

A study to assess the correlation between emotional intelligence and assertiveness among student nurses in selected institution, Bengaluru

¹Parvathy Chandrasekharan, ²Porkodi Michael

¹Lecturer, ²Professor and Head

^{1,2}Department of Mental health nursing,

¹SI-MET College Of Nursing, Muttathara, Trivandrum, India

²Vydehi Institute of Nursing Science and Research Centre, Bengaluru, Karnataka, India

Abstract: Emotional intelligence and assertiveness are critical competencies for nursing professionals, influencing patient care quality, interprofessional collaboration, and personal resilience. Understanding the relationship between these traits is vital for enhancing nursing education. This study aimed to assess the correlation between emotional intelligence and assertiveness among undergraduate nursing students in a selected institution in Bengaluru. **Methodology:** A descriptive correlational research design was employed with a sample of 200 nursing students selected via disproportionate stratified random sampling. Data were collected using a structured tool comprising a socio-demographic proforma, the Modified Schutte Self-Report Emotional Intelligence Scale, and an Assertiveness Scale. The data were analyzed using descriptive statistics (frequency, percentage, mean, standard deviation) and inferential statistics (Karl Pearson correlation and Chi-square test). **Results:** The study found that 56.5% of students had a high level of emotional intelligence, while 43.5% had an average level. In contrast, a vast majority (85.5%) demonstrated an average level of assertiveness. A statistically significant, moderately positive correlation was identified between emotional intelligence and assertiveness ($r = 0.501$, $p < 0.001$). Additionally, a significant association was found between emotional intelligence and father's education ($p=0.023$) and between assertiveness and the students' year of study ($p=0.006$). **Conclusion:** The findings confirm a significant positive relationship between emotional intelligence and assertiveness among nursing students. While students display strong emotional intelligence, their assertiveness skills are largely average, highlighting a key area for educational intervention. Nursing curricula should incorporate targeted training to bolster both competencies, particularly assertiveness, to better equip future nurses for the complexities of patient advocacy and professional practice.

IndexTerms - Emotional Intelligence, Assertiveness, Nursing Students, Correlation, Professional Competence.

INTRODUCTION

Emotional intelligence (EI) and assertiveness are essential competencies that significantly influence the professional development and clinical effectiveness of student nurses. Emotional intelligence refers to the ability to perceive, understand, manage, and utilise emotions effectively in oneself and others, encompassing dimensions such as self-awareness, emotional regulation, motivation, empathy, and social skills. Assertiveness, on the other hand, is the ability to express one's thoughts, feelings, and beliefs in a direct, honest, and appropriate manner whilst respecting the rights of others, which is particularly crucial in healthcare settings where effective communication can directly impact patient safety and outcomes.

In the contemporary nursing education landscape, there is growing recognition that technical competence alone is insufficient for delivering quality patient care. Nursing students require well-developed emotional and interpersonal competencies to navigate the complex and often stressful clinical environments they encounter during their training and professional practice. Research has demonstrated that emotional intelligence training significantly improves nurses' resilience, stress management, and communication skills, whilst also enhancing their ability to respond positively to patients and demonstrate greater empathy and compassion. Studies from India have shown that emotional intelligence levels among nursing students vary considerably, with approximately 12% exhibiting low levels, 50% moderate levels, and 38% high levels of emotional intelligence.

The relationship between emotional intelligence and assertiveness among nursing students has emerged as an important area of investigation in nursing education research. Evidence suggests that these two constructs are interconnected and jointly contribute to students' clinical competence, interpersonal relationships, and professional identity formation. A descriptive correlational study conducted in Bangalore found that amongst nursing students, 12% had low emotional intelligence, 50% had moderate emotional intelligence, and 38% had high levels of emotional intelligence, whilst 20% demonstrated less assertive behaviour, 56% showed moderately assertive behaviour, and 24% exhibited highly assertive behaviour. This variation in both emotional intelligence and assertiveness levels highlights the need for targeted educational interventions during nursing education.

