

Research Report

A CROSS-SECTIONAL STUDY ON PERSONALITY DIMENSIONS, COPING STRATEGIES AND QUALITY OF LIFE AMONG NURSING STUDENTS

Arumuganathan S¹, Sumithra Devi S¹, Usaid S¹, Ezhilarasi P¹, Baby E², Siva Ilango T^{1*}

¹Department of Psychiatry, Karpaga Vinayaga Institute of Medical Sciences & Research Centre, Maduranthagam

²Department of Mental Health Nursing, Karpaga Vinayaga College of Nursing, Maduranthagam

*Corresponding address: siva.ilango@gmail.com

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ABSTRACT

Background & Objective: With the increase in students pursuing nursing education in India, studies report one in four students suffer from stress-related disorders like anxiety and depression. While many studies focus on the stressors and associated external factors, this study was designed to determine the personality dimensions, coping strategies and their potential impact on the quality of life.

Methodology: A cross-sectional survey was conducted with a universal sampling of 161 consenting nursing students. Semi-structured proforma, Eysenck Personality Inventory (EPI), Coping Strategies Inventory- short form (CSI-SF) and WHOQOL – BREF were used for data collection. Statistical analysis was done using SPSS version 20. Descriptive statistics of the mean (sd) and percentages and inferential statistics of Independent t-test, ANOVA and Pearson's correlation analysis were used.

Results: 161 out of 184 study participants were included in the analysis. 93.2% of participants were females, and more than 60% were from a rural background. Neuroticism scores were significantly higher among first and second year student. Problem-focused disengagement and emotion-focused disengagement scores were significantly higher among first and fourth year students respectively. Third year students scored high across psychological, social and environmental domains of quality of life.

Conclusion: Neuroticism, as a trait, negatively impacts the student's coping strategies and quality of life. Early understanding of an individual's personality will help to implement measures to strengthen their coping strategies in dealing with stressors and improve quality of life.

Keywords: Personality, Coping Strategies, Quality of Life, Nursing students

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INTRODUCTION

The transition from school to college for higher studies can be exciting for some but stressful for most of the students. It is a stage of passing from adolescent to adult when they face many challenges including, physical, psychological and social demands of life. Many studies found that nursing student has a high level of stress compared with other students.^{1,2,3} Studies note that the clinical part of nursing education is more stressful than the theoretical part.⁴ One out of four college students reported experiencing symptoms of depression and anxiety.⁵ If not addressed appropriately, it may lead to fatal consequences such as suicide.

Studies had reported an association between an individual's personality and coping with stressors. Personality has been conceptualized as more or less stable and enduring dispositions (thoughts, feelings, and behaviours). Difference in personality may explain why some people are more vulnerable to stress than others.⁶ Certain personality dimensions such as extraversion was positively correlated to problem-focused coping style⁷, while neuroticism to emotion-focused coping style.

Every individual has varied coping strategies that surface when they are faced with demands that the existing resources are unable to meet. Coping is a dynamic, behavioural and cognitive effort in controlling internal and external stress. There are at least two types of coping strategies; problem-focused and emotion-focused. A person with problem-focused coping tries to solve the problems by changing the environment (external) while emotion-focused coping attempts to reduce the negative feeling associated with problem

(internal). Coping Strategies applied by nursing students not only affects their physical and mental health but also impacts on the quality of nursing care. Hence it is essential to identify their maladaptive coping strategies for early interventions.^{8,9}

World Health Organization (WHO) defines Quality of Life as 'individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards, and concerns. It is a broad concept affected in a complex way by the person's physical health, psychological state, level of independence, social relationships, personal beliefs and their relationship to salient features of their environment.¹⁰ Nursing students with dysfunctional personality traits and maladaptive coping strategies struggle to effectively deal with stressors which will have a profound adverse effect on their quality of life. This, in turn, will impact on their learning, training and their overall preparedness for achieving a successful career. This study will help to determine the personality dimensions, coping strategies employed, perceived quality of life and the association between them.

OBJECTIVES

The objectives of the study were 1) to evaluate the personality characteristics, coping strategies and quality of life of nursing students 2) to identify if there are any differences in gender and year of study on the above parameters, 3) correlation between personality, coping and quality of life.

