

Perceived Stress and Coping Strategies among Undergraduate University Students: Role of Gender

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This study intended to explore the disparity in male and female approach to recognize perceived stress and coping strategies among first year university students. The data was collected from $N=454$ students (Male $n= 301$ & Female $n= 153$) aged between 18- 23 years. All students belonged to a public sector university situated in the city of Multan, Pakistan. Purposive convenient sampling technique was used to collect data. The data was collected through Perceived Stress Scale and Coping Resource Inventory. The findings showed that there were variations in the perceived stress and coping styles of males and females. Female undergraduate students reported high perceived stress as compared to male students and male students often used problem focused coping strategies whereas the female students on the contrary used more emotional focused coping strategies. Results pertaining to effect of perceived stress on the use of coping strategies declared that the effect of stress on coping strategies is different among male and female first year university students. The results of the study highlight the importance of providing trainings to first year undergraduate students on using effective coping strategies to deal with their high level of perceived stress.

Keywords: Perceived Stress, Coping Strategies, Gender, Problem Focused Coping Strategies, Emotion Focused Coping Strategies

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University students play a critical role in building the future of a nation and are potential drivers' of a country's economic growth (Oketch, McCowan & Schendel, 2014). They are about to enter their professional lives and hence experience stress due to this transition from academics to professionalism.(American College Health Association, ACHA, 2015).

Several factors play a great role in adding to the stress of university students which includes; socializing within an academic institution (Ahmad-Tharbe, 2006) as the university environments are different from other settings (Burks & Martin, 1983). The transition from college to university environment may require going away from home, kinsmen and nearest and dearest ones for the first time which makes the students vulnerable to stress (Hoban, 2007; Regehr, Glancy & Pitts, 2013). Moreover, students may also face difficulty in building new relationships and adjusting to new social climate while endeavouring to attain high grades for academic status (Ross, Neilbling & Heckert, 1999). These stressful interactions all call for using coping strategies to deal with the pressures of the environment (Robotham & Julian, 2006).

Stress pertains to a peculiar affinity that has linked a person with ones' milieu and is evaluated by an individual as arduous and transcending one's resources and engendering one's life (Lazarus & Folkman, 1984). Previous studies have reported higher level of stress amongst university students. In a study, Markrides, Veinot, Richard, Mckee and Gallivan (1998) found that more than 60% university students' experience elevated amount of stress. On the other hand, Amponsah and Owolabi, (2011) revealed that 70% of the fresh undergraduates had moderate levels of perceived stress. Stress in student life is not restricted to academics only but can also arise due to various other sources such as health, financial constraints, academic problems, and romantic relationships (Hashim, 2007). Among university students, anxiety for grades and the terror of failure is a constant stressor which ultimately deteriorates their psychological and personal well-being (Beck, 1995; Walton, 2002; Mason, 2017).

The gender role orientation theory by Bem (1974), explains that individuals use gender as a mechanism to organize information in all the aspects of their lives. This theory also describes that the differences in masculinity and femininity influence the information processing mechanisms of individuals and the gender regulates individuals' behaviours. For instance, females express their emotions openly as compared to males (Eaton & Bradley, 2008) however this ability to express emotions makes them vulnerable to experience stress.

An event or situation is not inherently stressful rather it is the subjective judgment of an individual about the situation which makes it stressful. This subjective judgment is primary appraisal which acts as an immediate response towards the situation. This leads to secondary appraisal which allows an individual to perform cognitive evaluation of environment that escorts employment of coping strategies. Thus stress transpires when an individual is unable to deal effectively with a demanding situation (Agolla & Ongori, 2009). Blonna (2005) found that a stressful situation can be reduced considerably if an individual knows how to cope with it.

According to Lazarus & Folkman, (1984), a person who experiences a cluster of stressful events in his life would be able to cope successfully and would be able to modify coping strategies in order to meet the demands of every situation. A clear approach to deal with stress can motivate an individual to face as well as manage taxing circumstances and control their level of general well-being (Uchino, 2004).