Research from various international contexts has established that emotional intelligence positively correlates with multiple professional attributes among nurses and nursing students. Studies have documented strong positive correlations between emotional intelligence and work engagement ($r = 0.693$, $p < 0.001$), with emotional intelligence accounting for 48% of the variance in engagement scores. Similarly, emotional intelligence has been found to positively correlate with reflective thinking among nursing students, with all domains of emotional intelligence—emotionality, self-control, sociability, and well-being—showing strong associations with reflective thinking abilities. Furthermore, emotional intelligence mediates important relationships in nursing practice, including the connection between moral sensitivity and communication ability with angry patients, thereby playing a crucial role in reducing nurse-patient conflicts and preventing workplace violence.

Assertiveness training has been demonstrated to produce significant improvements in nursing students' emotional literacy, self-

esteem, and interpersonal communication satisfaction. A quasi-experimental study from India revealed that assertiveness training significantly improved self-esteem ($t=11.78$, $p=0.001$) and interpersonal communication satisfaction ($t=12.78$, $p=0.001$) amongst nursing students. Another mixed-method study found significant differences between experimental and control groups in both emotional literacy and assertiveness scale mean scores following structured assertiveness training programmes. These findings underscore the malleability of assertiveness as a skill that can be enhanced through targeted educational interventions, particularly during the formative years of nursing education.

The Indian healthcare context presents unique challenges that make the study of emotional intelligence and assertiveness particularly relevant. India faces a substantial deficit of healthcare workers, with an estimated active health worker density of doctors and nurses at 5.0 and 6.0 per 10,000 population respectively, considerably below international standards. This shortage is compounded by issues of workplace violence, with studies from Bangalore reporting that 33.6% of nurses experienced at least one type of violence over a six-month period. Additionally, nursing students in India face considerable psychological distress, with studies indicating that 56.2% experience high levels of distress, and significant proportions struggle with adjustment difficulties in academic and clinical settings. Research has also documented that 65% of nursing students in North India reported exposure to some form of childhood trauma, which was inversely related to psychological resilience. These contextual factors emphasise the critical importance of developing emotional intelligence and assertiveness skills among student nurses to prepare them for the demands of professional practice.

The relationship between emotional intelligence and assertiveness extends beyond individual professional development to impact patient safety and quality of care. Assertive communication has been identified as essential for patient advocacy and safety, enabling nurses to voice concerns, challenge unsafe practices, and effectively communicate within multidisciplinary teams. Evidence suggests that nurses with higher emotional intelligence demonstrate superior communication abilities with patients and colleagues, which directly influences health outcomes and reduces medical errors. In the context of India's healthcare system, where communication challenges and nurse-patient ratio issues are prevalent, enhancing these competencies among student nurses becomes imperative for improving healthcare delivery and patient outcomes.

Despite the growing body of international literature on emotional intelligence and assertiveness in nursing, there remains limited research specifically examining the correlation between these two constructs among nursing students in the Indian context, particularly in Bengaluru. Understanding this relationship is essential for developing evidence-based educational interventions that can be integrated into nursing curricula to foster the holistic development of future nurses. This study therefore aims to assess the correlation between emotional intelligence and assertiveness among student nurses in selected institutions in Bengaluru, contributing valuable insights to the Indian nursing education literature and informing curriculum development strategies.

NEED OF THE STUDY.

The nursing profession in India is facing unprecedented challenges including severe workforce shortages, high levels of workplace violence, and significant psychological distress among nursing students. Studies indicate that approximately 75% of healthcare workers in India experience some form of workplace violence, whilst 56.2% of nursing students report high levels of psychological distress. Furthermore, 33.6% of nurses in Bangalore experienced workplace violence within a six-month period, highlighting the urgent need for enhanced communication and interpersonal skills. With India requiring an additional 1.8 million healthcare professionals to meet WHO standards, and nursing students exhibiting variable levels of emotional intelligence (only 38% demonstrating high levels) and assertiveness (only 24% showing highly assertive behaviour), there is a critical need to understand and strengthen these competencies. Effective assertive communication can reduce medical errors and improve patient safety outcomes, whilst emotional intelligence has been shown to account for 48% of variance in work engagement amongst nurses. This study addresses this gap by examining the correlation between emotional intelligence and assertiveness amongst student nurses in Bengaluru, providing evidence to inform targeted educational interventions that can enhance these crucial professional competencies and ultimately improve healthcare delivery and patient outcomes in the Indian context.