MATERIALS & METHODS

Study design and participants:

Designed as a cross sectional study with universal sampling where all the students were

pursuing B.Sc. The nursing program in a private nursing college was approached for inclusion in the study. The study protocol was briefed by one of the authors at the end of a lecture class. Students were informed that refusal to participate would have no academic consequences. The study instruments were then distributed to the students who were willing to participate and consented for the study. It took approximately 20 to 30 minutes to complete the questionnaires. The Institutional ethics committee approved the study. Informed consent was taken. Students were informed that participation is voluntary, and confidentiality will be maintained.

A total of 184 students were approached for inclusion in the study, and 161 students gave informed consent and completed the questionnaires. All of them were included in the analysis. The response rate was 87.5%.

Study Instruments

1. Semi-structured proforma to collect sociodemographic details including age, gender, religion, locality, the income of the household, education and occupation of the parents.
2. Eysenck's Personality Inventory (EPI) (Extroversion/Introversion).¹¹ Developed by Hans & Sybil Eysenck, it measures two personality dimensions, Extraversion-Introversion and Neuroticism-Stability, which account for most of the variance in the personality domain. Each form contains 57 "Yes/No" items with no repetition of items. EPI gives three scores. The 'lie score' is out of 9. It measures how socially desirable they are trying to be in their answers. A participant who scores five or more on this scale is probably trying to make themselves look

good and are not being totally honest in their responses. The 'E score' is out of 24 and measures how much of an extrovert a person is. The 'N score' is out of 24 and measures how neurotic a person is.

3. Coping Strategies Inventory Short Form: This brief 16 item scale was derived from the 78-item Coping Strategies Inventory. The items are rated on a 5 item Likert scale from 1 to 5 rated as never, seldom, sometimes, often, and almost always. The different forms of self-reported coping responses that are generally used when faced with difficult situations are evaluated through this scale. Coping responses are classified into emotion-focused and problem-focused, which are further sub-classified as either engagement type or disengagement type of strategy.¹²
4. WHOQOL-BREF: The 26-item WHOQOL-BREF Scale encompasses physical health (8 items); psychological health (6 items); social relationship (3 items); environment (8 items) and overall quality of life (1 item). It assesses the individual's perception in the context of their culture and value system and their personal goals, standards and concerns. The participants were required to evaluate their quality of life during the past two weeks. The item scores ranged from 1 to 5, with a higher score indicating a better quality of life for the corresponding item. The 26 BREF version and 100 items full version have a correlation of >0.89 .¹³

Statistical Analysis

Data analysis was performed using SPSS version 20. Descriptive measures such as frequency, percentages, mean and standard deviation were used. Independent t-test was

used to compare the groups based on gender while groups based on year of study were done using ANOVA. Post hoc analysis was done for multiple comparisons between groups. A 'p' value less than 0.05 was considered statistically significant.

RESULTS

Table.1. Sociodemographic details of the Study participants

Variables		Frequency	Per cent
Sex	Male	11	6.8
	Female	150	93.2
Year of Study	I st Year	37	23.0
	II nd Year	36	22.4
	III rd Year	44	27.3
	IV th Year	44	27.3

More than ninety per cent of the study participants were females. Within years of study, third and fourth year students accounted for 27.3% each, while first and second year students were 23 and 22.4% respectively 25% of the participants. (Table 1) Mean age of the study participants was 19.29(\pm 1.5) years. The majority were Hindu (90.7%) by religion and from a rural background (60.2%). Less than 8% of parents were graduates, and the mean annual household income was Rs. 139919 (\pm 58869).

On EPI, the low extroversion and neuroticism scores were 12.10 (\pm 2.30) and 14.15(\pm 4.21). There were no significant differences in the scores between male and female participants on extroversion ($p=0.49$; CI: -1.92 to 0.92) and neuroticism ($p=0.64$, CI: -1.98 to 3.22) subscales of personality. However, multiple

comparisons within years of study, first year students scored significantly high on neuroticism than third and fourth year students. ($p < 0.001$, CI: 3.34 to 7.59 and $p < 0.001$, CI: 2.36 to 6.62 respectively). Similarly, second year students scored significantly high on neuroticism than third and fourth year students. ($p=0.001$, CI: 1.16 to 5.45 and $p=0.03$, CI: 0.19 to 4.47 respectively) (Table 2).

