Original Article

Anxiety, Depressive Symptoms and Socio-Demographic Factors Associated with Self-Esteem among Male Nursing Students

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ABSTRACT

Self-esteem is an individual attitude about his personality and the gratitude of his worth. It signifies an honest, suitable, steady appreciation of one's value. **Objectives:** To find out anxiety, depressive symptoms and socio-demographic factors associated with self-esteem among male nursing students. **Methods:** A cross-sectional research design was selected and conducted with 155 undergraduate students of nursing students at College of Nursing and Midwifery, Sindh Government Hospital, Liaquatabad, Karachi. The Urdu version of the Aga Khan University Anxiety and Depression Scale (AKUADS) and Rosenberg Self-Esteem Scale (RSES) validated questionnaires were used to collect data. **Results:** The study findings showed that 137 students (88.39%) had normal self-esteem levels, and 18 students (11.61%) had low self-esteem. Analysis of Self-esteem about socio-demographic variables revealed an insignificant association with age, gender, marital status, family type, socioeconomic levels, family income, residence, substance use, and education program. The only statistically significant association was found between the current degree year and self-esteem levels (p = 0.046). There was a weak statistically significant negative relationship between self-esteem and anxiety depressive symptoms ((r = -0.221; p < 0.01). **Conclusions:** The current research study concluded that nursing students with normal self-esteem levels were also suffering from anxiety and depression. The junior students were found to have more anxiety and depression symptoms and low self-esteem levels. Socio-demographic variables have no significant effect on the self-esteem of nursing students.

INTRODUCTION

Self-esteem is particularly associated with the disposition of healthcare professionals, specifically nurses. The person's worth is estimated through the yardstick of self-esteem. It is believed that the higher self-esteem, the better stress resistance, so people with higher self-esteem may deal with stress better than those less have. Self-esteem is a personal perspective of individual worth from the lens of one's values [1]. A person's day-to-day dealings, life experiences, and accomplishments carve self-esteem. A strong and flourishing self-esteem is responsible for a person's overall health and mental well-being. The Self-esteem scale measures an individual's true worth at different levels. The scale ranges from a high to a low level of self-esteem. A high level of self-esteem refers to positive self-evaluation from the global perspective, and low self-esteem denotes negative self-esteem. In contrast, absolute self-esteem means poised and stabilized recognition of one's achievements and accomplishments, whether physical or spiritual. Yet, this absolute self-esteem may deter one's way to self-conceited superiority over others [2]. Positive students do not suffer from stress or anxiety and do not fall prey to

drugs like alcohol, as they are strong and have the potency to cope with difficult and stressful situations. They are rather cheerful and eventually show better performance in academics. People with negative self-esteem are self-abased people who suffer from a lack of confidence in themselves and doubt their own decisions. They turn out as puppets in the hands of others and lose their self-respect and credence [2]. It is a vital predictor of stress coping. An increase in stress might result in a decrease in self-esteem. An outcome of a high self-esteem level is more active and effective coping [3]. Self–esteem is considered a vital personality attribute for healthcare professionals. The students' preexisting self-esteem strongly contributes to prosperous or non-adaptive adjustment to problems. The students with high self-esteem are more confident and perform well in any situation, considering new learning opportunities as a challenge and actively taking part in adapting new behavior. In contrast, students with low levels of self-esteem constantly show negative feelings about their personalities and are unenthusiastic in new situations [1]. Self-esteem is an individual attitude about his personality and the gratitude of his worth. It signifies an honest, suitable, steady appreciation of one's value. The final-year nursing students showed higher self-esteem levels than the junior students in a cross-sectional study conducted at the University of Mosul, Iraq, in the year 2015 comprises of 300 nursing students [2]. The result of a cross-sectional study of 190 nursing students conducted at Kathmandu University shows that 78% of nursing students have low self-esteem [1]. A research study was conducted at the University of Korea in 2017. A sample of 173 nursing students was selected. The result of the study indicated that communication skills had a positive substantial influence on self-esteem in student nurses. The study also revealed that communication competence mediated to some extent between emotional intelligence and self-esteem [3]. A cross-cultural research study was conducted on nursing students of Thailand and UK. The results of the study indicated that there was no statistical significant difference between the mean self-esteem scores of nursing students of both the countries [4]. Similarly a research study was conducted in Malaysia the study showed that there was no significant correlation found between students CGPA and self-esteem, a weak negative correlation was found between academic performance and self-esteem levels and there was no impact of demographic variables as well [5]. .Furthermore the study was conducted in Bangalore comprises of 118 nursing students confirm that majority of the students had normal self-esteem, one of the socio-demographic variable gender is found to be significantly associated with self-esteem [6]. A study conducted in the UK on the three-

