

Student loan implications for Hispanics in higher education

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ABSTRACT

This study examines two major student loan debt implications that Hispanics or Latinos face upon graduation from institutions of higher learning. The first implication is financial difficulty. The second implication is experiencing stress from financial difficulty. When compared with the Non-Hispanic student population, Hispanics (for purposes of this study, Hispanics is used to refer to both Hispanics and Latinos) appear to have more challenges. The study provides some descriptive and inferential statistics using Power Stats that substantiate some differences and challenges. The belief that obtaining a college degree will provide financial stability may not be guaranteed for Hispanics.

With the increase of borrowing, Hispanic families may face both stress and financial difficulties within 12 months of graduating. This study explores the longitudinal surveys of 2008 through 2012 conducted annually by the National Center for Education Statistics and consisting of approximately 13,500 students in post-secondary schools across the United States. It provides some comparative descriptive statistics of the student population between Hispanic and Non-Hispanics during the period of the study. The statistical regression analysis suggests that there may be a relationship between student loan debt and having financial difficulties along with stress. Recommendations for additional research are made to assess areas that address the rise in borrowing by Hispanic graduates.

KEY WORDS: Student loans, Student loan implications, Hispanic students, Latino students, Student financial stress, Hispanic student loans, Debt burden, Cost of Higher Education

PROBLEM/ISSUE

In 1965, legislators introduced the Guaranteed Student loan program under Title IV of the Higher Education act with intent to assist those disadvantaged individuals desiring to attend college. This program would assist the most needy with access to student loans to help pay for their education. Along with providing the opportunity to have low-income students gain access to higher education, a problem arose where student loan borrowers can borrow any amount up to the difference between the expected family contribution and the cost of tuition (Mumper & Ark, 1991).

From the introduction of this program and throughout the years, the cost of tuition has dramatically increased and so did the overall borrowing. Having tuition substantially increase, which affects the increase in borrowing, low-income students face large amounts of debt compared to those that are not of low-income background. This poses another issue for low-income borrowers as they now find high debt amounts discouraging, or as a barrier, to pursue a college degree. A large percentage of Hispanics are considered to be of low-income status, and therefore, many Hispanics face this barrier (DeNavas-Walt, Proctor, & Smith, 2014; Aud, Fox, & KewalRamani, 2010).

Borrowing overall has multiplied where research has gauged the increase in excess of 400 percent between 1975 and 1980 and much more in recent years (Mumper & Ark, 1991). What's more alarming is that current figures estimate that the national student loan borrowing balances have reached an alarming milestone of approximately \$1.3 trillion (Ionescu & Ionescu, 2015). As debt continues to rise, this becomes a concern both to the borrowers as well as to the economy overall. Research notes the default rate for government student loans at 20 percent (National Association of Consumer Bankruptcy Attorneys, 2012). One cannot overlook that number. With many constraints on the federal budget, taxpayers also become vulnerable stakeholders.

Notably, the Hispanic population has had the largest population increase and exceeding 50 percent of the nation's population growth with over 50 million of them between 2000 and 2010 U. S. Census (Passel, Cohn, & Lopez, 2011, p. 1). Hispanics being a large population and a large percentage being of low-income status (DeNavas-Walt et al., 2014, p.6), college access at the expense of incurring substantial debt results in financial strain for Hispanic graduates. Huelsman (2015) indicated in his research that Latino students have equal borrowing rate as white students at 63% and slightly lower than white at public institutions. It could indicate that whites attend more expensive public universities, and Latinos have a different attitude in borrowing (p. 8). "However, borrowing rates are far higher for Latino students at private Non-profit schools, where 87% borrow. Average debt at private Non-profits is actually higher for Latino students than for Black and white students" (Huelsman, 2015, p. 8). Figure 1 in the Appendix reflects a significant disparity in borrowing and institutional type, specifically for Hispanics or Latinos.

Upon review of the economics of educational indebtedness, we review Becker's (1964) human capital theory. Becker (1964) describes two conclusions of the human capital theory which, the first, describes employer provided training that both employee and employer have vested interest in reciprocity of skills attained by the employee, and the increase in output for the company. Secondly, training the person and having he/she invests in themselves leads to forgoing of present earnings, have educational expenditures, with the expectations of higher future earnings (Becker, 1964; Kessler & Lulfesmann, 2006, p. 903). This study focuses on the

second conclusion where people are more willing to invest in themselves to increase their marketability and likelihood of higher future earnings.

