

# Prevalence and Associated Factors of Emotional Intelligence Among Nursing Students of a Tertiary Level Medical College

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## ABSTRACT

**Background:** Emotional intelligence (EI) is the ability to recognize, understand, manage, and effectively use emotions in oneself and others. It is an important competency for nursing students as it contributes to effective communication, empathy, stress management, and quality patient care. The objective of this study is to assess the prevalence of emotional intelligence and its associated factors among nursing students.

**Methods:** An analytical cross-sectional study was conducted among nursing students at a Teaching Hospital of Bharatpur, Chitwan. Data were collected using a self-administered structured questionnaire. The data were entered and analyzed using SPSS version 20. Descriptive and inferential statistics were used to summarize the findings and examine associations between emotional intelligence and selected socio-demographic variables. P-value<0.05 was considered statistically significant.

**Results:** The majority of respondents were aged 18–19 years (44.8%), unmarried (95.7%), and had chosen nursing of their own interest (94.0%), 78.4% of the students demonstrated a high level of emotional intelligence. Academic year showed association with emotional intelligence (p=0.071).

**Conclusion:** Most nursing students had a high level of emotional intelligence. Although socio-demographic factors showed limited influence, emotional intelligence appeared to increase with academic progression. Integrating emotional intelligence development into nursing education may help strengthen students' professional competencies and improve patient care outcomes.

**Keywords:** Emotional intelligence; nursing students; empathy; self-awareness; patient care

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## INTRODUCTION

Emotional intelligence (EI) refers to the ability to recognise, understand, manage, and effectively utilise emotions in oneself and others to respond appropriately in various situations.<sup>1</sup> Salovey and Mayer described EI as the ability to perceive, differentiate, integrate, and regulate emotions to guide thinking and behavior.<sup>2</sup> In recent years, emotional intelligence has gained increasing attention because individuals with higher EI tend to perform better in both personal and professional life, particularly in communication and productivity.<sup>3</sup> EI is associated with several personal benefits, including improved self-confidence, optimism, emotional stability, and stronger interpersonal relationships. Individuals with high EI are more aware of their emotions, can label them accurately, and regulate emotional responses effectively.<sup>4</sup> This helps them remain calm under pressure and make thoughtful rather than impulsive decisions.<sup>5</sup> In nursing, emotional intelligence is especially important due to the emotionally demanding nature of patient care. Nurses regularly deal with suffering, stress, and complex human emotions. Those with higher EI demonstrate greater empathy, compassion, resilience, and effective communication, all of which contribute to quality patient care.<sup>6</sup> Integration of emotional intelligence with communication skills has been shown to improve clinical performance, academic success, leadership development, and patient safety among healthcare trainees.<sup>7</sup> For nursing students, EI is a key factor in academic achievement and professional development. It helps them manage clinical stress, build therapeutic relationships, and improve decision-making in practice settings.<sup>8</sup> Previous studies have also shown that EI may vary according to age, gender, and academic year, although findings are inconsistent across different populations.<sup>9</sup> The objective of this study is to assess the prevalence of emotional intelligence and its associated factors among nursing students.

## METHODS

An analytical cross-sectional study was conducted

to assess the prevalence and associated factors of emotional intelligence among nursing students of a tertiary medical college. The study was carried out at the College of Medical Sciences–Teaching Hospital (COMS-TH), Bharatpur-10, Chitwan, Nepal. The study population included nursing students enrolled in B.Sc. Nursing 1<sup>st</sup> year, 2<sup>nd</sup> year, and 4<sup>th</sup> year, as well as PCL Nursing 3<sup>rd</sup> year. A total of 116 nursing students participated in the study, comprising 40 from B.Sc. Nursing 1<sup>st</sup> year, 22 from 2<sup>nd</sup> year, 14 from 4<sup>th</sup> year, and 40 from PCL Nursing 3<sup>rd</sup> year. A non-probability purposive sampling technique was used to select the participants. Data were collected using a self-structured questionnaire consisting of two sections. The first section included socio-demographic and personal characteristics such as age, academic year, marital status, parental education, choice of nursing education, and exercise habits. The second section consisted of the Schutte Self-Report Emotional Intelligence Test (SSEIT), a standardized 33-item instrument measured on a five-point Likert scale, with three reverse-scored items. The total emotional intelligence score ranged from 33 to 165 and was categorized as low (33-77), moderate (78-121), and high (122-165). The dependent variable of the study was the level of emotional intelligence, assessed across four domains: perception of emotions, management of one's own emotions, management of others' emotions, and utilization of emotions. Independent variables included age, academic year, marital status, choice of nursing education, parental education, and exercise habits. Data were coded and analyzed using SPSS version 20. Descriptive statistics such as frequency, percentage, mean, and standard deviation were used, while the Chi-square test was applied to assess the association between emotional intelligence and selected variables. Results were presented in tables and figures, with statistical significance determined at an appropriate level. Ethical approval was obtained from the Institutional Review Committee (IRC) of COMS-TH (Ref No. COMSTH-IRC/2023-42), Chitwan. Permission for data collection was also secured from the concerned

authorities. Informed verbal and written consent was obtained from all participants after explaining the study objectives and ensuring confidentiality and voluntary participation.

