

Stress Appraisal, Resilience, and Psychological Distress in College and University Students

Nighat Yasmeen and Rukhsana Kausar

University of the Punjab

The study aimed to investigate the relationship between stress appraisal (i.e. threat, challenge, centrality, controllability by self, controllability by others, uncontrollable, and stressfulness), resilience (interstate resilience, intra state resilience, inter-trait resilience, and intra-trait resilience) and psychological distress (subscales of psychological distress: intrusion, avoidance, and arousal) in College and University students. Students ($N = 400$) with age range of 19 to 22 years ($M = 20.01$, $SD = 1.05$) were recruited from different colleges and universities in Lahore. The research protocol consisted of the Stress Appraisal Measure, The State-Trait Resilience Checklist, and the Impact of Event Scale-Revised. The findings revealed that threat, challenge, centrality, controllability by self, controllability by others, uncontrollable, and stressfulness (subscales of stress appraisal) had a significant positive relationship with psychological distress, intrusion, avoidance, and arousal (subscales of psychological distress). The findings also indicated a negative relationship between resilience and psychological distress. Moreover, the results showed that threat, centrality, and inter-trait resilience are significant positive predictors of psychological distress while intra-state resilience is a negative predictor of psychological distress. Limitations and recommendations are discussed.

Keywords. Stress appraisal, resilience, psychological distress, college, and university students

Psychological distress and stress appraisal are increasing in academic institutions due to academic pressure. Research revealed that academic stress predicts psychological distress (Abid et al., 2021). The literature suggests that the prevalence rate of psychological distress was more in women (35.2%) than in men (23.6%). Moreover,

Nighat Yasmeen and Rukhsana Kausar, Centre for Clinical Psychology, University of the Punjab, Lahore, Pakistan.

Rukhsana Kausar, now at, Government College for Women University, Sialkot, Pakistan.

Correspondence concerning this article should be addressed to Nighat Yasmeen, Centre for Clinical Psychology, University of the Punjab, Lahore Pakistan. Email: nighatyasmeen123@gmail.com

it was found that scores of psychological distress were higher in students than in young adults, rate of prevalence was 30 % (Adlaf et al., 2001). In an indigenous research rate of psychological distress was 44.8% (Muneer et al., 2025). Resilience might help in coping with psychological distress but it might not help when appraisal is heightened. This research will help in finding out predictors of psychological distress in college and university students as their mental health and academic performance are affected by psychological distress.

Stress appraisal determines how a person perceives and gives meaning to a situation. According to the cognitive relational theory, a particular transaction or series of transactions between the individual and the environment is known as stress (Lazarus & Folkman, 1984). Cognitive appraisal involves the evaluation of the situation and the possible responses of the individual for handling the situation (Folkman et al., 1986). According to this theory, stress perception, management, and termination are determined by the stress appraisal process (Largo-Wight et al., 2005).

There are two stages of cognitive appraisal i.e., primary appraisal and secondary appraisal (Lazarus & Folkman, 1984). The primary appraisal takes place during the preliminary evaluation of a situation and the secondary appraisal follows it. The primary appraisal occurs in a situation in which the event is appraised as threatening or not (Largo-Wight, et al., 2005). There are three categories of the primary appraisal, namely: harm/loss, threat, and challenge (Lazarus & Folkman, 1984). However, in the stress appraisal measure, Peacock and Wong (1990) overlooked the category of harm/loss. Secondary appraisal can be defined as an evaluation of coping options (Lazarus & Folkman, 1984). The process of secondary appraisal has three dimensions: Self-control, other control, and uncontrollability. Researchers reported that primary and secondary appraisals interact to produce an overall perception (Ferguson et al., 1999). An outcome of the coping process is determined by actual coping efforts aimed at regulation of the problem. When individuals appraise situations threatening then psychological distress occurs. Resilience helps in reducing the distress caused by stress appraisal. Research shows that resilience is negatively related to stressful life events (Ong et al., 2006).

Resilience might help in dealing with the above-mentioned outcomes of stress appraisal. Therefore, it is important to know the role of resilience in coping with the consequences of stress appraisal. Resilience can be defined as successful adaptations in the presence of adversities (Zhang et al., 2008). There are two types of resilience.

Which are: Trait resilience and state resilience. Trait resilience is defined as a personality trait. It has two types: inter-trait resilience and intra-trait resilience. Resilience produced in adverse circumstances is known as state resilience. It also has two types: inter-state resilience and intra-state resilience (Hiew et al., 2000). Students who are less resilient experience more psychological distress as they appraise situations more threatening. Literature suggests that participants were less likely to perceive an event stressful who reported high resilience as compared to participants who reported low resilience (Hardy et al., 2004). Moreover, it was found that a high level of resilience was related with low level of psychological distress (Bacchi & Licinio, 2016).

