# EMOTIONAL INTELLIGENCE AMONG UNDERGRADUATE NURSING STUDENTS

*Binisha Sinha[1] Rojana Bachracharya[2] Saraswati Pandey[3] Sobhita K.C[4] Sumitra Koirala[5] Manoj Prasad Kushwaha[6]*

**Affiliation(s)**

1.Lecturer, Department of Nursing, Sanjeevani College of Medical Sciences, Affiliated to Purwanchal University, Butwal, Rupandehi, Nepal.

2,4.Assistant Lecturer, Department of Nursing, Sanjeevani College of Medical Sciences, Affiliated to Purwanchal University, Butwal, Rupandehi, Nepal.

3,5.Lecturer, Department of Nursing, Sanjeevani College of Medical Sciences, Affiliated to Purwanchal University, Butwal, Rupandehi, Nepal.

6. Pediatrician, Department of Pediatrics, Lumbini Zonal Hospital, Butwal, Rupandehi, Nepal.

## Abstract:

***Background & Objective****: The nursing profession is an occupation with a high level of emotional labor. So, it is important to identify the level of emotional intelligence among nursing students for an effective nursing leadership and quality nursing care. Thus, this study aimed to assess the factors associated with emotional intelligence of undergraduate nursing students.* ***Materials & Methods****: A descriptive cross-sectional study with 223 undergraduate nursing students was carried out in Sanjeevani College of Medical Sciences, Butwal, Rupandehi, Nepal. Census method using pre-tested self-prepared self-administered questionnaire was used for the data collection. Collected data were analyzed using descriptive and inferential statistics.* ***Results:*** *The mean & median age of the students was 21.78 & 22 years respectively. About 45% of the students had previous work experience and only 12% had received some type of health related training. Approximately 17% were married and about 93% of the students had mixed diet. One third (33.63%) consumed junk foods more than 3 times a day and about 88% of the students performed light exercise on regular basis. The study found that about 46% of the students had normal & about 15% had high level of emotional intelligence. Diet, father's educational status, age of the students, work experience, Program (PBBN & BSN) and religion were the factors influencing emotional intelligence of the undergraduate nursing students (p-value 0.002, 0.043, 0.025, 0.008, 0.006, 0.011) respectively.* ***Conclusion****: The study concluded that nearly half (52%) of the nursing students had normal level of emotional intelligence. Diet, father's educational status, age of the students, work experience, Program (PBBN & BSN) and religion were the factors influencing emotional intelligence in the study. Thus, these factors should be considered for emotional management among nursing students.*

***Key words****: Nursing, Emotional, Intelligence, Undergraduate.*

## 1. Introduction

Emotional intelligence (EI) has been associated with positive outcomes for nursing students. Higher EI is associated with personal wellbeing and stress management, higher academic performance, stronger nursing leadership and practice performance, and greater patient safety[1]. Today, nursing education which educates the future members of the nursing profession aims to gain them high self-esteem, self-confidence and self-compassion, independence, assertiveness and ability to establish good human relations[2].

Developing emotional intelligence should be a useful adjunct to improve academic and clinical performance and to reduce the risk of emotional distress during clinical placement experiences. We call for more consistency in the use of emotional intelligence tests as a means to create an empirical evidence base in the field of nurse education [3].

Nurse managers who exhibit high emotional intelligence (EI) can elicit higher nurse-retention rates, better patient satisfaction and optimal organizational outcomes, and those who are emotionally intelligent tend consistently to model the positive behavior that is expected of healthcare staff. The results of this study could be of use to help nursing students in their psychological adaptation and health based on the understanding of such students considering the characteristics of their emotional intelligence.

**Objectives**

- To assess the demographic profile of the nursing students.
- To identify the level of emotional intelligence of nursing students.
- To find out the association between socio-demographic profile and emotional intelligence of nursing students.

## 2. Materials & Methods

**Design:** A cross-sectional descriptive study design.

**Setting**: Sanjeevani College of Medical Sciences (SCMS), Butwal, Rupandehi, Nepal.

**Sample Size**: 223.

**Sampling Technique**: Census method.

**Research Instrument**: A self-prepared, pretested semi-structured self-administered questionnaire was used.

**Data Collection Procedure**: Data was collection after obtaining permission from the Institutional Review Committee and all the concerned authority of SCMS. Consent was obtained from each respondent.

**Data Analysis Procedure:** Collected data were analyzed using descriptive statistics (Mean, Median, Standard Deviation) and inferential statistics (Mann Whitney U Test and Kruskal Wallis Test) in SPSS version 16. P-value was calculated at 95% CI & 5% permissible error. Tests of Normality were used to check the distribution of data and so non-parametric test

were used for the analysis. Level of emotional intelligence was categorized on the basis of lower & upper limit of total percent score of emotional intelligence at 95% confidence interval. The data consisted of socio-demographic section and emotional intelligence sections with 5 subscales: Self-awareness, Self-regulation, Motivation, Empathy & Social Skills subscale. The checklist for measuring subscales was computed as highest score & lowest score (Yes=3, Don't know=2 & No=1). Then, the total score and total percentage score was calculated and interpreted at 95% CI and categorized as low, normal and high level of emotional intelligence.

