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EFFECT OF EMOTIONAL INTELLIGENCE ON STRESS OF UNIVERSITY STUDENTS

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Abstract

The present study was planned to investigate the relation between emotional intelligence and students' stress level. This study helped in achieving the main objectives related to measurement of emotional intelligence of students of three public sector universities, their stress scores and finally the impact of emotional intelligence on stress among these university students. In this regard, pilot testing was performed on the sample of 80 university students to determine the psychometric properties. The researcher distributed 800 questionnaires while received 738 filled questionnaires were received from sampled students of all three northern area universities. For the collection of data, Goleman's Mixed Model of Emotional Intelligence was used to measure emotional intelligence. A questionnaire was developed consisted of 35 items and five sub-scales as Self-awareness, managing emotion, motivating oneself, empathy and Social Skills in addition to this for measurement the stress of university students 7 item. Self-Awareness (SA) and Empathy (E) abilities have statistically significant negative impact on their stress, whereas Managing Emotions (ME) ability and Motivating Oneself (MO) ability statistically non-significant negative impact on their stress. Social Skill (SS) of Emotional Intelligence (EL) positively impact the stress of students however this impact is not statistically significant.

Keywords: Emotional Intelligence, Self-awareness, Managing Emotion, Motivating Oneself, Empathy, Social Skills and Stress

INTRODUCTION

Goleman (1995) put forward the idea of Emotional Intelligence (EL) in the form his model that personality's traits are combined and then Salovey and Mayer's gave their model (Mayer et al., 2008). Ackley (2016) argues that although Goleman's model of EI was quite appealing for the public, however some critics declared that his scientific method was not strong. However, Goleman's mixed model was considerably recognized in leadership development. As according to Ackley (2016), "he is an unusual psychologist" who can write about psychology is such a way that strangers to this profession can easily understand. As compared to other two types EI model is more related to self-perception (Qualter et al., 2011). Furthermore, Emotional Intelligence is more concerned with the traits related to make personality order at lower levels (Petrides, 2010). It holds that there are differences within these models, EI is inclusive of development and native ability (Ackley, 2016).

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During review of literature, it is observed by Cazan and Năstasă (2015) and Pertegal-Felices et al. (2014). That there is a connection between Emotional Iintelligence (EL) and burnout for the students studying in university education institutions. The high EI perceived scores of university students are associated with low stress score of stress (Cofer et al., 2018).

The main objective of this quantitative research was to find evidence required to prove with some experimentation that through controlling stress and developing emotional intelligence to improve retention university students. This evidence approved that there is a strong predictive relationship between stress and EI among university level students. The study was conducted in Southeastern University situated USA. The findings of research conducted by Delgado et al. (2017), suggest that students having reduced levels of EI were more helpless to bear stress as compared to the students having high scores of EI (). Thus, this study investigated the construction of EI with respect to stress and abilities of university students. The relationship between these variables is significant in determining and understanding of Emotional Intelligence (EI) in university education. As a result, the improved scores of EI helps educators for the development of collaborative interventions that can improve the clinical experiences.

According to Tedeschiand Kilmer (2005), stress plays an important role in triggering the negative experiences which can accompany biochemical, behavioural and physiological changes. On the other hand, others believe that stress can be conceptualized as a positive experience contributing growth and development. However, there are other opinions as well where it is proposed that the term stress is quite subjective and instead of it other terms stressor can be used, described as perceived or real demand on physical or mental state, which involves physical and emotional responses to the need (Blonna, 2007). It is further argued through extensive research that stress reactivity to the stressor can vary among people (Lazarus, 1998; Telch et al., 2012; Vollrath, 2001).

RESEARCH QUESTION

What are the effects of emotional intelligence on the stress of students?

