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ASSOCIATION OF ASSERTIVENESS WITH EMOTIONAL INTELLIGENCE AND SELF-ESTEEM AMONG UNDERGRADUATE STUDENTS

Original Research

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ABSTRACT

Background: Assertiveness, emotional intelligence (EI), and self-esteem are key psychological traits essential for success in healthcare professions. These attributes significantly influence effective communication, self-expression, and emotional regulation, crucial for healthcare professionals such as nurses and physiotherapists.

Objective: This study aims to investigate the associations between assertiveness, emotional intelligence, and self-esteem among undergraduate students in the BS Nursing and Doctor of Physiotherapy programs at Liaquat University of Medical & Health Sciences, Jamshoro. Specific objectives include assessing levels of self-esteem and assertiveness and examining their relationships with emotional intelligence.

Methods: A comparative cross-sectional study was undertaken over a six-month period involving 242 students chosen through non-probability convenient sampling. The Rosenberg Self-Esteem Scale, Schutte Self-Report Emotional Intelligence Test, and the Begley and Glacken Assertiveness Questionnaire were employed for data collection. Statistical analyses were performed using SPSS, focusing on descriptive statistics, correlation, regression, and ANOVA.

Results: The demographic profile showed a majority of female students (57% in nursing and 84.3% in physiotherapy), predominantly aged between 21-25 years. A substantial number of students originated from rural areas. Emotional intelligence scores were notably high across both student groups. In contrast, self-esteem and assertiveness levels were moderate. Regression analysis revealed that self-esteem significantly predicted assertiveness in nursing students, while emotional intelligence did not exhibit a significant effect on assertiveness in either group.

Conclusion: The findings indicate high emotional intelligence and moderate levels of self-esteem and assertiveness among the students. While self-esteem significantly influences assertiveness in nursing students, emotional intelligence does not affect assertiveness. The results emphasize the necessity of integrating emotional intelligence and assertiveness training into healthcare education curricula to foster the development of competent and resilient professionals.

Keywords: Assertiveness, Emotional Intelligence, Healthcare Education, Nursing Students, Physiotherapy Students, Self-Esteem, Student Psychology.

INTRODUCTION

Assertiveness is an essential interpersonal skill characterized by the ability to express one's needs and thoughts in a direct, respectful, and non-aggressive manner, which is crucial for establishing healthy boundaries within various relationships (1). This skill is particularly vital in professional settings such as healthcare, where effective communication forms the cornerstone of robust interactions with colleagues, patients, and their families (2). Often, assertiveness is intertwined with self-esteem; individuals with a heightened sense of self-worth are typically more assertive (4). Studies have shown that healthcare professionals, like nurses who are assertive, often report higher self-esteem, which in turn enhances their professional achievements and their ability to manage workplace challenges effectively. Alongside assertiveness, emotional intelligence (EI) plays a significant role in interpersonal effectiveness, comprising the ability to identify, understand, and manage one's own emotions and those of others. This facet of intelligence is fundamental in fostering communication, empathy, conflict resolution, and emotional regulation, especially in high-stress environments such as healthcare settings. Research indicates a positive correlation between emotional intelligence and self-esteem, which is particularly evident among healthcare students in various geographical regions including Pakistan (3,5).

Self-esteem itself, defined as an individual's overall sense of personal worth or value, correlates with several positive life outcomes. These include enhanced job performance, healthier interpersonal relationships, and greater psychological well-being. In the context of healthcare education, students in fields such as nursing and physiotherapy with high self-esteem have shown better clinical skills, leadership qualities, and more effective patient interactions (6,7,9). Despite these known associations, there is a scarcity of research focusing on assertiveness, emotional intelligence, and self-esteem among undergraduate healthcare students in Pakistan. Addressing this research gap is crucial for the formulation of educational strategies and policies aimed at enhancing the psychological well-being, communication skills, and professional competence of future healthcare practitioners. Moreover, this endeavor supports the objectives of Sustainable Development Goal 3 (SDG 3) — "Good Health and Well-Being," emphasizing the importance of mental health in the training of adept healthcare professionals.

The primary goal of this study is to explore the interrelationships between assertiveness, emotional intelligence, and self-esteem among undergraduate students to aid in the development of targeted educational and policy interventions. Specifically, it aims to examine how assertiveness interacts with emotional intelligence and to assess its correlation with self-esteem among undergraduate nursing and physiotherapy students. This research not only seeks to fill a critical knowledge gap but also to substantiate the interconnectedness of these psychological traits, which are pivotal for the holistic development of healthcare professionals.

