education Research Institute. (ERIC Document Reproduction Service No. ED 112 804)
- Austin, D. A. (2013). The indentured generation: Bankruptcy and student loan debt. *Santa Clara Law Review*, 53(2), 329-420.
- Baum, S., & O'Malley, M. (2003). College on credit: How borrowers perceive their education debt. *Journal of Student Financial Aid*, 33(3), 1.
- Bean, J. P. (1980). Dropouts and turnover: The synthesis and test of a causal model of student attrition. *Research in Higher Education*, 12(2), 155-187.
- Bean, J.P., & Eaton, S. B. (2001). The psychology underlying successful retention practices. *Journal of College Student Retention: Research, Theory & Practice*, 3(1), 73-89.
- Bean, J. P., & Metzner, B. S. (1985). A conceptual model of nontraditional undergraduate student attrition. *Review of Educational Research*, 55(4), 485-540.
- Becker, G. S. (1964). *Human capital theory*. New York: Columbia.
- Beekhoven, S., De Jong, U., & Van Hout, H. (2002). Explaining academic progress via combining concepts of integration theory and rational choice theory. *Research in Higher Education*, 43(5), 577-600.
- Behrman, J., Kletzer, L., McPherson, M., & Schapiro, M. O. (1998). Microeconomics of college choice, careers, and wages. *The Annals of the American Academy of Political and Social Science*, 559(1), 12-23.
- Berkner, L., He, S., & Cataldi, E. F. (2002). Descriptive summary of 1995-96 beginning postsecondary students: Six years later. Statistical Analysis Report.
- Benitez, M., & DeAro, J. (2004). Realizing student success at Hispanic-serving institutions. *New Directions for Community Colleges*, 2004(127), 35-48.
- Berger, J. B. (2001). Understanding the organizational nature of student persistence: Empirically-based recommendations for practice. *Journal of College Student Retention: Research, Theory & Practice*, 3(1), 3-21.
- Berger, J. B., & Milem, J. F. (2000). Exploring the impact of historically Black colleges in promoting the development of undergraduates' self-concept. *Journal of College Student Development*, 41(4).
- Bettinger, E. (2004). How financial aid affects persistence. In *College choices: The economics of where to go, when to go, and how to pay for it* (pp. 207-238). University of Chicago Press.

- Borden, V. M., & Sharpe, R. V. (2015). Trends in graduate degrees conferred to students of color. *Diverse Issues in Higher Education*, 32(13), 14.
- Bowen, W. G., Chingos, M. M., & McPherson, M. S. (2009). *Crossing the finish line: Completing college at America's public universities*. Princeton University Press.
- Braxton, J. M. (2000). Reinvigorating theory and research on the departure puzzle. *Reworking the Student Departure Puzzle*, 257-274.
- Braxton, J. M., Sullivan, A. S., & Johnson, R. M. (1997). Appraising Tinto's theory of college student departure. In J. C. Smart (Ed.), *Higher education: Handbook of Theory and Research* (Vol. 12; pp. 107-164). New York: Agathon.
- Britt, S., Ammerman, D., Barrett, S. F., & Jones, S. (2017) Student loans, financial stress, and college student retention. *Journal of Student Financial Aid*, 47(3).
- Brown, M., Haughwout, A., Lee, D., Scally, J., & Van Der Klaauw, W. (2015). Measuring student debt and its performance. *Student Loans and the Dynamics of Debt*, 37-52.
- Buchmann, C., & DiPrete, T. A. (2006). The growing female advantage in college completion: The role of family background and academic achievement. *American Sociological Review*, 71(4), 515-541.
- Burdman, P. (2005). The student debt dilemma: Debt aversion as a barrier to college access. *Center for Studies in Higher Education*.
- Cabrera, A. F., Nora, A., & Castaneda, M. B. (1993). College persistence: Structural equations modeling test of an integrated model of student retention. *The Journal of Higher Education*, 64(2), 123-139.
- Chen, R. (2008). Financial aid and student dropout in higher education: A heterogeneous research approach. In J. C. Smart (Ed.), *Higher education: Handbook of Theory and Research*, Vol. XXIII (pp. 209–239).
- Chen, R., & DesJardins, S. L. (2010). Investigating the impact of financial aid on student dropout risks: Racial and ethnic differences. *The Journal of Higher Education*, 81(2), 179-208.
- Choy, S. P., & Berker, A. M. (2003). How Families of Low-and Middle-Income Undergraduates Pay for College: Full-Time Dependent Students in 1999-2000. Postsecondary Education Descriptive Analysis Report.