RESEARCH METHODOLOGY

This study utilized a descriptive correlational design to investigate the relationship between emotional intelligence and assertiveness among nursing students at the Vydehi Institute of Nursing Sciences and Research Centre in Bengaluru. The target population included all students enrolled in the four-year B.Sc. nursing program. A minimum sample size of 99 was calculated using the correlation formula $n = [Z_{1-\alpha/2} + Z_{1-\beta}]^2 / C^2$, assuming a 95% confidence level and 80% power. A final sample of 200 students was selected using a disproportionate stratified random sampling technique, with 50 students chosen from each academic year. Data were collected using a structured tool consisting of three sections: a socio-demographic proforma, the Modified Schutte Self-Report

Emotional Intelligence Scale, and an Assertiveness Scale. The content validity of the tool was established by a panel of fifteen experts, including nursing professionals, a psychiatrist, a psychologist, and a statistician. A pilot study was conducted on 20 nursing students, which confirmed the tool's reliability with Cronbach's alpha values of 0.86 for the Emotional Intelligence scale and 0.85 for the Assertiveness scale. After obtaining ethical clearance and informed consent, the researcher administered the questionnaires to the 200 participants over a two-week period. The collected data were compiled in an MS Excel sheet and analyzed using both descriptive and inferential statistics. Descriptive analysis included frequency, percentage, mean, and standard deviation. The Karl Pearson correlation coefficient was used to assess the relationship between emotional intelligence and assertiveness, while the Chi-square test was employed to examine the association between these variables and selected socio-demographic factors.

Population and Sample

The study population consisted of undergraduate students enrolled in the B.Sc. Nursing program at the Vydehi Institute of Nursing Sciences and Research Centre in Bengaluru. This population was chosen to assess the levels of emotional intelligence and assertiveness in trainee nurses who are preparing to enter a demanding and emotionally challenging profession. The universe of the study includes all undergraduate nursing students at the selected institution across all four years of study. A minimum sample size of 99 was calculated using a standard formula for correlation studies, with a 95% confidence level and 80% power. To ensure greater statistical significance, a final sample of 200 students was selected through a disproportionate stratified random sampling method. This involved creating strata based on the academic year (first, second, third, and fourth year) and randomly selecting 50 participants from each stratum, ensuring equal representation across the different stages of their education. Data collection occurred over a two-week period in 2024, focusing on the undergraduate nursing student population to explore the relationship between their emotional intelligence and assertiveness.

Data and Sources of Data

For this study, primary data were collected using a structured tool designed to assess the correlation between emotional intelligence and assertiveness among undergraduate nursing students at the Vydehi Institute of Nursing Sciences and Research Centre, Bengaluru. Prior to initiating the research, formal written permission was secured from the college authorities, and ethical clearance was obtained from the institutional ethical committee to ensure compliance with research standards. Data collection was conducted over a 13-day period, from March 25, 2024, to April 6, 2024. During this time, the investigator introduced herself to the students, clearly explained the purpose and nature of the study, and assured them of the anonymity and confidentiality of their responses. Informed consent was obtained from all 200 participants, who were selected through a disproportionate stratified random sampling technique, confirming their voluntary participation. The data collection tool consisted of three sections: a proforma for socio-demographic details, the Modified Schutte Self-Report Emotional Intelligence Scale, and an Assertiveness Scale, both utilizing a five-point Likert scale format. The tool's validity was established through a rigorous review by a panel of fifteen experts, including specialists in nursing, psychiatry, psychology, and statistics. A pilot study was conducted on 20 nursing students, which confirmed the tool's high reliability with Cronbach's alpha coefficients of 0.86 and 0.85 for the emotional intelligence and assertiveness scales, respectively. The collected data were compiled and organized in a master data sheet using MS Excel. The plan for data analysis includes both descriptive and inferential statistics. Descriptive statistics, such as frequency, percentage, mean, and standard deviation, will be used to summarize the socio-demographic characteristics and the levels of emotional intelligence and assertiveness. Inferential statistics, including the Karl Pearson correlation coefficient and the Chi-square test, will be employed to determine the relationship and association between the study variables. Secondary data from academic journals, previous research studies, and relevant literature were used to build the conceptual framework and support the findings of the study. This comprehensive approach ensures that the primary data are robustly analyzed and contextualized within the existing body of knowledge on emotional intelligence and assertiveness in nursing education.

