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Self-Efficacy and Neuroticism among Depressed Female University Students

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ABSTRACT

The primary objective of this study was to explore self-efficacy and neuroticism within a population of depressed female university students. This research encompassed two distinct phases. In Phase-I, the focus was on the recruitment and selection of the sample, involving the administration of the Beck Depression Inventory (Beck, et al., 1961) to a group of 500 female university students. Out of this initial pool, 300 female university students were identified as exhibiting high scores on the Beck Depression Inventory (Beck, et al., 1961).

Subsequently, Phase-II, which constituted the main part of the study, was carried out. To assess self-efficacy and neuroticism, the researchers employed the General Self-Efficacy Scale (Tabassum, Rehman, Schwarzer & Jerusalem, 2003) and the

Adjective Checklist (Sechrest, Fay & Zaidi, 1972). These instruments were administered to the sample previously selected during Phase-I, consisting of 150 students from the Social Sciences field and another 150 from the Natural Sciences, all falling within the age range of 20 to 25 years. The correlation coefficient elucidates that there exists an inverse correlation between self-efficacy and neuroticism within the cohort of female university students grappling with depression. Moreover, it appears that students pursuing social sciences exhibit notably diminished levels of self-efficacy in comparison to their counterparts studying natural sciences. Conversely, students in the natural sciences seem to manifest elevated levels of neuroticism relative to their peers enrolled in social sciences.

Keywords: Depression, Neuroticism, Self-efficacy

INTRODUCTION

Personality is a constantly evolving and complex concept, making it challenging to provide a broad description. It can be defined through various factors, some of which have the capacity to forecast a student's academic success. In a study conducted by Furnham (1993), it was observed that personality factors like extraversion, neuroticism, and openness to new experiences are pertinent to education.

Additionally, several other elements, such as birth order and the academic disciplines students choose, can also contribute to amplifying stress, shaping self-efficacy, and molding the personality of university students. A robust sense of efficacy plays a pivotal role in enhancing human achievements and overall well-being. In educational settings, students tend to quickly regain their sense of efficacy even after facing setbacks. They attribute their failures to insufficient effort or gaps in their knowledge and skills, which they believe are attainable. This efficacious perspective fosters personal accomplishments, diminishes stress, and reduces susceptibility to depression, as indicated by Eysenck (2004).

The evaluation of an individual's personality can be subject to the influence of their gender. An illustrative instance is the tendency for women to obtain lower scores than men on assessments designed to gauge assertiveness. This variance in scores may stem from cultural conditioning prevalent in various societies (Schultz & Ellan, 2001). Neuroticism, which is conversely referred to as Emotional Stability, pertains to an individual's inclination to undergo negative emotions. Elevated scores on neuroticism assessments signify a heightened prevalence of adverse effect, characterized by a persistently negative emotional disposition. Such individuals tend to interpret ordinary situations as menacing, react emotionally for extended durations, and perceive minor setbacks as insurmountable challenges, leading to a perpetual sense of unhappiness. Conversely, individuals with lower neuroticism scores are less prone to emotional turbulence, exuding a sense of calm, emotional resilience, and a diminished propensity for enduring negative emotions. More precise traits linked to this factor include anxiety, which distinguishes

between momentary anxiousness and chronic worry, as elucidated by Fincham and Rhodes (2005).

Self-Efficacy is an expression of a positive self-assurance inherent in individuals. It embodies the belief that one possesses the capability to tackle challenging tasks and effectively handle adversity across diverse domains of human performance. The concept of self-efficacy was introduced within the framework of Social Learning theory, which also highlighted several significant distinctions between social cognitive theory and behaviorism. One of these distinctions underscores that individuals are not merely passive beings molded by external circumstances, as in the Behaviorist approach. Instead, they are self-organizing, proactive, introspective, and self-regulating agents. (Bandura, 1999). Self-efficacy can be defined as the set of beliefs an individual holds regarding their ability to perform adequately in a specific situation. The theory of self-efficacy posits that motivation is influenced by two key factors: the belief in one's capability to successfully execute a particular behavior, and the belief that performing this behavior will lead to desired outcomes. Levels of self-efficacy are believed to be shaped by factors such as prior experiences (both successes and failures), observations of others' successes and failures, encouragement and persuasion from peers, colleagues, or relatives, as well as one's emotional state, including feelings of anxiety. These self-efficacy levels have been demonstrated to impact the choice of tasks, motivation, the effort invested in tasks, and the perseverance displayed while engaging in them. As self-efficacy is rooted in an individual's self-perception concerning specific behaviors, it is considered to be situation-specific or context-sensitive. (Feist & Feist, 2006). The impact of self-efficacy beliefs on life trajectories through choice-related processes is exemplified by career selection and advancement. When people have a strong sense of self-efficacy, it expands the spectrum of career choices they genuinely contemplate, enhances their enthusiasm for these choices, motivates them to pursue relevant educational preparations diligently, and ultimately leads to a higher degree of success in their chosen occupational endeavors (Schunk, 2004).

