

The Influence of Neuroticism on Stress Perception and Its Resultant Negative Effect on University Students in Nakuru County–Kenya

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ABSTRACT: There is contemporary literature reporting the role of the neuroticism personality type in the stress process. People with elevated neuroticism experience more interpersonal stressors, perceive daily events as more negative, and use maladaptive ways to combat stressors. This article explores the influence of neuroticism on stress perception and the associated negative affect among university students in Nakuru County, Kenya. The study used a Correlational research design. The target population will consist of about 10,000 students enrolled in universities located in Nakuru County. The researcher used the Yamane (1967) formula to determine the sample size of 385 respondents. The researcher used Simple random sampling method in selecting respondents from different universities. Quantitative data was collected using standardized questionnaires. Data was analysed in themes and narratives. The results were presented in tables. The results indicated that a strong relationship between neuroticism and Stress($r=0.62$) this means that the participants in the high neuroticism group had significantly higher base levels of stress and negative affect, as compared to the participants in the low neuroticism group. The study recommends and appeals to government leaders, education stakeholders to strive further towards addressing Neuroticism and stress. Additionally, social workers, counsellors and psychologists should be assigned through the cooperation of the above institutions to cater for the mental-wellness of university students and the community at large.

I. BACKGROUND

According to Zobel et al., (2004) neuroticism as a temperamental sensitivity to negative stimuli refers to a predisposition towards experiencing anxiety, tension, self-pity, hostility, irrational thinking, impulsivity, self-consciousness, depression, and low self-esteem. On the other hand, Penley & Tomaka, (2002), asserted that neuroticism accompanies a susceptibility to psychological distress and indicates a proclivity to hold unrealistic ideas, inefficient ways of coping with stress, and an inability to control urges.

Neuroticism consists of two poles of a single dimension: emotional stability and negative emotionality. The term “neuroticism” has also been used interchangeably with the term “negative affectivity” (McCrae, 1990; Ormel & Wohlfarth, 1991; Schwebel & Suls, 1999). People high in negative affectivity appear to be especially sensitive to the minor failures and frustrations of daily life (Zobel et al., 2004). According to Rosenberg (1998), the two widely recognized classes of affective states are moods and emotions. Rosenberg argued that both mood and emotions are transient states that fluctuate throughout the day but that moods last for long periods of time, while emotions are acute, intense, and short lived. According to Watson, Clark, and Tellegan (1988), positive and negative affect are the two strongly negatively correlated dominant dimensions of affect, which have consistently appeared in affect studies. However, Costa and McCrae (1980) reported that

due to, earlier research on positive and negative affect, it was concluded that these two dimensions are uncorrelated and independent.

Positive affect (PA) indicates the degree to which a person feels active, enthusiastic, and pleasantly excited. Negative affect (NA) is reflected by an inclination towards experiencing sadness and is a dimension of subjective distress. According to Hanson, Maas, Meijman, and Godaert (2000), negative affect is defined as “a general dimension of subjective distress and unpleasurable engagement”. High NA is characterized by irritability, hostility, nervousness, and shame, whereas low NA is characterized by calmness and serenity (Watson et al., 1988).

STRESS

Stress is defined as a burden placed on individuals by external conditions that overwhelm their psychological capacities to adapt (McCrae, 1990). Ormel and Wohlfarth (1991) identified two types of life stresses: exogenous (involving external circumstances) and endogenous (involving internal processes). Transactional stress theory posits that stress is neither rooted in the environment nor in the person, but is a consequence of their ongoing interaction or transaction (Vollrath, 2001). Bolger and Zuckerman (1995) identified two fundamental stages of stress process: stress exposure and stress reactivity. Stress exposure represents the degree to which a person is likely to experience a stressful event; stress reactivity is the degree to which a person is likely to manifest emotional or physical symptoms in response to a stressor.

According to Dedovic, D’Aguir, and Pruessner (2009), stress poses a threat to homeostasis, which is followed by a stress response to restore homeostasis. When a person perceives stress, deactivation of the hippocampus takes place, resulting in the disinhibition of the hypothalamic pituitary adrenal (HPA) axis. HPA is the main human stress hormone axis that leads to the release of glucocorticoids (cortisol) in the human body. Excess of cortisol initiates a negative feedback mechanism that curbs further cortisol production (Dedovic, D’Aguir et al., 2009).

