MODERATING ROLE OF RESILIENCE AND SELF EFFICACY ON THE STRESS AND PERFORMANCE RELATIONSHIP AMONG UNIVERSITY STUDENTS

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ABSTRACT

Universities are strategic assets of a country. Recently universities in Pakistan have experienced changes; resultantly students are exposed to different stressors that affect their academic performance. The resources have unique position in stress-performance relationship because resources buffer the negative effects of stressors. Keeping in view vital role of resources, the current study has examined moderating role of resources (resilience and self efficacy) on the stress and performance relationship. In this regard, students of COMSATS Institute of Information Technology, Attock were selected as special case. The data were online collected from 415 students. The results showed that majority of respondents were male (73%), single (92%), having intermediate level degrees (76%). Department wise Computer Science (38%); Management Science (25%); Electrical Engineering (20%) and Mathematics (16%). The multivariate analysis showed that there was a negative relationship between stressors and students' performance, whereas the resources moderated the relationship between stressors and performance. The resources were also positively related to performance. It has been concluded that the problem of student stress is recognized hazard and should be dealt in proactive way by providing sufficient resources to the students. Otherwise it can have overwhelming effects on performance of students and growth of universities as whole.

Keywords: *Stressors, Resources, Performance & Universities*

INTRODUCTION

Universities are strategic assets of any country as they have long-standing role in socio-economic development of any country (Burchi, 2006; Goldstein & Drucker, 2006). Universities also act as source of alleviation of the unemployment rate by imparting quality education and skills (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). Nowadays the universitiesare being evaluated against world standards in regard to quality of education, values, costs, pace and services (Hazelkorn, 2011)**.** These standards are sometimes difficult to comply, resultantly universities experience pressure. Such pressure is ultimately shifted to students, who are expected to meet the quality requirements (Alexander, 2000)**.** Previous studies for e.g. (Hamaideh, 2009; Khawaja, 2008) identified certain

factors like work overload, course requirements, financial issues, time management, role ambiguity, adjustment to new campus environment and lack of support as stressors that impeded the students' performance. Like the rest of universities of Pakistan, the COMSATS Institute of Information Technology, Attock is also trying to meet higher education needs of country by providing quality teaching in order to meet the technological and personnel needs of country. It is therefore, important to study these factors, so that their effect could be comprehended and possible solution could be formulated. Previous research suggests that "Resources" can buffer the effect of stressors Resources are factors that have value in their own or they can help in attaining certain goals. Thus, resources can help in relieving the negative effects of stress (Bakker & Demerouti, 2007). Resources like resilience, self efficacy, social support and autonomy can moderate the relationship between prevalent stressors and students' performance. Therefore, all universities have to evaluate its perceived stressors in order to provide their students with the appropriate resourceful methods to cope with stress.

LITERATURE REVIEW

As earlier discussed, the students are exposed to wide variety of problems due to changes in universities of Pakistan. These problems are perceived by students as stressors. The findings of previous research show that students are exposed to different stressors, e.g. Campbell, Svenson, & Jarvis (1992) found that student experience stressors like lack of resources, tight working schedule and work load. Similarly Ross, Niebling & Heckert (1999) found that poor life habits and changes in responsibilities act as stressors. Such stressors have negative effects, for e.g. stress reduce motivation of students (Struthers, Perry & Menec, 2000), it impede performance and work engagement (Schaufeli, Martínez, Pinto, Salanova, & Bakker, 2002). The wide spread occurrence of stress among students in past has raised questions regarding determining its current position, thus identifying a serious research gap. Keeping in mind this gap the current study will initially examine the relationship of prevalent stressors with performance of students at COMSATS Institute of Information Technology, Attock.

Researchers in past have identified various types of resources that can help in reducing negative effects of stress in academic setting. For e.g. Bovier, Chamot, & Perneger (2004) found that certain internal resources and social support potentially acts determinants of mental health among students. Similarly other researchers have identified other resources, for e.g. Self-Esteem, (Friedlander, Reid, Shupak & Cribbie, 2007), self efficacy (Han, 2005) and locus of control (Abouserie, 2014) e.t.c. Keeping in view important role of resources, Hartley (2011) suggested that more research is needed to examine the usefulness of resources as it relates to students' academic performance. Moreover it is still not known that what is current status of effect of resources in academia of Pakistan. Thus identifying a research gap. In order to fill this gap, the current study has examined the moderating role of four types of resources on the stressors-performance interaction.

