

Relationship between Personality Dimension and Depression among Nursing Students: A Cross-Sectional descriptive study

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ABSTRACT

Background:

Nurse personality characteristics such as understanding, sympathy, tolerance and helpfulness, are the important when it comes to their ability to act in caring situations. Nursing students find themselves always busy with their clinical training and duty. Due to heavy workload nursing student are highly vulnerable to depression.

Aim of the study: The aim of the present study was to assess personality dimensions of nursing students, and evaluates its relationship with depression.

Materials and Methods: The participants of the study were recruited from different colleges of Patna, India. 100 consenting participants aged 18-30 years were interviewed to gather socio-demographic information, and then Eysenck Personality Questionnaire (EPQ) and Beck Depression Inventory (BDI) was administered. The present research was approved by the ethical committee of the University.

Result and Conclusion: Male students had higher score on extraversion as compared to female nursing students, and female students had more score on neuroticism as compared to male nursing students. Significant positive correlations were found between the neuroticism and depression, psychoticism and depression, while significant negative correlations were found between the extraversion and depression.

Keywords: Nursing students, extraversion, neuroticism, depression

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Introduction and Review of Literature

A study conducted by Yousef and Houfey (2014) with sample of 307 nursing students. Result showed that female student had higher score on neuroticism and extraversion.

A study conducted by Seyedoshohadaee et al. (2017) and results stated that maximum score belonged to conscientiousness and minimum to neuroticism among the personality traits.

Depression is characterized by loss of energy, disturbed sleep, loss of appetite, loss of interest and pleasure in activity, decrease social relationship, helplessness, hopelessness, recurrent thoughts of death and suicide and impairment in functioning.

A study done by Papazisis et al. (2008) with the sample of 170 nursing students in Greece. Result showed that 52.4% of students experienced depressive symptoms (34.7% mild, 12.9% moderate and 4.7% severe).

A study conducted by Fatemeh and Nahid (2014) with the sample of 250 nursing students. Result revealed that 55.6% of students had average and low levels of assertiveness and 38.7% had mild to severe depression.

A study conducted by Xu et al. (2014) with the sample of 763 college participants and administered Center for Epidemiologic Studies Depression Scale (CES-D). The result showed that 22.9% of participants reported high score on the Depression.

A study done by Kaur and Maheshwari (2015) with the sample of 100 P.G nursing students from nursing colleges of Punjab. Result showed that about 17% students had mild depression, 14% had moderate depression, 18% had severe depression and 6% had extremely severe depression.

A study conducted by Risal et al. (2016) with the sample of 212 nursing students in Kathmandu, used Beck Depression Inventory. Result showed that Almost 40% were found to be having depressive symptoms in variable degrees of severity (Mild-27.4%, Moderate-9%, Severe-1.4%).

A study done by Basu et al. (2016) with 129 sample of nursing students of tertiary care teaching institution of Kolkata. The result revealed that 33.33% of the students suffered from moderate to extreme depression; 56.59% had moderate to extreme levels anxiety and 23.26% experienced moderate to extreme levels of stress.

A study conducted by Rathnayake and Ekanayaka (2016) in Sri Lanka with sample of 92 undergraduate nursing students. The majority of the respondents stated mild to extremely severe symptoms of depression (51.1%), anxiety (59.8%) and stress (82.6%). Significant positive relationship were found between depression and anxiety, depression and stress, and anxiety and stress.

A study conducted by Bhanawat et al. (2017) with sample of 314 students. The Rosenberg self-esteem scale and Beck depression inventory were administered to assess self-esteem and depression. The female participants had more depressive symptoms than male students.

A study done by Ediz et al. (2017) to measure depression and anxiety among students of Turkey. The following tests were used: Beck Depression Inventory and Anxiety Inventory and the Turkey version of depression anxiety and stress scale. Result showed that 30.5% of the participants have mild and moderate degree of depression while 8.5% have severe and extremely severe levels of depression.

The Depression Anxiety Stress Scale was administered to 102 nurses. Result revealed that 32.4% participants had depression, 41.2% anxiety

and 41.2% stress respectively. (Maharaj et al., 2018).

Other studies done by Tung et al. and Albikawi (2018; 2022), and found that 34.0% participants had depression.

Methodology

Aim of the study

The aim of the present study was to assess personality dimensions of nursing students, and evaluates its relationships with depression.

Objectives

The main objectives of the present study were

1. To assess personality dimensions of nursing students.
2. To assess and quantify the level of depression of nursing students.
3. To find the association between personality dimensions and depression of nursing students.

Hypotheses

1. There would be high score on neuroticism, extraversion and low score on psychoticism
2. There would be difference in level of depression among nursing male and female students.
3. There would be high level of depression in female students as compared to male students.
4. There would be association between personality dimensions and depression of nursing students.

Sample

100 nursing students were selected from different nursing colleges of Patna, India.

Inclusion Criteria

- Age between 18 to 30 years
- Students of both genders

- Students who were co-operative for the assessment of personality dimensions and depression.