Psychological stress is investigated in laboratories to measure people’s unique reactions to stressful experiences. Researchers have used different methods to induce stress in controlled settings; these methods include public speaking, recalling previous stressful experiences, and watching stressful films (Kirschbaum, Pirke, & Hellhammer, 1993; Lazarus, 1993). According to Nejtck (2002), psychological stressors such as public speaking, medical exams, parachute jumping, and watching suspenseful films such as “The Shining” and “Psycho” significantly increase people’s salivary cortisol levels above their “at---rest” baseline levels. Dedovic, Wadiwalla, Engert, and Pruessner (2009) studied gender differences in response to laboratory psychosocial stressors and found that different types of laboratory stressors produced different reactions in men and women. For example, challenging mathematical tasks given under time pressure significantly increased cortisol levels in men, as compared to women. Similarly, social rejection stress tasks significantly increased cortisol levels in women when compared to men (Dedovic, Wadiwalla et al., 2009).

Coping is another critical process that follows appraisal and consists of cognitive and behavioral efforts to prevent, manage, and relieve stress (Penley & Tomaka, 2002). Coping is defined as “the person’s constantly changing cognitive and behavioral efforts to manage specific external and/ or internal demands that are appraised as taxing or exceeding the person’s resources” (Folkman et al., 1986,).

According to Cohen, Kamarck, and Mermelstein (1983), health researchers commonly assume that the impact of objectively stressful events is determined by one’s perception of an event’s stressfulness. Bolger and Zuckerman (1995) argued that personality influences the stressor reactivity by mapping out coping choices, their likely effectiveness, or both. Vollrath (2001) asserted that personality outlines the stress---reaction process that begins at the stress appraisal, then proceeds to the choice of coping techniques, and eventually leads to the emotional outcome.

II. METHOD

Research Design

The study set to identify the relationship between neuroticism and stress. In this study the researcher used a Correlational research design. According to Creswell (2014), correlation research is defined as a statistical test to determine the tendency or pattern for two even (or more) variables or two sets of data to vary consistently data to determine whether, and to what degree, a relationship exists between two or more quantifiable variables. Correlational research provides a numeric description of attitudes, opinions, or trends of a population by studying a sample of that population while comparing some its variables. Singh, (2006) asserts that the method is concerned with the present and attempts to determine the status of the phenomena being investigated; this method comes in handy when a researcher is studying several variables using a large sample size and rigorous statistical analysis. This includes interviewing or administering the questionnaire to a sample of individuals in Nakuru County.

Location of the Study

The study was conducted in Nakuru County. The reason for selecting Nakuru County is that it is reported among the host posts of people with violent behaviour. Nakuru is one of the 47 counties in Kenya. Nakuru has an area of 7,496.5 km² with a population of 2,162,202. Nakuru borders seven counties: Laikipia to the North East, Kericho to the West, Narok to the South West, Kajiado to the South, Baringo to the North, Nyandarua to the East and Bomet to the West.

Target Population

The target population of the study was university students. This section of the population composed of mostly undergraduate students enrolled in colleges. The study considered recruiting male and female participants.

Sample Size and Sampling Procedures

Kumar (2011) says that Sampling is the process of selecting a few (a sample) from a bigger group (the sampling population) to become the basis for estimating or predicting the prevalence of an unknown piece of information, situation or outcome regarding the bigger group. And he goes ahead to say that A sample is a subgroup of the population that a researcher is interested in.

To select these respondents, the researcher allocated a number to every subject or member of the accessible population, placing the numbers in a container and then picking any number at random. The subjects corresponding to the numbers picked would be included in the sample (Creswell 2014). The simple random sampling technique was used in the selection of the participants. This would give each member an equal chance to participate in the study.

To get the sample size the researcher used the Yamane (1967) formula as explained below to get the sample size for the study.

$$n = \frac{N}{1 + N(e)^2}$$

n = Sample size

N= Signifies Population under study

e= Signifies the margin error. (0.05)²

$$n = 10000 / 1 + 10000(0.05)^2$$

n= 10000/1+10000(0.0025)

n= 10000/1+ 25

n= 10000/26

n= 384.61

n= 385

The total sample size were 385 university students in Nakuru County.