This study was also influenced by the theory of EI. As mentioned previously, EI models have developed and advanced within the past 50 years. The major constructs of these models are trait, ability and mixed models. EI is perceived as a potential that helps in perception of emotions and enables to differentiate between them. As a result, this information is used to control behavior. The capability-based model of EI can be compared with other models with regards to the ability of individual in it. EI can better be explained as an attribute which is described by self-reflection within lower-level personality traits of an individual (Petrides, 2010). Therefore, EI is considered part of the individual's personality. There are various distinct views regarding the definition of EI. Most scholars believe that three exceptional thoughts and perceptions like EI, IQ and personality are very important characteristics. Goleman (2006) put forward the mixed model of EI which EI is based on different abilities and traits. These models also portrayed and discussed in detail. However, it is significant to note that EI for this study is based on EI theory presented by Salovey and Mayer.

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RESEARCH METHODOLOGY

As discussed earlier prime focus of this study was to analyse the potential effect of EI on stress of the students. For this study, a cross-sectional, non-experimental and predictive correlational design is used. As Boet et al (2012) implies that a quantitative methodology is mostly used for university education literature. In quantitative research, numerical data are generated to measures objectively the targeted variables (Bloomfield & Fisher, 2019). In addition, the significance of cross-sectional research lies in the fact that it provides a “snapshot of the outcome and the characteristics associated with it, at a specific point in time” (Levin, 2006 p. 24). On the other hand, experimental research involves manipulation of data (Babbie, 2016).

RESEARCH DESIGN

The researcher opted for a quantitative research instead of other approaches as results can be inferred from larger number of participants. In this study, quantitative non-experimental predive correlational research design was used.

POPULATION OF THE STUDY

Population of the study was comprised of all students studying in 6th or onward years of public sector universities located at Northern areas of Pakistan. Three public sector universities in northern areas are recognized by HEC having 7625 students. Names of the universities are Karakoram International University (Gilgit), University of Baltistan (Sakrdu) and University of Chitral.

SAMPLING

Sample of the study was comprised of university students studying in 6th semester and onward. Convenience sampling was used to collect data from three northern area universities. The researcher distributed 800 questionnaires while received 738 filled questionnaires were received from sampled students of all three university.

RESEARCH INSTRUMENTS

A questionnaire is regarded as a written document that is created by a researcher and filled out by study participants. The researcher used standardized scales as the tool for gathering data in this investigation.

The Self-Rated Emotional Intelligence Scale having 35 item was used to assess the EI of the participating students. The SREIS measures self-awareness (SA) ability, managing emotions (ME) ability, motivating oneself (MO) ability, empathy (E) ability, and social skill (SS) ability having seven items influenced the criterion variable indicated as stress in both one and others. Respondents may assess themselves on a 6-point Likert scale on both scales. A scale was used to gauge the stress of the university students.

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Based on the study's goals and other comparable research on emotional intelligence abilities and stress with their significance in addressing psychological issues, the data gathering methods were chosen.

Pilot Testing

The test population for the survey was not a sample. To ensure the clarity, readability, and quality of the research questionnaire, fifty (80) respondents who were enrolled in public sector universities in northern Pakistan were chosen at random for a pilot study. The respondents were asked to comment and offer suggestions for the tool's improvement. Their recommendations were acknowledged and taken into account.

Validity of the Instruments

According to Brains et al. (2011), the degree to which a notion, inference, or measurement accurately and appropriately depicts the real world is known as its validity. In research, validity is viewed as being equivalent to accuracy. The degree to which the questions and themes seem acceptable to a panel of evaluators with excellent understanding of the area under investigation or a panel of related field specialists is referred to as content validity (Korroch et al., 2005). An expert panel from the University of Haripur's Department of Education validated the study's standardized tool as a result. In order to assure content validity, a few test items were altered on the basis of their recommendations/proposals.

RELIABILITY OF THE INSTRUMENTS

By calculating Cronbach's alpha, the validity of the scales employed in this study was assessed. The result was found appropriately according to the range. Cronbach's alpha was 0.813, which is satisfactory for this research investigation. For the Self-Rated Emotional Intelligence Scale (SREIS), cronbach’s alpha was 0.815, which is likewise adequate for this research investigation.