- Choy, S. & Li, X., & Carroll, C. D. (2005). *Debt burden: A comparison of 1992–93 and 1999–2000 bachelor's degree recipients a year after graduating*. (NCES 2005–170). Washington, DC: National Center for Education Statistics, U.S. Department of Education
- Coco, L. E. (2013). Mortgaging human potential: Student indebtedness and the practices of the neoliberal state. *Available at SSRN* 2404913.
- Cofer, J., & Somers, P. (1999). An analytical approach to understanding student debtload response. *Journal of Student Financial Aid*, 29(3), 25-44.
- Cofer, J., & Somers, P. (2000). A comparison of the influence of debtload on the persistence of students at public and private colleges. *Journal of Student Financial Aid*, 30(2), 39-58.



- Contreras, F. E., Malcom, L. E., & Bensimon, E. M. (2008). Hispanic serving institutions. *Understanding Minority-Serving Institutions*, 71-90.
- College Board (2017). Retrieved from: <https://trends.collegeboard.org/college-pricing/figurestable/tuition-fees-room-and-board-over-time>
- Crisp, G., Nora, A., & Taggart, A. (2009). Student characteristics, pre-college, college, and environmental factors as predictors of majoring in and earning a STEM degree: An analysis of students attending a Hispanic serving institution. *American Educational Research Journal*, 46(4), 924-942.
- De Los Santos & De Los Santos (2003). Hispanic-serving institutions in the 21st century: Overview, challenges, and opportunities. *Journal of Hispanic Higher Education*, 2(4), 377-391.
- Deming, D., & Dynarski, S. (2009). *Into college, out of poverty? Policies to increase the postsecondary attainment of the poor* (No. w15387). National Bureau of Economic Research.
- Dowd, A. C., & Coury, T. (2006). The effect of loans on the persistence and attainment of community college students. *Research in higher education*, 47(1), 33-62.
- Downing, R. C. (2008). *The relationship between financial aid and the retention of first-time community college students* (Doctoral dissertation, Capella University).
- Dwyer, R. E., McCloud, L., & Hodson, R. (2012). Debt and graduation from American universities. *Social Forces*, 90(4), 1133-1155.
- Dynarski, S. (2002). The behavioral and distributional implications of aid for college. *American Economic Review*, 92(2), 279-285.
- Dynarski, S., & Scott-Clayton, J. (2013). *Financial aid policy: Lessons from research* (No. w18710). National Bureau of Economic Research.
- Edmiston, K. D., Brooks, L., & Shepelwich, S. (2013). Student loans: overview and issues.
- Engle, J., & Tinto, V. (2008). Moving beyond access: College success for low-income, first generation students. Pell Institute for the Study of Opportunity in Higher Education.
- Federal Reserve Bank of New York (2018). The labor market for recent college graduates. Retrieved from: [https://www.newyorkfed.org/research/college-labor-market/collegelabor-market\\_wages.html](https://www.newyorkfed.org/research/college-labor-market/collegelabor-market_wages.html)
- Fuligni, A. J., & Witkow, M. (2004). The postsecondary educational progress of youth from immigrant families. *Journal of Research on Adolescence*, 14(2), 159-183.
- Gasman, M., & Conrad, C. F. (2013). Educating all students: Minority serving institutions. *Penn Center for Minority Serving Institutions*, Retrieved from: [http://repository.upenn.edu/gse\\_pubs/339](http://repository.upenn.edu/gse_pubs/339)
- Gross, J. P., Cekic, O., Hossler, D., & Hillman, N. (2009). What matters in student loan default: A review of the research literature. *Journal of Student Financial Aid*, 39(1), 19-29.

- Gross, J. P., Zerquera, D., Inge, B., & Berry, M. (2014). Latino associate degree completion: Effects of financial aid over time. *Journal of Hispanic Higher Education, 13*(3), 177-190.
- Hall, J. (2015). College Graduation Rates of Hispanic Students: A Review of the Literature. *CUNY Academic Works*, Retrieved from: [https://academicworks.cuny.edu/gc\\_etds/962](https://academicworks.cuny.edu/gc_etds/962)
- Heller, D. E. (2008). The impact of student loans on college access. *The effectiveness of student aid policies: What the research tells us*, 39-68.
- Houle, J. N. (2013). Disparities in debt parents' socioeconomic resources and young adult student loan debt. *Sociology of Education, 0038040713512213*.
- Hu, S., & John, E. P. S. (2001). Student persistence in a public higher education system: Understanding racial and ethnic differences. *The Journal of Higher Education, 72*(3), 265-286.
- John, E. P. S., & Noell, J. (1989). The effects of student financial aid on access to higher education: An analysis of progress with special consideration of minority enrollment. *Research in Higher Education, 30*(6), 563-581.
- Johnson, J., Conrad, C., & Perna, I. (2006). Minority-serving institutions of higher education. *The Sage Handbook for Research in Education*, 263-277.