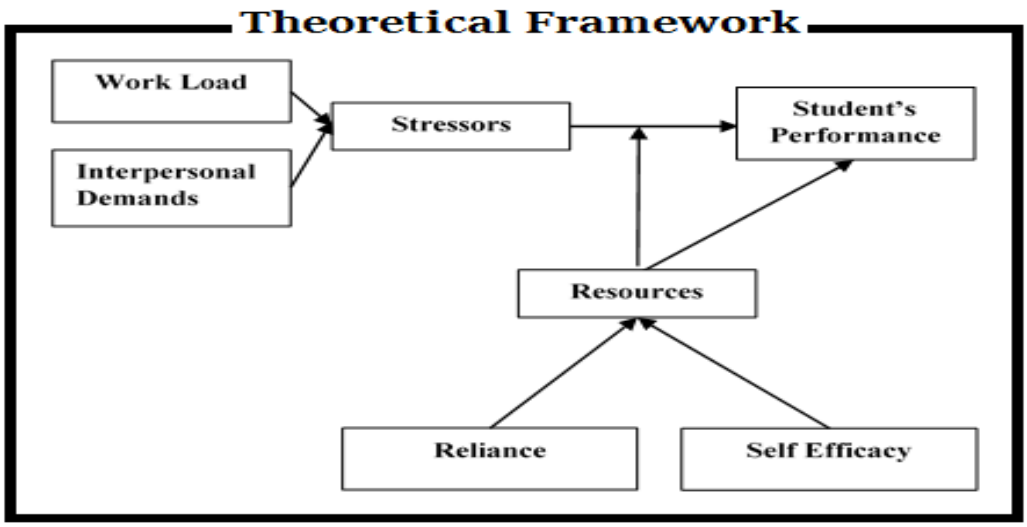
Research Questions

Following are the research questions of the current study:

- What is the relationship between prevalent stressors and students' performance?
- Are the Resources moderating the relationship between prevalent stressors and students' performance?

Research Framework and Hypotheses

The research framework of current study is consisted of two major parts. The first part is about main effect analysis, i.e. interaction between prevalent stressors and performance, whereas the second part is about moderation analysis, i.e. the interaction between resources, stressors and performance.



Based on the types of interactions between variables in the research framework, the following hypotheses have been formulated:

H_1: The prevalent stress will be negatively related with students' performance.
H_2: The Resources will moderate the relationship between stressors and students' performance.

RESEARCH METHODOLOGY

Quantitative techniques were applied in current study because it was cross sectional case study research by using of self administrated questionnaire. Population (N= 1675) of the study consists four departments of COMSATS Institute of Information Technology, Attock. A two stages sampling technique was used; at first stage stratified and at second stage systematic sampling used to select final sample of (n=566). Two strata were made on basis of gender, i.e. Male and female. Later on four strata were made on the basis of departments (Management sciences,

Computer Sciences, Electrical Engineering and Mathematics). After stratification, systematic sampling technique was applied by selecting every 3rd respondent from each stratum. The details are given in table 01

Table 01 Population and Sampling detail

Department	**Population**		**Sample**	
	Male (N)	**Female(N)**	**Male (n)**	**Female(n)**
Computer Science	589	196	198	66
Mgt Science	250	125	85	43
Mathimatics	37	139	13	47
E. Engineering	307	32	103	11
Total	1183	492	399	167

A self administered online questionnaire was designed for the purpose of data collection. The questionnaire consisted of Demographic data; Workload and Interpersonal Demands by 08 items of Rao's (2013) of Academic Stress Scale. Performance by 10 items of Functional Performance Rating Scale (2013). Resilience by 04 items of Connor's (2003) Resilience Scale. Self Efficacy by 04 items of Schwarzer & Hallum's (2008) self efficacy Scale.

RESULTS OF STUDY

The demographic characteristics of respondents. The results show that gender wise there were 74% male respondents, while 26% female respondents. Marital status wise, the majority of students are single, i.e. 92%. Age wise, the majority (94%) of students are within the age of 20 to 30 years. Researchers have found that young people are more prone to stress because they still struggle for getting certain position in life and career. On the other side they also have low stress coping capacities, therefore the chances of developing stress induced health related problem increases(McNamara, 2000). Department wise there are more respondents (38%) in department of Computer Science compare to other department like Management Science (25%), Electrical Engineering (20%) and Mathematics (16%).

The first hypothesis was tested by Hierarchical Multiple Regression Analysis. Table 4 shows that in the first step the control variables explained negligible amount (1.8%) of the variance in the dependent variable, which means that demographic variables have no effect on the dependent variable. In the second step, the prevalent stressors were entered into the model as independent variables. The results show that they had explained 62% of variance independent variable, moreover, such relation was also significant at p=0.001 level. The standardized beta coefficients were significant and negative, which mean that Workload (β= -0.206), Interpersonal Demands (β= -0.152)were negatively related to performance. Hence, the first hypothesis was accepted.

Tables 02 Hypothesis 01 - Regression Analysis results for first hypothesis

Variables	β[a]	t-value
Step One		
Gender	0.010	0.159
Marital Status	-0.006	-0.065
Age	0.145	1.255
Education	-0.184**	-2.100
Department	0.033	0.563
Step two		
Gender	0.002	0.050
Marital Status	-0.018	-0.303
Age	-0.038	-0.527
Education	-0.018	-0.333
Department	-0.028	-0.781
Work Load	-0.206*	-3.894
Interpersonal Demands	-0.152*	-3.231
STEP one R^2 : 0.018		
STEP two R^2 : 0.62 *		
STEP one F value : 1.122		
STEP two F value : 125.693*		

a= standardized beta coefficient; * significant at p: 0.001; **significant at p: 0.005;
b= Dependent variable: Performance

The second hypothesis was also tested by Hierarchical Multiple Moderation Regression Analysis as clear from Table 03. In the first step the control variables explained negligible amount (1.9%) of the variance in the dependent variable, which means that demographic variables have no effect on the dependent variable. In the second step, the Work Load and Interpersonal Demands were entered into the model as independent variables.