DATA COLLECTION

At their universities, the respondents were approached and told what the goal of the study was. Following the delivery of the questionnaire to the class, the students were asked to complete it by picking the appropriate response option from the list, which included strongly disagree, disagree, neutral, agree, and highly agree.

DATA ANALYSIS

For data analysis, the gathered information was organized and summarized in Excel. Following that, it was examined using SPSS version 22. The three study variables' Pearson correlations were examined. Tables and descriptions were used to display the outcome.

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Table 1: Reliability Statistics for EL abilities and stress

Scale	n (No. of items)	A
Self-Awareness (SA)	7	0.796
Managing Emotions (ME)	7	0.746
Motivating Oneself MO	7	0.832
Empathy E	7	0.858
Social Skill (SS)	7	0.844
Emotional Intelligence (EI)	35	0.815
Stress (S)	7	0.759

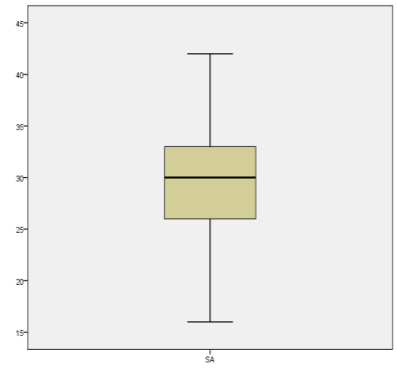
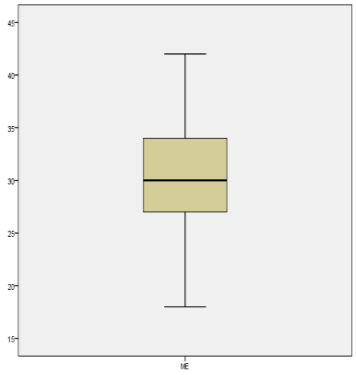
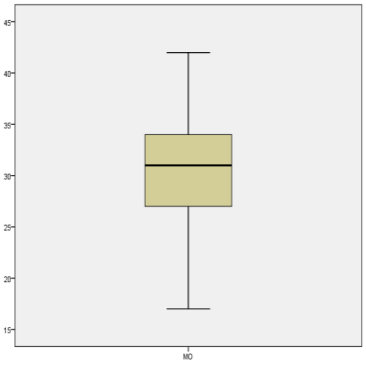
Table 1 shows the reliability of each ability of Emotional Iintelligence (EL) Self-Awareness (SA) ability (0.796), Managing Emotions (ME) ability (0.746), Motivating Oneself-(MO) ability (0.832), Empathy (E) ability (0.858), and Social Skill (SS) ability (0.844). Emotional Intelligence (EI), and Stress (E) (0.759).

Table 2: Descriptive Statistics for Emotional Iintelligence (EL) scores and stress of university students

	N	Min	Max	Mean	SD	n (items)	α
SA	717	9.00	42.00	29.24	5.623	7	0.796
ME	717	10.00	42.00	29.93	5.117	7	0.746
MO	717	10.00	42.00	30.38	5.348	7	0.832
E	717	11.00	42.00	30.09	5.550	7	0.858
SS	717	8.00	42.00	29.64	5.725	7	0.844
S	717	3.00	21.00	8.78	4.287	7	0.759

Table 2 shows the Emotional Iintelligence (EL) scores in terms Self-Awareness (SA) ability m 9.00 to 42.00, M = 29.24 and SD = 5.623. Managing Emotions (ME) ability 10.00 to 42.00, M = 29.93 and SD = 5.117. Motivating Oneself (MO) ability 10.00 to 42.00, M = 30.38 and SD = 5.348. Empathy (E) ability 11.00 to 42.00, M = 30.09 and SD = 5.550. Social skill (SS) ability 8.00 to 42.00, M = 29.64 and SD = 5.720. Stress scores 3.00 to 21.00, with M = 8.78 and SD = 4.278.