In this case, Hispanics who generally are of low-income background, desire to increase their economic mobility by accessing higher education. Since tuition has increased dramatically throughout the years, Hispanics of low-income background do not have sufficient expected family contribution, grant monies generally do not cover a substantial portion of their tuition, and are then required to fund their education through the use of student loans (Elliott & Friedline, 2013, p. 135).

While Hispanics are among the highest in borrowing rates and average at higher debt amounts (Huelsman, 2015, p. 8), starting salaries for Hispanic graduates are the lowest among all groups (Baum & O'Malley, 2003; Price, 2004). This amplifies the economic issues that Hispanics will face following graduation. According to the Baccalaureate and Beyond Longitudinal Study (B&B: 08/12), Figure 2 in the Appendix indicates the annualized salary, by race/ethnicity, for their primary job after graduating with a degree. The Hispanic graduates had the lowest annualized starting salary at \$40,784.60 compared to the Non-Hispanic population.

Additionally, Hispanics are generally debt averse (Mortenson, 1988, p. 25; Burdman, 2005), and yet are still desiring to access higher education, there is a greater number of Hispanic students who are receiving their bachelor's degree from a public institution to alleviate debt burden rather than elite institutions (Bensimon & Dowd, 2009, p. 634). For those reasons, Hispanics face the issue of gainful employment and trying to pay back the loans. What's more concerning, because Hispanics are more prone to face unemployment, and according to economists, are vulnerable and susceptible at a time of financial difficulties, such as recessions (Cohen, 2015), paying back the loans with a likelihood of becoming delinquent or defaulting (Mitchell, 2015), Hispanics face dire financial situations with a likelihood of a stressful financial situation.

After reviewing some descriptive statistics, the researchers decided to do correlational analysis using the regression models available through NCES to measure the student debt burden implications for Hispanic students when compared to Non-Hispanic students. Accordingly, the following research questions were examined for statistical significance:

RQ1. What is the relationship between student loan debt for Hispanic and Non-Hispanic graduates and financial difficulty after graduation?

H₀1. There is no relationship between Hispanics and Non-Hispanics having financial difficulty after graduation.

H^A1. There is a significant relationship between Hispanics and Non-Hispanics having financial difficulty after graduation.

RQ2. What is the relationship between student loan debt for Hispanic and Non-Hispanic graduates and stress?

H₀2. There is no relationship between Hispanics and Non-Hispanics and stress after graduation.

H^A2. There is a significant relationship between Hispanics and Non-Hispanics and stress after graduation.

METHODOLOGY

This study employs a quantitative Non-experimental correlational approach. The researchers extracted from a secondary data source using the 2008/12 Baccalaureate and Beyond Longitudinal Study (B&B: 08/12) data files from the National Center for Education Statistics (NCES) website. The NCES website provided the PowerStats statistical tool, using PowerStats the researchers utilized customized data queries to analyze the data of those statistical records. The data consisted of approximately 13,500 post-baccalaureate sample members who participated in a nationwide data collection survey.

Further, the B&B: 08/12 data records were comprised of longitudinal statistical data that was gathered from surveys during the 2007-08 (NPSAS: 08) academic year, an initial follow-up occurred in 2009, and an additional follow-up in 2012 in aggregate. The conceptual framework for this study was based upon the notion to observe a longitudinal view, from graduating with debt to a future view of possible life-altering implications.

The B&B: 08/12 questionnaire collects data from college graduates covering areas that relate to graduate debt levels and life implications. The questionnaire also included demographic criteria, survey questions that related to financial difficulties and stress. The choice of using the correlational quantitative Non-experimental research study allowed the researchers to determine whether, and to what degree, a relationship exists comparing the quantifiable variables.

The first research question that guided this study was: RQ1. What is the relationship between student loan debt for Hispanic and Non-Hispanic graduates and financial difficulty after graduation? The criterion variable analyzed was "financial difficulty in the past 12 months as of 2012" and the predictor variable (Race: Hispanic or Latino origin). The variable used for was "amount owed in 2009". This variable was used because it captures all loans incurred after the students graduated in 2008. Since loan payments occurred six months after graduating, this was an appropriate variable to capture total loans owed for 2008. In addition, the only other variable available to use was "latest federal amount owed - principal as of 2012"; however, this only captures federal loans and does not capture any private loans they might have taken. Figure 3 in the Appendix provides the chronology of the measurement.

