11 IMPACT OF EDUCATION LOAN ON MENTAL HEALTH OF STUDENTS: AN EMPIRICAL STUDY

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Abstract

This paper investigates the relationship between education loan and mental health among education loan beneficiaries by controlling various demographic variables. Data has been collected through primary sources on the basis of a questionnaire designed for the current study. The mental health was measured using the 5-item Mental Health Inventory scale. To analyse the collected data, multiplehierarchical regression analysis was employed. Results demonstrated that monthly family income of the education loan beneficiaries is directly proportional to their mental health, which means higher the monthly family income of the beneficiaries, better is their mental health. Education loan is not directly related to mental health, but perception about the education loan amount as "excessive" is negatively related to mental health. Education loan beneficiaries, who were identified as having financial anxiety, possessed significantly worse mental health.

Keywords: Education loan, mental health, students, multiple hierarchical regressions

Introduction

Education is considered very important for both economic and human development of every nation. It has significant positive effects on growth (Lucas, 1988; Romer, 1990; Barro, 1991). Investment in education leads to the formation of human capital, which has a statistically significant impact on economic growth in large developing countries (Vinod & Kaushik, 2007). Higher education is responsible for providing the specialized human capital and also for training the manpower inside the country. Education is necessary for the development but higher education is essential for sustainable development. But now a day's education is becoming very costly affair, which is not affordable for most of the population. To make it approachable, education loan scheme was introduced by the Indian Government in the year 2001. With the introduction of this scheme, the education loan is growing over the years among students in India. Over the decade, the education loan in India has increased by 33.5 per cent (average annual growth rate) during the period 2000-2001 to 2011-2012 (Rani, 2014). Education loan surely helps the needy students, who otherwise have not sufficient funds or resources for their studies. These loans assist the students to acquire human capital, but it also creates stress and anxiety for them regarding their repayment and high rate of interest. It is very important to include such measures like mental health of education loan beneficiaries as they usefully add to our understanding of the impact of student debt on the stresses and strains students face at university. Although sparse, research has linked mental health with student loan. In UK (Stradling, 2001) found that students anticipating excessive debts upon graduation more likely to suffer severe depression and anxiety compared to those anticipating manageable debts. In another study by (Cooke et al. 2004) found that students categorized as experiencing high 'debt worry' felt greater tension and unhappiness compared to other students. The author also found that high financial concern was a significant predictor of poor mental and physical health. A review of existing literature reveals that there are many studies done on debt and mental health of students in developed countries, but in India, not a single study is available in the literature that discusses the issue of education loan and its impact on student mental health. In this regard, the main purpose of the current study is to investigate the relationship

between education loan and mental health of the education loan beneficiaries in Indian context. This paper aims to explains the existing literature related to the financial difficulties and mental health of the education loan takers. It further describes the research methodology followed by the data analysis, results and discussion.

Literature Review

Research on education loan in India has been gaining importance in recent years. As education loan is increasing day by day, so there is need to study the psychological functioning of the students who have taken education loan for their studies. A related body of literature found that student loans are associated with poorer mental health, while this student loan amount is cumulative or yearly in college. The effect of student loans on mental health seems modest, after controlling for other economic and demographic factors, including income, educational attainment, occupation and parental net worth (Walsemann et al. 2015). (Cooke, Barkham, Audin, Bradley & Davy, 2004) investigated that anticipated debt and mental health had no relationship, but attitudes towards debt were related to mental health. Students with high financial concerns and high worry about debt had worsened mental health. Another study identified that negative financial situations (i.e., financial stresses) were significantly more likely to be linked with financial stress among college students (Heckman et al. 2014). (Archuleta et al. 2013) found financial satisfaction. student loan and gender as significant predictors of financial anxiety. Another study of British university students found (Roberts et al. 2000) a link between financial problems and adverse psychological and physical functioning among college students. (Roberts, Golding, Towell, & Weinreb, 1999) investigated that poorer mental health, were significantly related to working long hours outside of the university, difficulty in paying bills, and having considered dropping out of studies. Another study by (Morra et al. 2008) demonstrated a significant relationship between perceived financial stress and current debt levels and also suggests that anticipated debt may be a better predictor of perceived financial stress. (Lange and Byrd 1998) found that daily financial stress influence students' psychological well-being (i.e., anxiety and depression) by negatively affecting the senses of control and self esteem. (Andrews and Wilding 2004) found that financial difficulties can increase anxiety and depression levels among college students in the United Kingdom. Furthermore the greater debt has been associated with lower levels of perceived financial well-being and higher reported levels of overall stress (Norvilitis et al., 2006). (Graham et al. 2016) found the sources of maximum stress were the financial difficulties among their clinical nursing training in Jamaica. In addition, students who considered leaving their academic programs prior to finishing due to financial strain reported poorer psychological health. Research has indicated a moderate association between debt and mental health problems such as anxiety and depression (Drentea, 2000; Jenkins et al., 2008; Roberts et al., 1999). The mental health of students is affected by a multiplicity of factors, but education loan and financial anxiety may