- Kim, D. (2007). The effect of loans on students' degree attainment: Differences by student and institutional characteristics. *Harvard Educational Review, 77*(1), 64-100.
- Kuh, G. D., Cruce, T. M., Shoup, R., Kinzie, J., & Gonyea, R. M. (2008). Unmasking the effects of student engagement on first-year college grades and persistence. *The Journal of Higher Education, 79*(5), 540-563.
- Le, V. N., Mariano, L. T., & Faxon-Mills, S. (2016). Can college outreach programs improve college readiness? The case of the college bound, St. Louis program. *Research in Higher Education, 57*(3), 261-287.
- Long, B. T., & Riley, E. (2007). Financial aid: A broken bridge to college access? *Harvard Educational Review, 77*(1), 39-63.
- Macy, A., & Terry, N. (2011). The determinants of student college debt. *Southwestern Economic Review, 34*, 15-26.
- Marshall, C. & Oliva, M. (2009). *Leadership for social justice: Making revolutions in education* (2nd ed.). Boston, MA: Allyn & Bacon.
- Marshall, C., & Rossman, G. B. (2014). *Designing qualitative research*. Thousand Oaks, CA: SAGE Publications, Inc.
- Medina, C. A., & Posadas, C. E. (2012). Hispanic student experiences at a Hispanic-serving institution: Strong voices, key message. *Journal of Latinos and Education, 11*(3), 182-188.
- Moline, A. E. (1987). Financial aid and student persistence: An application of causal modeling. *Research in Higher Education, 26*(2), 130-147.

- Mumper, M. (1996). *Removing college price barriers: What government has done and why it hasn't worked*. SUNY Press.
- Mumper, M., & Ark, P. (1991). Evaluating the Stafford Student Loan Program: Current Problems and Prospects for Reform. *The Journal of Higher Education*, 62(1), 62-78.
- Nelson Laird, T. F., Bridges, B. K., Morelon-Quainoo, C. L., Williams, J. M., & Holmes, M. S. (2007). African American and Hispanic student engagement at minority-serving and predominantly White institutions. *Journal of College Student Development*, 48(1), 39-56.
- Nora, A. (2001). The depiction of significant others in Tinto's "Rites of Passage": A reconceptualization of the influence of family and community in the persistence process. *Journal of College Student Retention: Research, Theory & Practice*, 3(1), 41-56.
- Nora, A., & Crisp, G. (2009). Hispanics and higher education: An overview of research, theory, and practice. In *Higher education: Handbook of Theory and Research* (pp. 317-353). Springer Netherlands.
- Núñez, A.-M., Hurtado, S., & Galdeano, E. C. (2015). Why study Hispanic-serving institutions? In A.-M. Núñez, S. Hurtado, & E. C. Galdeano (Eds.), *Hispanic-Serving Institutions: Advancing Research and Transformative Practice* (pp. 1-25). New York, NY: Routledge.
- Núñez, A. M., Hurtado, S., & Galdeano, E. C. (Eds.). (2015). *Hispanic-serving institutions: Advancing research and transformative practice*. Routledge.
- Page, L. C., & Scott-Clayton, J. (2016). Improving college access in the United States: Barriers and policy responses. *Economics of Education Review*, 51, 4-22.
- Pascarella, E. T., Pierson, C. T., Wolniak, G. C., & Terenzini, P. T. (2004). First-generation college students: Additional evidence on college experiences and outcomes. *The Journal of Higher Education*, 75(3), 249-284.
- Pascarella, E. T., & Terenzini, P. T. (1983). Predicting voluntary freshman year persistence/withdrawal behavior in a residential university: A path analytic validation of Tinto's model. *Journal of educational psychology*, 75(2), 215.
- Patton, M. Q. (1990). *Qualitative evaluation and research methods*. Thousand Oaks, CA: SAGE Publications, Inc.
- Paulsen, M. B., & Smart, J. C. (2001). *The finance of higher education: Theory, research, policy, and practice*. Algora Publishing.
- Paulsen, M. B., & St John, E. P. (1997). The financial nexus between college choice and persistence. *New Directions for Institutional Research*, 1997(95), 65-82.
- Paulsen, M. B., & St John, E. P. (2002). Social class and college costs: Examining the financial nexus between college choice and persistence. *The Journal of Higher Education*, 73(2), 189-236.
- Russell, J. (2015, February 2). Ewing Marrison Kauffman Foundation. Retrieved from Five reasons to be concerned about student debt: <http://www.kauffman.org/blogs/growthology/2015/02/5-reasons-to-be-concerned-aboutstudent-debt>

- Santiago, D. (2006). Inventing Hispanic-serving institutions (HSIs): The basics. *Excellencia in Education (NJ1)*.