The second research question that guided this study was: RQ2. What is the relationship between student loan debt for Hispanic and Non-Hispanic graduates and stress? The criterion variable analyzed was "stress from education-related debt in 2012" and the predictor variable (Race: Hispanic or Latino origin).

RESULTS

The analysis in this study incorporates descriptive statistics with the help of Excel and inferential statistics applying the Power Stats program from NCES for linear regression models.

Table 1 in the Appendix provides output from a sample size of approximately 13,500 participants. The analysis describes 24.0 percent of all respondents indicated that they were having financial difficulty in the past 12 months as of the year 2012, and did not meet all essential expenses. While 23.3 percent of the Non-Hispanic population indicated that they were not meeting all essential expenses. It also surfaces that 31.0 percent of Hispanic or Latino's were having financial difficulties and were not meeting essential expenses. As a consequences of this observance in disparity between Hispanics and Non-Hispanics, the researcher decided to run some regression analysis reports using Power Stats as well as a Chi-square test using SPSS. The results may be viewed in Tables 2 and 3 respectively. The Power Stats report shows that there is a statistically significant different between Hispanics and Non-Hispanics (p value 0.000).

However, further analysis showed each race was statistically different when compared to all the remaining races regarding the question of having financial difficulty in the past 12 months as revealed in Table 4.

Additionally, Table 2 in the Appendix provides a 't' value of -3.420 which is the ratio of the estimated coefficient divided by the standard error. Since the absolute value of 't' is greater than the typical 1.96, the coefficient is statistically significant at the 95 percent confidence level. It also means the true coefficient is two standard errors lower than that estimated by the regression, there is 95 percent probability that the true coefficient would still be different from zero. This table also measures the *p*-value at 0.001 indicating that the Hispanic sample yields a sampling variation value of less than 0.05 which is considered statistically significant.

Table 3 in the Appendix displays some of the Chi-Square statistics which showed the same statistical significance between Hispanics and Non-Hispanics involving the financial difficulty question. However, additional Chi-Square statistics revealed a measurement that required further evaluation on the matter. The Phi statistics (0.052) showed that the significant association may not be due to a true difference between Hispanic and non-Hispanic groups in the financial difficulty rate, but primarily due to the large sample size (13,500). Since a measure of 0 for this index indicates no association and 1 indicates a perfect association, the 0.052 appears to be a weak association. Also, the Chi-Square Odds ratio (1.48), which is also used to measure the effect size in addition to Phi, does not seem very high. The 1.48 indicates that the odds for Hispanics to have financial difficulties is 1.48 times bigger than the odds for non-Hispanic to have financial difficulties.

Table 4 reveals surprising results in that it suggests that all races experience financial difficulty when asked the question in 2012 and were statistically different for each of the races when they were compared to the other races respectively. However, further review of the Odds Report from Power Stats as shown in Table 5 of the Appendix show that Hispanic students are almost twice as more likely than White students to have financial difficulty in the past 12 months as of 2012 and two and a half times more likely than Asian students. The Blacks or African Americans answered more affirmative on the financial difficulty question. Blacks or African Americans were almost three (2.84) times more likely than Whites and almost four (3.74) times more likely than Asians to have financial difficulties.

Table 6 in the Appendix provides output of the analysis describing 18.4 percent of all respondents indicated that they had "Very High" stress from education-related debt in 12 months as of the year 2012. While 17.9 percent of the Non-Hispanic population indicated that they had "Very High" stress. Table 4 also reveals that 23.3 percent of Hispanic or Latino's were having "Very High" stress. Further statistical regression analysis was required to see if there were significant differences between races. Please refer to Table 5 in the Appendix. This observation of high stress encouraged additional statistical testing using Power Stats.

