



Effects of perceived stressors and psychiatric morbidity on academic performance of university students

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Abstract

The current study aims at examining the effects of perceived stressors and psychiatric morbidity on the students' academic performance by taking COMSATS Institute of Information Technology, Attock as case study. Using a cross sectional design, the data was collected on four stressors, i.e. Workload, Emotional & Interpersonal Demands and three types of psychiatric morbidities, i.e. Depression, Anxiety & Social Dysfunction from 379 students. The Job-Demand-Resource Model (JD-R) model was used as theoretical base for formulating research framework. The existing literature states that level of students' performance varies with the level of perceived stress and symptoms of mental illness. The findings of current study are in concurrence with findings of previous research. It has been found that perceived stressors and symptoms of mental illness were negatively related with students' academic performance. The results of this study will be helpful to students, teacher and to administration of University for taking conducive steps to minimize the impacts of perceived stress on the students' academic performance.

Keywords: Perceived Stressors, Psychiatric Morbidity, Academic Performance

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Introduction

Higher Education Institutions are strategic assets of any country as they provide intellectual capital and meet the technological and personnel related requirement (Burchi, 2006; Goldstein & Drucker, 2006). Higher Education Institutions also act as a source of alleviation of the unemployment rate by impacting quality education and skills, which can later on help in attaining jobs (Angang & Xin, 2006). Developing economies like Pakistan relied on systems of its higher education to produce the talent for its workforce and to develop the intellectual foundation for the growth of new ideas and products (Burk, 2011). Higher Education Institutions are evaluated against world standards in regard to quality of education, values, costs and services (Hazelkorn, 2011). Such standards are sometimes difficult to comply, resultantly employees working in Higher Education Institutions experience pressure. This pressure is in shape of increase workload, time constraints, multiple roles and task complexities. Such pressure is ultimately shifted to the students, who are expected to meet the quality requirements (Alexander, 2000).

Previous studies for e.g. (Hamaideh, 2009; Khawaja, 2008; Kiselica, Baker, Thomas, & Reedy, 1994) identified certain factors like work overload, course requirements, financial issues, time management; role ambiguity, interactions with peers and faculty, social activities, adjustment to new campus environment and lack of support networks are the main stressors, which causes physical and psychological health problems and ultimately impede the students' academic performance. Apart from this other authors like Hartley Michael (2011) and Adams et al., (2008) found that stress and mental health problems impedes the academic performance of approximately a third of academic institute students. Stress can also cause physical sickness, insomnia, eating

disorders, anxiety and depression. Such studies strongly suggested that the problem of stress among students should be further investigated because stress and certain psychiatric morbidities have become an emerging issue in world of academia. It is therefore important to study these factors, so that their effect could be comprehended and possible solution could be formulated.

Keeping in view this issue, the current study has empirically studied the effect of perceived stressors and psychiatric morbidity on the academic performance of university students. In this regard COMSATS Institute of Information Technology, Attock was selected as special case because the Attock campus of COMSATS Institute of Information Technology is comparatively new born as it has recently completed its ten years of establishment. That is why this campus is still experiencing different types of problems. In this regard data was collected from 300 students through online questionnaire. The results of current study show that both perceived stressors and psychiatric morbidity had negative effect on the academic performance of students. It is therefore concluded that students' stress is a recognized workplace problem. It requires proactive actions as solution to be taken both at individual and institutional levels.

Keeping in view the above discussion, the current study has investigated following research question:

1. What is the relationship between prevalent stressors and psychiatric morbidities?
2. What is the relationship between prevalent stressors and psychiatric morbidities and students' academic performance?

These questions will be answered by testing the following hypotheses:

1. Psychiatric morbidities will be positively related with perceived stressors.



2. The prevalent stressors will be negatively related with students' academic performance.
3. The perceived psychiatric morbidities will be will be negatively related with students' academic performance.

Methodology

This section has discussed the methodology of current study.

Research design

A cross sectional research design was selected. The cross section study is preferred over longitudinal studies because it is time and cost effective, where it provides snap shot results (Cooper & Schindler, 2010).

Population and sampling

The Population of current study consists of students studying in three departments of COMSATS Institute of Information Technology, Attock. The details are given in Table 1.