Till now, researchers have been able to differentiate among two major types of coping strategies. First type of coping strategy is problem focused in which an individual tries to overcome the stress by seeking information and instrumental help. Second type of coping strategy is emotion-focused in which an individual tries to overcome stress through emotional responses such as blaming, wishful thinking, avoidance (Pearlin & Schooler, 1978; Folkman & Lazarus, 1980; Carver, Scheier, & Weintraub, 1989). However, both types of coping strategies are aimed at controlling as well as

reducing threats leading to perceived stress in a person. The university students, who experience high level of stress due to grade anxiety and the fear of failure (Beck, 1995; Walton, 2002), as stated earlier, are highly likely to adapt an effective coping mechanism to alleviate harmful effects of perceived stress and to enhance the level of general health (Thoits, 1995).

Since prior researches have quoted a difference in the level of stress among men and women (Amponsah & Owolabi, 2011) therefore this research also aims to investigate the differences among men and women in the selection of coping strategies. Gender differences could affect the level of stress perceived by the university student and the coping strategies adopted by them. This could also affect the time taken to socialize with university environment and academic performance of the student. Though a lot of previous researches (Dyson & Renk, 2006; Al-Dubai, Al-Nagar, Alshagga & Rampal, 2011; Mason, 2017) have been conducted to inquire the association of stress with coping strategies, still the severity of issue consistently requires to advance the research to investigate how this relationship differs across male and female university students.

The first-year of university is challenging and stressful for students as it requires a transition and students have to adapt to a new environment and system (Dyson & Renk, 2006). Moreover, it also develops fear among students due to their personal expectations as well as the expectations of their parents (Blimling & Miltenberger, 1984). These challenges create stress among the students and require them to adopt some coping mechanisms to deal with their stressors. The stress and coping relationships have been investigated since a long time (Blimling & Miltenberger, 1984; Dyson & Renk, 2006; Pierceall & Keim, 2007; Kausar, 2010). The present study aims to investigate how this relationship differs across men and women.

This study serves two basic purposes to fulfil this research gap: the first objective of the present study was to explain the persisting differences in the level of perceived stress and relative coping strategies adopted by male and female university students.

Second purpose of this research was to explore how perceived stress determines the coping strategies of male and female undergraduate students. Based on the literature review, following hypotheses were formulated; (1) Female students will be prone to experience high levels of stress as compared to male students, (2) Male and female undergraduate students will use different coping strategies under stress, (3) Female students experiencing high levels of stress will adopt more emotion focused strategies whereas male students experiencing high levels of stress will adopt more problem focused coping strategies.

Method

Participants

The researchers approached $N=454$ undergraduate students aged 18-23 years enrolled in the first semester of undergraduate programs at Bahauddin Zakariya University Multan. From the total participants $n=301$ were males and $n=153$ were females. Data collection was done through purposive convenient sampling technique.

Measures

Following measures were used in the current study:

Perceived Stress Scale. A 10-item perceived stress scale was used in the present study. The scale measures the extent to which participants perceive their levels of stress. Participants were asked to respond on a five point likert scale ranging from 0 (Never) to 4 (very often). The scores range between 0 - 40, and higher composite scores indicate high level of perceived stress. The scale has a sound validity and reliability having Cronbach Alpha that was extended to 0.78-0.91, along with test-retest reliability coefficients ranging from 0.55-0.85 (Cohen, Kamarck & Memelstein, 1983; Cohen & Williamsons, 1988).

Coping Responses Inventory (CRI-Adult- Moos, 1993). The CRI was administered to find out participant scores on eight distinct varieties of coping reactions to demanding life

situations; Positive Reappraisal (PR), Logical Analysis (LA), Problem Solving (PS), Seeking Guidance and support (SG), Acceptance or Resignation (AR), Cognitive Avoidance (CA), Emotional Discharge (ED), and Seeking Alternative Rewards (SR). All sub-scales are interrelated (average $r = .36$) and scale's test retest / split half reliability is .5; furthermore it has good content and face validity. Six items were included in each of the eight subscales. While responding to statements of each test, a person selects as well as depicts latest stressor and uses a four point scale which ranges from "Not at all" (0) to "fairly often" (3). Subsequently raw score of every subscale is transformed in T-values which are specified in the official guidebook of the scale. T-values (46-54) were considered as cut off range. Therefore, a score higher than 54 or lower than 46 is regarded as high and low respectively.