Table 7 in the Appendix was developed by running a logistic regression using Power Stats and NCES data base. Power Stats provided the estimated full sample regression coefficients including *p* values for the high stress question. At an instant, one concludes that there is no significant difference between Hispanics and other races (*p* value at 0.480) and no significant difference between Black or African American and the rest of the other races (*p*. value at 0.688). However there appears to be a significant difference between the White students and the other races with a *p* value of 0.012 as well as Asians and other races with a *p* value of 0.038. All of these were set at a confidence level of 95 percent. Further observation of the analysis shows that the data analysis was done at "N" being at 3,100 per NCES Standards. "The true sample size has

been modified to minimize disclosure risk of individual survey responses. Because this is not the actual number of cases, caution is advised when using it for statistical purposes.” (Socha, NCES Power Stats, 2014).

NULL HYPOTHESIS 1 (H₀1).

The data ($p \leq .05$) suggests that a statistically significant association exists between student loan debt for Hispanics and Non-Hispanic graduates and financial difficulty after graduation. Therefore, the researchers rejected the null hypothesis. Incurring student loan debt upon graduation indicates a level of higher degree financial difficulty for Hispanic students. There was a slightly greater number of Hispanics surveyed versus the Non-Hispanic who indicated financial difficulties within the descriptive analysis.

NULL HYPOTHESIS 2 (H₀2).

The data ($p \geq .05$) suggests that no statistically significant association exists between student loan debt for Hispanics and Non-Hispanic graduates and stress from education-related debt in 2012. Therefore, the researchers did not reject the null hypothesis.

CONCLUSION AND RECOMMENDATIONS

This study provided some comparative descriptive statistics as well as some regression analysis of the student population in higher education in the United States between Hispanic and Non-Hispanics during the period from 2008 to 2012. The descriptive statistics show higher loan values in private non-profit institutions as well as lower national starting wages for Hispanic graduates when compared to Non-Hispanic graduates. The statistical regression analysis suggests that there may be a relationship between student loan debt and having financial difficulties along with stress. A statistical Odds Ratio Results revealed that Hispanic students are almost twice as more likely than White students to have financial difficulty in the past 12 months and two and a half times more likely than Asia students according to NCES’ survey in 2012. The Blacks or African American answered more definitively on the financial difficulty question. Blacks or African Americans were almost three (2.84) times more likely than Whites and almost four (3.74) than Asians.

There appears to be no significant difference between Hispanics and other races (p value at 0.480) and no significant difference between Black or African American and the rest of the other races (p value at 0.688) when it comes to high stress question caused by education-related debt in 2012. However there appears to be a significant difference between the White students and the other races with a p value of 0.012 as well as Asians and other races with a p value of 0.038.

The American dream becomes more distant for Hispanics who aspire to gain financial responsibility and foster economic mobility. Because tuition costs continue to rise, and financial limitations exists for a majority of parents trying to encourage their children to gain college access, Hispanic graduates must face the current reality that most likely they will incur educational debt. However, leaders of influence must acknowledge that while the Hispanic population grows, economic disparities exist and continue to exist, allowing for a dangerously polarized society, and expediting the issue of racial inequality and racial wealth gap (Dowd,

2008). This issue of mounting educational debt is echoing across the nation and impacting institutions and America's economic system (Holland, 2015).

Recommendations for additional research are made to assess areas that address the rise in borrowing by Hispanic graduates