be the major influencing variable which can impact on psychological functioning of the students.

An analysis of the literature reveals that above mentioned, investigations are carried out exclusively in foreign context, and this is the only work which has undertaken this issue in Indian context. This interpretation in research has motivated the need for the present study.

Objective of the study

To investigate the relationship between education loan and mental health of the education loan beneficiaries.

Following null hypotheses have been framed to achieve the objective of the study.

H01: There is no significant relationship between gender and mental health of the education loan beneficiaries.

H02: There is no significant relationship between age and mental health of the education loan beneficiaries.

H03: There is no significant relationship between monthly family income and mental health of the education loan beneficiaries.

H04: There is no significant relationship between the amount of education loan and mental health of the education loan beneficiaries.

H05: There is no significant relationship between perception about the education loan amount and mental health of the education loan beneficiaries.

H06: There is no significant relationship between financial anxiety and mental health of the education loan beneficiaries.

Research Methodology Sample Design

The present study aims to explore the relationship between education loan and mental health of the education loan beneficiaries. The target respondents are the students, who have taken education loan and studying at Guru Nanak Dev University, Amritsar. Snowball sampling method was used to collect the data. A total of 120 questionnaires were distributed, out of which 116 were found usable for analysis. The sample consisted of 63.8% male students. 72.4 % of the students were under the age of 21 years and the same percentage of them (72.4%) reported their monthly family income as below 40,000 (Table 1).

Data Collection Instrument

The measuring instrument for the present study has been drawn from several past studies. The current study explored the predictors of mental health of the education loan beneficiaries. Mental health served as the dependent variable and education loan (in amounts), perception about the education loan amount, financial anxiety and demographic variables (gender, age and income) served as independent variables. The following is the discussion of the measurements used in the study (Table 2).

Dependent Variable

Mental health (psychological functioning) was measured using the 5-item Mental Health Inventory (MHI), a scale similar to the one used by (Walsemann et al. 2015). This 5-item Mental Health Inventory (MHI) scale is an abbreviated version of the MHI-38 item scale (Veit and Ware) has also shown high validity and reliability in prior studies (Berwick et al., 1991; Rumpf et al., 2001). Respondents were asked how often in the past month they felt 1) nervous: 2) calm and peaceful; 3) downhearted and blue; 4) happy; and 5) down in the dumps. Response categories used a 5-point Likert scale ranging from 1 (never) to 5 (always). Negatively worded items were reverse coded, such that higher values represent better mental health. The mean score for this sample was 3.72

(SD = 0.70). The value of Cronbach's alpha, a measure of internal reliability was 0.69 and factor loadings are given in the Table 3.

Independent Variables

Demographic variables like gender, age and income were taken as control variables. Education loan was asked in amounts, and average loan was Rs 323210.09 with SD = 107343.381. Perception about loan amount was asked as 1 (manageable), 2 (moderate) and 3 (excessive) to understand how they perceive about the education loan amount. Financial anxiety was measured using 7-items scale developed by (Archuleta et al. 2013), in which participants were asked to rate their reaction on a 5-point Likert scale. ranging from 1 (never) to 5 (always). Higher scores represent more financial anxiety. The mean score for this sample was 2.29 (SD = 1.00). This scale demonstrated high reliability (0.94) in a previous study by (Archuleta et al. 2013). Example items on the Financial Anxiety Scale included: a) I feel anxious about my financial situation, b) I have difficulty sleeping because of my financial situation, and c) I am irritable because of my financial situation (Table 4). Factor loadings for the scale achieved 0.72 and above (Table 4), which support the construct validity of the scale. Internal reliability, using Cronbach's alpha, was found to be high $\alpha = .93$.

