

The Impact of Neuroticism on Perceived Stress among University Students

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ABSTRACT

Academic pressure, social expectations, and uncertainty about the future careers exert a significant psychological pressure on the students of the university. Women students, especially in developing and war-torn countries, can have other stressors of culture, safety, and scarcity. Perceived stress is a subjective judging of situations in the life as stressful by individuals, but this state is only affected by environmental demands but also stable personal traits. Neuroticism as one of the main dimensions of the Big Five personality model is an instability of emotions, anxiety, and a high degree of sensitivity to stress. The research problem of the present study is to address the effect of neuroticism on perceived stress among 300 female students pursuing their studies in Women University of Azad Jammu & Kashmir (AJK), Bagh. Through the existing personality and stress theories, this paper identifies the role of neurotic tendencies in enhancing the stress appraisal and emotional response during an academic situation. The introduction gives a thorough theoretical and empirical background, importance of researching neuroticism in female university students, and also presents the gaps in the research especially absence of institution-specific evidence in Azad Jammu and Kashmir. Results of such studies can be used to shape specific mental health interventions and counseling services to women-centered institutions of higher learning.

Keywords: Neuroticism; Observed Stress; Female University Students; Personality Factor; Academic Stress; Azad Jammu and Kashmir.

INTRODUCTION

University education is another key stage of development where there is a lot of academic, psychological and social change. Students have to deal with the academic loads, exams, relationships, and demands connected with the future job, which add to the high stressing level. Perceived stress in university students is a pressing issue of educational institutions and mental health professionals in recent years because it is linked to anxiety, depression, low academic success, and lower well-being. Perceived stress constitutes the level of stress that people subjectively perceive their lives as being stressful with a focus on individual interpretation of stress and not the objective stressor (Cohen et al., 1983). This subjective quality renders perceived stress very susceptible to personal differences, such as personality traits.

One of the most popular personality frameworks is the Five-Factor Model (FFM) which has been embraced in explaining the consistency of thoughts, emotions, and behaviors. One of the five core traits is neuroticism, which is a negative emotionality tendency, such as anxiety, irritability, emotionally unstable and susceptible to stress (McCrae and Costa, 2003). A person with a high level of neuroticism will tend to see even common scenarios and experience it as a threat and feel stressed. In academic settings, these people can perceive common academic tests, including exams, presentations, or responses, as a great load of stress.

The consistency of the empirical literature is that, neuroticism has a strong positive correlation with perceived stress among age groups and across cultures. Research has demonstrated that high neuroticism

individuals are more emotionally responsive to everyday stressors and say that they are more stressed in objectively similar situations (Bolger and Schilling, 1991; Ebstrup et al., 2011). Neuroticism has been observed among university students to be associated with academic stress, test anxiety, emotional exhaustion, and poor coping habits like rumination and avoidance (Grant and Langan-Fox, 2007; Penley and Tomaka, 2002). These trends demonstrate that neuroticism is a key factor in determining the way students evaluate and react to the academic requirements.

The perceived stress problem is even more crucial when it is considered in the context of female population of universities. The studies have also shown that female students tend to have more perceived stress and neuroticism, which could be the result of emotional sensitivity, social role expectations, and gender-specific stressors (Beiter et al., 2015). Female students can be subjected to several stressors in the context of conservative or developing areas involving limitations in mobility, familial demands, safety issues, and the inability to access psychological support services. The given considerations render the research of stress and personality quite topical within the sphere of female educational organizations.

The current research is based in Women University of Azad Jammu and Kashmir (AJK), Bagh, which is a geographically challenging area with the issue of socio-political sensitivity and scarce mental health resources. In this example, female students do not just have to deal with their academic obligations but in general with society and culture, and their expectations. Although the international literature on neuroticism and its perceived stress has been increasing, the lack of empirical studies on female university students in Azad Jammu & Kashmir is quite apparent. The majority of the available research is done in Western context or major urban institutions, and therefore, has limited applicability in terms of context to students in marginal or underserved areas.