Psychological distress can be defined as “anxiety which has both emotional and psychological manifestations (Mirowsky & Ross, 2017, p.4). Psychological distress is a major issue for college students (Deckro et al., 2002). Students are more prone to stress particularly college students (Saipanish, 2003). Certain risk factors affect the mental health of college students and psychological distress is one of them (Hunt & Eisenberg, 2010). Therefore, the present research aimed to find out the relationship of stress appraisal, resilience, and psychological distress in college and university students.

Objectives

Present research is aimed at to study the relationship of stress appraisal, resilience, and psychological distress in college and university students.

Hypotheses

1. There is a positive relationship between appraisal of threat, centrality, uncontrollability, controllability by self, controllability by others, and stressfulness with psychological distress (intrusion, avoidance, and arousal) in college and university students.
2. There is a negative relationship between resilience (trait resilience, inter-trait resilience, and intra-trait resilience) and psychological distress (intrusion, avoidance, and arousal) in college and university students.
3. Stress appraisal (threat, challenge, centrality, controllability by self, controllability by others, uncontrollability and stressfulness), and resilience (trait resilience, inter-trait resilience, and intra-trait resilience) are likely to predict psychological distress in college and university students.

4. Resilience mediates the relationship between stress appraisal and psychological distress in college and university students.

Method

Sample

Sample comprised of college and university students ($N = 400$). Two hundred students were recruited from government and private colleges and two hundred from government and private sector universities by using convenient sampling. Equal numbers of male ($n = 200$) and female ($n = 200$) students were recruited with the age ranges from 19-22 years ($M = 20.05$, $SD = 1.05$). Students registered in a regular program were recruited and students suffering from any major physical illness, psychological illness, or physical disability were excluded.

Measures

Stress Appraisal Measure

Stress Appraisal Measure (Peacock & Wong, 1990) was used to measure different dimensions of primary and secondary appraisal. It was developed by Peacock and Wong (1990). It consists of 28 items. It has seven subscales: three for primary appraisal, three for secondary appraisal, and one for stressfulness. Subscales of primary appraisal are threat, challenge, and centrality while secondary appraisal is controllable by self, controllable by others, and uncontrollable. Ratings are taken on a five-point Likert scale ranging from 1 = *Not at all* to 5 = *To a great amount*. The overall score is computed by adding the score of all items of the respective scale. The alpha reliability ranged from .71 to .89. High score shows more stressfulness (Peacock & Wong, 1990).

The State-Trait Resilience Scale

The State-Trait Resilience Scale (Hiew et al., 2000) was used to assess the resilience of the respondents. It was developed by Hiew et al. (2000). It has two subscales namely state resilience checklist (SRC) and trait resilience checklist (TRC). It is based on a 5 point Likert scale where 1 = *Strongly disagree* to 5 = *Strongly agree*. It has 35 items, state resilience checklist has the 15 items with score range of 15 – 75 and trait resilience checklist has 18 items with the score range 18-90. Furthermore, the alpha reliabilities of inter-state and intra-state resilience were .55 and .72, and inter-trait and intra-trait resilience were .72 and .78 respectively (Hiew et al., 2000).

Children's Revised Impact of Event Scale

It is a self-report measure that was used to assess stress due to disturbing events. It was developed by Horowitz et al. (1979). It comprises thirteen items and three subscales including intrusion, avoidance, and arousal. It uses a four-point Likert scale and scoring options are *Not at all* = 0, *Rarely* = 1, *Sometimes* = 3, *Often* = 5. It consists of 4 items measuring Intrusion with the score range of 0 - 20, 4 items measuring avoidance with score range 0-20, and 5 items measuring arousal with the score range of 0-25. The alpha reliability of the scale is .75 (Horowitz et al., 1979).

Procedure

After obtaining permission from College and University authorities initially pilot study was conducted on a sample of 30 students to check comprehension level and time taken to complete the questionnaires. After obtaining consent and giving research information, the participants were requested to fill out a research protocol consisting of a demographic sheet and above mentioned scales. Feedback from participants was also taken. After that main study was conducted. Participants were briefed about the nature and purpose of the research. Instructions were given to them, informed consent was taken. Participants, who were willing, were requested to fill out research protocols. They were asked to put a mark against the response category that they found most appropriate. Moreover, they were requested to give honest answers to the questions being asked. It took almost thirty minutes to fill out questionnaires. The data was collected in the period of three months. The data was cleaned and analyzed by using SPSS.