University students encounter various stressors encompassing academic, personal, institutional, and social pressures. These stressors can exert considerable influence on an individual's personality. Effectively managing stress, alongside a robust sense of self-efficacy, proves to be beneficial for university students in terms of their adaptation. Examining personality from a neurotic perspective offers a framework for contemplating the diversity in students' personalities, including variations in emotional stability, extraversion or introversion, openness to new experiences, agreeableness, and conscientiousness (Santrock, 2004).

The primary objective of this current study is to investigate the correlation between general self-efficacy and neurotic behavior among female university students, with consideration for additional contributing factors such as their academic faculty. Notably, the majority of prior research has predominantly focused on undergraduate students. In contrast, the present study explores a distinct

dimension by examining postgraduate students in both their initial and final semesters. Imam's study (2006) revealed a positive correlation between general self-efficacy scores and overall exam performance in undergraduate education settings. This research, however, shifts its focus to a different academic level and timeframe.

Material and Methods

Research design

The study utilized a quantitative, cross-sectional correlational design.

Phase-I: Recruitment and selection of sample

Main purpose of this phase is to recruit and select the sample.

Population

The sample was comprised of 500 female university students, aged between 20 and 25 years. Data was collected from two prominent faculties: one encompassed four departments from the natural sciences faculty, which included Bioinformatics, Mathematics, Statistics, and Computer Sciences, while the other consisted of four departments from the social sciences faculty, encompassing Psychology, Sociology, International Relations, and Education.

Research Instruments

The Beck Depression Inventory (BDI) is a self-administered assessment tool consisting of 21 items designed to gauge an individual's typical attitudes and manifestations of depressive symptoms (Beck, et al., 1961). The Beck Depression Inventory (BDI) has been adapted into various formats, including computerized versions, a card-based form (May, Urquhart, Tarran, 1969, as cited in Groth-Marnat, 1990), a shorter 13-item version, and the more recent BDI-II developed by Beck, Steer, and Brown (1999) (Steer, Rissmiller, & Beck's, 2000).

Although the BDI normally takes ten minutes to complete, responders should be able to read at a fifth or sixth grade level in order to understand the questions (Groth-Marnat, 1990). With coefficients ranging from .73 to .92 and an average of .86, the BDI shows good internal consistency (Beck, Steer, & Garbin, 1988). The 13-item short form has shown comparable reliability levels (Groth-Marnat, 1990). As noted by Beck et al. (1988), the BDI exhibits great internal consistency, with alpha coefficients of .86 and .81 for both psychiatric and non-psychiatric populations.

Procedure

Upon obtaining the necessary permissions from the relevant authorities, the Beck Depression Inventory was systematically administered to a sample of 500 female university students. To ensure a cohesive and efficient process, students were approached in group settings. The research objectives were clearly communicated to the students, and they were kindly requested to provide honest responses when rating themselves on the provided scale.

To ensure the students' comfort and confidentiality, the researchers assured them that their identities would remain anonymous, and the gathered information would be solely utilized for research purposes. This approach aimed to create a secure and trustful environment, encouraging the participants to provide accurate and genuine responses without any concerns about their privacy or confidentiality

being compromised.

Phase II: Main Study

Hypotheses

The present study established the following hypotheses:

1. There exists an inverse correlation between self-efficacy and neuroticism in depressed female university students.
2. Depressed female students in the natural sciences exhibit higher levels of self-efficacy when compared to their counterparts in the social sciences.
3. Neuroticism factors are more pronounced in depressed female students pursuing natural sciences in contrast to those studying social sciences.

Population

A sample comprising 300 female university students who obtained higher scores on the Beck Depression Inventory (Beck, et al., 1961) in Phase-I, was carefully chosen. This sample was evenly split, with 150 students from the Faculty of Social Sciences and another 150 from the Faculty of Natural Sciences.