Moreover, the available literature takes general student sample with no specific analysis of institutions. This leaves a loophole of perceiving the functioning of personality traits like neuroticism in localized cultural and educational setups. The other area that has limited evidence is the study of perceived stress as a facet of stress and not a combination of general stress or psychological distress. These gaps need to be filled in order to create culturally and institutionally relevant mental health interventions.

Through the sample of 300 female students of Women University of AJK, Bagh, the current study aims to add a context-related empirical information to the association of neuroticism and perceived stress. This association would be vital in determining the students who are at greater psychological risk and in an informed approach to counseling, stress management initiatives, and personality sensitive support systems in women universities. The results can also play a role in the general debate of gender, personality and mental health in higher education in Pakistan.

LITERATURE REVIEW

Perceived Stress of University students

Perceived stress has proved to be an important construct in determining the mental health outcome of university students. In contrast to objective stress, perceived stress focuses on the subjective assessment of individuals on the idea that life events are stressful, unpredictable, or overwhelming (Cohen et al., 1983). This is done by considering that different individuals will react differently to stress-inducing situations due to the perception-based approach. Students of the universities often have high perceived stress because of their academic tasks, exams, their finances, social adaptation, and doubts about their career opportunities (Beiter et al., 2015).

The literature has repeatedly shown that perceived stress can be incredibly common in the higher education environment, and has negative psychological consequences of anxiety, depression, emotional fatigue, and diminished academic interest (Dyrbye et al., 2006). Women students, especially, are mostly likely to report more perceived stress than males and this is a tendency that cuts across cultures (Misra and McKean, 2000). The perception of stress in genders has been explained by socialization patterns, emotional expressiveness, and role expectations on women being higher than on men.

Sociocultural barriers, lack of institutional support and access to mental health services might also contribute to the further exacerbation of perceived stress in female university students in developing regions. Research studies in South Asian settings indicate that female students tend to experience two pressures of poor performance at school and living up to gender expectations which are a major contributor to stress perception (Saleem et al., 2021). The results highlight the necessity to study perceived stress in culturally and institutionally specific situations, e.g. in women universities in Azar Jammu and Kashmir.

Personality Characteristics and Stress Perception

Personality traits are patterns of consistent cognition, feeling and behavior that shape the perceptions and reactions of individuals to the demands in the environment. The Five-Factor Model (FFM) of personality which includes neuroticism, extraversion, openness, agreeableness and conscientiousness has been widely applied in understanding individual differences in stress appraisal (McCrae and Costa, 2003). Among these characteristics, neuroticism has always shown the most dramatic relationship with perceived stress.

Theoretical viewpoints indicate that presence of personality affects stress based on the cognitive approaches in appraisals. As suggested in the transactional model of stress by Lazarus and Folkman (1984), people assess the possible stressors depending on the perceived threat and coping resources. These evaluations are influenced by personality factors, especially neuroticism, which predisposes people to negative perceptions of ambiguous situations. As a result, more neurotic people tend to think that situations are stressful, even in cases where the objective demands are mid-range.

There is empirical support of the assumption that personality characteristics explained a significant amount of variance in perceived stress. Ebstrup et al. (2011) established that neuroticism had a positive relationship with perceived stress but other character traits like extraversion and conscientiousness had negativity. These results indicate that whereas the process of perceived stress is protected by certain personality factors, neuroticism acts as vulnerability factor to it.

Neuroticism: Theories and Psychological Personality

Neuroticism is described as a personality dimension, which has been described as emotionally unstable, anxious, moody, irritable, as well as, vulnerable to stress (Costa and McCrae, 1992). Neurotic individuals are characterized by frequent negative emotions, including fear, sadness, anger, and guilt and are more prone to emotional responsiveness of stressors. Neuroticism is also regarded as a relatively stable feature that does not significantly change during adulthood, as it is one of the substantial predictors of mental outcomes in the long term.

Cognitively, neurotic disorder is more likely to be associated with maladaptive ways of thinking, such as catastrophizing, rumination and threat sensitivity. These cognitive biases enhance the perception of stress because they make people pay more attention to the threats and have a low perception of coping (Robinson et al., 2007). The problems of emotion regulation are also characteristic of people with high neuroticism, which also promotes a prolonged experience of stress.

