

Student Debt and Perceptions of Preparedness for Employment or Higher Education

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Student debt is receiving attention as a significant stressor for college undergraduates. This, coupled with concerns about the future, has the potential to negatively impact students' well-being. Using data from a national student survey, this study examined the extent to which financial burdens and feelings of preparedness for their path following graduation predicted the functioning of college seniors. Higher debt and lower perceptions of preparedness for employment or higher education significantly predicted lower levels of emotional and physical health in students with loans of \$0 - \$200,000. These results support the notion that, in these uncertain economic times, greater emphasis could be placed on student career planning and guidance, not only for the purposes of future professional development, but to promote well-being while students are still in college.

INTRODUCTION

College students deal with various sources of stress. A common concern involves financial burdens, as many college students accumulate loans of considerable sums, often with interest (Bernard 2009). The average student loan debt of American college graduates between 2006 and 2010 was estimated to be \$20,000 (Rampell 2011) and forgiving such loans in circumstances of hardship is becoming increasingly more difficult (Hancock 2009). Such financial burdens can cause significant stress, have a negative impact on academic persistence, and lead some students curtail to their studies indefinitely (Dowd and Coury 2006; Jessop, Herberts and Solomon 2005). Students with a greater tolerance for debt have been found to have lower grade point averages (Zhang and Kemp 2009) but those who are of low-income and wary of accruing debt may forgo pursuing lucrative, but costly, training in such careers as medicine (Ross, Cleland Macleod 2006). Financial concerns among students have been shown to impact both physical and mental health (Jessop et al. 2005; Roberts, Golding, Towell and Weinreb 2000; Ross et al. 2006).

College students also deal with stress from concerns about job opportunities following graduation, particularly during uncertain economic times. Changes in the global market have brought frequent merging and reorganization of companies and an accompanying loss of jobs and benefits (Ferrie, Shipley, Marmot, Stansfeld and Smith 1998). Reactions to these conditions include loss of morale, helplessness, and stress (Ashford, Lee and Bobko 1989). Even after controlling for economic status, job instability has a strong positive correlation with depressive mood, particularly for people with debt and for those holding jobs requiring lower degrees of skill (Meltzer et al. 2010). Population mental health is often correlated with economic conditions (Zivin et al. 2011). For instance, increases

in average state unemployment rates have been associated with individual ratings of decreased health-related quality of life (Dávalos and French 2011). Unemployed individuals are more likely to exhibit mental health problems and show greater negativity, anxiety, and depression than employed individuals (Paul and Moser, 2009; Scutella and Wooden 2008). Not only does joblessness increase symptoms of depression, but those with depression have a higher chance of being unemployed in the future (Jefferis et al. 2011). Recent data shows that more than 50% of college graduates below the age of 25 were either unemployed or employed in work that did not require a college degree (Bruni 2012). Students who go from education to unemployment were observed to have somewhat worsened, but not significantly so, mental health, whereas students who go from education to employment or further education show a significant increase in mental health (Paul and Moser 2009).

As such, financial burdens coupled with worries about the future have the potential to affect college students' well-being as graduation approaches. The purpose of this study was to assess the extent to which student debt and perceptions of preparedness for employment or higher education predict emotional and physical health. The findings may help better understand how such pressures affect student functioning and inform guidance and counseling for college students. Data collected by the 2007 College Senior Survey from the Cooperative Institutional Research Program (CIRP) from the Higher Education Research Institute (HERI) were used to examine these relationships with a series of multiple regression analyses. Among other variables, the survey assessed college seniors' anticipated student debt and their perceptions of preparedness for employment or higher education as well as their ratings of their emotional and physical health (CIRP HERI, 2007). We hypothesized that a higher student debt load and perceptions of lower preparedness for employment or higher education would predict lower emotional and physical health, and expected that student loan burden would be a stronger predictor relative to perceptions of preparedness.

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METHODS AND MATERIAL

The 2007 College Senior Survey was administered in 109 colleges, of which a large proportion were private (88.1%) and many were characterized as being highly selective (45%; CIRP HERI 2007). A total of 26,710 students participated in the survey, with 93.1% of respondents selecting English as their native language. Notably, 33.8% of students who took the survey reported feeling overwhelmed by all that they had to do within the previous year (CIRP HERI 2007). Following the procedures used for analyses that appeared in the HERI final report of the 2007 College Senior Survey (CIRP HERI, 2007), 86 students who reported having debts greater than \$200,000 were screened out, because they were considered

anomalies. We also excluded those who reported that they were not graduating seniors, were not full-time students, and those who were missing data on our focal variables, resulting in a sample size of 17,422. Of these, 62% of respondents were female, and 38% were male. The majority of participants (82.3%) classified themselves as White, with 7.5% Latino, 6.0% Asian, 5.2% Black, 1.5% American Indian, and 0.8% Native Hawaiian/Pacific Islander; 3.2% identified as other race/ethnicity, and 0.8% were missing/unknown. Over 85% had a GPA of B or above. Substantial proportions of students (43.4%, 34.1%, and 35.1%) reported receiving more than \$10,000 in financial aid from family resources, scholarships, and loans, respectively, to cover educational expenses such as room, board, tuition, and fees.