Research Instruments

General Self-Efficacy Scale

In this study, the assessment instrument utilized was essentially a version of the General Self-Efficacy Scale translated into Urdu by Tabassum, Rehman, Schwarzer, and Jerusalem (2003). This scale consists of 10 items and is designed for self-administration, utilizing a 4-point psychometric rating system. The scale demonstrated strong internal consistency, with Cronbach's alphas falling within the range of .76 to .90, and the majority of them exceeding the high .80s.

Adjective Check List

Sechrest, Fay, and Zaidi's (1972) Urdu translation was employed. Neuroticism (N) scores 18; extroversion (E) scores 21; openness to experience (O) scores 25; agreeableness (A) scores 28; and conscientiousness (C) scores 20.

Procedure

In the data collection process, the study utilized the translated versions of the General Self-Efficacy Scale and the neuroticism items. Prior to the presentation of these items, essential demographic information was included. Clear instructions for responding to the scale items were placed on the first page of the questionnaire booklet.

To initiate data collection, the researchers sought permission from department chairpersons to approach students within their respective classes. Upon entering these classrooms, the study's objectives were communicated to the students, who were then kindly requested to provide candid responses to the scales provided. It was emphasized that their identities would remain confidential, and the gathered information would be exclusively utilized for research purposes.

Ethical Considerations

The subjects of the quantitative study were given informed consent, prior approval, anonymity, and confidentiality in compliance with the suggested ethical

standards of the American Psychological Association. Safeguards were in place to protect everyone's safety and privacy. The study was conducted ethically, and participants received a thorough explanation. The participants gave their written agreement and were told there would be no consequences if they choose to leave the research at any time. During the study, the researcher mostly followed four guiding principles: respect for the examinee's abilities, accountability, integrity, and rights.

Statistical Analysis

Descriptive statistics and inferential statistical analyses were conducted on the data to investigate the underlying aims of the present research by using the statistical package for the social science (IBM SPSS 26).

RESULTS AND DISCUSSION

Subsequently, after the data collection process was completed, statistical analysis was conducted using the software tool SPSS.

Table 1

Correlation coefficient and descriptive Scores of the female university students on Self-Efficacy (General Self-Efficacy Scale) and Neuroticism (adjective Checklist) (N= 170)

Variables	Self-Efficacy	Neuroticism	α	Skewness	Kurtosis
Self-Efficacy	-	-.41*	.62	.34	1.15

p>.05

Self-efficacy is negatively significantly correlated between Scores of the female university students on Self-Efficacy (General Self-Efficacy Scale) and Neuroticism (adjective Checklist) The results of the table 1 show that there exists negative relationship between self-efficacy and neuroticism (r = -.41, p>.05).

Table 2

Means, Standard deviations and t- values of the scores of the natural and social sciences female University students on the General Self-Efficacy Scale

Gender	n	M	SD	t(df)	Cohen's d	p
Social sciences	90	27.26	5.45	2.73(168)	0.362	0.007
Natural sciences	80	29.30	5.80			

Table 2's results demonstrate that there is a noteworthy disparity between the self-efficacy scale scores of university students studying the social sciences and those studying the natural sciences. As a result, female university students studying the natural sciences had higher levels of self-efficacy than those studying the social sciences.

Table 3

Means, Standard deviations and t- values of the scores of the natural and social sciences female University students on the Neuroticism

Personality Factors	Natural sciences		Social sciences		t(168)	Cohen's d	p
	M	SD	M	SD			
Neuroticism	28.19	8.19	26.59	7.50	0.36	0.046	0.719

The table 3 shows that there is a non significant difference on the scores on the Neuroticism among the Natural sciences and Social sciences female university students in neuroticism ($t = -0.36$, $df = 168$, $p = 0.719$).

DISCUSSION

This study's main goal was to investigate how university students' self-efficacy and different personality traits interact. The study's conclusions point to a number of significant connections. First, it was found that stress and self-efficacy are inversely correlated, meaning that self-efficacy tends to decline as stress levels rise. Furthermore, there was a significant correlation between neuroticism and stress, suggesting that neurotic tendencies are more prevalent in people who experience higher amounts of stress.

Additionally, the study found favorable relationships between self-efficacy and a number of personality traits, such as agreeableness, extroversion, conscientiousness, and openness to new experiences. This suggests that people who have higher levels of self-efficacy also have a stronger feeling of responsibility, are more gregarious and outgoing, are more agreeable in their dealings with others, and are more receptive to new experiences. These results provide insight into the intricate connection between university students' self-efficacy and a range of personality factors.