- Santiago, D. A., & Brown, S. (2004). Federal policy and Latinos in higher education. *Pew Hispanic Center*.
- Somers, P., Woodhouse, S., & Cofer, J. (2000). Persistence of first-generation college students. *Annual Conference of the Association for the Study of Higher Education, Sacramento, CA*.
- Somers, P., Woodhouse, S. R., & Cofer Sr, J. E. (2004). Pushing the boulder uphill: The persistence of first-generation college students. *NASPA Journal*, 41(3), 418-435.
- Spady, W. G. (1971). Dropouts from higher education: Toward an empirical model. *Interchange*, 2(3), 38-62.
- Sparks, P. J., & Nuñez, A. M. (2014). The role of postsecondary institutional urbanicity in college persistence. *Journal of Research in Rural Education (Online)*, 29(6), 1.
- St John, E. P. (1989). The influence of student aid on persistence. *Journal of Student Financial Aid*, 19(3), 5.
- St John, E. P. (1991). The impact of student financial aid: A review of recent research. *Journal of Student Financial Aid*, 21(1), 2.
- St John, E. P. (1992). Workable Models for Institutional Research on the Impact of Student Financial Aid. *Journal of Student Financial Aid*, 22(3), 13-26.
- St John, E. P. (1998). The effects of changes in student aid policy on persistence: A case study of a private university. *Journal of Student Financial Aid*, 28(1), 7-18.
- St. John, E. P. S., Andrieu, S., Oescher, J., & Starkey, J. B. (1994). The influence of student aid on within-year persistence by traditional college-age students in four-year colleges. *Research in Higher Education*, 35(4), 455-480.
- St. John, E. P., Cabrera, A. F., Nora, A., & Asker, E. H. (2000). Economic influences on persistence reconsidered. *Reworking the Student Departure Puzzle*, 29-47.
- St. John, E. P., Paulsen, M. B., & Carter, D. F. (2005). Diversity, college costs, and postsecondary opportunity: An examination of the financial nexus between college choice and persistence for African Americans and Whites. *The Journal of Higher Education*, 76(5), 545-569.
- Swail, W. S. (2003). *Retaining Minority Students in Higher Education: A Framework for Success*. ASHE-ERIC Higher Education Report. Jossey-Bass Higher and Adult Education Series. Jossey-Bass, 989 Market Street, San Francisco, CA 94103-1741.
- The Institute for College Access and Success (2018). 13th annual report student debt and the class of 2017. Retrieved from: [https://ticas.org/sites/default/files/pub\\_files/classof2017.pdf](https://ticas.org/sites/default/files/pub_files/classof2017.pdf)
- Tinto, V. (1975). Dropout from higher education: A theoretical synthesis of recent research. *Review of Educational Research*, 45(1), 89-125.
- Tinto, V. (1987). *Leaving college: Rethinking the causes and cures of student attrition*. University of Chicago Press, 5801 S. Ellis Avenue, Chicago, IL 60637.

- Tinto, V. (1992). Student attrition and retention. *The Encyclopedia of Higher Education*, 3, 16971709.
- Tinto, V. (1990). Principles of effective retention. *Journal of The First-Year Experience & Students in Transition*, 2(1), 35-48.
- Tinto, V. (1993). Building community. *Liberal Education*, 79(4), 16-21.
- Tinto, V. (2004). Student retention and graduation: Facing the truth, living with the consequences. Occasional Paper 1. *Pell Institute for the Study of Opportunity in Higher Education*.
- Tinto, V. (2006). Research and practice of student retention: What next?. *Journal of College Student Retention: Research, Theory & Practice*, 8(1), 1-19.
- United States Department of Education (2018). Retrieved from:  
<https://studentaid.ed.gov/sa/about/data-center/student/portfolio>
- United States Federal Reserve (2018). Retrieved from:  
<https://www.federalreserve.gov/publications/2018-economic-well-being-of-ushouseholds-in-2017-student-loans.htm>
- Valencia, R. (2010). *Dismantling contemporary deficit thinking: Educational thoughts and practice*. New York, NY: Routledge.
- Voorhees, R. A. (1985). Student finances and campus-based financial aid: A structural model analysis of the persistence of high need freshmen. *Research in Higher Education*, 22(1), 65-92.
- Warburton, E. C., Bugarin, R., & Nunez, A. M. (2001). Bridging the gap: Academic preparation and postsecondary success of first-generation students. Statistical Analysis Report. Postsecondary Education Descriptive Analysis Reports.
- Woo, J. H. (2013). Degrees of debt. Student borrowing and loan repayment of bachelor's degree recipients 1 year after graduating: 1994, 2001, and 2009. Stats in Brief. NCES 2014-011. *National Center for Education Statistics*.