Theoretical framework

This study is grounded in the Health Belief Model (HBM), as revised by Rosenstock in 1997, to provide a theoretical framework for understanding the factors that influence the development of emotional intelligence and assertiveness among nursing students. The HBM posits that an individual's engagement in health-promoting behaviors is determined by their perceptions and beliefs about health threats and the costs and benefits of taking action. In this context, emotional intelligence and assertiveness are framed as essential components of professional well-being and competence.

Individual Perceptions and Modifying Factors: The model begins with the individual's perceptions and modifying factors. For this study, the inputs are the nursing students' socio-demographic characteristics (age, gender, year of study, family background), which act as modifying factors. These factors shape their individual perceptions, including their perceived susceptibility to professional challenges and stress, and their perceived seriousness of how low emotional intelligence and assertiveness could negatively impact their personal and professional growth.

Process (Throughput): The process component involves the students' cognitive assessment of the situation. This is where they weigh the perceived threat—comprising low emotional intelligence, low assertiveness, and a decreased quality of life—against the potential outcomes of developing these skills. Students evaluate the perceived benefits of high emotional intelligence and assertiveness, such as improved patient care, better teamwork, and enhanced personal well-being. Simultaneously, they consider the perceived barriers, which may include a lack of awareness, fear of conflict, self-doubt, or cultural influences that discourage assertiveness. This internal evaluation is further influenced by cues to action, such as guidance from health personnel, family, or media, which trigger their readiness to develop these skills.

Likelihood of Action (Output): The output of this process is the student's likelihood of action, which manifests as their current levels of emotional intelligence and assertiveness. This outcome reflects their cognitive balancing of the benefits and barriers. A student who perceives a significant threat from low emotional skills and sees clear benefits in developing them, while facing minimal barriers, is more likely to exhibit higher levels of emotional intelligence and assertiveness.

Feedback: The findings of this study serve as a crucial feedback loop. By assessing the correlation between emotional intelligence and assertiveness and identifying their levels among students, the research provides data that can inform the development of recommended actions, such as targeted training programs and counseling services. This feedback can modify the system's inputs for future cohorts by reducing barriers (e.g., lack of awareness) and strengthening cues to action, thereby fostering an educational environment that actively promotes the development of these critical professional competencies.