The results show that it had explained 52% of variance independent variable, moreover, such relation was also significant at p=0.001 level. The beta coefficients for control variables were still insignificant. In the third step, the Resilience and Self Efficacy were entered into the model as moderator variables. The results show that they had explained 58% of variance independent variable, moreover, such relation was positive and significant at p=0.001 level. In the fourth step, interaction effect as the products of Stressors and Resources were entered into the model.

The results show 48% of variance was explained in the dependent variable. The standardized beta coefficients for the interaction effect of the workload* resilience (β=0.072); workload* self-efficacy (β=0.084); interpersonal demands* resilience (β=0.023); interpersonal demands* self-efficacy (β=0.032) were positive and significant at p=0.005 level. This means that full moderation had occurred, where as this moderation was positive. Thus, the second hypothesis was also accepted.

Tables 03 Regression Analysis results for second hypothesis

Variables	βa	t-value
Step One		
Gender	0.010	0.159
Marital Status	-0.006	-0.065
Age	0.145	1.255
Education	-0.184**	-2.100
Department	0.033	0.563
Step Two		
Gender	0.021	0.458
Marital Status	0.034	0.482
Age	0.027	0.307
Education	-0.038	-0.573
Department	0.008	0.194
Work Load	-0.666*	-15.400
Interpersonal Demands	-0.326*	-7.262
Step Three		
Gender	0.020	0.546
Marital Status	-0.013	-0.222
Age	-0.031	-0.441
Education	-0.007	-0.128
Department	-0.015	-0.432
Work Load	-0.355*	-8.574
Interpersonal Demands	-0.303*	-7.696
Resilience	0.277*	6.763
Self Efficacy	0.359*	8.356
Step FOUR	-0.589*	-12.807
Gender	0.019	0.534
Marital Status	-0.001	-0.023
Age	-0.034	-0.485
Education	0.000	-0.009
Department	-0.017	-0.502
Work Load	-0.343*	-7.681
Interpersonal Demands	-0.316*	-6.262
Resilience	0.291*	6.980
Self Efficacy	0.352*	8.217
WL*RES	0.072**	1.786
WL*SE	0.084**	2.050
ID*RES	0.023**	3.528
ID*SE	0.032**	1.419
STEP one R^2 : 0.019	STEP one F value : 1.122	
STEP two R^2 : 0.52*	STEP two F value : 247.165	
STEP THREE R^2 : 0.58*	STEP THREE F value : 88.094	
STEP FOUR R^2 : 0.480**	STEP FOUR F value : 12.686	

a= standardized beta coefficient; * significant at p: 0.001; **significant at p: 0.005;
Dependent variable: Performance; WL: Workload; ID:
Interpersonal Demands; RES: Resilience; SE:Self Efficacy

DISCUSSION

The findings of current study revealed that there is negative relationship between prevalent stressors and performance. This finding is conforming that students within COMSATS Institute of Information Technology, Attock are experiencing stressors during work, where these stressors are having negative effect on their work related performance. Such findings are in concurrence with previous finding for e.g. Britz & Pappas (2010) conducted study on the sources of stress among university students in Virginia, USA and found that university students were suffering from variety of stressors. Similar findings were generated by studies like (Bayram & Bilgel, 2008; Clarke & Ruffin, 1992; Eisenberg, Gollust, Golberstein, & Hefner, 2007). In fact stressors are unwanted factors that are existing within the campus environment. These unwanted factor either acts a barrier to smooth running of routine activities or they causes physical and psychological symptoms among the affected students, resultantly they are unable to performance their academic and non academic activities. The findings of current study revealed that resources possessed by student of COMSATS Institute of Information Technology, Attock were positively related with their performance. In fact resources built the stress coping capacities of students in such a way that they are in better position to fight the un wanted demands. The resources have one another function, i.e. they boost up the energies of students resultantly they perform well. The positive relationship between resources and performance has been extensively documented in existing literature, for e.g. Adeogun(2008), Chemers, Hu, & Garcia (2001) and Malecki & Demaray (2006).

CONCLUSION

It has been concluded that the problem of student stress is recognized hazard at COMSATS Institute of Information Technology, Attock and should be dealt in proactive way by providing sufficient resources to the students. Proactive steps need to be taken both at individual, institutional and policy levels. At individual level, the students should try to acquire awareness about the nature, causes and consequences of stress. The students should also try to appropriately use the accessible resources. Whereas at institutional and policy levels, the COMSATS Institute of Information Technology, Attock and the Higher Education Commission should start broad range of policies and programs to manage the problem of stress in universities of Pakistan, particularly at COMSATS Institute of Information Technology, Attock. In this way COMSATS Institute of Information Technology, Attock and other universities of Pakistan could be saved from the devastating effects of stress.

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