Table 1: Population Distribution

Departments	Population	
	Male (N)	Female (N)
Computer Science	389	125
Management Science	150	90
Electrical Engineering	207	32
Mathematics	37	112
Total	783	359

It was not practically possible to collect data from all students, therefore two stages sampling technique was used. At first stage stratification was done on basis of gender and department. At second stage systematic sampling was used to select final sample. Two strata were made on basis of gender, i.e. Male and female. Four strata were made on the basis of departments, i.e. Management sciences, Computer Sciences, Electrical Engineering and Mathematics. Finally, systematic sampling technique was applied by selecting every third respondent from each stratum. The detail is given in Table 2.

Table 2: Sampling Distribution

Departments	Population	
	Male (n)	Female (n)
Computer Science	130	41
Management Science	50	30
Electrical Engineering	69	10
Mathematics	12	37
Total	261	118

Data collection and analysis

Data was collected through an online self administered questionnaire, which consisted of 49 items as shown in Table 3.

Table 3: The detail of questionnaire items

Variable	Scale source	No of Items
Demographic	---	07
Stressors		
(Work Load, Interpersonal Demands, Role Conflict & Ambiguity, Physical Workplace) Performance	Rao (2013)	15
(Environment Mobility, Learning Skills, Self-Determination Skills, Social Skills)	Functional Performance Rating Scale (2013)	15
Psychiatric Morbidity (Anxiety, Depression, Social Dysfunction)	Goldberg & Williams (1988)	12
Total		

The online questionnaire was circulated among students and their responses were online reordered. The data collation process was completed within two months. The collected data was initially screened for missing values and normality analysis. It was found that 79 questionnaires had missing values and normality issues, therefore such cases were deleted. The data was analyzed by using descriptive and inferential statistics. In this regard frequency tables were used to present demographic data and hierarchical multiple regression analysis was used to check the relationship between perceived stressors, psychiatric morbidity and academic performance of students.

Results

This section has discussed the results of study. The demographic data shows that majority of respondents were male (64.70%), unmarried (67.30%), 17 to 22 years old (71.70%) with at least intermediate level education (63.66%) as clear from Table 4. The results further show that department of Management Science (28.30%) and Electrical Engineering (31.70%) had majority of respondents. Such results mean that the respondents are in their early adult hood transition age, which is characterized by adoption to changes of life. Such age is more vulnerable to mental health problems as it is immature and transition age (Grant & Potenza, 2010).

Table 4: Demographic Profile of Respondents

	Variables	Number	Percentage (%)
Gender	Male	194	64.7
	Female	106	35.3
Age	Age 17 to 19 years	120	40.0
	20 to 22 years	95	31.7
	23 to 24 years	60	20.0
	Above 25 years	25	8.30
Marital Status	Married	98	32.70
	Unmarried	202	67.30
Educational Level	Intermediate	191	63.66
	Masters	109	36.34
Departments	Management Science	85	28.30
	Computer Science	55	18.33
	Electrical Engineering	95	31.70
	Engineering	65	21.66
	Mathematics	65	21.66

The multivariate analysis shows that the all types of stressors and symptoms of mental illness were positively related with each other. However, they were negatively related with academic performance of students. Table 5 shows that perceived stressors are positively related with symptoms of anxiety, depression and social dysfunction, where all stressors have cumulatively explained 15% of variance in symptoms of mental illness. Therefore, the first hypothesis has been accepted.

Table 5: Regression Analysis Results (Hypothesis 01)

	Anxiety	Depression	Social Dysfunction
Step 01	β	β	β
Gender	0.036	0.022	0.012
Age	0.032	0.009	0.019
Marital Status	0.081	0.087	0.017
Department	0.048	0.045	0.025
Step 02			
Gender	0.036	0.024	0.016
Age	0.024	0.007	0.014
Marital Status	0.076	0.081	0.022
Department	0.027	0.045	0.003
Workload	0.119**	0.127**	0.231**
Interpersonal Demands	0.125**	0.173**	0.121**
Emotional Demands	0.111**	0.235**	0.147**
R2 Step 01	0.019	0.025	0.099
R2 Step 02	0.125**	0.178**	0.185**
F Step 01	0.987	0.887	0.784
F Step 02	12.36**	10.72**	8.66**



a= Standardized β Coefficients; * $p < 0.05$; ** $p < 0.001$

Table 6 shows that that perceived stressors are negatively related with academic performance, where workload, interpersonal demands and emotional demands have explained 23% variance in the academic performance of students. The Standardized β Coefficients for workload is (-0.323**), where as for interpersonal demands it is (-0.187**) and for emotional demands (-0.122**). This means that perceived stressors are negatively related with academic performance. Thus the second hypothesis has been accepted.