Exclusion Criteria

- Age below 18 and above 30 years
- Any significant head injury and neurological problems.

Tools

Socio-Demographic data Sheet: A socio-demographic data sheet would be specially designed for the study to record socio-demographic variable such as age, gender, marital status, residence, living condition, relationship problems with peers, any abuse history, substance use by students and substance use in any family members and family history of psychiatric disorder.

Beck Depression Inventory (Beck et al., 1988): It is a 21-item measure and has been one of the most commonly used screening instruments for detecting symptoms of depression. Responses to the 21 items are made on a 4-point scale, ranging from 0 to 3 (total scores can range from 0 to 63). As a general guideline a score from 0-9 is considered to be within the normal range or asymptomatic; a score of 10-18 indicates mild- to- moderate depression; a score of 19-29 indicates moderate- to severe depression and a score of 30 or more indicates extremely severe depression. It also has a high test-retest reliability with correlation ranging .48 to .86 with psychiatric patients and from .60 to .83 with non-psychiatric groups.

Eysenck's Personality Questionnaire, (Eysenck & Eysenck, 1975), Hindi Adaptation, (G. P. Thakur, & M. Thakur): Eysenck's Personality Questionnaire

Results

Table 1: Socio-demographic characteristic of the nursing students (N= 100)

Variables	Minimum	Maximum	Nursing Students (N= 100)
			Mean \pm SD
Age (in years)	19	30	23.28 \pm 1.84
Education (in years)	15	20	16.41 \pm 1.02

developed by H. L. Eysenck in 1947, was designed to give rough and ready measure of three important personality dimensions: Psychoticism, Extraversion and Neuroticism. There are 100 questions that measure each of the three traits. The 101 items on the E.P.Q. (Eysenck & Eysenck, 1975) measure social desirability, extraversion, neuroticism, and psychoticism. Six of the items were translated into Hindi and are pertinent to Indian culture.

Procedure

Participants giving informed consent were selected on the basis of inclusion/exclusion criteria details of socio-demographic variables and clinical history were evaluated on interview with the participants. This was followed by a baseline evaluation on EPQ to evaluate personality dimensions & BDI to evaluate depressive symptoms or level of depression among nursing students.

Statistical analysis

The collected data was analyzed by the IBM SPSS Statistics for Window 20 (IBM, Armonk, NY, USA). Mean and standard deviation were computed for continuous variables in descriptive statistics, whereas number and percentage were computed for discrete or categorical data. Independent sample t-test was used for comparing the continuous variable. The level of significance was kept at $p < 0.05$. To see the association among personality profile and depression, Pearson Correlation-Coefficient (2-tailed) was used.

Table 1 shows the socio-demographic characteristics (continuous variables) of the nursing students. The mean duration of age of the nursing students was found to be 23.28 ± 1.84 years and minimum and maximum age of the nursing students was 19 and 30 years. The mean age of education was found to be 16.41 ± 1.02 years and minimum and maximum years of education was found to be 15 and 20 years.

Table 2: Demographic and clinical characteristics of the nursing students (N= 100)

Variables		Nursing Students n (%)
Domicile	Rural	29 (29%)
	Urban	71 (71%)
Types of family	Joint	80 (80%)
	Nuclear	20 (20 %)
Marital Status	Single	89 (89%)
	Married	11 (11%)
Current academic year	1 st year	48 (48%)
	2 nd year	34 (34%)
	3 rd year	8 (8%)
Substance intake by students	Yes	15 (15%)
	No	85 (85%)
	Only alcohol	12 (12%)
	Only cannabis	1 (1%)
	Both	2 (2%)
Substance intake by parents	Yes	56 (56%)
	No	44 (44%)
	Only alcohol	48 (48%)
	Only cannabis	(0) 0%
	Both	8 (8%)
History of abuse	Yes	30 (30%)
	No	70 (70%)
Types of abuse	Emotional	9 (9%)
	Physical	9 (9%)
	Sexual	10 (10%)
	More than one	2 (2%)
Family history of psychiatric illness	Yes	16 (16%)
	No	84 (84%)
Past history of psychiatric illness in students	Yes	2 (2%)
	No	98 (98%)

Out of 100 nursing students 29 (%) had history of substance intake, 56 (%) had family rural and 71 (%), urban residence, 80 (%) had joint history of substance intake, 30 (%) had family and 20 (%) had nuclear family, 89 (%) had abuse, 16 (%) had family history of psychiatry single and 11 (%) married, 48 (%) 1st year student, illness and 2 (%) had past history of psychiatry 34 (%) 2nd year and 8 (%) had 3rd year of nursing illness in students students. Out of 100 nursing students 15 (%) had

Table 3: Personality dimensions and depression of the nursing students (N= 100)

Personality Dimensions	Minimum	Maximum	Nursing Students (N= 100)
			Mean \pm SD
Psychoticism	0	15	4.21 \pm 3.10
Extraversion	2	19	10.97 \pm 4.00
Neuroticism	2	25	12.04 \pm 5.59
Lie	1	13	5.83 \pm 2.35
BDI (Depression)	0	57	16.14 \pm 12.21