Procedure

After taking initial approval from the university then the students were approached, the selected participants were provided with instructions to fill a booklet which comprised of above mentioned measures. The participants were assured about the confidentiality of the results. Post data collection the results were scored and analysed through SPSS.

Results

The results of the present study were analysed through SPSS. Independent Sample T-test and Regression Analysis were used for data analysis. Descriptive statistics and psychometric properties are mentioned in table 1.

Table 1
Psychometric Properties and the Descriptive Statistics of the Study Variables(N=452)

Study Variable	α	M	SD	Skewness	Kurtosis
Perceived Stress	0.78	2.02	0.57	-0.16	0.40
Problem Focused Coping	0.57	1.59	0.36	0.19	0.37
Logical Analysis	0.54	1.46	0.49	-0.16	-0.18
Positive Reappraisal	0.49	1.66	0.52	0.14	-0.27
Seeking Guidance and Support	0.51	1.63	0.55	-0.17	-0.28
Problem Solving	0.55	1.62	0.50	0.15	-0.35
Emotion Focused Coping	0.59	1.48	0.34	0.19	0.75
Cognitive Avoidance	0.48	1.47	0.52	0.16	-0.46
Acceptance or Resignation	0.52	1.41	0.50	0.15	0.23
Seeking Alternative Rewards	0.57	1.62	0.53	-0.17	-0.19
Emotional Discharge	0.54	1.43	0.52	0.10	0.37

The table shows that the data of the current study is normally distributed and all the Cronbach Alpha Reliabilities are falling in an acceptable range. An independent sample t-test was applied in order to analyse Hypothesis 1 and Hypothesis 2.

Table 2
Independent Sample t-Test for Perceived Stress and Coping Strategies among Male and Female University Students (N=452)

	Male		Female		<i>t</i>	95% CI		Cohen's <i>d</i>	
	M	SD	M	SD		UL	LL		
Perceived Stress	1.86	0.49	2.10	0.58	-4.325***	-0.34	-0.13	0.53	
Problem Focused Coping	1.64	0.35	1.50	0.36	-3.838***	-0.20	-0.06	0.46	
Emotion Focused Coping	1.46	0.34	1.52	0.33	1.848	-0.12	0.01	-	
Problem Focused Coping	Logical Analysis	1.50	0.50	1.38	0.49	2.427*	-0.21	-0.02	0.22
	Positive Reappraisal	1.72	0.49	1.52	0.53	3.892***	-0.30	-0.09	0.44
	Seeking Guidance and Support	1.54	0.46	1.66	0.51	2.325*	-0.21	-0.01	0.26
	Problem Solving	1.55	0.54	1.67	0.55	2.109*	-0.22	-0.09	0.24

Emotion Focused Coping	Cognitive Avoidance	1.46	0.53	1.47	0.51	-.235	-0.11	0.08	-
	Acceptance or Resignation	1.46	0.49	1.38	0.52	1.612	-0.10	0.08	-
	Seeking Alternative Rewards	1.59	0.52	1.69	0.53	-1.985*	0.10	0.06	0.27
	Emotional Discharge	1.48	0.53	1.41	0.52	1.478	-0.20	-0.07	-

The results indicate a significant difference in perceived level of stress among male and female first year university students. It also demonstrates a significant difference among male and female students in problem focused coping strategies which includes Logical Analysis, Positive Re-appraisal, Seeking Guidance and Support and Problem Solving. However, the values of Cohens' *d* represented that this difference was small. Moreover, no significant difference is observed among male and female students in the three emotion focused coping strategies i.e. Cognitive Avoidance, Acceptance of Resignation and Seeking Alternative Rewards. Overall the statistical results of the study demonstrated partial support for hypothesis 2.