## RESULTS

Among the 116 respondents, the majority were aged 18–19 years (44.8%), followed by those aged 20–21 years (41.4%). Equal proportions of respondents were enrolled in the first year (34.5%) and third year (34.5%) of nursing education. Most participants were unmarried (95.7%) and had chosen nursing education by their own will (94.0%). Regarding parental education, secondary-level education was the most common among both mothers (55.2%) and fathers (49.1%). Less than one-quarter of fathers (22.4%) and 11.2% of mothers had attained a bachelor's degree or higher. Concerning health-related behavior, more than half of the respondents (56.0%) reported not performing regular exercise, while 44.0% engaged in regular physical activity. Overall, the study participants were predominantly young, unmarried nursing students who had voluntarily chosen their profession, with parents mainly educated up to the secondary level (Table 1).

The findings revealed that the majority of respondents had a high level of emotional intelligence, accounting for 78.4% (95% CI: 69.85%–85.54%). In contrast, only 21.6% of respondents demonstrated a moderate level of emotional intelligence (95% CI: 14.46%–30.15%) (Table 2).

A statistically significant association was observed only between academic level and emotional intelligence ( $\chi^2 = 4.819$ ,  $p = 0.028$ ), indicating that PCL students had a significantly higher proportion of high emotional intelligence (90.0%) compared to BSc students (72.4%). However, no statistically significant associations were found with age group ( $\chi^2 = 0.663$ ,  $p = 0.718$ ), marital status ( $p = 0.583$ ), choice of nursing education ( $p = 0.170$ ), mother's education ( $p = 0.332$ ), father's education ( $p = 0.856$ ), or regular exercise ( $p = 0.174$ ) (Table 3).

**Table 1. Socio-demographic Characteristics of the Respondents**

Variables	Frequency (%)
<b>Age Group (Years)</b>	
18-19	52(44.8)
20-21	48(41.4)
22-23	16(13.8)
<b>Academic year</b>	
1 <sup>st</sup> year	40(34.5)
2 <sup>nd</sup> year	22(19)
3 <sup>rd</sup> year	40(34.5)
4 <sup>th</sup> year	14(12.1)
<b>Marital status</b>	
Married	5(4.3)
Unmarried	111(95.7)
<b>Join nursing education by own will</b>	
Yes	109(94)
No	7(6)
<b>Mother's education</b>	
Primary	37(31.9)
Secondary	64(55.2)
Bachelor	13(11.2)
Master	2(1.7)
<b>Father's education</b>	
Primary	23(19.8)
Secondary	57(49.1)
Bachelor	26(22.4)
Master	10(8.6)
<b>Performed exercise regularly</b>	
Yes	51(44)
No	65(56)

**Table 2. Level of Emotional Intelligence among the Respondents**

Level of Emotional Intelligence	Frequency (%)	95% CI	
		Lower	Upper
Moderate level	25(21.6)	14.46	30.15
High level	91(78.4)	69.85	85.54

<b>Table 3. Association between level of emotional Intelligence and selected Socio-demographic variables among respondents</b>				
Variables	Level of Emotional Intelligence		Chi-square	p-value
	Moderate n (%)	High n (%)		
<b>Age group</b>				
18–19	13 (25.0%)	39 (75.0%)		
20–21	9 (18.8%)	39 (81.3%)	0.663	0.718
22–23	3 (18.8%)	13 (81.3%)		
<b>Academic level</b>				
PCL	4 (10.0%)	36 (90.0%)	4.819	0.028
BSc	21 (27.6%)	55 (72.4%)		
<b>Marital status</b>				
Married	0 (0.0%)	5 (100%)	1.436	0.583
Unmarried	25 (22.5%)	86 (77.5%)		
<b>Join nursing education by own will</b>				
Yes	22 (20.2%)	87 (79.8%)	2	0.17
No	3 (42.9%)	4 (57.1%)		
<b>Mother's education</b>				
Primary	6 (16.2%)	31 (83.8%)		
Secondary	13 (20.3%)	51 (79.7%)		
Bachelor	5 (38.5%)	8 (61.5%)	3.415	0.332
Master	1 (50.0%)	1 (50.0%)		
<b>Father's education</b>				
Primary	4 (17.4%)	19 (82.6%)		
Secondary	13 (22.8%)	44 (77.2%)		
Bachelor	5 (19.2%)	21 (80.8%)		0.856
Master	3 (30.0%)	7 (70.0%)		
<b>Performed regular exercise</b>				
Yes	8 (15.7%)	43 (84.3%)	1.852	0.174
No	17 (26.2%)	48 (73.8%)		

## DISCUSSION

The present study shows that the age distribution of the participants was relatively diverse, with a significant proportion (44.8%) in the 18-19 years age group, followed by 41.4% in the 20-21 years age group. A smaller proportion (13.8%) belonged to the 22–23 years age group. This finding is consistent with a study conducted in Saudi Arabia in 2023, which reported that 51.8% of the study population were in the 18–19 years age group and 48.2% were in the 20-