Results

The Pearson product moment correlation was applied to determine the relationship between study variables. Table 1 showed a significant positive relationship of threat, centrality, controllability by self, controllability by others, stressfulness, and uncontrollability with psychological distress. The results indicated that resilience, state resilience, intra-state resilience, interstate resilience, and intra-trait resilience had a negative relationship with psychological distress. However, inter trait and trait resilience had a positive relationship with psychological distress. The results presented in Table 1 are in support of proposed hypotheses of the present study. There is a positive relationship between stress appraisal and psychological distress and negative relationship between resilience and psychological distress.

Table 1: *The Relationship Between Stress Appraisal, Resilience and Psychological Distress Among College and University Students (N = 400)*

Vars.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1.Th	-														
2.Ch	.45***	-													
3.Cen	.58***	.21***	-												
4.S.Co	.31***	.26***	.32***	-											
5.O.Co	.35***	.21***	.33***	.49***	-										
6.UnC	.44***	.22***	.37***	-.18***	.22***	-									
7.Stres	.57***	.27***	.53***	.15**	.49***	.42***	-								
8.Intertr	.15**	-.15**	.15**	-.18**	.18***	.18***	.19***	-							
9.Intratr	.12*	-.15**	.11*	.15***	-.11*	.19***	.16***	.70***	-						
10.Intersr	.19***	.22***	.22***	.17***	.17***	.23***	.21***	.66***	.69***	-					
11.Intrasr	.10*	.18***	.15**	.26***	.20***	.11*	.20***	.60***	.71***	.77***	-				
12.Stat	.15**	.21***	.19***	.23***	.19***	.17**	.22***	.67***	.74***	.93***	.95***	-			
13.Trai	.14**	-.16**	.14**	.17***	-.15**	.20***	.18***	.89***	.95***	.73***	.72***	.77***	-		
14.Res	.15**	.20***	.18***	.22***	.18***	.19***	.21***	.82***	.89***	.89***	.90***	.95***	.93***	-	
15.Psy.D	.23***	.32***	.37***	.14**	.18***	.39***	.31***	.19***	-.14**	-.12*	-0.03	-0.08	.18***	-.13**	-

Note. Vars = Variables; Th = Treat; Ch = Challenge; Cen = Centrality; S.Co = Self Control; O.Co = Other Control; UnC = Uncontrollable; Stres = Stressfulness; Intertr = Inter Trait Resilience; Intratr = Intra Trait Resilience; Intersr = Inter State Resilience; Intrasr = Intra State Resilience; Stat = State Resilience; Trai = Trait Resilience; Res = Resilience; Psy.D = Psychological Distress.

* $p < .05$. ** $p < .01$. *** $p < .001$.

The Linear regression was used for finding out predictors of psychological distress. Results are shown in Tables 2 and 3.

Table 2: *Resilience as a Predictor of Psychological Distress in College and University Students (N = 400)*

Variables	Psychological Distress				
	B	S.E	95% CI		
			B	LL	UL
Constant	15.78***	4.18		7.55	24.01
Inter-trait resilience	.59**	.22	.19**	.16	1.03
Intra-trait resilience	.22	.17	.10	-.12	.56
Inter-state resilience	.25	.20	.11	-.14	.64
Intra-state resilience	-.47**	.16	-.24**	-.79	-.14
ΔR^2	.06***				
F	6.03***				

Note. * $p < .05$. ** $p < .01$. *** $p < .001$.

Table 2 shows that the overall model explains a 6% variance in psychological distress of students, $F(4, 395) = 6.03, p < .001$. The findings revealed inter trait resilience was a significant positive predictor of psychological distress while intra-state resilience was a negative predictor of psychological distress.

Table 3: *Stress Appraisal as a Predictor of Psychological Distress in College and University Students (N = 400)*

Variables	Psychological Distress				
	B	S.E	95% CI		
			B	LL	UL
Constant	-2.73***	3.74		-10.09	4.61
Threat	.63**	.23	.17**	.18	1.07
Centrality	.58*	.24	.15*	.10	1.06
Challenge	.44	.26	.09	-.07	.93
Self-controllable	.01	.20	.04	-.39	.41
Other controllable	.08	.18	.02	-.29	.43
Uncontrollable	.31	.19	.08	-.06	.68
Stressfulness	.34	.25	.08	-.14	.83
ΔR^2	.19***				
F	13.85***				

Note. * $p < .05$. ** $p < .01$. *** $p < .001$.