Figure 1: Screening of the data to exclude outliers

EI: Self-awareness ability	EI: Managing Emotions ability	EI: Managing Emotions ability
		

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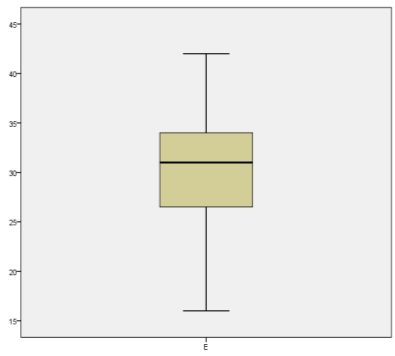
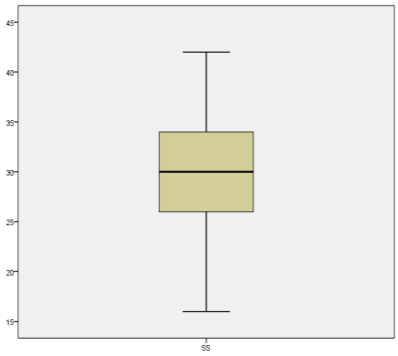
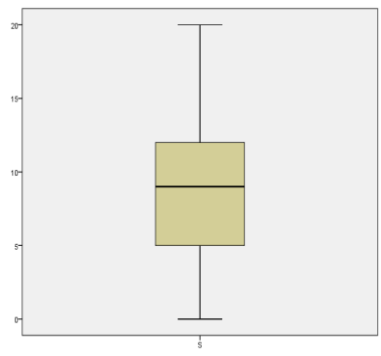
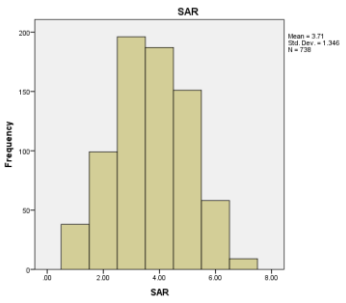
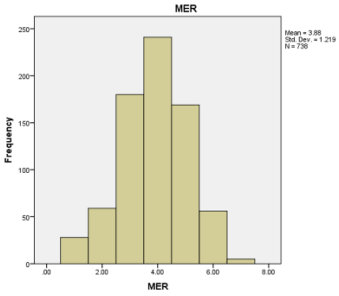
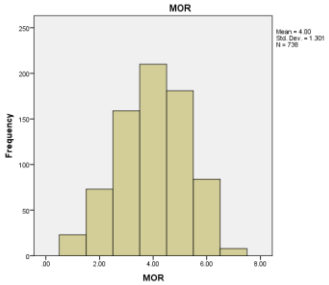
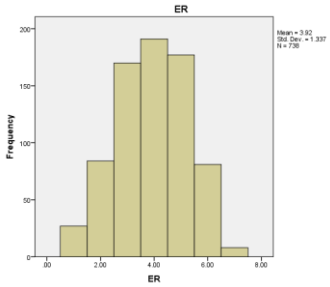
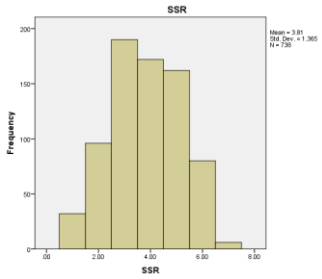
EI: Empathy ability	EI: Social Skill ability	Stress
		

Figure 2: Histograms for Emotional lintelligence (EL) abilities scores (IV) and Stress (DV) scores

EI: Self-awareness ability	EI: Managing Emotions ability	EI: Managing Emotions ability
		
EI: Empathy ability	**EI: Social Skill ability**	
		

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Multiple Linear Regression

To find the answer the research question, what are the effects of emotional intelligence on the stress of students? Multiple linear regression model (MLRM) was applied to explore the predictive relationships among Self-Awareness (SA) ability, Managing Emotions (ME) ability, Motivating Oneself (MO) ability, Empathy (E) ability, and Social Skill (SS) ability of Emotional Intelligence (EI) and Stress (E).