Research Instruments

To collect quantitative a series of standardized questionnaires with open and closed ended questions, as well as a questionnaire prepared by the researcher, was be employed. The result is as shown in Table1:

Pearson Correlation on Neuroticism and Stress

		Correlations	
		Neuroticism	Stress
Neuroticism	Pearson Correlation	1	-.030
	Sig. (2-tailed)		.628
	N	262	262
Stress	Pearson Correlation	-.030	1
	Sig. (2-tailed)	.628	
	N	262	262

The study identified a weak relationship between Neuroticism and Depression with a score of ($r=0.628$). This belongs to $|0.300| < r < |0.700|$. The results indicate that there is a significance relationship between the two. This indicates that Neuroticism predicts stress among university students.

Pearson correlation shows both magnitude and direction of the relationship between two measured variables. In regard to magnitude of relationship, correlation coefficient ranges from -1 to +1. A correlation coefficient of -1 implies a perfect negative correlation while a correlation coefficient of +1 implies a perfect positive correlation. A correlation coefficient of zero implies that the two variables are not related. Pearson correlation shows both magnitude and direction of the relationship between two measured variables. In regard to magnitude of relationship, correlation coefficient ranges from -1 to +1. A correlation coefficient of -1 implies a perfect negative correlation while a correlation coefficient of +1 implies a perfect positive correlation. A correlation coefficient of zero implies that the two variables are not related. A correlation coefficient in the range of $|0| < r < |0.300|$ implies that the strength of relationship is weak, a correlation coefficient in the range of $|0.300| < r < |0.700|$ implies that the strength of the relationship is moderate, a correlation coefficient in the range of $|0.700| < r < |1|$ implies that the relationship is strong (Muriithi, 2019).

This findings are in agreement with those of Clark et al. (2017) conducted a study in USA on personality traits moderate the relationship between religious capital and depressive symptomology in a National Sample of African Americans. The findings indicated that Black students who were high in neuroticism were more likely to

experience intrusive thought, increased negative affect, and less forgiveness in response to a racist incident. They also found that neuroticism moderated the relationship between some coping strategies and distress in response to a racist incident.

III. Discussions

Neuroticism is associated with feelings of ineffective coping ability (Schneider, 2004). According to Gunthert et al. (1999), coping effectiveness is correlated with the degree to which the coping strategies are effective in relieving distress. Vollrath (2001) argued that wishful thinking and self-blame are special coping characteristics of people high in neuroticism; elevated N is associated with maladaptive emotion focused coping such as escapist fantasy, hostile reactions, wishful thinking, distancing, sedation, self-blame, withdrawal, and emotional venting (Penley & Tomaka, 2002).

In Pakistan, Batool and Hanif (2018) conducted a study on differential relationships of Big Five personality traits with positive mental health and psychopathology: examining dual continua model of positive mental health. As expected, neuroticism was found to have unique significant relationship with emotional wellbeing, while openness to experience had shown unique associations to both psychological and social wellbeing and conscientiousness to psychological wellbeing alone.

In Sudan, Khalig and Choudhry (2020) conducted a study on The Relationship between Neuroticism, Extraversion and Psychological Well-Being in Sudanese Undergraduate Students between different gender and age cohort. The results indicated that there were various forms in the cross correlation between Big 5 personality and well-being. However, neuroticism was the largest and most consistent correlation of well-being. Neuroticism contrasts emotional stability and even temperedness with negative emotionality such as feeling anxious, sad, and tense. People that score high on neuroticism experience high levels of consciousness and emotional instability.

In Kiambu, Karanja (2019) conducted a study on personality, intervening variables, and academic achievement as precursors of career aspirations among form three secondary school students. It was realized that Individuals who are high in neuroticism tend to be anxious, nervous, sad, tense and they tend to relate poorly to stressors as well as being self-conscious and shy. On the other hand, In Nyando, Otieno et al. (2021) conducted a study on the Big Five Personality as a correlate of involvement in violence among Students in Secondary Schools. According to the extract above, extraverted, and neurotic individuals were most likely to engage in violence.

IV. CONCLUSION

Students' age is a crucial stage that needs a lot of care and concern from the surrounding environment. This age that needs humble time for awareness and acceptance of personal strengths and weaknesses, individualism and freedom. If all these are met; it will create a friendly and pleasant environment full of trustworthy relations, concerned with the others' peace and comfort. Under this situation the students will be able to stay in unanimity and companionship environment and this will improve their psychological well-being and the results in their academic performance may improve.

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