METHODS

The methodology employed in this study involved a comparative cross-sectional design, which facilitated the examination of the associations between assertiveness, emotional intelligence, and self-esteem among undergraduate students over a concise period. Conducted at Liaquat University of Medical and Health Sciences (LUMHS) in Jamshoro, Sindh, Pakistan, the research spanned six months following the approval of the research proposal. This duration was strategically chosen to allow ample time for participant recruitment, data collection, and subsequent analysis. Participant selection was based on non-probability convenient sampling, where individuals were chosen according to their availability and willingness to engage in the study. This approach, although practical, might introduce bias as it does not represent the entire population systematically. The sample size was determined to be 242 individuals using Raosoft's calculator, with settings at a 5% margin of error, a 95% confidence level, and an anticipated response distribution of 50%. Inclusion criteria specified BS Nursing (Generic) and Doctor of Physiotherapy students, encompassing both male and female candidates who were willing and deemed mentally fit. Conversely, postgraduate students and those either unwilling to participate or mentally unwell were excluded from the study.

Data were gathered face-to-face using a structured questionnaire following the receipt of ethical approval and informed consent, ensuring adherence to the ethical standards set by the Research Ethics Committee (REC) of LUMHS. The survey instruments included the Rosenberg Self-Esteem Scale, a 10-item Likert scale ranging from 0 to 30, to measure self-esteem; the Schutte Self-Report Emotional Intelligence Test (SSEIT), comprising 33 items with scores ranging from 33 to 165; and an Assertiveness Scale consisting of 28 items

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INSIGHTS-JOURNAL OF HEALTH AND REHABILITATION

with a total score ranging between 28 and 112. Ethical considerations were meticulously observed, with approval granted by the REC of LUMHS. Participants' confidentiality was strictly maintained, and all research protocols were followed according to REC guidelines. The data analysis was performed using SPSS version 23.0, employing descriptive and inferential statistical methods such as regression, correlation, and ANOVA, with a significance threshold set at $p \leq 0.05$. This rigorous analytical approach ensured that the findings were robust and statistically valid, providing meaningful insights into the studied correlations.

RESULTS

The results of the study provided a comprehensive analysis of the demographic profiles, descriptive measures, and statistical relationships between assertiveness, emotional intelligence, and self-esteem among undergraduate students in nursing and physiotherapy programs.

Table 1: Demographic Profile of BS Nursing and Doctor of Physiotherapy Students

Demographic Variable	Subcategory	BS Nursing Students (Frequency (%age))	Doctor of Physiotherapy Students (Frequency (%age))
Gender	Male	52 (43.0%)	19 (15.7%)
	Female	69 (57.0%)	102 (84.3%)
Age	<20 Years	30 (24.8%)	20 (16.5%)
	21–25 Years	83 (68.6%)	97 (80.2%)
	26–30 Years	8 (6.6%)	4 (3.3%)
Place of Residence	Rural	75 (62.0%)	64 (52.9%)
	Urban	46 (38.0%)	57 (47.1%)
Education Status of Mother	Primary	25 (20.6%)	23 (19.0%)
	Matriculation	26 (21.5%)	37 (30.6%)
	Intermediate	3 (2.5%)	6 (4.95%)
	Others	67 (55.4%)	55 (45.5%)
Family Monthly Income	20,000 to 40,000 PKR	69 (57.0%)	45 (37.2%)
	41,000 to 100,000 PKR	43 (35.5%)	55 (45.5%)
	More than 100,000 PKR	0 (0.0%)	21 (17.4%)

In the demographic analysis, the majority of BS Nursing students were female, representing 57.0%, aligning with common trends in nursing education. Most students fell within the 21-25 age group, accounting for 68.6% of the sample. A significant 62.0% of these students hailed from rural areas, indicating the reach of the program into less urbanized regions. Regarding family backgrounds, 42.1% of students' mothers had achieved education up to the matriculation level, reflecting certain socio-economic factors affecting educational pursuits. The largest income bracket among these students' families was 20,000 to 40,000 PKR per month, covering 57.0% of the sample. Similarly, the Doctor of Physiotherapy program also showed a predominance of female students at 84.3%. The age distribution was similar to that of the nursing students, with 80.2% being between 21-25 years old. The student population was almost evenly divided between rural and urban origins. The educational status of mothers and family income distribution suggested a slightly better economic background compared to the nursing students, with a larger segment earning between 41,000 to 100,000 PKR.