Data analysis

Before conducting multiplehierarchical regression analysis, a correlation matrix was performed to examine the collinearity among all the independent variables. The results of the correlation matrix (Table 5) showed that none of the variables were moderately or highly correlated with one another. Moreover, in order to obtain accurate results, collinearity diagnostic was also performed with SPSS 19, such as Variance Inflation Factor (VIF) and Tolerance Level (I/VIF) to test the multicollinearity. Variance Inflation Factor (VIF) value equivalent or below 10, and Tolerance level greater than 0.10 indicating no multicollinearity among the

variables. The multicollinearity diagnostics, statistics showed that tolerance value is not below 0.10 and VIF also did not exceed the recommended limit of 10; hence it can be said from the analysis that data is free from multicollinearity.

Further, multiple hierarchical regression analysis was completed to examine the predictors of mental health of the education loan beneficiaries. Predictors included education loan, perception about loan amount and financial anxiety of the students after controlling for demographic variables.

Results and Discussion

Results from the multiple hierarchical regression, using predictors of mental health of students are shown in Table 6. In step 1 of hierarchical regression, all the demographic variables were entered, which include gender, age and monthly family income, but this model was not found to be significant and accounted for only 2 % of the explained variance of mental health (F = 1.85; p > .05). However, hypothesis, H01 and H02 were accepted and H03. "there is no significant relationship between monthly family income and mental health of the students" was rejected. Therefore, monthly family income came out to be positive and significant at the 5 % level, which showed that higher the monthly family income of the students, better the mental health of the students. Thus, in predicting mental health, from the demographic variables, monthly family income was found to be significant predictor as one might expect, regardless of age and gender. Generally, it is reported that wealth is linked to health. There are number of literature reports which support this finding. The first support predicts levels of depression and anxiety among low income students (Sands & Richardson, 1984). Mental health, illness has a high correlation with a person's income (Gresenz, Sturm, & Tang, 2001: Jenkins et al., 2008). Throughout the lifetime, there is a high risk of mental health problems among lower income households

(Sareen, Afifi, McMillan, & Asmundson, 2011). Also, depression is associated with income levels (Andersen et al., 2009; Wang, Schmitz, & Dewa, 2010).

In step 2, all the independent variables, education loan, perception about loan amount and financial anxiety along with the demographic variables were entered. The model came out to be significant (F =12.03; p < .001) and accounted for 43.6 % of the overall variance in the mental health. In this hypothesis H04 was accepted and H05 and H06 were rejected. Therefore, the predictor variables, perception about the education loan amount and financial anxiety showed significant impact on the mental health of the students. Perception about the education loan amount and financial anxiety were negatively related to mental health of the students. Therefore, the actual amount of loan is not directly related to mental health. but the perception about the education loan amount perceived by the beneficiaries as "excessive" was found to be significant predictor of mental health of the students. This finding is also supported by the previous finding by (Stradling 2001). The author has shown that "students who perceived their anticipated graduate debt as 'excessive' were more likely to be anxious or depressed than students who viewed their anticipated debt as 'manageable'. Therefore, it means that the perception about the education loan amount is more important than the actual amount of loan.

With regard to financial anxiety, it is negatively related to the mental health of the students. The significant association between financial anxiety and mental health of the students' makes sense; the higher one's financial anxiety, the lower one's mental health. Our finding is consistent with previous research, which delineates the strong and persistent relation between financial strain and mental health (Ferraro and Su, 1999; Kahn and Pearlin, 2006; Selenko and Batinic, 2011). For instance, in a study by Kahn and Pearlin (2006) financial strain was connected with higher levels of depressive symptoms. Financial difficulties appeared to be associated with mental health (Butterworth, Rodgers, & Windsor, 2009; Husain, Creed, & Tomenson, 2000; Laaksonen et al., 2007, 2009).

Limitations and scope for further research One of the major limitations that could have influenced the outcomes of this study is generalisability of the sample. The sample was taken from only one university, Guru Nanak Dev University. However, a more extended geographical sample may produce different results. Due to time constraints, the sample size is just 116; further study can be conducted by taking a larger sample. Moreover, a comparative study of university and college students can be conducted to find out the difference in their financial anxiety and mental health. A comparative study of students belonging to professional and non professional disciplines can be conducted to find out the difference in their mental health.