year diploma nursing students found that self–esteem had fallen at the end of the training program [7]. A research study was conducted at the University of Saudi Arabia in May 2023. The results showed that 8.1% of students had high self-esteem, 76.6% had moderate self-esteem, and 15.3% had low self-esteem. Moreover, the study also showed that socio-demographic variables such as the father's education, physical health, year of study, and psychological health had a significant correlation to self-esteem [8]. The study was carried out on 276 nursing students, and the result findings showed that 64.1% had high self-esteem levels, while 35.5% of the students had normal self-esteem levels. The study also found out that there had no significant association between gender and self-esteem levels [9]. Anxiety is the word used to express worry, fear, or hesitation [10]. In this regard, a research study was conducted in Cyprus to find out the correlation between anxiety and depression with self-esteem and religious beliefs in student nurses; the sample size involved 123 nursing students. The results revealed a strong positive correlation between religious and spiritual beliefs and increased self-esteem, and there was no impact of gender on the findings [11]. In another cross-sectional study which was conducted in the nursing college of Kanpur, the result showed that 73.3% of students had a normal self-esteem level, 23.8% students had low self-esteem level, while merely 2.9% students had high self-esteem level. There was no significant association found between demographic variables and self-esteem levels, the only significant association was found between stress variable with self-esteem [12].

This study helped us to identify the anxiety depressive symptoms and socio-demographic factors which are associated with the self-esteem level.

METHODS

The research study's design was cross-sectional. The chosen design was used to assess the anxiety, depressive symptoms and socio-demographic factors associated with self-esteem among nursing students. The current study was conducted at the College Of Nursing and Midwifery (Male), Sindh Government Hospital, Liaquatabad, Karachi. The study population was the male students of the Bachelor of Nursing Program. The sample was selected using a convenience sampling technique. A sample size of 91 achieves 80% power to detect an effect size of 0.32 using 2 degrees of freedom Chi-Square test with a significance level of 0.05 computed using an association between degree year groups and self-esteem level. The current study was conducted on 155 students. The study was conducted from March 2023 to September 2023. Inclusion Criteria are Students of 1st, 2nd and 3rd year Bachelor of Science in Nursing program and Students who agreed to

participate in the study Exclusion Criteria are Students in the midwifery Nursing Diploma program And Students in the the certified Nursing Assistant program. Each student filled out out the informed consent before the data collection; students were fully aware of the objectives of the research study. The principal of the college, a BPS 19 government officer, obtained permission before the data collection. The data collection was done through a questionnaire comprised of socio-demographic information. Study approval was taken from the research committee of DOW university with reference number (DUHS/SPH/2023/03-0413). The AKUADS scale for anxiety and depression symptoms and the Rosenberg Self-Esteem Scale were used to collect data. The AKUADS scale for anxiety and depression symptoms comprises 25 items, with a cut-off value >19, and Cronbach's alpha for total anxiety depressive symptoms was 0.861 in this study. On the Rosenberg Self-Esteem Scale, comprising a 10-item self-report measure of global self-esteem, a score below 15 was considered Low self-esteem level, and abobe 15 high self-esteem and Cronbach's alpha for total Self-Esteem was 0.696 in this study. The statistical package of the SPSS version 25.0 was used for data analysis, for descriptive data, frequency tables and charts were used. Statistical tests such as correlation analysis, independent t test and ANOVA were used to find the relationship and association between the dependent and independent variables. The level of significance was 0.05.