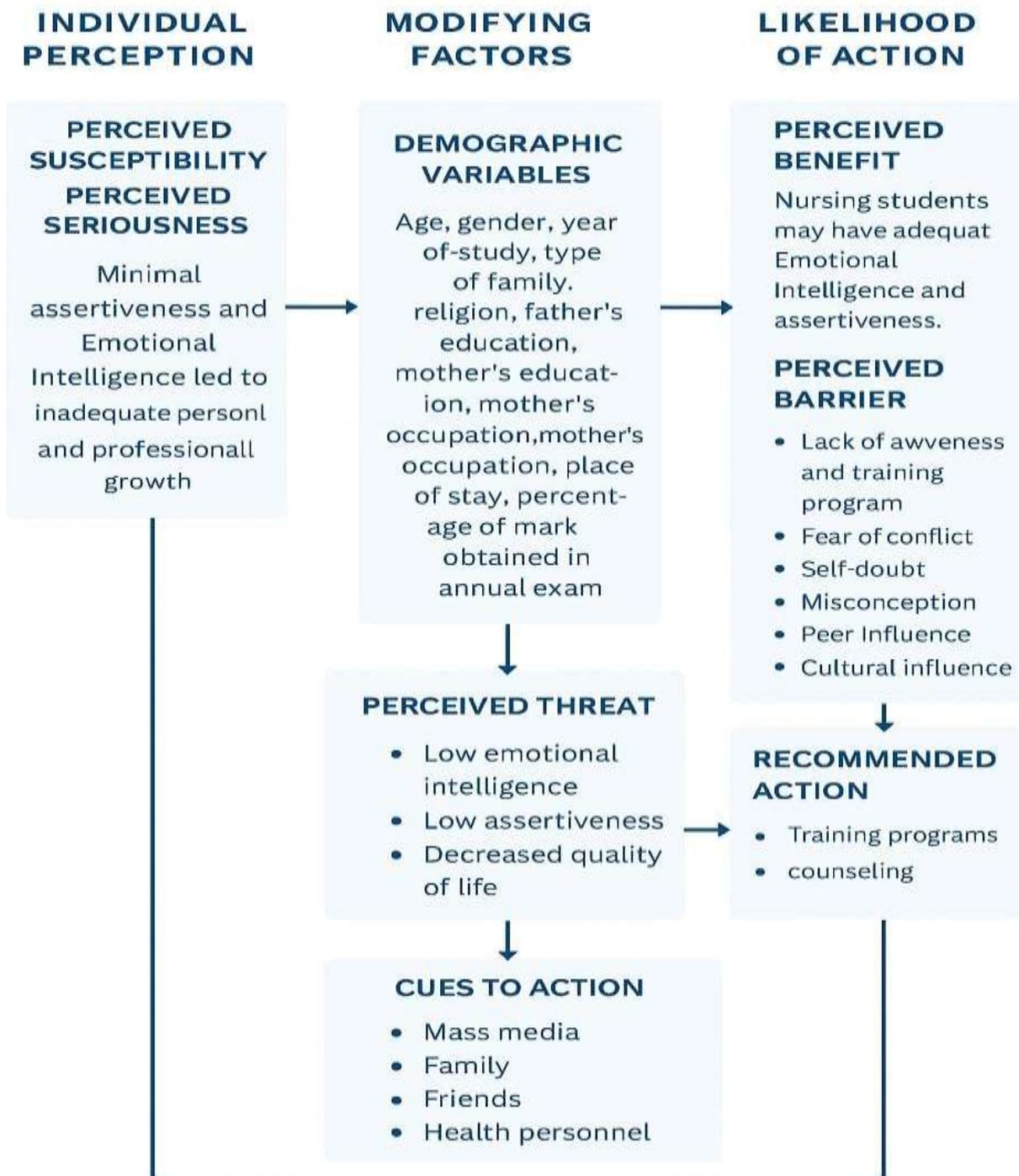


Fig.1: Conceptual framework based on Rosenstock's Health Belief Model (HBM)

Statistical tools

This research will apply a comprehensive suite of statistical tools to analyze the data on emotional intelligence and assertiveness among nursing students. After the data is compiled and entered into an MS Excel master sheet, a statistical software package will be used for a thorough analysis. The statistical approach will begin with descriptive statistics, including frequencies and percentages,

to summarize the socio-demographic characteristics of the participants. Mean and standard deviation will be calculated to assess the overall levels of Emotional Intelligence and Assertiveness within the sample.

For the inferential analysis, the Karl Pearson correlation co-efficient will be employed to determine the strength and direction of the linear relationship between the students' emotional intelligence scores and their assertiveness scores. This directly addresses the primary objective of the study. Furthermore, the Chi-square (χ^2) test will be used to examine the association between the levels of emotional intelligence and assertiveness with the selected socio-demographic variables, such as year of study, age, and family background.

The statistical significance for all inferential tests will be set at $p < 0.05$. The reliability of the data collection instruments was established during the pilot study, with Cronbach's alpha coefficients of 0.86 for the Modified Schutte Self-Report Emotional Intelligence scale and 0.85 for the Assertiveness scale, indicating a high degree of internal consistency. The final results will be presented through organized tables, figures, and graphs to facilitate clear interpretation.

This combination of descriptive and inferential statistical methods provides a robust framework for achieving the study's objectives by quantifying the levels of emotional intelligence and assertiveness, determining the correlation between them, and identifying significant associations with demographic factors among the nursing students.

RESULTS AND DISCUSSION

Results of this study has been discussed under the various categories below,

Socio-Demographic Profile

The demographic analysis of the 200 participants revealed that the majority of students were between 18-19 years of age (58%), with the remaining (42%) being 20 years and above. A significant proportion of the respondents were female (71.5%), while males constituted (28.5%). The distribution across the four years of study was even, with each year representing (25%) of the sample. The predominant religion was Hindu (49%), followed by Christian (42.5%) and Muslim (8.5%). The vast majority of students came from nuclear families (88.5%). Regarding parental education, (35%) of fathers had higher secondary education and (37%) were graduates, while (31.5%) of mothers had higher secondary education and (34%) were graduates. The most common occupation for fathers was self-employment (40%), whereas most mothers were homemakers (66%). A majority of the students' families had a monthly income above ₹20,000 (60%). Most students had one sibling (62%), resided in rural areas (51.5%), and stayed in a hostel or PG accommodation (90%). Academically, (60%) of students had scored 75% or above in their previous examination.

