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RELATIONSHIP BETWEEN STRESSORS AND STUDENTS' ACADEMIC ACHIEVEMENTS WITH MEDIATION OF COPING STRATEGIES: A SURVEY OF GOMAL UNIVERSITY, KHYBER PAKHTUNKHWA, PAKISTAN

Abstract. The current study focuses on the relationship between stressors and academic achievement of students with the mediating of coping strategies. Students of Gomal University Dera Ismail Khan (D.I.K) were participated in the study. A sample of 389 students was selected through stratified sampling method. A self-developed questionnaire was distributed among the students for data collection. Regression techniques and Hayes (2015) process macro was used for mediation analysis. The result of the study indicates that coping strategies partially mediates in the association between stressors and students' academic performance.

Keywords: stressors, academic achievement, coping strategies

INTRODUCTION

The term ‘stress’ refers to some physical, mental and emotional strains on an individual which produced due to reaction of some situation that a person feels threatened.(Farhan & Khan, 2015). Now a days, every person encounters stress. Some stress is beneficial and assist to drive towards the achievement is called ‘eustress’ whereas some stress are negatively effect on the individual mental, physical and emotional part (MoghimIslam & Hoseini, 2013). Research evidence indicates that students are also experience stress during their academic period. There are many factors related to students’ stress including financial, health, peer relationship, related departments, personal or family and environmental (Kumar & Jejurkar, 2005). Research Studies indicates that a stressful condition of the students leads to mental, physical and emotional disturbance which ultimately influence of their academic performance. Low self-esteem, metal health issues, frustration and Polyphagia issues developed due to constant stress which ultimately influences the performance of the students (Farhan, & Khan, 2015). Sometime stress can also enhance the performance of students and one the reasons for this could be approach of the students to coping with stress (Najafi et al., 2018). In higher Education Institutions such as university where the burden placed on students’ shoulder due to limited time, semester system, assignments, tests and examination. Continuous stress among students develops loss of energy, elevated blood pressure, cause depression and nervousness (Jun & Jo, 2016). research studies indicates that there are different coping strategies used by the students in higher education institutions to decrease the level of stress including problem-focused coping strategies, goal-coping strategies and problem- avoiding strategies. So, the present research paper was examined the mediating role of scoping strategies in the association of stressors with students’ academic achievement. Following objectives were made to achieve:-

1. To find out the association between stressors and academic achievements of learners.
2. To investigate the most dominant stressors which affect the students’ academic score.
3. To find out the mediating role of scoping strategies in the association of stressors with students’ academic score

Significance of the Study

There are very limited researches have been conducted regarding association between stressors and students’ academic score with mediating role of coping strategies. Therefore, this study is helpful for stress students are developed or improve coping strategies will able to resolve their problems. Through this study, students are able to understand and identify the nature of the stress. Moreover, the current study also helpful for students to identify type of stressors and guide students to manage their stress.

LITERATURE REVIEW

According to Hussain, Kumar and Hussain (2008) usually stress arises when expectation exceeds than available resources to students which they adapts and then such stress negatively affects the students’ academic achievement. According to Gustems-Carnicer et al. (2019) students experience different type of stress specifically

in higher education institutions which categorized into individual stress, group stress, organizational and environmental stress. So, there are many empirical research studies have been established results that stress has influence on the learners' education life. It often declines the students' academic progress or abandonment of studies or negative consequences (Hoferichter et al., 2014). A meta-analysis was conducted by Hancock et al. (2007) which examined 562 research studies and found positive association between stress and performance of learners ($r=-.18$). Another meta-analysis was conducted by McCarthy and Goffin (2005) and found that stress has negative association with performance of students ($r=-.23$). Such results infer that stress arises among students then academic achievement decreases (Genc, 2017).

Academician agreed that stress is part of students' life and its influence on the students' studies and students' coping strategies is helpful to improve their academic life (Agolla & Ongori, 2009). Experiences of students indicates that high academic stress produced due to limited time, class competition, peer relationship, covering huge syllabus and policies of universities (Omomia et al., 2014). A study conducted by Kumar and Jejurkar (2005) and concluded that academic stress is one of the prime factors which affect their performance at university. Students confront different kinds of stress including environmental stress, peer relationship stress, social behavior and adjustment in university environmental and personal stress. Wilks (2008) further added that high expectations of parents, lengthy curriculum, physical environment, unhealthy student-teacher interaction, teachers' attitude, hard and fast rules of university.