Table3 shows personality dimension and depression symptoms of nursing students. The mean and SD score of psychoticism was found to be 4.21 \pm 3.10 and minimum and maximum score of psychoticism of the nursing students was 0 and 15. The mean and SD score of extraversion was found to be 10.97 \pm 4.00 and minimum and maximum score of extraversion of the nursing students was 2 and 19. The mean and SD score of neuroticism was found to be 12.04 \pm 5.59 and minimum and maximum score of neuroticism of the nursing students was 2 and 25. The mean and SD score of lie was found to be 5.83 \pm 2.35 and minimum and maximum score of lie of the nursing students was 1 and 13. The mean and SD score of BDI was found to be 16.14 \pm 12.21 and minimum and maximum score of BDI of the participants was 0 and 57.

Table 4: Distribution of the sample according to the severity levels of depression (N= 100)

Severity levels	n (%)
Normal	33 (33)
Mild level	35 (35)
Moderate level	19 (19)
Severe level	13 (13)

Table 4 shows severity levels of depression among samples. Thirty five (35) percent students had mild level of depression, nineteen (19) percent had moderate level of depression and thirteen (13) percent had severe level of depression.

Table 5: Comparison of personality dimensions and depression between male and female samples (N= 100)

EPQ	Male (N= 26)	Female (N= 65)	t (df= 98)	P
	Mean ± SD	Mean ± SD		
EPQ Psychoticism	4.30 ± 2.80	4.17 ± 3.24	.127	.851
EPQ Extraversion	12.70 ± 3.72	10.22 ± 3.92	2.93**	.004
EPQ Neuroticism	9.30 ± 5.71	13.21 ± 5.15	3.36**	.001
EPQ lie	5.33 ± 2.17	6.04 ± 2.41	1.38	.169
BDI Total score	13.23 ± 11.62	17.38 ± 12.32	1.57	.120

** $p < .01$ level of significance

There was significant higher score in EPQ Extraversion ($t = 2.93$, $p = .004$) in male students as compared to female nursing students. There was significant higher score in EPQ Neuroticism ($t = 3.36$, $p = .001$) in female students as compared to male nursing students. There was no significant difference was found between male and female

nursing students in EPQ Psychoticism and lie score. There was no significant difference was found between male and female nursing students in term of depression. However, female nursing students had higher mean score on BDI as compared to male students

Table 6: Association between the personality dimensions and depression (N= 100)

Personality Dimensions	Depression
Psychoticism	.474**
Extraversion	-.485**
Neuroticism	.600**

** $p < .01$ level of significance

Table 6 shows association between the personality dimensions and depression. Psychoticism showed significant positive correlation ($r = .474$, $p = < .01$) with depression. Extraversion showed significant negative correlation ($r = -.485$, $p < .01$) with depression. Neuroticism showed significant positive correlation ($r = .600$, $p < .01$) with depression.

Discussion

When the Eysenck personality questionnaire (EPQ) scores of male and female patients were compared, it was revealed that the extraversion scores of the male students were greater than those of the female nursing students. Compared to female nursing students, male

students demonstrated higher levels of friendliness, vitality, optimism, responsiveness, activity, risk-taking, sensation-seeking, expressiveness, lack of dominance, and impulsivity. The current study aligns with previous research conducted by Belsi et al. (2011), Singh & Duggal (2009), Warbah et al. (2007), and Loo (1983). When it came to neuroticism, female nursing students scored higher than male students. This indicated that there were greater symptoms of anxiety, despair, guilt feelings, low self-esteem, worry, irritability, lack of autonomy, and preoccupation in female pupils. It was predicted that those with high scores on this dimension would be scared, nervous, depressed, emotional, and low on self-esteem. They would

also likely complain of physical symptoms like backaches and soreness, but they might not have any psychological symptoms (Tiwari et al., 2009). In the current study, 34.1% of nursing students reported mild depression, 20.9% reported moderate depression, and 14.3% reported severe depression. Researchers Ediz et al. (2017), Ratnayake and Ekanayaka (2016), Kaur & Maheshwari (2015), Mutalik et al. (2016), and Risal et al. (2016) found results that are nearly identical to this one. The current study found a substantial positive correlation between the neuroticism and depression scores, a significant positive link between the psychoticism and depression scores, and a significant negative correlation between the extraversion and depression scores. These results were nearly identical to those of previous researchers (Khanjani and Bahadori, 2014; De Haro et al., 2013; Seyedoshohadaee et al., 2017).

Conclusion

In comparison to female nursing students, male students scored higher on extraversion, and female nursing students scored higher on neuroticism. When comparing the psychoticism and Lie scores of male and female nursing students, no discernible differences were identified. Regarding depressed symptoms, no discernible difference was observed between the female and male students. Substantial positive associations were found between the neuroticism and psychoticism scores and depression, while substantial negative associations were found between the extraversion and depression scores. The study's shortcomings include a lower proportion of male participants and lack of psychosocial management.

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