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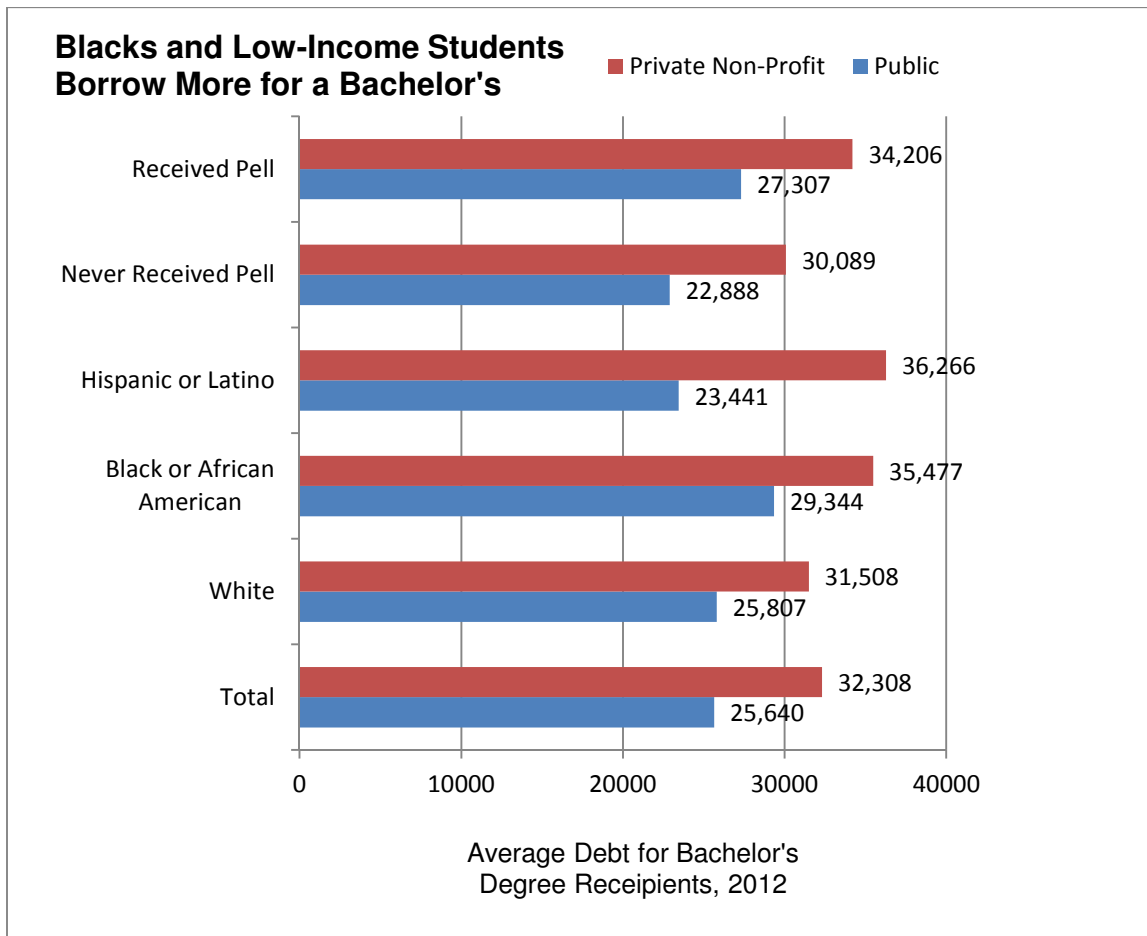
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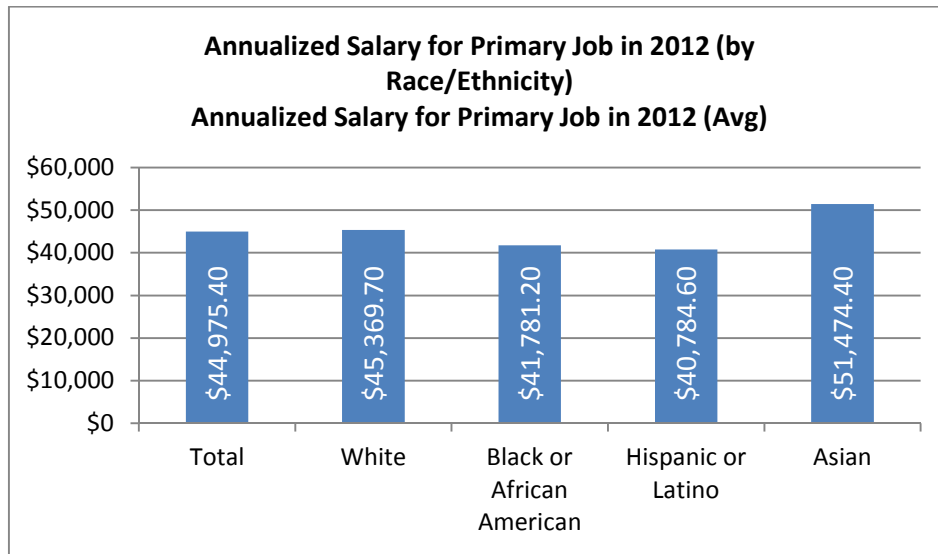
APPENDIX