Materials and Measures

The individual items on the College Senior Survey developed by CIRP corresponding to the amount of student debt, perceptions of preparedness for employment, and perceptions of preparedness for further education were: “If you borrowed money to help pay for college expenses, estimate how much you will owe as of June 30, 2007?”; “Compared with when you first entered this college, how would you now describe your preparedness for employment after college?”; and “Compared with when you first entered this college, how would you now describe your preparedness for graduate or advanced education?”, respectively. Items for preparedness for employment and preparedness for further education were rated on a 5-point Likert scale ranging from *much weaker* to *much stronger*, with scores ranging from 1-5. For assessments of emotional health and physical health, respondents were instructed to “Rate yourself on each of the following traits as

compared with the average person your age. We want the most accurate estimate of how you see yourself” and presented with the terms “emotional health” and “physical health” (CIRP HERI, 2007). Ratings of emotional and physical health were made on a scale comprising the response options: *lowest 10%*, *below average*, *average*, *above average*, and *highest 10%*, with scores ranging from 1-5 (CIRP HERI, 2007).

Variable	Emotional Health ^{1,2}		Physical Health ^{3,4}		Emotional Health (Excluding Those Without Loans) ^{5,6}		Physical Health (Excluding Those Without Loans) ^{7,8}	
	β	β	β	β	β	β	β	β
Preparedness for employment after college	.20**	--	.13**	--	.20**	--	.13**	--
Preparedness for graduate or advanced education	--	.18**	--	.13**	--	.18**	--	.13**
Loan amount	-.03**	-.03**	-.06**	-.05**	-.02	-.02*	-.02*	-.02

Table 1 Multiple Regression Analysis of Feelings of Preparedness for Employment and Higher Education as Predictors of Emotional and Physical Health * $p < 0.05$, ** $p < 0.001$ ¹ $R^2 = 0.04$, $p < 0.001$, $N = 12,432$; ² $R^2 = 0.03$, $p < 0.001$, $N = 14,725$; ³ $R^2 = 0.02$, $p < 0.001$, $N = 12,424$; ⁴ $R^2 = 0.02$, $p < 0.001$, $N = 14,716$; ⁵ $R^2 = 0.04$, $p < 0.001$, $N = 9,379$; ⁶ $R^2 = 0.03$, $p < 0.001$, $N = 10,828$; ⁷ $R^2 = 0.02$, $p < 0.001$, $N = 9,371$; ⁸ $R^2 = 0.02$, $p < 0.001$, $N = 10,820$

Data Analysis

We conducted multiple regression analyses to determine (1) the extent to which level of student debt and preparedness for employment predicted emotional and physical health for students who indicated that they were pursuing employment following graduation, and (2) the extent to which student debt and preparedness for higher education predicted emotional and physical health for students who indicated that they were pursuing higher education following graduation. We performed the analyses two ways: (1) including both students who had no loans and those who had loans of any amount, and (2) including only students who had loans.

RESULTS

Table 1 provides the standardized regression coefficients and their associated level of statistical significance for the predictors of emotional and physical health. For analyses that included students with and without loans (i.e., \$0 – 200,000), all sets of variables significantly predicted outcomes in the expected directions, with loan amount ($\beta = -.03$, $p < .001$; $\beta = -.06$, $p < .001$) and perceptions of preparedness for employment ($\beta = .20$, $p < .001$; $\beta = .13$, $p < .001$) predictive of emotional health and physical health, respectively, among those who were planning to pursue employment following graduation, and loan amount ($\beta = -.03$, $p < .001$; $\beta = -.05$, $p < .001$) and perceptions of preparedness for graduate or advanced education ($\beta = .18$, $p < .001$; $\beta = .13$, $p < .001$) predictive of emotional and physical health, respectively, among those who planned to pursue higher education. The strongest predictive relationship was between preparedness for

employment after college and the outcome of emotional health. In all analyses, feelings of preparedness for employment or higher education were stronger predictors than level of debt. For analyses that included only students who had loans (i.e., \$1 - \$200,000), the results showed a similar pattern, but in two cases, loan amount was not a significant predictor of outcomes (see Table 1). In both sets of analyses the set of predictors accounted for just a small amount, less than 5%, of the variance (R^2).