Levels of Emotional Intelligence and Assertiveness

Table 1: Levels of Emotional Intelligence and Assertiveness

N = 200			
Variable	Level	Frequency (n)	Percentage (%)
Emotional Intelligence	High	113	56.50%
	Average	87	43.50%
	Low	0	0.00%
Assertiveness	High	27	13.50%
	Average	171	85.50%
	Low	2	1.00%

Regarding emotional intelligence, a majority of the students, 113 (56.50%), were found to have a high level. A substantial portion, 87 students (43.50%), demonstrated an average level of emotional intelligence. It is particularly noteworthy that no students (0.00%) were classified as having a low level of emotional intelligence. In terms of assertiveness, the overwhelming majority of participants, 171 students (85.50%), exhibited an average level. A smaller group of 27 students (13.50%) displayed a high level of assertiveness. A negligible number, only 2 students (1.00%), were found to have a low level of assertiveness. The findings suggest that the student nurse population in this study generally possesses a strong emotional intelligence, with over half rated as 'high' and the remainder as 'average'. Conversely, while assertiveness is not low, it is predominantly concentrated at an 'average' level, indicating potential for development in this area.

Mean and Standard Deviation of Emotional Intelligence and Assertiveness

Table 2: Mean and Standard Deviation of Emotional Intelligence and Assertiveness

N = 200			
Research Variables	Mean	Mean Percentage	Standard Deviation
Emotional Intelligence	107.52	82.07%	10.141
Assertiveness	77.95	76.43%	8.471

The mean emotional intelligence score was 107.52 (82.07%) with a standard deviation of 10.141. The mean assertiveness score was 77.95 (76.43%) with a standard deviation of 8.471, indicating that participants generally displayed assertive behavior.

Correlation between Emotional Intelligence and Assertiveness

Table 3: Correlation between Emotional Intelligence and Assertiveness

N = 200

Research Variables	Test Value (r)	p-Value
Emotional Intelligence & Assertiveness	0.501	<0.001*

The correlation coefficient (r) was 0.501 with a p-value of <0.001. Since the p-value is less than the significance level of 0.05, the result is statistically significant. This indicates a moderately positive relationship between emotional intelligence and assertiveness. Therefore, the hypothesis (H₁) stating a significant correlation between the level of emotional intelligence and the level of assertiveness among student nurses is accepted.