21 years age group.<sup>11</sup> Regarding marital status, the majority (95.7%) of respondents were unmarried, while only a few (4.3%) were married. This finding is supported by a study conducted among Saudi nursing students in 2023, where 98.1% were unmarried.<sup>12</sup> A similar result was also reported in a study conducted in selected colleges of Morang district among nursing students in 2022, where 86.4% were unmarried.<sup>10</sup>

The findings further reveal that most respondents

(94.0%) chose nursing education voluntarily, while only 6.0% did not. This suggests strong personal motivation among the majority of students toward the nursing profession. This result is similar to a study conducted by Cerit et al., which reported that 88.6% of students in Turkey chose nursing education voluntarily, and 69.9% expressed satisfaction with studying nursing.<sup>13</sup> A study conducted in eastern Nepal also reported comparable findings, where 78.8% of respondents joined nursing education by their own choice.<sup>14</sup> In terms of maternal education, the study shows diversity in educational background. The largest proportion of mothers (55.2%) had secondary-level education, followed by primary education (31.9%), bachelor's degree (11.2%), and master's degree (1.7%). A contrasting finding was reported in a study conducted in selected colleges of Morang district among nursing students in 2022, where 38.8% of participants' mothers had secondary-level education.<sup>10</sup> Similarly, the educational background of fathers also varied. Nearly half (49.1%) had secondary-level education, followed by bachelor's degree (22.4%), primary education (19.8%), and master's degree (8.6%). A more or less similar finding was reported in a study conducted in selected colleges of Morang district among nursing students (2021), where 33.6% of students' fathers had secondary-level education.<sup>10</sup> In relation to physical activity, a considerable proportion (56%) of respondents did not engage in regular exercise, while 44.0% reported engaging in regular physical activity. This indicates that a substantial proportion of participants lack regular exercise habits. A contrasting finding from eastern Nepal by Shrestha and Mandal (2021) reported that 89.4% of respondents did not have a habit of daily exercise.<sup>14</sup> The study findings show that the majority (78.4%) of participants exhibited a high level of emotional intelligence, while 21.6% demonstrated a moderate level. Notably, none of the respondents were categorized as having low emotional intelligence. The predominance of high emotional intelligence is encouraging, as it may enhance interpersonal relationships, communication skills, and overall well-being-key attributes for nursing students

in healthcare practice. This finding is supported by a study conducted in selected colleges of Morang district among nursing students in 2021, which reported that 75.4% had high emotional intelligence, while 24.6% had moderate levels.<sup>10</sup> Similar findings were also reported in studies conducted in Nigeria, where 80% of nursing students demonstrated high emotional intelligence<sup>15</sup> and in eastern Nepal, where 81.8% of nursing students had high emotional intelligence.<sup>14</sup> The present study explored the relationship between emotional intelligence and selected socio-demographic variables. A statistically significant association was found between emotional intelligence and academic level ( $p = 0.028$ ), which is consistent with a study conducted in Thrissur, India (2024), where academic level was also significantly associated with emotional intelligence ( $p = 0.049$ ).<sup>16</sup> However, no statistically significant associations were observed between emotional intelligence and age ( $p = 0.718$ ), marital status ( $p = 0.583$ ), voluntary choice of nursing education ( $p = 0.170$ ), mother's education ( $p = 0.332$ ), father's education ( $p = 0.856$ ), and regular exercise ( $p = 0.174$ ). Similar findings were reported in a study conducted in selected colleges of Morang district among nursing students in 2021, which showed no significant association between emotional intelligence and age ( $p = 0.663$ ), marital status ( $p = 0.795$ ), mother's education ( $p = 0.662$ ), and father's education ( $p = 0.661$ ).<sup>10</sup> Likewise, Shrestha and Mandal et al., in 2021 reported no significant association between emotional intelligence and age ( $p = 1.00$ ), voluntary choice of nursing education ( $p = 1.00$ ), and regular exercise ( $p = 0.282$ ).<sup>14</sup> Similarly, Thamizhselvan and Goleman et al., in 2019 also reported that emotional intelligence was not significantly associated with age ( $p = 0.372$ ).<sup>17</sup>

## CONCLUSIONS

The study concludes that a majority of nursing students demonstrated a high level of emotional intelligence, reflecting a strong foundation for effective communication, empathy, and emotional regulation in clinical practice. Although socio-demographic variables showed no significant

association, variations in academic level suggest gradual development of emotional intelligence during training. These findings highlight the importance of strengthening emotional competencies throughout nursing education. Enhancing emotional intelligence can better prepare students to manage the emotional demands of healthcare settings. Therefore, integrating structured emotional intelligence development into the nursing curriculum is essential to improve both professional competence and patient care outcomes.

### Limitations

The study was conducted in a single teaching hospital; therefore, the findings may not be generalizable to other settings. In addition, the use of a non-probability convenience sampling technique may limit the representativeness of the sample

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### Availability of data and materials

The datasets generated and analyzed during the current study are available from the corresponding author upon reasonable request.

### Authors' Contributions

Conceptualization: Srijana Shrestha

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