R E S U L T S

The table 1 provides an overview of socio-demographic characteristics among a sample of 155 individuals. The gender distribution is entirely male, comprising 100% of the sample. In terms of age, the majority fall within the 16-22 age group (54.8%), followed by 23-29 (40.0%), and a smaller percentage in the 30-36 range (5.2%). Marital status indicates that 81.9% are unmarried, 16.1% are married, and 1.9% fall into the "Others" category. Family types are predominantly extended (63.2%), with 36.2% belonging to nuclear families. Regarding residence, the majority live with parents (94.8%), while a small percentage live with relatives (2.6%) or in a hostel (2.6%). Substance abuse is reported by 11.6%, with 88.4% indicating no substance abuse. Academic year distribution shows 41.3% in Year 1, 32.9% in Year 2, and 25.8% in Year 3. Employment status reveals 36.1% are self-employed, while 63.9% are not. The majority of fathers (68.4%) and mothers (94.2%) are employed. Family income is diversified, with 57.4% earning below 50,000, 28.4% between 50,000-100,000, 10.3% between 100,000-200,000, and 3.9% earning above 200,000.

Table 1: Socio-demographic variables (n=155)

Socio-Demographic Variables	Characteristics	N (%)
Gender	Male	155 (100)
	Female	0 (0)
Age	16-22	85 (54.8)
	23-29	62 (40.0)
	30-36	8 (5.2)
Marital status	Married	25 (16.1)
	Unmarried	127 (81.9)
	Others	3 (1.9)
Family Type	Nuclear Family	57 (36.2)
	Extended Family	98 (63.2)
Residence	Living with Parents	147 (94.8)
	Living with Relatives	4 (2.6)
	Hostel	4 (2.6)
Substance abuse	Yes	18 (11.6)
	No	137 (88.4)
Current Degree Year	Year 1	64 (41.3)
	Year 2	51 (32.9)
	Year 3	40 (25.8)
Self Employed	Yes	56 (36.1)
	No	99 (63.9)
Father Employed	Yes	106 (68.4)
	No	49 (31.6)
Mother Employed	Yes	9 (5.8)
	No	146 (94.2)
Family Income	Below 50,000	89 (57.4)
	50,000-100,000	44 (28.4)
	100,000-200,000	16 (10.3)
	Above 200,000	6 (3.9)

The result of table 2 showed that 88.39% of nursing students had normal self-esteem levels and 11.61% of nursing students had low self-esteem levels.

Table 2: Level of self-esteem

Level of self Esteem	Percentage	Scored obtained
Normal self Esteem	88.39%	Above 15
Low Self Esteem	11.61%	Below 15

Result of table 3 shows that 59.35% of the students, the anxiety and depression symptoms score was absent, while 40.65% of students were found to have anxiety depression symptoms.

Table 3: Anxiety depressive symptoms

Anxiety Depressive Symptoms	Percentage
Symptoms Absent	59.35%
Symptoms Present	40.65%

Self-esteem levels and anxiety depressive symptoms were found to be negatively weakly statistically significant. (r = -0.221; n = 155; P < 0.01) (Table 4).

Table 4: Correlation between self-esteem and anxiety depressive symptoms

SE Levels, ADS	N	r	p-value
	155	− 0.221	< 0.01

Table 5 shows the result of Association of demographic variables with self-esteem score. The age group does not exhibit a significant association with self-esteem (p = 0.687). Marital status also shows no significant difference (p = 0.147). Residence type lacks a significant relationship with self-esteem (p = 0.286). However, academic year emerges as a significant factor, with first-year students demonstrating a notable difference in self-esteem compared to their peers (p = 0.046). Family income and family type do not reveal significant associations. Additionally, variables such as substance abuse, self-employment, and father's employment show no significant correlations with self-esteem (p-values: 0.523, 0.817, 0.923).