Association between Stressors and academic achievement with Mediating of Coping Strategies

Academic Stressors refers a mental distress about some anticipated frustration link with failure in academic career. There are some kinds of stressors which associated with students' academic such as Environmental, individual and group stressors. Such stressors are usually faced by the students in the academic institutions which cause mental distress and ultimately influence on their learning (Alsulami et al., 2018). There is common conception that stress has negative association with academic score of the students. In other words, if stress rises, the students' performance in exam declines. Many mediators involve in reducing the stress level in students particularly in tertiary education (Hsieh et al., 2012). Transactional theory of stress founded by Lazarus and Folkman provided a special attention to contribution of coping strategies which lead to a change an event in individual favor comprehensively. Individual used different kinds coping strategies to handle the stressors such as Problem-focused coping strategies, emotion-focused strategies, avoiding strategies and social gathering strategies (Alsulami et al., 2018). In Problem focus strategies, one's prime emphasis on the problem being caused distress and handle such problem accordingly. Emotion-based coping strategies regulates the one's emotions, uphold the hope and refuse accept the worst. Avoiding strategies refers to one's cognitive and behavioral avoidance and rejects the existence of the problem (Wang & Saudino, 2011). Results of different studies suggest coping strategies play vital role in declining the stress among students. Students who use coping strategies to handle problem reduces their stress level and secured high marks. Emotion-focused coping is one of the most is significantly

mediator in the association between stress and learners' academic performance (Genc, 2017).

Conceptual Model of the Study

According to Osanloo and Grant (2014) conceptual framework explains the association between the prime constructs, ideas or research variables in a logical manners to provide the visual angle in statistical perspective. A study conducted by Khan, Altaf and Kausar (2013) found significant association between stress and students' academic achievement. Moreover, Gustems-Carnicer et al. (2019) found that coping strategies partially mediates in the association between academic stress and academic score. On the above results of different empirical studies, following research hypotheses were generated:

H₀₁ : Stressors has significant impact on students' academic achievement.

H₀₂ : Different kinds of Stressors has significant impact on students' academic achievement.

H₀₃ : Coping strategies play significant role in the association of stressors with students' academic score.