FIGURE 1. Black and Low-Income Students Borrow More for a Bachelor's Degree



Source: Huelsman, 2015, p. 9

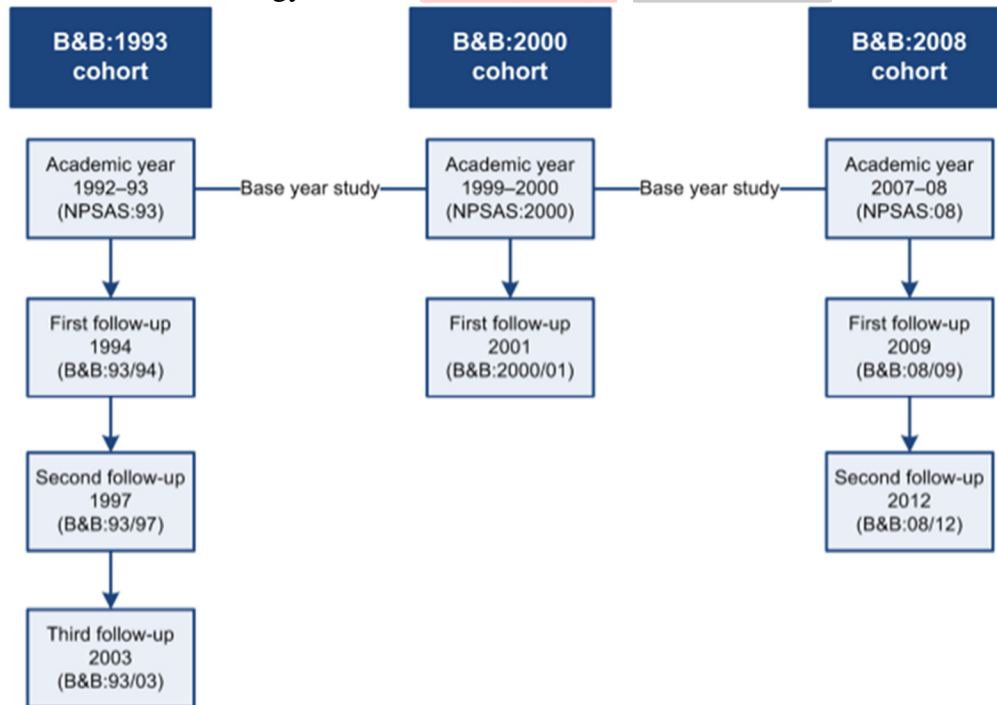
FIGURE 2. Annualized Salary for Primary Job in 2012 (by Race/Ethnicity)



Source: R. Valadez & E. Rodriguez 2016 adapted from the U.S. Department of Education, National Center for Education Statistics, 2008/12 Baccalaureate and Beyond Longitudinal Study (B&B: 08/12). Computation by NCES Powerstats.

The names of the variables used in this table are: RACE and B2CJSAL. The weight variable used in this table is WTE000.

FIGURE 3. Chronology of B&B 1993-2012



NOTE: NPSAS = National Postsecondary Student Aid Study.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2008/12 Baccalaureate and Beyond Longitudinal Study (B&B:08/12).

TABLE 1. Financial difficulty in past 12 months as of 2012 by Race: Hispanic or Latino origin.

	Met all essential expenses (%)	Yes, did not meet all essential expenses (%)	Total
Total	76.0	24.0	100%
Non-Hispanic or Latino Origin	76.7	23.3	100%
Hispanic or Latino Origin	69.0	31.0	100%

Source: R. Valadez & E. Rodriguez 2016 adapted from U.S. Department of Education, National Center for Education Statistics, 2008-12 Baccalaureate and Beyond Longitudinal Study (B&B: 08/12).

The names of the variables used in this table are: HISPANIC and B2FSTRESS.

The weight variable used in this table is WTE000.

TABLE 2. Linear Regression Analysis of Financial difficulty in past 12 months as of 2012 by Race: Hispanic or Latino origin.

Estimated Full Sample Regression Coefficients

	b	S.E.	t	p-value	Lower 95%	Upper 95%
Intercept	0.723	0.035	20.416	0.000	0.653	0.793
Amount owed in 2009	0.000	0.000	-3.420	0.001	0.000	0.000

Source: R. Valadez & E. Rodriguez 2016 adapted from U.S. Department of Education, National Center for Education Statistics, 2008/12 Baccalaureate and Beyond Longitudinal Study (B&B: 08/12).