Table 5: Association of demographic variables with self-esteem score

Variables	Mean ± SD	N	p-value
Age			
16-22	21.33 ± 4.489	85	
23-29	21.97 ± 4.304	62	0.687[a]
30-36	21.63 ± 4.373	8	
Marital Status			
Married	23.12 ± 2.818	25	
Unmarried	21.34 ± 4.614	127	0.147[a]
Others	20.00 ± 3.464	3	
Residence			
Living with Parents	21.73 ± 4.350	147	
Living with Relatives	19.75 ± 4.787	4	0.286[a]
Hostel	18.75 ± 5.500	4	
Academic Year			
Year 1	20.56 ± 4.475	64	
Year 2	22.27 ± 4.128	51	0.046[a]
Year 3	22.40 ± 4.355	40	
Family income			
Below 50,000	21.17 ± 4.200	89	
50,000 - 100,000	21.91 ± 4.482	44	0.394[a]
100,000 - 200,000	23.13 ± 4.225	16	
Above 200,000	21.67 ± 6.772	6	
Family Type			
Nuclear Family	21.35 ± 4.786	57	0.054[b]
Extended Family	21.74 ± 4.165	98	
Substance Abuse			
Yes	20.89 ± 4.129	18	0.523[b]
No	21.69 ± 4.432	137	
Self Employed			
Yes	22.64 ± 4.474	56	0.817[b]
No	21.01 ± 4.256	99	
Father Employed			
Yes	21.48 ± 4.371	106	0.923[b]
No	21.86 ± 4.472	49	

[a]ANOVA test has been applied
[b]Independent T-test has been applied

DISCUSSION

The main aim of this study was to find out the association between anxiety depressive symptoms and socio-demographic factors with self-esteem among nursing students. Our study revealed that the majority of the nursing students have normal self-esteem levels. The students of 1st year nursing students have mean self-esteem scores in comparison with 2nd and 3rd-year nursing students. Similar results are found in the cross-sectional study comprising 300 nursing students, which was conducted in Iraq, which showed that the final-year nursing students have high self-esteem scores compared to the junior students [2]. Low self-esteem can have a number of negative consequences for nursing students. It can make it difficult for them to succeed academically and clinically. It can also lead to problems in their personal and social lives. Nursing students with low self-esteem may be more likely to experience anxiety and depression, have difficulty coping with stress, avoid challenging tasks, procrastinate, give up easily, withdraw from social activities, and have negative relationships with others[13]. The current study findings revealed that 40.65% of the students have no anxiety symptoms. Similarly, another study found that,(41.3%) had low anxiety score during their clinical placement [14]. Another study found that the majority of the students have moderate stress [15]. In this regard, another study said that 17.6% of the pupils acknowledged feeling anxious [16]. Our study outcome shows that there was no significant association found between different socio-demographic variables such as gender, marital status, family type, family income, residence, or substance abuse with self-esteem levels. The only significant association was found between education level and self-esteem levels which means that change in education level has an impact on self-esteem scores. According to the cross-sectional study conducted in India, comprised of 210 undergraduate nursing students, the results revealed that there was no significant association was found between socio-demographic variables and self-esteem, the only stress variable was found to be significantly associated with self-esteem [12]. Despite having normal self-esteem scores, the students were found to have positive anxiety depression symptoms. The junior students were found to have more anxiety and depression symptoms in comparison with senior students. Similarly, another study found the same result that: junior