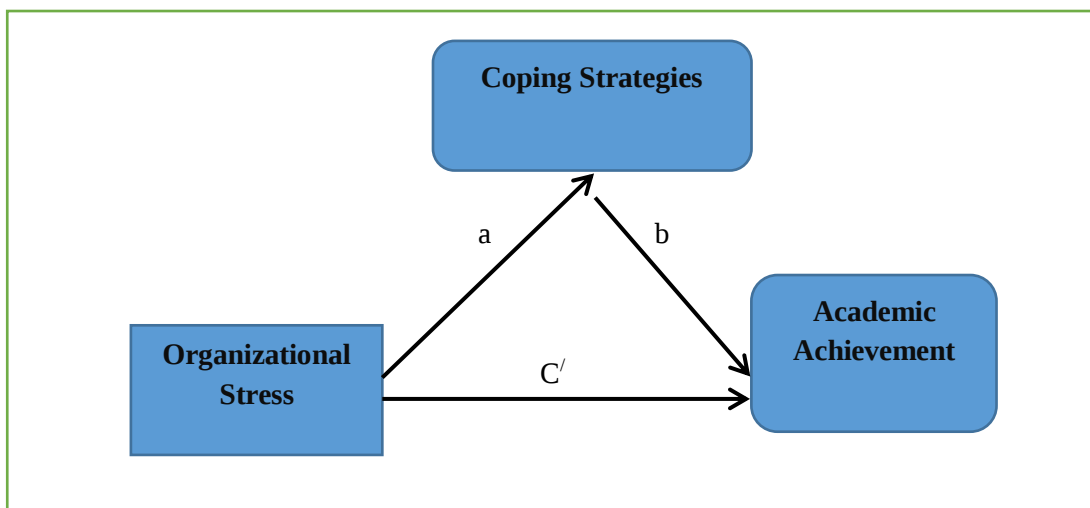


Figure: Research Model

METHODS AND MATERIAL

The current study was quantitative research approach in nature and therefore survey research design was applied. There are 13851 (7621 male and 6230 female) students are enrolled in Gomal University, Dera Ismail Khan (D.I.Khan). A sample of 389 (214 male and 175 female) students was taken in the study through stratified sample technique. Sample size was calculated by using Yamane (1967) formula. A self-developed questionnaire was used for the purpose of data gathering. Four types of stressors contained in the research tool including individual stressors (6 items), group stressors (5 items), organizational stressors (8 items) and environmental stressors (5 items) whereas coping strategies contained 14 items. Validation of the questionnaire was done through Index-Objective-Congruence (IOC) while reliability of instrument

was calculated though Cronbach's Alpha. Table-1 indicates that the estimated the sample size, score of IOC and reliability score.

Table 1 Sample Size, IOC and Cronbach's Alpha Score

Research Variables	IOC (including low and high values)	Sample Size (n)	Cronbach's Alpha
Individual Stressor	0.7-0.9	$n = \frac{N}{1 + Ne^2}$	.873
Group Stressor	0.8-1.0		.786
Organizational Stressor	0.6-1.0	$\frac{13851}{1 + 13851(0.5)^2} = 389$	.865
Environmental Stress	0.5-0.9		.923
Coping Strategies	0.5-0.8		.806

DATA ANALYSIS

Researcher used Linear Regression and multiple regressions to test the first and second hypotheses respectively. For mediation analysis, researcher used Baron and Kenny's Model to test the third hypothesis through Hayes (2015) method.

Data Normality Tests

Research Variable	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Stressors	.035	388	.200*	.991	388	.543
Academic Achievement	.039	388	.200*	.990	388	.504
Coping Strategies	.036	388	.200*	.993	388	.818

Table 2 shows the Kolmogorov-Smirnov (K-S) and Shapiro Wilk (S-W) test was applied to determine that a sample is come from particular distribution and both test are used to test the normality of data set. The above table reported that value of K-S ($p=.200>.05$) and S-W ($p=.543>.05$) for stressors, K-S ($p=.200>.05$) and S-W ($p=.504>.05$) for academic achievement and K-S ($p=.200>.05$) and S-W ($p=.818>.05$) for coping strategies. Thus, it is concluded that data found normally distributed for all research variable.

Table 3: H₀₁: Stressor has no significant impact on students' academic achievement.

IV	R	R ²	Adjusted-R ²	F	B	Sig.	Durban-Watson
Stressors	.682 ^a	.466	.464	287.54	-.846	.000	1.70

Dependent: Academic Achievement

Table-3 reveals regression output regarding impact of stressors on the academic achievement of students. The table shows that $R^2=.466$ which depicts that 46% change occur in academic achievement due to stressors. Moreover, the table indicates that value of $F=287.54$ which provide strong evidence against the rejection of null hypothesis. The value of $p=.000<.05$ which shows that null hypothesis is hereby

rejected. The value of negative beta (-.846) indicates that a single unit increase in independent variable (stressor) then .486 unit decrease in the dependent variable (academic achievement). The score of Durban Watson (1.70) shows no autocorrelation was found between the variables.

Table 4: H₀₂: Different kinds Stressors has no significant impact on students' academic achievement

IVs	<i>R</i>	<i>R</i> ²	<i>Adjusted- R</i> ²	<i>F</i>	<i>B</i>	<i>VIF</i>	<i>Tolerance</i>
Individual Stressor				124.14	- .733	.583	1.714
Group Stressor	.777 ^a	.603	.598		- .659	.436	2.293
Organizational Stressor					- .780	.423	2.366
Environmental Stressor					- .896	.691	1.446

Dependent: Academic Achievement

Table-4 shows the regression outcome regarding impact of different kinds of stressors on the students' academic achievement. The table shows that $R^2 = .603$ which depicts that 60% change occur in academic achievement due to stressors (individual, group, organizational and environmental stressors). Moreover, the table indicates that value of $F = 124.14$ which provide strong evidence against the rejection of null hypothesis. The value of $p = .000 < .05$ which shows that null hypothesis is hereby rejected. Different value of negative beta value (-.733) for individual stressor, -.659 for group stressor, -.780 for organizational stressor and -.896 for environmental stressor generate some degree of contribution in variable (academic achievement). The table also shows that all the values of VIF and tolerance falls in acceptable range, so there is no multicollinearity issue among the variables.