Keeping in view, the assumptions related to apply the regression model were investigated. Field (2013) and Laerd (2018) suggested to verify required assumptions before using MLR analyses:

Dependent Variable: Only one dependent variable is required which can be determined at the continuous level. This hypothesis was fulfilled as the total scores of dependent variable stress of university were calculated at the continuous level.

Independent Variables: There were Self-Awareness (SA) ability, Managing Emotions (ME) ability, Motivating Oneself (MO) ability, Empathy (E) ability, and Social Skill (SS) ability of Emotional Intelligence (EI) five independent variables whereas minimum two independent variables are required those either may be measured at the continuous or nominal level. This assumption was achieved by both variables emotional intelligence and age.

Autocorrelation: Durbin-Watson test is used to find independence of observations. The value of the Durbin-Watson test was 1.848, which is greater than the lower limit 1.5 and less than 2, as the absence of autocorrelation limit is 1.5 to 2. This indicates that autocorrelation is not found.

Linear Relationship: A linear relationship is between the analysts Self-Awareness (SA) ability, Managing Emotions (ME) ability, Motivating Oneself (MO) ability, Empathy (E) ability, and Social Skill (SS) and outcome stress. Scatterplot was used to verify the linear relationship visually. A negative trend between EI abilities and on stress scores was appeared (Figures 3).

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Figure 3: A linear relationship between predictors and criterion variables