Dependent variable: Financial difficulty in past 12 months as of 2012, reference category includes: Yes, did not meet all essential expenses.

The names of the variables used in this regression are: B2FSTRESS, B1OWAMT1 and HISPANIC.

TABLE 3. Chi-Square Test

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	36.258 ^a	1	.000		
Continuity Correction ^b	35.840	1	.000		
Likelihood Ratio	34.415	1	.000		

Fisher's Exact Test				.000	.000
Linear-by-Linear Association	36.256	1	.000		
N of Valid Cases	13500				

Source: J. Kim 2016 adapted from figures extracted from Table 1 above produced from National Center for Education Statistics data base, 2008/12 Baccalaureate and Beyond Longitudinal Study (B&B: 08/12) using SPSS.

TABLE 4. Logistic Regression Analysis of Financial difficulty in past 12 months by all Races (Full Sample Regression Coefficients)

	Std.B	S.E.	t	p-value
Intercept				
Race: Hispanic or Latino origin				
Hispanic or Latino origin	0.042	0.014	2.964	0.003
Race: White				
Yes	-0.061	0.028	-2.175	0.031
Race: Asian				
Yes	0.110	0.027	4.122	0.000
Race: Black or African American				
Yes	-0.065	0.020	-3.312	0.001

Source: R. Valadez & E. Rodriguez 2016 adapted from U.S. Department of Education, National Center for Education Statistics, 2008-12 Baccalaureate and Beyond Longitudinal Study (B&B: 08/12).

The names of the variables used in this regression are: B2FSTRESS, RABLACK, HISPANIC, RAWHITE and RAASIAN.

TABLE 5. Logistic Regression Analysis of Financial difficulty in past 12 months by all Races (Odds Ratio Results)

	Odds Ratio	Lower 95%	Upper 95%	p-value
Intercept	0.380	0.277	0.521	0.000
Race: Hispanic or Latino origin				
Hispanic or Latino origin	1.384	1.126	1.700	0.002
Race: White				
Yes	0.715	0.528	0.967	0.030

Race: Asian				
Yes	0.543	0.376	0.784	0.001
Race: Black or African American				
Yes	2.029	1.421	2.896	0.000

Source: R. Valadez & E. Rodriguez 2016 adapted from U.S. Department of Education, National Center for Education Statistics, 2008-12 Baccalaureate and Beyond Longitudinal Study (B&B: 08/12).

The names of the variables used in this regression are: B2FSTRESS, RABLACK, HISPANIC, RAWHITE and RAASIAN.

TABLE 6. Descriptive Statistics - Stress from education-related debt in 2012 by Race: Hispanic or Latino origin.

	Very low (%)	Low (%)	Moderate (%)	High (%)	Very High (%)	Total
Total	9.5	18.3	31.5	22.3	18.4	100%
No Hispanic or Latino Origin	9.6	18.7	31.5	22.3	17.9	100%
Hispanic or Latino Origin	8.7	14.0	32.3	21.7	23.3	100%

Source: R. Valadez & E. Rodriguez 2016 adapted from U.S. Department of Education, National Center for Education Statistics, 2008-12 Baccalaureate and Beyond Longitudinal Study (B&B: 08/12).

The names of the variables used in this table are: HISPANIC and B2CEOUTLN.

The weight variable used in this table is WTE000.

TABLE 7. Stress from education related debt in 2012 by Race (Sample Regression Coefficients)

	Std.B	S.E.	t	p-value
Intercept				
Race: Hispanic or Latino origin				
Hispanic or Latino origin	-0.019	0.027	-0.708	0.480
Race: White				
Yes	0.130	0.051	2.546	0.012

Race: Asian				
Yes	0.068	0.032	2.087	0.038
Race: Black or African American				
Yes	0.019	0.046	0.402	0.688

Source: R. Valadez & E. Rodriguez 2016 adapted from U.S. Department of Education, National Center for Education Statistics, 2008-12 Baccalaureate and Beyond Longitudinal Study (B&B: 08/12).

The names of the variables used in this regression are: B2CEOUTLN, RABLACK, HISPANIC, RAWHITE and RAASIAN.