Table 5: H₀₃: Relationship between stressors and students' academic achievement with mediating role of coping strategies

Steps	β	<i>p</i>
Step-1		
Association between Stressor & Academic Achievement	-.622	.000
Step-2		
Association between Stressor and Coping Strategies	.846	.000
Step-3 & 4		
Mediation of coping strategies in relationship between stressor and academic score	.852	.000

Table-5 indicates association between stressors and students' academic achievement by taking coping strategies as mediating variable. The table illustrates the

Baron and Kenny (1986) four step model. The table reveals that association between stressor and academic achievement is found significant ($\beta = -.622, p = .000$) which satisfied the first condition. In the 2nd step, it is found that significant association between stressor and coping strategies. ($\beta = -.846, p = .000$) which shows that coping strategies decrease the stress level in students. The third and fourth step indicates that coping strategies partially mediates in association between stressor and students' academic achievement ($\beta = .853, p = .000$)

DISCUSSION

In the current research, the main key focuses on the relationship of stress with academic score of the students with mediation of coping strategies. The study's finding reveals that stressor has significant impact on learners' academic score. The study's finding is supported by Pascoe, Hetrick and Parker (2020). They explored that stress had negatively influence on the students' learning capacity and academic progress at school. It causes mental health problems among students which affect the students' performance. The result of the study depicts that coping strategies had partially mediates in the association between stressors between students' academic achievement. Same result was mentioned by Genc (2017). He found that coping strategies decrease the students' level of stress and increase the academic progress.

CONCLUSION AND RECOMMENDATIONS

The key objective of the study was to examine the role of coping strategies in the association of stressors with students' academic score. The study concluded that coping strategies partially mediates in the association between stressors and students' academic performance. Students secured low grades due stress environment in the institutions. In other words, negative association between stressors and students' academic achievement. High stress causes low grades. The current study concluded that when students using different strategies to cope with different kind of stressors then students perform better in their academics. The present study recommended that students may use different coping strategies to reduce their stress level. For this purpose, HEIs may arrange workshops and seminars regarding awareness about stressors and knowledge about coping strategies to deal with such stressors.

RESEARCH IMPLICATIONS

The current research has theoretical and practical implications as well. The results of the current study contribute in the existing literature in perspective of role of coping strategy as mediator in the association between stressors and learners' academic performance. Moreover, administrative bodies, faculty members of the Gomal University can provide psychological counseling services for students who have high level of stress.

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**ЗВ'ЯЗОК МІЖ СТРЕСОРАМИ ТА АКАДЕМІЧНИМИ
ДОСЯГНЕННЯМИ СТУДЕНТІВ З ПОСЕРЕДНИЦТВОМ СТРАТЕГІЙ
ПОДОЛАННЯ: ОПИТУВАННЯ ГОМАЛЬСЬКОГО УНІВЕРСИТЕТУ,
ХАЙБЕР-ПАХТУНХВА, ПАКИСТАН**

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Анотація. Це дослідження зосереджено на зв'язку між стресорами та академічними досягненнями студентів з посередництвом стратегій подолання. У дослідженні взяли участь студенти Гомальського університету Дера Ісмаїл Хан (D.I.K). Вибірка з 389 студентів була відібрана методом стратифікованої вибірки. Для збору даних серед студентів було розповсюджено самостійно розроблену анкету. Для аналізу посередництва використовувалися методи регресії та макропроцес Хейса (2015). Результати дослідження показують, що стратегії подолання частково опосередковують зв'язок між стресорами та академічною успішністю студентів.

Ключові слова: стресори, академічні досягнення, стратегії подолання.

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