The mental health issues that have been attributed to neuroticism are quite diverse and comprise anxiety disorders, depression, and psychosomatic complaints (Lahey, 2009). Academically, neurotic students might not cope with performance pressure, fear of failure and interpersonal issues that increase perceived stress levels.

Empirical Evidence of Neuroticism and Perceived Stress

There is a significant amount of empirical evidence that neuroticism is related to perceived stress in a positive way. Bolger and Schilling (1991) also discovered that people with high neuroticism experienced more stressors in their everyday lives and also displayed more emotional response to the stressors. This twofold process of exposure amplification and reactivity amplification is the reason neuroticism is a sound predictor of perceived stress.

In the case of university students, research has reported a consistent finding that neuroticism is a predictive of a greater perceived academic stress and emotional distress. As Grant and Langan-Fox (2007) noted, the neuroticism factor was found to relate to stress outcomes largely on students despite the adjustment of coping strategies. Home, in a similar study by Lee et al. (2019), found that perceived stress was a direct predictor of neuroticism, as well as, mediated the correlation between neuroticism and a depressive symptom.

The existence of this relationship is supported by cross-cultural research. As an example, the research performed in the environment of Asian universities has shown that neuroticism is positively correlated with the perceived stress, burnout at school, and test anxiety (Zhang et al., 2023). These results indicate that neuroticism to stress relationship is not a culturally determined phenomenon but could be enhanced by the situational sources of stress like academic rivalry and institutional inadequacies.

Neuroticism and Stress Gender Differences

Both male and female neuroticism have been extensively reported in the literature where the females tend to score higher in neuroticism than the males in all cultures (Schmitt et al., 2008). This distinction has great implications over perceived stress with the neuroticism being higher; this predisposes people to be more emotionally sensitive and react to stress. As a result, female students tend to have more perceived stress, anxiety, and emotional distress.

Among the female populations at the university, neuroticism can be critical in relation to sociocultural stressors in order to magnify the perception of stress. Research shows that female students have special pressures regarding the safety issues, social norms, and having academic goals and family duties (Misra et al., 2000). Such stressors might be especially acute in conservative or conflict-affected areas, where the educational enrolment of women is followed by the extra psychological costs.

Regardless of these results, there is limited research done on female-only universities. Mixed-gender samples have been used in most of the studies and this could blur gender-specific patterns in the neuroticism-stress relationship. This gap creates a necessity of research that should be carried out with institutions that are oriented towards women like Women University of Azad Jammu and Kashmir, Bagh.

Coping, Emotion regulation and neuroticism

The use of coping methods and emotion regulation mechanisms is essential to the process of explaining the impact that neuroticism has on perceived stress. Neurotic people tend to adopt unhealthy coping

mechanisms like avoidance, denial and rumination that increase the perception of stresses (Penley and Tomaka, 2002). Adaptive coping strategies (such as problem-solving and cognitive reappraisal, etc.) are less commonly used by neurotic persons, in contrast.

The effect of neuroticism on stress is also magnified by emotion regulation problems. This causes the neurotic individual to find it difficult to regulate his or her negative feelings and as a result produce long lasting stress reactions and emotional fatigue (Gross and John, 2003). Poor ability to regulate emotions among university students has been associated with more perceived stress, lack of engagement in academics, and psychological distress.

Even though various studies have accepted the importance of coping and emotion regulation, very few have looked at these processes among female university students in developing economies. This weakness limits the generalisability of current results to situations like Azad Jammu & Kashmir.

Research Gaps

Although a lot of literature has been done on neuroticism and perceived stress, there are a number of gaps that can be identified. To begin with, there is a paucity in research that centers on female university students to women-only institutions, especially in such areas as Azad Jammu & Kashmir. Second, most of the studies are based on Western samples and thus are not culturally generalized. Third, the correlation between neuroticism and perceived stress is established but institution-specific data that can be used to design localized mental health interventions is missing.