Implications

Education loan plays an important role in the life of students to achieve their goals. The results of the present study can help the practitioners to understand the mental health of the education loan beneficiaries. From the current study, it is clear that education loans are helpful for students, but its ill effects on student's mental health can reduce the performance of the students. So both educational institutions and banks should help them to the best so that they don't feel burdened and can concentrate on their studies. Furthermore, counselling centres in the institution could be set up for the proper guidance to the students and where already counselling centres are present they should be properly managed.

Appendix

Table 1. Sample characteristics				
Sample characteristics	Percentage (%)			
Gender	63.8			
Male	36.2			
Female				
Age				
Less than 21	72.4			
21-25	25.0			
Above 25	2.6			
Monthly family income				
Less than 40000	72.4			
Above 40000	27.6			

Source: Authors' own calculations, based on the responses of the students.

Table 2. Variables of the study						
Variables	Mean	Std. Deviation				
Dependent Variable						
Mental Health	3.72931	.700437				
Independent Variable						
Education loan (in amounts)	323210.09	107343.381				
Financial anxiety	2.29680	1.005072				
Independent Variable (categorical)						
Gender						
Male						
Female		.483				
Age		.514				
Less than 21						
21-25						

Above 25	
Monthly family income	.44889
Less than 40000	
Above 40000	
Perception about education loan amount	.772
Manageable	
Moderate	
Excessive	

Source: Authors' own calculations, based on the responses of the students.

Table 3. Mental Health Scale (Factor loadings)				
Mental Health Scale (($\alpha = .69$)	Factor scores			
I have been a very nervous person (R)	.672			
I feel calm and peaceful	.679			
I feel downhearted and blue (R)	.736			
I have been a happy person	.697			
I feel so down in the dumps that nothing could cheer me up (R)	.569			
R means Reverse coded				

Source: Authors' own calculations, based on the responses of the students.

Table 4. Financial Anxiety Scale (Factor loadings)					
Financial Anxiety Scale (($\alpha = .93$)	Factor scores				
I feel anxious about my financial situation.	.906				
I have difficulty sleeping because of my financial situation.	.886				
I have difficulty concentrating on my school/or work because of my financial situation.	.872				
I am irritable because of my financial situation.	.866				
I have difficulty controlling worrying about my financial situation.	.827				
My muscles feel tense because of worries about my financial situation.	.819				
I feel fatigued because I worry about my financial situation	.724				
Source: Authors' own calculations, based on the responses of students.					

Table 5. Correlations among all variables								
Variables	1	2	3	4	5	6	7	8
Mental Health Scale	_							
Gender	.040	_						
Age	095	.257**	_					
Monthly family Income	.201*	.017	100	_				
Perception about Loan amount	293**	020	.222	309	206	_		
Education Loan	.080	060	289	.274	.090	110	_	
Financial Anxiety Scale	592**	001	.169	379	226	.316	200	_
*p < .05. ** p < .01.								

Source: Authors' own calculations, based on the responses of the students.

Table 6. Multiple Hierarchical Regression Analysis Using Predictors of Mental Health					
Predictors	$\Delta R2$	В	Std. Error	Beta	Sig
Step 1	0.029				
Constant		3.639	.094		.000
Gender (Male)					
Female		.103	.146	072	
Age (Below, 21)					
21 – 25		132	.163	082	
Above25		439	.405	101	
Income (Below, 40000)					
Above 40000		.308	.143	.200*	.034
Step 2	0.43*				
Constant		4.844	.237		.000
Gender (Male)					
Female		.068	.114	.047	
Age (Below, 21)					
21 - 25		001	.129	001	
Above25		048	.329	011	
Income (Below, 40000)					
Above 40000		073	.131	048	
Education Loan		000	.000	014	
Level of loan amount (Manageable)					
Moderate		034	.122	024	
Excessive		298	.142	181*	.038
Financial Anxiety		448	.057	631**	.000

Source: Authors' own calculations, based on the responses of the students.

Reference categories in parentheses *p <. 05 ** p <.01

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