students have more anxiety than senior students [17]. This is due to several factors, including academic pressure, clinical concerns, long hours, irregular sleep patterns, exposure to human suffering and death. Anxiety and depressive symptoms have an adverse impact on self-esteem. People with anxiety depression often have a negative view of themselves and their abilities. They may also have difficulty coping with stress and challenges. Anxiety is a common experience among nursing students, and it can manifest in a variety of ways, such as feeling nervous, restless, or worried. Anxiety can interfere with academic performance, clinical performance, and overall well-being [18]. Depressive symptoms are also common among nursing students. These symptoms can include sadness, hopelessness, fatigue, and difficulty concentrating. Depressive symptoms can make it difficult to complete nursing school and can also lead to other problems, such as academic failure, relationship problems, and substance abuse [19]. There was a negative inverse weak correlation between self-esteem mean scores and anxiety depression symptoms mean score (r = -0.221; n=155; P = 0.006). Similar results were found in the research study conducted in Saudi Arabia in the year 2018 involved 152 nursing students. The results of this study revealed that there was a weak statistically significant negative relationship between self-esteem and level of depression (r =-0.224; n=152; P < 0.01), with a lower level of depression associated with a high level of self-esteem [20]. Another study found a negative correlation between self-confidence and anxiety p-value of 0.224 [14]. There is a need to look after the 1st year students as they had low mean scores on both variables, and the new academic environment and culture might affect the findings.

CONCLUSIONS

A negative, significant, weak correlation was found between anxiety, depressive symptoms and self-esteem.. Nursing students' academic level was found to be significantly associated with both self-esteem scores and anxiety depressive symptoms scores; the junior students are more prone to have more anxiety depressive symptoms and low self-esteem levels.

Authors Contribution

Conceptualization: DAK, MTK
Methodology: DAK, AGM
Formal analysis: DAK, MTK, DAS
Writing-review and editing: DAK, AP, FMA, AB

All authors have read and agreed to the published version of the manuscript.

Conflicts of Interest

The authors declare no conflict of interest.

REFERENCES

[1] Pandey RA and Chalise HN. Self-esteem and academic stress among nursing students. Kathmandu University Medical Journal. 2015; 13(4): 298-302. doi: 10.3126/kumj.v13i4.16827.

[2] Valizadeh L, Zamanzadeh V, Badri GR, Ghahramanian A, Jabbarzadeh TF, Keogh B. Self-esteem challenges of nursing students: an integrative review. Research and Development in Medical Education. 2016 Jun; 5(1): 5-11. doi: 10.15171/rdme.2016.003.

[3] Han MR and Kim HG. Mediating effect of communication competence on the relationship between emotional intelligence and self-esteem among nursing students. Journal of Digital Convergence. 2017 Feb; 15(2): 263-72. doi: 10.14400/JDC.2017.15.2.263.

[4] Burnard P, Hebden U, Edwards D. Self-esteem and student nurses: an account of a descriptive study. Nursing & Health Sciences. 2001 Mar; 3(1): 9-13. doi: 10.1046/j.1442-2018.2001.00061.x.

[5] Arshad M, Zaidi SM, Mahmood K. Self-Esteem & Academic Performance among University Students. Journal of Education and Practice. 2015; 6(1): 156-62.

[6] Park JY and Park EY. The Rasch analysis of Rosenberg self-esteem scale in individuals with intellectual disabilities. Frontiers in Psychology. 2019 Sep; 10: 1992. doi: 10.3389/fpsyg.2019.01992.

[7] Edwards D, Burnard P, Bennett K, Hebden U. A longitudinal study of stress and self-esteem in student nurses. Nurse Education Today. 2010 Jan; 30(1): 78-84. doi: 10.1016/j.nedt.2009.06.008.

[8] Almansour AM. Self-esteem among nursing students at a public university in Saudi Arabia: A cross-sectional study. Belitung Nursing Journal. 2023 Aug; 9(4): 377. doi: 10.33546/bnj.2750.

[9] Vasli P, Mortazavi Y, Aziznejadroshan P, Esbakian B, Ahangar HG, Jafarpoor H. Correlation between critical thinking dispositions and self-esteem in nursing students. Journal of Education and Health Promotion. 2023 Apr; 12(1): 144. doi: 10.4103/jehp.jehp_1481_22.