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Table 2: Descriptive Measures of BSN & DPT students

	BS Nursing Students			**Doctor of Physiotherapy Students**		
	Self-Esteem	Emotional Intelligence	Assertiveness	Self-Esteem	Emotional Intelligence	Assertiveness
N	121					
Min	2.2	1.39	1.59	1.36	1.36	2.06
Max	3.6	4.7	3.82	4.73	4.73	3.82
Mean	2.843	3.6932	2.7953	3.7488	3.7488	2.7618
SD	0.28601	0.50033	0.3466	0.50394	0.50394	0.33439
Skewness	0.276	-1.127	-0.178	-1.542	-1.542	0.533

Descriptive statistics revealed that the mean self-esteem scores among nursing students were moderately high with a slight positive skew, indicating a general trend towards higher self-esteem. Emotional intelligence scores also averaged on the higher side but with a substantial negative skew, suggesting that a large number of students exhibited high emotional intelligence. Assertiveness scores showed moderate levels with a slight negative skew, indicating variability in assertiveness among the students. For Doctor of Physiotherapy students, both self-esteem and emotional intelligence displayed similar patterns with high mean scores and strong negative skews, denoting high levels in most students. However, assertiveness scores were moderately high with a positive skew, suggesting that while many students displayed sufficient assertiveness, a smaller proportion exhibited higher levels.

The correlation analysis within the nursing student group showed a significant positive relationship between self-esteem and assertiveness, implying that higher self-esteem was associated with greater assertiveness. However, emotional intelligence did not show a significant predictive relationship with assertiveness. In contrast, the physiotherapy students' results indicated no significant correlations between these variables, highlighting possible program-specific differences in how these psychological traits interact.

Table 3: Descriptive Measures and Correlation Matrices of BS Nursing and Doctor of Physiotherapy (DPT) Students

Variable	**N**	**Min**	**Max**	**Mean**	**Std. Deviation**	**Skewness**	**Emotional Intelligence**	**Assertiveness**	**Self-Esteem**
BS Nursing Students									
Self-Esteem	121	2.20	3.60	2.8430	0.28601	0.276	0.081	0.225*	1.000
Emotional Intelligence	121	1.39	4.70	3.6932	0.50033	-1.127	1.000	0.122	0.081
Assertiveness	121	1.59	3.82	2.7953	0.34660	-0.178	0.122	1.000	0.225*
DPT Students									
Self-Esteem	121	1.36	4.73	3.7488	0.50394	-1.542	0.098	0.032	1.000**
Emotional Intelligence	121	1.36	4.73	3.7488	0.50394	-1.542	1.000**	0.032	0.098
Assertiveness	121	2.06	3.82	2.7618	0.33439	0.533	0.032	1.000	0.032

INSIGHTS-JHR
INSIGHTS-JOURNAL OF HEALTH AND REHABILITATION

Variable	N	Min	Max	Mean	Std. Deviation	Skewness	Emotional Intelligence	Assertiveness	Self-Esteem
Note: *p < 0.05; **p < 0.01									

Table 4: Regression and ANOVA Analysis of Assertiveness with Self-Esteem and Emotional Intelligence (EI)

Group	Predictor	Constant	β	Std. Error	t-ratio	Sig.	ANOVA F	Sig.
BS Nursing Students	Self-Esteem	2.020	0.273	0.108	2.518	0.013	6.343	0.013
	Emotional Intelligence	2.482	0.085	0.063	1.344	0.181	1.807	0.181
DPT Students	Self-Esteem	2.682	0.021	0.061	0.350	0.727	0.122	0.727
	Emotional Intelligence	2.682	0.021	0.061	0.350	0.727	0.122	0.727

The regression analyses further supported these findings, where self-esteem significantly predicted assertiveness among nursing students but not among physiotherapy students. In both groups, emotional intelligence did not emerge as a significant predictor of assertiveness, reinforcing the unique interplay of these variables in different academic settings. This comprehensive analysis underscores the nuanced relationships between assertiveness, emotional intelligence, and self-esteem, influenced by demographic factors and educational backgrounds, and highlights the need for targeted interventions that consider these dynamics within healthcare education programs.

DISCUSSION

In this study, nursing and physiotherapy students showed high emotional intelligence and moderate self-esteem and assertiveness levels. For nursing students, self-esteem significantly correlated with assertiveness, indicating that higher self-esteem led to more assertive behavior, while emotional intelligence had no impact on assertiveness in either group. Interestingly, physiotherapy students did not show a significant relationship between assertiveness and either self-esteem or emotional intelligence, suggesting that the associations between these psychological traits vary between academic disciplines. These results highlight the importance of developing self-esteem as part of assertiveness training, especially for nursing students, to strengthen healthcare communication skills.