This paper fills these gaps as it discusses the role of neuroticism in the perceived stress of 300 female students in the Women University of Azad Jammu and Kashmir, Bagh. The study can be useful in providing the contextually relevant evidence to the existing literature by paying attention to this underrepresented population and facilitating the design of the personality-informed stress management programs in higher education institutions attended by women.

METHODOLOGY

Research Design

The research design used in the current study is a quantitative, cross-sectional correlational study, which aimed at investigating how neuroticism affects perceived stress among university students. It was deemed that this design is suitable because it enables the measurement of relationships between psychological variables to be measured systematically at one point in time without the manipulation of variables. The application of quantitative methods in the research of personality and stress is popular because it generates generalizable results.

Population of the Study

The study population included female undergraduate and postgraduate students who were students of the Women University of Azad Jammu and Kashmir (AJK), Bagh. The university has a wide range of socio-economic and cultural backgrounds and covers the entire Azad Jammu and Kashmir, and thus it is an appropriate environment where we can study the psychological variables of personality traits and perceived stress among women.

Sample and Sampling Technique.

The study was chosen on a sample of 300 female students. The sample size was deemed to be sufficient to do correlational analysis and regression-based statistical analysis. The participants also had a convenience sampling technique, since they were approached by contact depending on the availability and their willingness to take part during normal school hours. Students across various academic departments and semesters were also sought to make sure that there is a reasonable representation.

Inclusion Criteria

- The population of female students already studying at the Women University of AJK, Bagh.
- Undergraduate students and postgraduate students.
- The students in 18 years and older.

Exclusion Criteria

- Students with known severe psychological disorders (self reports).
- Students who do not want to give an informed consent.

Research Instruments

Neuroticism Scale

The subscale of Neuroticism of the NEO Five-Factor Inventory (NEO-FFI) designed by Costa and McCrae (1992) was used to measure neuroticism. The scale measures emotional instability, anxiety, and stress vulnerability. The answers are rated in a Likert-type of scale with the scores giving higher levels of neuroticism. The NEO-FFI has proven to be very reliable and valid in various cultural settings.

Perceived Stress Scale (PSS)

The perceived stress was evaluated through the Perceived Stress Scale (PSS-10) invented by Cohen, Kamarck, and Mermelstein (1983). The scale provides an understanding of the extent to which the respondents have perceived that their lives are stressful in the last month. The items are measured using a 5-point Likert scale; this runs between never and very often. The increase in scores depicts the increase in perceived stress. The PSS has become common with large populations of university students and has good psychometric characteristics.

Data Collection Procedure

The data were gathered on the basis of the formal permission of the official university authorities. The participants were informed of the research objective, and they were guaranteed confidentiality and anonymity. Administration of questionnaires was face-to-face during the free time or upon lectures. All participants agreed to take part in the study informed. The subjects were asked to give truthful answers and they were not given a time limit to complete the questionnaire.

Ethical Considerations

The process of carrying out the research was very ethically guided. The participation was voluntary and the participants were told about their right to opt out at any point without any punishment. Data anonymity was provided by its use to guarantee confidentiality, and it was used in academic purposes only. No personal information that could identifiably determine the person was noted.

Data Analysis

The analysis of data was done with the help of Statistical Package of Social Sciences (SPSS) software. The descriptive statistics (mean, standard deviation, frequency, and percentage) were calculated in order to characterize demographic features and the study variables. The correlation coefficient test was performed to test the correlation between neuroticism and perceived stress. Also simple linear regression analysis was used to establish the predictive influence of neuroticism on the perceived stress in university students. The 0.05 level was used to determine the level of statistical significance.

Consistency of the Instruments.

Cronbach alpha coefficient was used to determine the internal consistency of the instruments. According to the previous research, there are no records of low reliability scores on the Neuroticism subscale, or the Perceived Stress Scale. The current sample was analyzed in terms of reliability so that the instruments were suitable to the study population.