It was discovered that female university students typically have higher degrees of agreeableness when it comes to gender variations in personality traits. On the other hand, compared to their female peers, male university students typically exhibit higher levels of self-efficacy and lower levels of stress. Self-efficacy, conscientiousness, and extroversion were found to positively correlate with academic achievement, indicating that students who score higher on these measures typically perform better academically.

When comparing students of social sciences to those in natural sciences, it was observed that social sciences students typically experience higher levels of stress and lower self-efficacy. On the other hand, students in natural sciences tend to display a greater inclination towards being open to new experiences. These natural sciences students also exhibit higher levels of personality traits associated with openness to experience, conscientiousness, and extroversion.

The hypothesis proposing an inverse correlation between self-efficacy received support from the findings of the present study. These results suggest that there is a likelihood of reduced self-efficacy among university students. High self-efficacy is typically indicative of students who firmly believe in their abilities and

capabilities.

Conversely, students with lower self-efficacy often set unrealistically high goals and standards for themselves, and when they fall short of these demanding benchmarks, they tend to place blame on themselves. This challenging and stressful situation can have detrimental effects on their self-efficacy (Coffman & Gilligan, 2003).

Examining the relationships between university students' personality qualities and self-efficacy was the study's second goal. The findings revealed favourable associations between self-efficacy and characteristics including agreeableness, extroversion, conscientiousness, and openness to new experiences. Often referred to as "intellect," openness to experience describes students who are sensitive to beauty, have an appreciation for art, and are intellectually curious. As a result, even when their behaviour conforms to social norms, they are likely to have unusual and independent views. On the other side, self-efficacy is defined by a person's knowledge of their own skills. Interestingly, one contextual component that has been found to tend to improve openness to experience is exposure to a university degree. Consequently, there is a favourable correlation between being receptive to new experiences and self-efficacy.

Additionally, it's critical to recognise that a variety of additional personality traits contribute significantly to the formation and growth of university students' self-efficacy (Costa, McCrae, Zonderman, Barbano, Eysenck, 2004). The purpose of the study was to compare the personality traits and self-efficacy of students from the scientific and social sciences faculties. Certain characteristics are more common among students studying the natural sciences than among their social science counterparts, according to the analysis of the five personality components between these two groups. In particular, extroversion, conscientiousness, and openness to new experiences were all higher among students studying the natural sciences. Although the mean scores showed that agreeableness and neuroticism were similarly greater among students studying the natural sciences, there were no discernible differences in these traits.

According to the study's findings, students studying the natural sciences are more self-assured than those studying the social sciences. These results could be attributed to a number of things. Students that study the natural sciences typically have a strong academic record and lofty goals. On the other hand, a lot of students studying the social sciences could pick their courses randomly and not give their studies as much attention. Furthermore, students in the social sciences frequently lack sufficient academic resources and deal with uncertainty regarding their future opportunities, which may affect their confidence levels. While students in the social sciences are frequently involved in a wider variety of university activities, students in the natural sciences are typically more focused and committed to their studies (Woolfolk, 2004).

CONCLUSION

This study's main goal was to look into how university students' personality traits and self-efficacy relate to one another. Conscientiousness, agreeableness, extroversion, and openness to new experience all showed favorable associations with self-efficacy. Examining personality variations by gender, it was found that while male university students typically show higher levels of self-efficacy, female students tend to be more pleasant.

Moreover, the study found that academic performance is positively linked to self-efficacy, conscientiousness, and extroversion. In addition, students studying in social sciences tend to have lower levels of self-efficacy when compared to their counterparts in the natural sciences. Furthermore, students in the natural sciences displayed higher levels of personality factors associated with openness to experience, conscientiousness, and extroversion as opposed to those in the social sciences.

Overall, this study effectively assessed the role of self-efficacy and personality traits among university students. It also established the capacity to predict academic performance based on the personality traits and self-efficacy of these students.

Limitations And Suggestions

The present study has certain limitations.

1. Firstly, the sample was limited exclusively to postgraduate university students, omitting the perspective of undergraduate students' self-efficacy and personality factors.
2. Secondly, the study did not explore variations across different semesters, restricting the findings solely to the self-efficacy levels of fourth-semester students.
3. The research was confined to two specific faculties of the university—natural and social sciences—thus limiting the broader applicability of the study's conclusions.
4. Future research should aim to include a representative and sizable sample encompassing both male and female university students from all provinces.
5. A comparative analysis could benefit from collecting data from students across all semesters of postgraduate classes to provide a more comprehensive understanding of self-efficacy and personality types among university students.
6. Expanding the data collection to include all faculties of the university would offer a more holistic view of stress, self-efficacy, and personality factors among students.

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