The current study revealed moderate levels of assertiveness and self-esteem among nursing and physiotherapy students, with self-esteem significantly predicting assertiveness in nursing students but not physiotherapy students. This finding aligns with research by Niyogi et al. (2020), which reported a positive correlation between self-esteem and assertiveness among South Indian youth, with correlation coefficients ($r = 0.367$, $p = 0.001$) indicating a moderate association between these traits (11). Similarly, Venkatesh and Sabesan (2019) found a significant relationship between assertiveness and self-esteem among adolescent students in Chennai, with adolescent boys demonstrating higher assertiveness and self-esteem than girls (12). The present study adds a nuanced perspective to these findings by differentiating between healthcare student groups, suggesting that the self-esteem-assertiveness link may vary depending on the academic and professional context. Despite the consistency with studies in youth populations, the absence of a significant association between emotional intelligence and assertiveness in the current study contradicts findings from the meta-analysis by MacCann et al. (2019), which established that emotional intelligence could predict academic and social competencies across multiple domains. In this meta-analysis, emotional intelligence accounted for approximately 1.7% to 3.9% of variance in academic performance, suggesting that while emotional intelligence plays a predictive role in certain academic skills, its influence on assertiveness may be context-dependent (13). In contrast, the present study did not find emotional intelligence as a predictor of assertiveness in healthcare students, indicating that professional traits like assertiveness in healthcare settings may be more closely tied to self-esteem than emotional intelligence.

Further comparisons reveal interesting distinctions. Rocha et al. (2019) observed that dental students displayed high assertiveness and moderate self-esteem, with no significant correlation between these variables (14). This contrasts with the current study's findings among nursing students, who showed a significant self-esteem-assertiveness association. This divergence could reflect variations in academic demands across healthcare fields. For instance, nursing students' interpersonal interactions may rely more on assertiveness and self-esteem due to frequent patient interactions, a requirement less emphasized in dental studies. The difference between the findings in

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INSIGHTS-JOURNAL OF HEALTH AND REHABILITATION

nursing and physiotherapy students in the present study could similarly be attributed to the unique interpersonal demands of nursing education. The study by Shilpa (2020) also strengthens the current findings, as it noted that assertiveness and self-esteem levels among advanced nursing students were positively correlated with academic achievement, mirroring the current findings in which self-esteem directly predicted assertiveness among nursing students. Nevertheless, differences in study methodologies, as Shilpa's was a systematic review and this study a cross-sectional analysis, highlight limitations in directly comparing outcomes across varied study designs (15).

Furthermore, the current study's results contrast with Parray et al. (2020), who observed a limited predictive effect of assertiveness on self-esteem among Kashmiri adolescents, noting that external factors such as gender and residence contributed more significantly. In the current study, the more substantial role of self-esteem in predicting assertiveness among nursing students underscores that self-esteem may exert a more profound influence on assertive behaviors in healthcare training environments than in general adolescent populations. The study's cross-sectional design, while providing insightful comparisons, may limit causative interpretations, indicating a need for longitudinal studies to better understand these dynamics over time (16). A notable strength of the present study was its focus on a specific student population within healthcare, providing targeted insights into traits crucial for healthcare practice. However, limitations exist, including the reliance on self-report measures, which may introduce response biases, and the non-probability sampling method, which could limit generalizability. Future research should consider randomized sampling and objective measures of assertiveness and emotional intelligence to enhance reliability (17,18).

Overall, the current study contributes valuable insights to the literature by emphasizing the specific role of self-esteem over emotional intelligence in predicting assertiveness among nursing students. This finding challenges generalized assumptions about emotional intelligence's role in professional attributes across fields, suggesting instead that self-esteem may be a more significant predictor of assertiveness in healthcare contexts. It underscores the potential value of self-esteem-enhancement programs within healthcare curricula, aligning with MacCann et al.'s (2019) emphasis on domain-specific applications of emotional intelligence. By integrating such targeted approaches, educational programs may better equip healthcare students to meet the interpersonal demands of their profession (13,19,20).

CONCLUSION

The study concludes that undergraduate students in BS Nursing and Doctor of Physiotherapy programs, predominantly female and from varied socio-economic backgrounds, exhibit notable levels of self-esteem, emotional intelligence, and assertiveness. It highlights that self-esteem plays a significant role in influencing assertiveness among nursing students, whereas emotional intelligence does not significantly impact assertiveness in either student group. These insights call for the development of targeted educational interventions that focus on enhancing both assertiveness and emotional intelligence. Such tailored strategies will better equip students to meet the demanding interpersonal dynamics of the healthcare field, ultimately fostering more effective professional practice.

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