DATA ANALYSIS AND FINDINGS

The statistical analysis of the data in 300 female students of the Women University of Azad Jammu and Kashmir (AJK), Bagh was performed with the help of the Statistical Package of Social Sciences (SPSS). The statistical methods, both descriptive and inferential, were used to test the correlation between neuroticism and perceived stress. The descriptive statistics were employed to describe the features of the study variables whereas inferential analyses, such as Pearson correlation and linear regression, were adopted to test the research objectives.

Descriptive Characteristics of Study Variables.

The mean scores and the variation of the neuroticism and perceived stress of the respondents were calculated using descriptive statistics to identify the results. These data give a general idea of the amounts of neuroticism and perceived stress among the sample.

Table 1

Descriptive Statistics of Neuroticism and Perceived Stress (N = 300)

Variable	Mean	Standard Deviation	Minimum	Maximum
Neuroticism	28.64	6.12	12	45
Perceived Stress	21.87	5.94	8	38

Interpretation:

The average neuroticism score of the students implies that the score is moderate implying that emotional instability exists in a considerable number of the students and the mean perceived stress score indicates that

a reasonable percentage of the students have moderate or high levels of stress. The values of the standard deviation are satisfactory, which means that the sample has students of diverse levels of neuroticism and perceived stress.

Correlation Analysis between Perceived Stress and Neuroticism.

The Pearson product-moment correlation analysis was used to evaluate the relationship between neuroticism and perceived stress amongst university students.

Table 2

Linear Relationship of Neuroticism with Perceived Stress.

Variables	1	2
1. Neuroticism	—	
2. Perceived Stress	.62**	—

Note. $p < .01$

Interpretation:

The findings indicate that neuroticism and perceived stress have a strong, positive and statistically significant relationship ($r = .62$, $p < .01$). This shows that the greater the levels of neuroticism, the greater levels of perceived stress among university students in females. Therefore, more emotionally unstable and anxious students are more likely to perceive academic and general life circumstances as stressful.

Regression Analysis: Prognostic Neuroticism

In order to evaluate the degree to which neuroticism is a predictor of perceived stress, a simple linear regression analysis was conducted with neuroticism as the independent variable and the perceived stress as the dependent variable.

Table 3

Prediction of Perceived Stress with Neuroticism using the Linear Regression Analysis

Predictor	B	SE B	β	t	p
Constant	8.42	1.21	—	6.95	.000
Neuroticism	0.47	0.04	.62	11.58	.000

Table 4

Model Summary

R	R ²	Adjusted R ²	F	p
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.62	.38	.38	134.10	.000
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Interpretation

The regression model was significant statistically ($F = 134.10$, $p < .001$), which showed that neuroticism was a significant predictor of perceived stress in university students. The value of $R^2 = .38$ also indicates that a 38 and only 38 percent of the variation in perceived stress is due to the effects of neuroticism. The standardized beta coefficient ($= .62$) represents a high positive impact which proves that with the increase in neuroticism perceived stress increases substantially.

As the study has shown clearly, neuroticism has a significant role in determining perceived stress among female university students at the Women University of Azad Jammu and Kashmir at Bagh. Mediocre to high scores on neuroticism and perceived stress are found in the sample in accordance with descriptive results. Correlation analysis showed that neuroticism and perceived stress were strongly positively correlated, whereas the regression analysis has proven neuroticism to be a significant predictor of perceived stress.

These results align with the aims of the study and are consistent with the available literature that proposed that people who are high in neuroticism are more emotionally sensitive and tend to examine situations as stressful. The findings indicate the need to consider personality variables when dealing with the stress among the students and designing mental health priorities in women-oriented colleges and universities.

DISCUSSION

The current research was aimed at analyzing how neuroticism affects the perceived stress in female students of university at the Women University of Azad Jammu & Kashmir (AJK), Bagh. The results give a solid empirical evidence to the hypothesized correlation amid neuroticism and perceived stress, showing that the positive relationship among neuroticism and perceived stress is statistically significant. These findings are relevant to the purpose of the study and in accordance with a large amount of prior literature, which has established neuroticism as one of the vulnerability factors to stress-related consequences, which is based on personality.