[10] Ali R, Shaikh MH, Bibi A, Gul H, Lakhani Z. Effectiveness of Education on COVID-19 Vaccine Anxiety among Patients at Tertiary Care Hospital Karachi Pakistan. Pakistan Journal of Health Sciences. 2023 Jun 30; 4(6): 226-30. doi: 10.54393/pjhs.v4i06.890.

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[11] Papazisis G, Nicolaou P, Tsiga E, Christoforou T, Sapountzi-Krepia D. Religious and spiritual beliefs, self-esteem, anxiety, and depression among nursing students. Nursing & Health Sciences. 2014 Jun; 16(2): 232-8. doi: 10.1111/nhs.12093.

[12] Banappagoudar S, Ajetha DS, Parveen A, Gomathi S, Subashini SP, Malhotra P. Self-Esteem of Undergraduate Nursing Students: A Cross-Sectional Study. International Journal of Special Education . 2022 Jan; 37(3): 4500-10.

[13] Nguyen DT, Wright EP, Dedding C, Pham TT, Bunders J. Low self-esteem and its association with anxiety, depression, and suicidal ideation in Vietnamese secondary school students: a cross-sectional study. Frontiers in Psychiatry. 2019 Sep; 10: 698. 10.3389/fpsyt.2019.00698. doi: 10.3389/fpsyt.2019.00698.

[14] Bibi A, Iqbal J, Bibi J, Sultan A, Thapur MB, Jamil Y, *et al.* Nursing students' anxiety and self-confidence in clinical decision-making. Journal of Population Therapeutics and Clinical Pharmacology. 2023; 30(18): 2955-60. 10.53555/jptcp.v30i18.3554. doi: 10.53555/jptcp.v30i18.3554.

[15] Shah A, Iqbal J, Bibi A, Sultan A. Determinants of Stress and Its Association with Academic Performance of Undergraduate Students of Nursing in Pakistan. Journal of Asian Development Studies. 2023 Sep; 12(3): 641-647.

[16] Romo-Barrientos C, Criado-Álvarez JJ, Martínez-Lorca A, Viñuela A, Martin-Conty JL, Saiz-Sanchez D, F, et al. Anxiety among nursing students during their first human prosection. Nurse Education Today. 2020 Feb; 85: 104269. doi: 10.1016/j.nedt.2019.104269.

[17] Rahman SU, Imtiaz L, Mahmood A, Gul S, Bibi A. Anxiety and its associated factors Among Undergraduate Nursing Students During Psychiatry Clinical Placement: A Cross-sectional Study in Mardan Khyber Pakhtunkhwa: Anxiety in Nursing Students. Pakistan BioMedical Journal. 2023 Nov; 6(11): 23-7. doi: 10.54393/pbmj.v6i11.972.

[18] Lundberg T, Årestedt K, Forinder U, Olsson M, Fürst CJ, Alvariza A. Higher Self-Esteem Associated With Less Symptoms of Anxiety and Depression Among Young Adults After the Loss of a Parent to Cancer—A Longitudinal Study. Journal of Palliative Care. 2022 Apr; 37(2): 113-9. doi: 10.1177/08258597211044585.

[19] Altaweel F, Kamel N, Alqahtani F. Self-Esteem and Determinants of Depression among Undergraduate Nursing Students in Dammam, Saudi Arabia. Medical Archives. 2023 Feb; 77(1): 44. doi: 10.5455/medarh.2023.77.44-48.

[20] Alsaqri SH, Albagawi BS, Aldalaykeh MK, Alkuwaisi MJ. Prediction of depression among undergraduate nursing students in North-Western Saudi Arabia: A quantitative cross-sectional study. International Journal of Advanced and Applied Sciences. 2019 Jan ; 6: 72-8. doi: 10.21833/ijaas.2019.03.011.