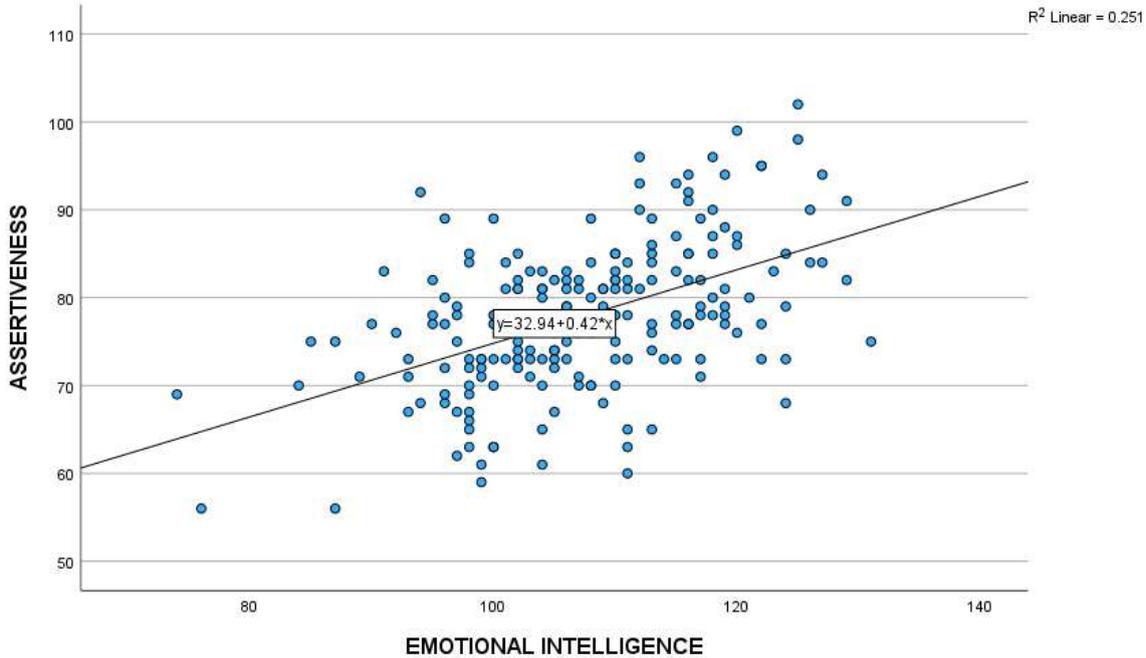


Fig.2: Scatter plot showing the relationship between Emotional Intelligence and Assertiveness among student nurses

Association Analyses

Emotional intelligence Associations

The association between emotional intelligence and selected socio-demographic variables was examined using the Chi-square test. The results showed that for most variables, the p-value was greater than 0.05, indicating no significant association. However, a significant association was found between emotional intelligence and the father's level of education ($\chi^2 = 13.056, p = 0.023$). Based on this finding, the hypothesis (H₂) is accepted only for the variable of father's education and is rejected for all other socio-demographic variables.

Assertiveness Associations

The association between assertiveness and the socio-demographic variables was analyzed. The findings revealed a statistically significant association between assertiveness and the student's year of study ($\chi^2 = 12.46, p = 0.006$). No significant association was found with any other demographic variable. Consequently, the hypothesis (H₃) is accepted only for the student's year of study and is rejected for all other variables.

DISCUSSION

The findings of this study reveal significant insights into the relationship between emotional intelligence and assertiveness among student nurses. The discovery of a moderately positive correlation ($r = 0.501, p < 0.001$) between emotional intelligence and assertiveness aligns with recent research indicating that these constructs are interdependent. Studies have demonstrated that nursing students with higher emotional intelligence tend to possess better assertive communication skills, which are essential for patient advocacy and clinical effectiveness. The predominance of students (56.50%) with high emotional intelligence in this study is encouraging and reflects growing recognition of the importance of these competencies in nursing education.

The finding that 85.50% of students demonstrated average assertiveness levels, with only 13.50% showing high assertiveness, suggests considerable potential for developing this critical skill. Research indicates that assertiveness can be significantly enhanced through targeted educational interventions during nursing training. This observation is particularly important given that assertiveness directly influences nurses' ability to communicate concerns, challenge unsafe practices, and advocate for patients. The significant association between assertiveness and year of study ($p = 0.006$) demonstrates that assertiveness develops progressively throughout nursing education, supporting the hypothesis that clinical experience and exposure gradually strengthen this competency.

The association between emotional intelligence and father's educational level ($p = 0.023$) is noteworthy and aligns with broader literature suggesting that parental education significantly influences children's emotional and social development. Recent studies document that parental educational background creates home environments that foster emotional development and cognitive

engagement. This finding underscores the importance of considering family sociodemographic factors when assessing student nurse competencies. The lack of significant associations between emotional intelligence and most other demographic variables suggests that emotional intelligence development is not heavily determined by age, gender, or family structure among this cohort.

These findings have important implications for nursing curriculum development. Integrating structured emotional intelligence and assertiveness training programmes during nursing education can enhance both competencies simultaneously, ultimately improving clinical competence, patient safety, and professional satisfaction. Future research should explore longitudinal effects of such interventions on student outcomes and clinical practice.

CONCLUSION

This study successfully demonstrated a significant, moderately positive correlation between emotional intelligence and assertiveness among nursing students, confirming that these two competencies are interconnected. The findings revealed that while students generally possess high to average emotional intelligence, their assertiveness levels are predominantly average, highlighting a specific area for development. The significant associations found with father's education and year of study provide further insight into influencing factors. These results underscore the critical need for nursing curricula to integrate targeted training programs aimed at enhancing both emotional intelligence and, particularly, assertiveness, to better prepare students for the complexities of clinical practice and patient advocacy.

ACKNOWLEDGMENT

We acknowledge all the participants who have actively participated in this study.

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