The correlation analysis showed that neuroticism has a strong positive relationship with perceived stress meaning that those students who are more emotionally unstable, anxious, and negatively affective tend to describe their academic and daily life experiences as stressful. This observation is in line with earlier studies that have established that neurotic people are more responsive to stressors and will likely perceive ambiguous or difficult events as a threat (Bolger and Schilling, 1991; Ebstrup et al., 2011). These cognitive and emotive dispositions can enhance daily academic tasks such as exams, due dates and performance ratings in the university setting which lead to an increased perceived stress.

Regression analysis also confirmed that neuroticism is a strong predictor of perceived stress with neuroticism significantly predicting a significant percentage of variance in the perception of stress by students. This observation goes hand in hand with the fact that neuroticism is known to be a powerful predictor of stress even in the presence of other personality factors and coping variables (Grant and Langan-Fox, 2007; Lee et al., 2019). The prognostic power of neuroticism denotes the crucial role of neuroticism in influencing the processes of stress appraisal and emphasizes the significance of considering the personality factors in the framework of student mental health.

The results are especially applicable to the situation with the female-only university in Azad Jammu & Kashmir, where the students might be subjected to further sociocultural and environmental stressors. In

conservative areas and geographically disadvantaged areas, female students tend to be subjected to increased demands in terms of academic performance, family roles, and social conformity. These pressures together with high neuroticism could also increase perceived stress, making them susceptible to emotional distress. The current work contributes to the existing literature as it offers an institution-specific evidence with an underserved population, hence filling a massive gap in the research on personality and stress.

Theoretically, these findings are valid and agree with the transactional theory of stress which attributes stress to the importance of cognitive appraisal in the stress experience (Lazarus and Folkman 1984). Neuroticism seems to affect perception of stress by predisposing people into negative appraisals and low confidence in coping skills. This theory is in line with studies that associate maladaptive coping mechanisms like rumination, avoidance with neuroticism that do not reduce stress but instead intensify stress (Penley and Tomaka, 2002).

The results also have significant practical implications on the higher learning institutions especially women universities. Individual personality differences in stress management programs should be put into consideration and early detection of high neuroticism students should be the priority. The counseling services, resilience-building interventions, and training in emotion regulation can be particularly useful to these students. By tackling the vulnerabilities of personality, the universities will be able to increase the psychological well-being and academic performance of students.

In spite of its contributions, the research is limited. The cross-sectional design restricts causal interpretation and the application of self-report measures can result in bias in responses. The longitudinal designs and investigation of the possible mediating variables, like coping strategies and emotional regulation, should be used in the future research to understand the mechanisms of interrelations between neuroticism and perceived stress better.

Finally, the research shows that neuroticism plays a crucial role in predicting perceived stress in female students of the university of women in Ajman, Bagh, Women University of AJK. These results underline the need to use personality-based approaches to the mental health of students and provide valuable context-specific evidence to the current literature.

CONCLUSION

In the current research, the researcher concludes that neuroticism is an important factor of perceived stress among female undergraduate students in the Women University of Azad Jammu and Kashmir, Bagh. The results indicate that higher neurotic students report to be more stressed, probably because they are more emotionally responsive and negatively evaluate academic and daily life expectations. The work is a contribution to the literature in that it presents context-specific evidence of a women-only university in an underrepresented part of the world and hence enhances the comprehension of personality-based vulnerability to stress. Generally, the findings point to the fact that the perceived stress in the case of university students is not only a factor of external demands but also closely dependent upon the stable personality factors like neuroticism.

RECOMMENDATIONS

It is also suggested based on the results that universities should introduce an element of personality-informed mental health intervention in their student support services. Early screening programs at counseling centers need to be used to identify the students with high rates of neuroticism and offer specific stress management, emotional control, and resilience-building workshops. The psychological needs of

emotionally vulnerable students should be made aware of faculty members and academic advisors so as to create conducive learning environments. Also, longitudinal designs should be used in future studies, and mediating factors (coping strategies and emotional regulation) need to be introduced to comprehend causal mechanisms in greater detail and improve the outcomes of intervention programs.

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