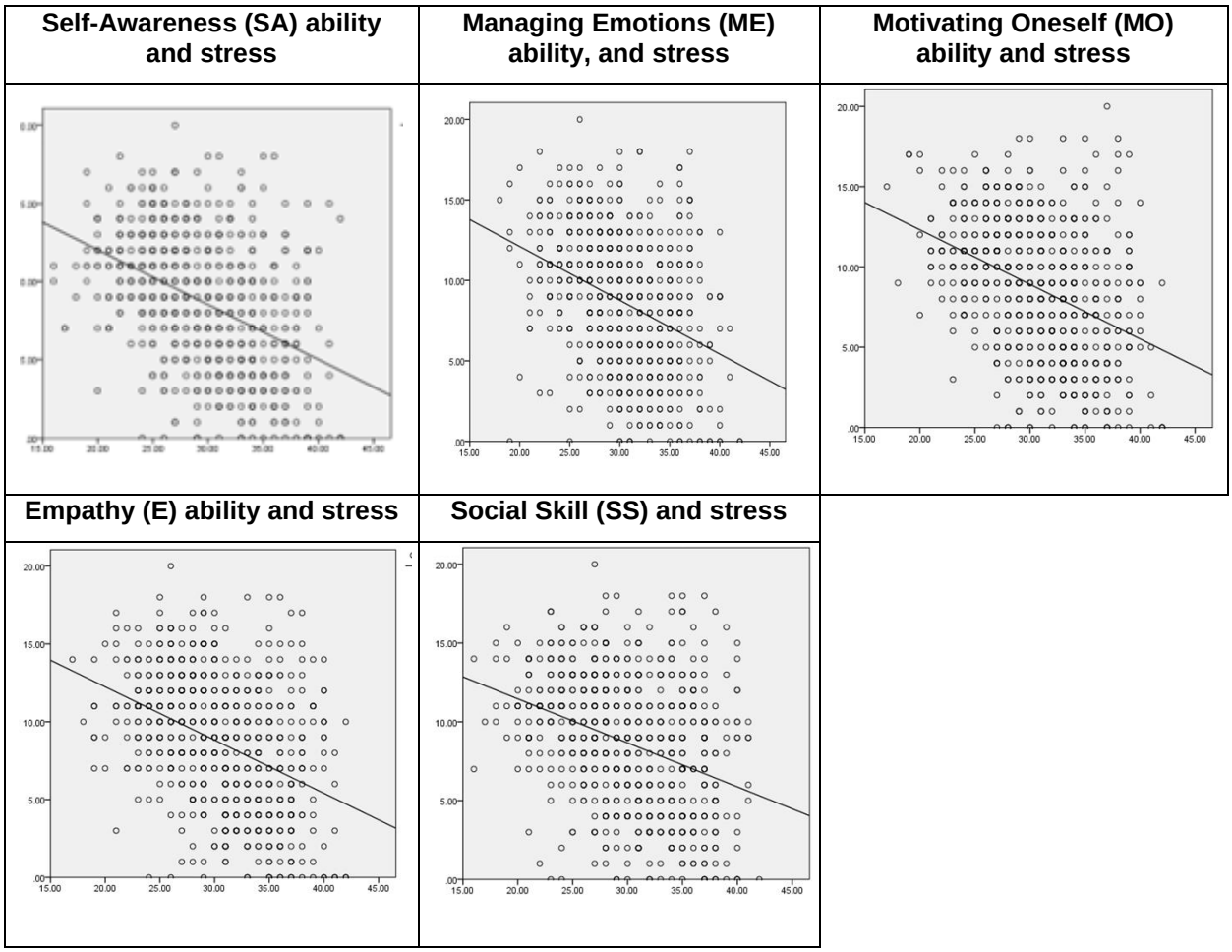

Table 3: *Glejser Test for Homoscedasticity*

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	20.671	0.868		23.801	0.000
	SA	-0.227	0.046	-0.298	-4.970	0.000
	ME	-0.047	0.047	-0.056	-.992	0.321
	MO	-.070	0.053	-0.087	-1.314	0.189
	E	-0.149	0.054	-0.193	-2.775	0.006
	SS	0.093	0.049	0.125	1.889	0.059
a. Dependent Variable: Stress						

Homoscedasticity Test: Table 3 shows possible relationships by assessing a secondary regression where emotional intelligence abilities as the independent variable is residuals (Berry & Feldman, 1985). By using estimates in terms of coefficients, the Glejser test was used to find out heteroscedasticity. The greater significance value upto 0.05 makes the data Homoscedastic (Berry & Feldman, 1985, McGuire, 2021). The

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value of significance for ME (p 0.321), MO (p 0.189) and SS (p 0.059) all three are greater than 0.05.

Table 4: VIF values of EI abilities

EI abilities.	Correlations			Collinearity Statistics	
	Zero-order	Partial	Part	Tolerance	VIF
SA	-.424	-.183	-.166	.397	2.521
ME	-.350	-.042	-.038	.454	2.203
MO	-.381	-.074	-.066	.363	2.755
E	-.389	-.084	-.075	.319	3.134
SS	-.336	.040	.035	.354	2.828

Multicollinearity: The multicollinearity is required to be absent in multiple linear regression which can be tested using VIF values as given in above table 4. As claimed by Stevens (2009), the Value VIFs should be less than 10 which shows a low linear relationship connection between the independent variables. All predictors Self-Awareness (SA) ability, Managing Emotions (ME) ability, Motivating Oneself (MO) ability, Empathy (E) ability, and Social Skill (SS) had low VIF values (each was less than 3.134), verify assumption that there is no multicollinearity.

Table 5: Model Summary for Emotional Iintelligence (EL) scores and stress of university students

Model	R	R^2	Adjusted R^2	SE of the Estimate	Durbin-Watson test
1	0.480[a]	0.231	0.225	3.77315	1.848
a. Predictors: (Constant), SA, ME, MO, E, and SS,					

In model summary table, the predictors, the Emotional Iintelligence (EL) scores in terms self-awareness (SA) ability, managing emotions (ME) ability, motivating oneself (MO) ability, empathy (E) ability, and social skill (SS) ability influenced the stress of the university students. Model Summary for Emotional Iintelligence (EL) scores and stress of university students show R^2 scores were 0.231(23.1%) suggested relationship between independent and dependent variables. The model summary explains approximately 22.5% variance with adjusted R^2 = 0.225 of predictive variables EI abilities.