Table 6: Regression Analysis Results (Hypothesis 02)

	Academic Performance	
	B ^a	t
Step 01		
Gender	0.012	-0.216
Age	0.012	-0.214
Marital Status	0.103	1.780
Department	0.123	1.023
STEP 02		
Gender	0.008	-0.161
Age	0.022	-0.435
Marital Status	0.074	1.458
Department	0.015	0.025
Workload	-0.323**	-5.620
Interpersonal Demands	-0.187**	-3.181
Emotional Demands	-0.122**	-2.282
ΔR^2 Step 01	0.011	
ΔR^2 Step 02	0.238**	
ΔF Step 01	1.101	
ΔF Step 02	0.235**	

a= Standardized β Coefficients; * $p < 0.05$; ** $p < 0.001$

Table 7 shows that symptoms of mental illness are negatively related with academic performance of students. The symptoms of mental illness have explained 32% of variance in academic performance of students. The Standardized β Coefficients for Anxiety is (-0.148**), where as for depression it is (-0.121**) and for social dysfunction (-0.222**). This means that symptoms of mental illness are negatively related with academic performance of students. Thus the third hypothesis has been accepted.

Table 7: Regression Analysis Results (Hypothesis 03)

	Academic Performance	
	B ^a	t
Step 01		
Gender	0.088	-0.221
Age	0.022	-0.230
Marital Status	0.025	1.298
Department	0.014	1.585
STEP 02		
Gender	0.008	-0.258
Age	0.023	-0.154
Marital Status	0.055	2.365
Department	0.024	0.257
Anxiety	-0.148**	0.235
Depression	-0.121**	-3.32
Social Dysfunction	-0.222**	-1.2554
ΔR^2 Step 01	0.012	
ΔR^2 Step 02	0.221**	
ΔF Step 01	1.244	
ΔF Step 02	0.325**	

a= Standardized β Coefficients; * $p < 0.05$; ** $p < 0.001$

Discussion

The current study aims at examining the effects of perceived stressors and psychiatric morbidity on the students' academic performance by taking COMSATS Institute of Information Technology, Attock as case study. The results show that both perceived stressors and psychiatric morbidity were negatively affecting the academic performance of students in such a way that the perceived stressors and psychiatric morbidity were positively related with each other. That is why their effect on academic performance was combined. The results of current study are in aligned with findings of previous studies. Eisenberg, Golberstein, & Hunt (2009) found that mental

illnesses like depression and anxiety were negatively affecting the Graduate Average Point and academic performance of university students in Michigan state of America. Similarly, McLeod, Uemura, & Rohrman (2012) found that psychiatric morbidities like attention problems, depression, delinquency, and substance use were negatively related with academic performance of American students. In another study Sreeramareddy et al., (2007) found that psychological morbidity, stressors and issues of quality of life had significantly negative effect on learning and academic performance of medical students in Nepal. The findings of these studies confirm that perceived stressors and resultant mental illness have significantly negative effect on the learning, academic performance and overall development of university students.

Conclusion

University students are valuable asserts of any country. The environment of modern universities has created different demands, which have made the life of student difficult. Students have to fulfill both academic and non academic requirements as a result of which they are subjected to different types of stressors. Such stressors ultimately develop some mental illness as a result of which the academic and non academic performance of students is negatively affected. The findings of current study have supported this fact. The findings revealed that both perceived stressors and psychiatric morbidities were negatively related with students' academic performance. It is therefore concluded that perceived stressors and psychiatric morbidities are recognized work place hazards and they have devastating effects on the academic performance of universities students. Furthermore, it has been concluded that perceived stressors and psychiatric morbidities require proper management both at individual and institutional levels. At individual level the students should get enough awareness about the causes and symptoms of mental illness. On other side at institutional level the academic staff members and administration of university should provide a favorable working environment to the students and their problems should be properly addressed and solved, so that students could be saved from the devastating effects of mental illness. In this way we can give mentally fit and academically brilliant student to society.

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