Table 3 shows that the overall model explains a 19% variance in psychological distress, $F(7, 392) = 13.85, p < .001$. The findings revealed that threat and centrality were significant positive predictors of psychological distress.

A mediation analysis was carried out via PROCESS for checking out the mediation between stress appraisal and psychological distress.

Table 4: *Mediation of Resilience Between Stress Appraisal and Psychological Distress in College and University Students (N = 400)*

Type	Estimates	SE	95% CI		t	p
			LL	UL		
Indirect Effect	.0046	.0075	-.0103	.0201		
SA → Res	.2573	.0523	.1546	.3601	4.922	.001
Res → P.Distress	.0177	.0308	-.0429	-.0782	.5745	.565
Direct Effect	.3086	.0331	.2436	.3737	9.329	.001
Total Effect	.3132	.0321	.2501	.3763	9.759	.001

Note. SA = Stress Appraisal; Res = Resilience; P. Distress = psychological distress.

This Table 4 shows that direct and total effects are significant. The indirect effect of stress appraisal and resilience is significant but the indirect effect of resilience and psychological distress is nonsignificant. It indicates that resilience does not significantly mediate the relationship between stress appraisal and psychological distress.

Discussion

The study investigated the relationship among stress appraisal, resilience, and psychological distress in college and university students. The positive relationship of threat, challenge, centrality, controllability by self, controllability by others, uncontrollable, and stressfulness with psychological distress (intrusion, avoidance, and arousal) in college and university students was hypothesized. The findings indicated that threat, challenge, centrality, controllability by self, controllability by others, uncontrollable, and stressfulness had a significant positive relationship with psychological distress, intrusion, avoidance, and arousal among students of colleges and universities. These findings are consistent with previous research, which indicated that perceived stress is related to more psychological distress (Gunthert et al., 1999). It could be reasoned that the person who appraises more threat is more likely to experience psychological distress. Similarly, in another research, a significant positive relationship of perceived stress with an appraisal of threat and stressfulness was reported (Kausar & Anwar, 2010). Likewise, the researchers found a significant relationship between threat, stress, and uncontrollability (Dopke & Milner, 2000; Skinner & Brewer, 2002).

Likewise, a negative relationship between resilience (trait resilience, inter-trait resilience, and intra-trait resilience) and psychological distress (intrusion, avoidance, and arousal) in college and university students was hypothesized. The results revealed a negative relationship between resilience and psychological distress. These findings are consistent with previous research as [Bacchi and Licio \(2016\)](#) reported that a high level of resilience is related to a low level of psychological distress. Similarly, it was found that students with a low level of resilience report a high level of psychological distress as compared to students with a high level of resilience ([McGillivray & Pidgeon, 2015](#); [Pidgeon et al., 2014](#)).

Results revealed that threat, centrality, and inter-trait resilience are positive predictors of psychological distress while intra-state resilience is a negative predictor of psychological distress. These findings are consistent with previous literature, appraisal of threat predicts psychological distress ([Saylor et al., 2003](#)), and lower levels of resilience predict high levels of psychological distress scores ([Liebana et al., 2014](#)).

It was hypothesized that resilience mediates the relationship between stress appraisal and psychological distress. Mediation analysis was carried out via PROCESS. The findings indicated that resilience did not significantly mediate the relationship between stress appraisal and psychological distress. These findings are in line with the previous research; it was found that resilience did not mediate the relationship between stress appraisal and psychological distress ([Ashfaq & Zahra, 2022](#)).

Limitations and Suggestions

The data was collected from two government universities, two private universities, and different campuses of one private college. This limits the generalizability of findings. The researcher had to rely on the self-reports of the participants. The participants reported that the tools were lengthy; the fatigue factor might have prevented the participants from giving appropriate responses. To avoid fatigue factor short and reliable tools should be used.

Implications

The findings of the study will be helpful in identifying students who are prone to feel high levels of psychological distress because of stress appraisal. Moreover, skills can be taught to the students to appraise stressful situations as challenging rather than threatening. It will help in reducing stress and fostering resilience.

Conclusion

Hence, it can be concluded that threat, challenge, centrality, uncontrollable, controllability by self, controllability by others and stressfulness has significant positive relationship with psychological distress, intrusion, avoidance and arousal in students of colleges and universities. The results also show negative relationship between resilience and psychological distress. Moreover, threat, centrality and inter trait resilience are significant positive predictors of psychological distress while intra state resilience is negative predictor of psychological distress.

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