DISCUSSION

It was hypothesized that a higher debt load and perceptions of lower preparedness for employment or higher education would predict lower emotional and physical health. This notion was generally supported by our results. Among students with and without loans (\$0-\$200,000) debt amount was a significant negative predictor and perceptions of preparedness for employment and perceptions of preparedness for higher education were both significant positive predictors of emotional and physical health. However, it was expected that student debt would be the best predictor among the three. Therefore it was surprising to observe that student loan amount was the weakest predictor of the three in all but one of the conditions.

The predictors accounted for less than 5% of the variance in all of the analyses. This implies that many other factors also account for emotional and physical health and may be better predictors than the variables tested in this study. Also, because the direction of causality is not certain, it is also possible that levels of emotional and physical health might predict feelings of preparedness for employment and higher education. Future studies could examine this reverse relationship and the role of other potential predictors such as level of assistance from professors in achieving goals, type of undergraduate major, and the aspired career.

One implication of this study lies in the realm of student guidance and counseling. Because perceptions of preparedness for the future (whether employment or higher education) were stronger predictors than student debt burden of student well-being, universities could focus more efforts into helping students understand and decide what to do once they have earned a degree. This notion is supported by the HERI College Senior Survey 2007 final report which noted that only 53% of students reported being 'satisfied' or 'very satisfied' with their college's career counseling and advising and only 47% were 'satisfied' or 'very satisfied' with its job placement services (CIRP HERI, 2007). These results support the notion that, in these uncertain economic times, greater emphasis could be placed on student career planning and guidance, not only for the purposes of future professional development, but to promote well-being while students are still in college.

REFERENCES

Abel, A. (1998) The new colour index international of pigments and solvent dyes. *Surface Coatings International Part B: Coatings Transactions* 81, 2, 77-85.

- Ashford, S. J., C. Lee and P. Bobko (1989) Content, causes, and consequences of job insecurity: A theory-based measure and substantive test. *Academy of Management Journal* 32, 803-829.
- Bernard, T. S. (2009, April 17) In grim job market, student loans are a costly burden. *The New York Times*.
- Bruni, F. (2012, April 28) The imperiled promise of college. *The New York Times*.
- CIRP Higher Education Research Institute. (2007) 2007 College Senior Survey.
- Dávalos, M. E., and M. T. French (2011). This recession is wearing me out! Health-related quality of life and economic downturns. *Journal of Mental Health Policy and Economics* 14, 61-72.
- Dowd, A. and T. Coury (2006) The effect of loans on the persistence and attainment of community college students. *Research in Higher Education* 47, 33-62.
- Ferrie, J. E., M. J. Shipley, M.G. Marmot, S. Stansfeld and G. Smith (1998) The health effects of major organizational change and job insecurity. *Social Science and Medicine* 46, 243-254.
- Hancock, K. E. (2009) A certainty of hopelessness: Debt, depression, and the discharge of student loans under the bankruptcy code. *Law and Psychology Review* 33, 151-166.
- Jefferis, B. J. et al. (2011). Associations between unemployment and major depressive disorder: Evidence from an international, prospective study (the predict cohort). *Social Science & Medicine* 73, 1627-1634.
- Jessop, D. C., C. Herberts, and L. Solomon (2005) The impact of financial circumstances on student health. *British Journal of Health Psychology* 10, 421-439.
- Meltzer, H. H. et al. (2010) Job insecurity, socio-economic circumstances and depression. *Psychological Medicine: A Journal of Research in Psychiatry and The Allied Sciences* 40, 1401-1407.
- Paul, K., and K. Moser (2009) Unemployment impairs mental health: Meta-analyses. *Journal of Vocational Behavior* 74, 264-283.
- Rampell, C. (2011, May 18) Outlook is bleak even for recent college graduates. *The New York Times*.
- Roberts, R. et al. (2000) Mental and physical health in students: the role of economic circumstances. *British Journal of Health Psychology* 5, 289-297.

Roberts, R. et al. (1999) The effects of economic circumstances on British students' mental and physical health. *Journal of American College Health* 48, 103-109.

Ross, S., J. Cleland and M. Macleod (2006) Stress, debt and undergraduate medical student performance. *Medical Education* 40, 584-589.

Scutella, R., and M. Wooden (2008) The effects of household joblessness on mental health. *Social Science & Medicine* 67, 88-100.

Zhang, J., and S. Kemp (2009) The relationships between student debt and motivation, happiness, and academic achievement. *New Zealand Journal of Psychology* 38, 24-29.

Zivin, K., M. Paczkowski and S. Galea (2011) Economic downturns and population mental health: Research findings, gaps, challenges and priorities. *Psychological Medicine: A Journal of Research in Psychiatry and the Allied Sciences* 41, 1343-1348.