Table 3

Regression Weights for Perceived Stress and Coping Relationship among Male & Female University Students (N=452)

		Male Students		Female Students	
		β	<i>p</i>	β	<i>p</i>
Problem Focused Coping	PS→LA	0.25	***	0.18	***
	PS→PR	0.22	***	0.17	***
	PS→SGS	0.28	***	0.21	***
	PS→PS	0.20	***	0.15	***
Emotion Focused Coping	PS→CA	-0.08	0.06	-0.05	0.06
	PS→AR	-0.18	***	-0.14	***
	PS→SAR	-0.16	***	-0.12	***
	PS→ED	-0.24	***	-0.17	***

Note. PS=Perceived Stress, LA=Logical Analysis, PR= Positive Reappraisal, SGS= Seeking Guidance and Support, PS= Problem Solving, CA=Cognitive Avoidance, AR=Acceptance or Resignation, SAR=Seeking Alternative Rewards, ED=Emotional Discharge

The table 3 shows the third hypothesis of our study stated that the effect of stress on coping strategies varies among male and female first year university students. We performed group analysis in AMOS and tested four different structural models to test this hypothesis. The first model was unconstrained and demonstrated bad fit (chi square = 1559.46, $df = 56$, $p = .000$, CMIN/DF = 27.848, RMR = .275, CFI = .009, RMSEA = .247, PCLOSE = .000). Based on the modification indices in Model 2, covariance were drawn between the error terms of CA and AR, CA and SAR, LA and PR, LA and SGS, PR and SGS, PR and PS, AR and SAR, and SGS and PS. Third model demonstrated better fit than model 2 (chi square = 1265.582, $df = 42$, $p = .000$, CMIN/DF = 26.214, CFI = .186, RMSEA = .239, PCLOSE = .000).

The statistical results obtained by multiple group moderation analysis in the AMOS represent that apart from CA, the relationship of perceived stress with coping styles is significant. However, the value of regression weights for problem focused coping are positive and the regression weights for emotion focused coping are negative. The results also represent that the beta values of problem focused coping styles for males is relatively larger than the beta values obtained for females. On the other hand, the values of emotion focused coping for females are relatively higher than the beta values for males. The chi-square difference was performed to determine if the regression weights of two groups are different. The chi-square difference test was insignificant (chi-square difference = 15.13, $p > .05$) and demonstrated that the two groups were completely different. Overall the results provided support for hypothesis 3 demonstrating that the effect of stress on coping styles is different for first year university males and first year university females.

Discussion

This study investigated the differences in the perceived level of stress and coping strategies in male and female Pakistani students. Based on the gender role orientation theory, the first hypothesis of the study investigated the differences in the level of

perceived stress among male and female first year university students. The statistical results in Table 1(mean values) and Table 2 (t-statistics) describe that the level of perceived stress among female first year university students was higher than the level of perceived stress reported by male first year university students. These results support the gender role orientation theory and are consistent with the findings of prior researches (Dyson & Renk, 2006; Amponsah & Owolabi, 2011; Khan, Altaf & Kausar, 2013; Khan & Chaudhry, 2014).

The second hypothesis of this study was based on the role constraint theory stating that male and female first year university students are different in using problem focused coping strategies but not in terms of the use of emotion focused coping strategies. The results in Table 2 (column 4) demonstrate that the difference in emotion focused strategies is insignificant however the difference in problem focused coping strategies is significant. The statistical results of this study provided support for the role constraint theory. However, the results of this study do not provide support for the socialization hypothesis.

While dealing with stress, students employ various coping strategies. Significant differences in the use of coping strategies between both genders are also evident through statistical results of this study. Females utilize more emotion focused coping strategies as compared to male student and are also most likely to use avoidant styles. These findings are consistent with the work of Raetz (2001); Dyson and Renk, (2006) as well as Madhyastha, Latha and Kamath (2014).

The positive but significant relationship between stress and coping demonstrates that both male and female students use problem focused coping in times of stress, but male students tend to use it more than females. The results also signify negative but significant values for stress and emotion-focused coping strategies and further explain that females tend to use more emotion focused coping as compared to males. However, the values of regression weights also indicate that the difference is not high. A possible justification for this finding could be the age range of the sample as

during this time both males and females aren't mature enough and therefore are more prone to opt for emotion focused coping strategies., The overall results of the study indicate that there is a difference in perceived level of stress and coping styles of both males and females.

Implications

The findings of the present study demonstrate differences in the level of perceived stress and coping strategies of male and female first year university students. The results of the study highlight a need for parents and teachers to understand the high level of perceived stress in female university students and to identify the factors leading to it so that suitable steps can be taken to protect their physical, academic and emotional well-being. The results of the study also demonstrate that male students use more problem focused coping strategies as compared to female students. The sources of stress for male and female university students are same however the level of perceived stress is higher among female students and the coping styles also vary between both genders.

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