Nursing students scored better overall scores on engagement (27.12 ± 5.08) strategies than disengagement (22.88 ± 4.5) coping strategies in CSI-sf. Female nursing students applied significantly more engagement strategies than male students, in particular, problem-focused strategy ($p=0.01$, CI: -5.09 to -0.72). First year students scored significantly high on problem-focused disengagement ($p=0.004$, CI: 0.52 to 3.71) than third year students while fourth year students scored high on emotion-focused disengagement ($p=0.01$, CI: 0.43 to 4.14) and disengagement strategies ($p=0.03$, CI: 0.18 to 5.32) than second year students. There were no significant differences in engagement strategies within years of study. (Table 3)

On WHOQOL-BREF, students obtained a mean score of 3.97 on the overall quality of life, 57.8 on physical, 62.22 on psychological, 70.72 on social, 63.87 on environmental domains. Female nursing students had a better overall quality of life ($p=0.04$, CI: -0.88 to -0.03) than male counterparts but no significant difference noted in any specific domains of Quality of Life. Within years of study, post hoc analysis showed significant differences in psychological, social and environmental domains. Third year students scored high across all the three domains than students from other year groups. Fourth year students scored

Table.2. Scores on Personality (EPI) among nursing students based on Gender and Year of Study

Dimension	Total N=161	Gender- Mean(sd)				Year of Study- Mean(sd)					
		Male	Female	F/ t	p	I	II	III	IV	F	p
Extroversion	12.10 (2.3)	11.64 (1.43)	12.13 (2.35)	2.07/ -0.69	0.49	12.03 (2.09)	12.25 (2.16)	11.64 (2.1)	12.50 (2.72)	1.11	0.35
Neuroticism	14.15 (4.21)	14.73 (4.15)	14.11 (4.22)	0.00/ 0.47	0.64	17.35 (3.3)	15.19 (3.54)	11.89 (3.8)	12.86 (3.94)	17.71	<0.001

Table.3. Scores on Coping Strategies among nursing students based on Gender and Year of Study

Subscale	Total N=161	Gender- Mean(sd)				Year of Study- Mean(sd)					
		Male	Female	F/ t	p	I	II	III	IV	F	p
PFE	14.3 (3.6)	11.6 (3.9)	14.5 (3.5)	0.1/ -2.4	0.04	13.9 (3.4)	14.3 (3.5)	14.5 (3.9)	14.7 (3.7)	0.3	0.83
PFD	11.9 (2.8)	12.4 (2.5)	11.8 (2.9)	0.2/ 0.7	0.50	13.0 (2.3)	11.6 (2.5)	10.9 (3.0)	12.1 (3.0)	4.2	0.01
EFE	12.8 (2.7)	11.3 (2.8)	12.9 (2.6)	0.1/ -1.9	0.09	12.4 (2.5)	13.2 (2.1)	12.7 (3.0)	12.9 (2.9)	0.5	0.68
EFD	11.0 (3.3)	9.2 (2.5)	11.2 (3.3)	0.5/ -2.5	0.05	10.4 (3.0)	9.9 (3.1)	11.2 (3.0)	12.2 (3.6)	4.0	0.01
Engagement	27.1 (5.1)	22.9 (6.1)	27.4 (4.9)	1.4/ -2.4	0.04	26.4 (4.8)	27.4 (4.1)	27.1 (5.7)	27.5 (5.5)	0.4	0.75
Disengagement	22.9 (4.5)	21.6 (3.5)	23.0 (4.6)	1.2/ -1.3	0.23	23.5 (4.8)	21.5 (2.7)	22.1 (4.7)	24.3 (4.9)	3.2	0.02

- PFE- Problem Focused Engagement; PFD- Problem Focused Disengagement; EFE- Emotion Focused Engagement; EFD- Emotion Focused Disengagement
- p-value <0.05 is considered significant
- Independent' t' test was used for comparison between gender
- One-way ANOVA was used for comparison between years of study

Table.4. Quality of Life (QoL) scores among nursing students based on Gender and Year of Study

Domain	Total N=161	Gender- Mean(sd)				Year of Study- Mean(sd)					
		Male	Female	F/t	p	I	II	III	IV	F	P
Overall QOL	3.97 (0.7)	3.6 (0.7)	4 (0.7)	1.3/-2.1	0.04	3.9 (0.7)	4.1 (0.6)	4.1 (0.8)	3.8 (0.6)	2.5	0.07
Physical	57.8 (9.8)	57.6 (11.1)	57.8 (9.7)	0.8/-0.1	0.94	55.9 (9.0)	60.7 (11.3)	57.6 (10.2)	57.3 (8.3)	1.6	0.19
Psychological	62.2 (13.8)	58.6 (14.7)	62.5 (13.8)	0.4/-0.8	0.42	65.8 (13.2)	61.7 (14.4)	66.7 (12.8)	55.2 (12.3)	6.8	<0.001
Social	70.7 (20.5)	72.7 (18.9)	70.6 (20.7)	0.1/0.4	0.72	75.8 (14.2)	64.2 (23.5)	79 (21.4)	63.5 (17.6)	6.9	<0.001
Environmental	63.9 (15.0)	66 (15.0)	63.7 (15.1)	0.01/0.5	0.64	57.7 (14.0)	68.2 (14.8)	71.6 (14.5)	57.8 (11.8)	11.6	<0.001