Table 6: ANOVA for Emotional Iintelligence (EL) scores and stress of university students

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	3122.951	5	624.590	43.872	.000[b]
	Residual	10421.223	732	14.237		
	Total	13544.173	737			
a. Dependent Variable: S						
b. Predictors: (Constant), SA, ME, MO, E, and SS						

In ANOVA table, the independent variable of Emotional Iintelligence (EL) abilities scores were regressed (3122.951) on the dependent variable stress using MLRM for the adequacy of the model using statistical viewpoint. The value of F (43.872) test with p=0.000 (p<0.000) establish the significant of the entire model.

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Table 7: Linear relationship

Model		B	Beta	t	Sig.
1	(Constant)	20.671		23.801	0.000
	SA	-0.227	-0.298	-4.970	0.000
	ME	-0.047	-0.056	-.992	0.321
	MO	-.070	-0.087	-1.314	0.189
	E	-0.149	-0.193	-2.775	0.006
	SS	0.093	0.125	1.889	0.059
a. Dependent Variable: Stress					

The multiple regressions reported in table 7, the predictors the Emotional Iintelligence (EL) scores in terms self-awareness (SA) ability, unstandardized coefficients B(-0.227), β(0.298), t(-4.970) with p(0.000) and p<0.05 significant influence of independent EL ability (SA) one unit increase, decrease (0.298) stress of university students, managing emotions (ME) ability B(-0.047), β(-0.056), t(-0.992) with p(0.321) and p>0.05 so nonsignificant influence of independent EL ability (ME) one unit increase, decrease (0.047) stress of university students, motivating oneself (MO) ability B(-0.070), β(0.087), t(-1.314) with p(0.189) and p>0.05 nonsignificant influence of independent EL ability (MO) one unit increase, decrease (0.087) stress of university students, empathy (E) ability B(-0.149), β(-0.193), t(-2.775) with p(0.006) and p<0.05 and significant influence of independent EL ability (E) one unit increase, decrease (0.193) stress of university students, and social skill (SS) ability B(0.093), β(0.125), t(1889) with p(0.059) and p>0.05 nonsignificant influence of independent EL ability (SS) one unit increase, increase (0.125) stress of university students..

CONCLUSION AND RECOMMENDATIONS

The results of this study show that the scores of predictors Self-Awareness (SA) ability, Managing Emotions (ME) ability, Motivating Oneself (MO) ability, Empathy (E) ability, and Social Skill (SS) of Emotional Intelligence (EL) sores have a linear relationship between the outcome of stress abilities of the university students.

Data collected from 717 university students from three universities Gilgit Baltistan and Chitral revealed that Self-Awareness (SA) and Empathy (E) abilities have statistically significant negative impact on their stress, whereas Managing Emotions (ME) ability and Motivating Oneself (MO) ability statistically nonsignificant negative impact on their stress. Social Skill (SS) of Emotional Intelligence (EL) positively impact the stress of students however this impact is not statistically significant.

This study also finds that abilities of EI work for coping with stress as they strive to achieve academic goals these results are align with research conducted by Erkutlu and Chafra, (2006). University students' experience/orientation in term of their stress specific to higher education, and these results are with the research conducted by Birks et al. (2009), Enns et al. (2018), Rudman & Gustavsson, (2012), Sharon and Grinberg (2018). Stress is a part of individual's personality and a harsh reality for university students therefore, further stress managing techniques should be explored for them Development of these stress-coping skills should be made part of the trainings. It is also

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recommended that emotional intelligence must be included in curriculum of higher education.

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