- QOL- Quality of Life
- p value <0.05 is considered significant
- Independent 't' test was used for comparison between gender
- One-way ANOVA was used for comparison between years of study :Psychological domain: IV year Vs I (p=0.002, CI: -18.18 to -2.97)and III year (p<0.001, CI: -18.77 to -4.23), Social Domain: IV year Vs I (p=0.026, CI: -23.62 to -1.05)and III year (p=0.001, CI: -26.31 to -4.74); II year Vs III year (p=0.005, CI: -26.15 to -3.41), Environmental domain: I year Vs II (p=0.007, CI: -18.89 to -2.15)and III year (p<0.001, CI: -21.86 to -5.91) ; IV year Vs II (p= 0.005, CI: -18.49 to -2.41)and III year (p<0.001, CI: -21.44 to -6.19)

significantly lower in all the domains except physical domain when compared to other years.

On Pearson's correlation analysis, year of education was positively correlated with emotion-focused disengagement [r= 0.23, p= 0.003] and negatively correlated to neuroticism[r= 0.44, p= 0.00] and psychological domain of QOL [r= 0.22, p= 0.004]. Extroversion score was positively correlated with psychological domain of QOL [r= 0.19, p= 0.02], while neuroticism score had positive correlation with emotion-focused

disengagement[r= 0.21, p= 0.008] and negative correlation with overall QOL[r= 0.25, p= 0.001] and Environmental domain of QOL[r= 0.27, p= 0.001].

DISCUSSION

The majority of the study participants were females who are probably representative of the nursing profession. ¹⁴ In contrast to the study done by Tsujita Y et al., in 2018, the sample population in this study was more from a rural background which could be attributed to the location of the college. Majority of students

were Hindu by religion, and there was no student from the Muslim community, which is similar to demographic findings from other Indian studies.¹⁵

There are no gender differences in personality subscales in our study, which is in contrast to the findings from Yousef HR et al., 2014.¹⁶ High neuroticism score among first and second year students was also confirmed by the negative correlation with the year of study. This was probably due to the transition to the new environment, language difficulties pertaining to the medium of instruction experienced by the students which they adapt and develop over a while. Mean interpersonal and environmental stress was found to be higher among first year students in the study done by Seyedfatemi N et al., 2007, which could account for high neuroticism score.¹⁷

Problem-focused engagement strategy employed by female students compared to the male counterparts can be attributed to the predominantly female population and their readiness and comfortability with more female nursing faculty in addressing the problems. In the initial years, students apply problem-focused disengagement strategy while with the advanced years, they employ emotion-focused disengagement. The authors relate this difference to first year students exposed to more external stressors while the fourth year students face up to deal with internal stressors like apprehension about results and future career prospects.

In our study, female students perceived a better overall quality of life. Third year students had a good quality of life on psychological, social and environmental domains and this could be accounted by the following factors such as peripheral postings

during the third year, engagement with cultural events, tours and more time to complete assignments. Also, by the time they reach the third year, they get used to deal with environmental and academic stressors effectively.

Our study reported a positive association between neuroticism scores and emotion-focused disengagement and a negative perceived overall quality of life. The above findings were similar to the study done on Iranian nursing students.⁷ Hence the authors believe students with neuroticism traits need to be trained with better coping strategies to improve their quality of life.

Strengths and Limitations:

There were few studies done in India among nursing students on these parameters. There was more or less equal representation from all years of study. Gender differences noted in this study had to be interpreted with caution as the male student's participation were less. Being a cross sectional survey, causality cannot be ascertained.

CONCLUSION

This study finds significant differences in personality dimensions, coping strategies and quality of life among nursing students based on year of study. Neuroticism, as a trait seems to impact the students coping strategies and quality of life negatively. Hence the understanding of an individual's personality early in the academic program will help to implement measures to strengthen their coping strategies in dealing with stressors, thus leading to improved quality of life.

Conflict of Interests

None

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