## 3. Results & Findings

The findings of the study showed that the mean & median age of the students was 21.78 & 22 years respectively. Majority (98%) of the fathers & approx. 96% of the mothers were literate. About 45% of the students had previous work experience and only 12% had received some type of health related training. Approximately 17% were married and about 93% of the students had mixed diet. One third (33.63%) consumed junk foods more than 3 times a day and about 88% of the students performed light exercise on regular basis. Majority (82.95%) of the students belonged to nuclear family and majority (93.27%) followed Hindu religion. About 77% of the students were from Rupandehi district of Nepal. Other district indicates Baglung, Dang, Synagja, Kaski, Arghakhanchi, Tanahun, Gulmi and Kathmandu.

**Table 1: Socio-demographic Characteristics of the Nursing Students (N=223)**

| Variables | Categories | Frequency | Percent (%) |
|---|---|---|---|
| **Program** | PBBN | 105 | 47.08 |
| | B. Sc. Nursing | 118 | 52.91 |
| **Work Experience (PBBN)** | 1-2 years | 87 | 39.01 |
| | 2-3 years | 12 | 5.38 |
| | 3-4 years | 2 | 0.89 |
| | 4-5 years | 4 | 1.79 |
| **Training received** | Yes | 27 | 12.11 |
| | No | 196 | 87.89 |
| **Father's Educational Status** | Illiterate | 3 | 1.34 |
| | Literate | 220 | 98.65 |
| **Mother's Educational Status** | Illiterate | 10 | 4.48 |
| | Literate | 213 | 95.51 |
| **Dietary Pattern** | Vegetarian diet | 15 | 6.72 |
| | Mixed (veg & non-veg) diet | 208 | 93.27 |
| **Performing light exercise on regular basis (2-4 hours per day)** | Yes | 197 | 88.34 |
| | No | 26 | 11.66 |
| **Age of the Respondents (in years)** | 15-20 | 63 | 15.24 |
| | 20-25 | 151 | 46.64 |
| | 25-30 | 9 | 34.08 |
| **Mean age ± S.D** | **(21.78 ± 2.154) years** | | |
| **Median age (IQR)** | **22 (20-23) years** | | |
| **Type of the Family** | Nuclear | 185 | 82.95 |
| | Joint | 38 | 17.04 |
| **Religion** | Hindu | 208 | 93.27 |
| | Buddhist | 13 | 5.83 |
| | Christian | 2 | 0.89 |
| **Address** | Rupandehi | 173 | 77.57 |
| | Palpa | 17 | 7.63 |
| | Nawalparasi | 15 | 6.73 |
| | Kapilvastu | 5 | 2.24 |
| | Others | 13 | 5.83 |

**Key:**
**PBBN: Post Basic Bachelor in Nursing BSN: Bachelor of Science in Nursing**

Regarding association between subscales of emotional intelligence, father's educational status, age of the students, type of diet, work experience and program were significantly associated with self-awareness subscales (p-

value=0.043, 0.025, 0.018, 0.008 & 0.006 respectively). This signifies that undergraduate nursing students whose father's were literate, belonging to age group (25-30) years, having mixed diet, having work experience and belonging to PBBN were more self-aware as illustrated by their total percentage rank score.

The study findings illustrated that type of diet was significantly associated with self-regulation subscale of emotional intelligence (p-value=0.022) whereas father's educational status, age of the students, age of the students, work experience and program were not statistically significant (p-value=0.770, 0.379, 0.726 and 0.803 respectively). This identifies that undergraduate nursing students having mixed diet were more self-regulated in the study.

The subscale motivation was significantly associated with religion (p-value=0.011). Father's educational status, age of the students, type of diet, work experience, religion, program were not significantly associated with motivation subscale (p-value= 0.436, 0.702, 0.911, 0.743 & 0.967 respectively). This signifies that nursing students following Buddhism were more motivated than the others in the study.

Regarding subscale empathy, age of the students was significantly associated with empathy (p-value=0.011) whereas father's educational status, type of diet, work experience, religion, program were not statistically associated with empathy (p-value=0.351, 0.095, 0.142, 0.416 and 0.275 respectively). This concludes that undergraduate nursing students belonging to age group (20-25) years were more empathetic than the others.

Type of diet, work experience and program were statistically significant with sub scale social skills (p-value=0.013, 0.012 & 0.025 respectively) whereas father's educational status, age of the students and religion were not statistically significant with social skills of the students (p=value=0.933, 0.060 & 0.393 respectively). This illustrates that undergraduate nursing students having mixed diet, having no work experience and PBBN program were more social than the others in the study.

The study found that about 46% of the students had normal & about 15% had high level of emotional intelligence as depicted by the Table2.

**Table 2: Level of Emotional Intelligence (N=223)**

| Variables | Categories | Frequency | Percent (%) |
|---|---|---|---|
| **Level of Emotional Intelligence (Taking cut off points at 95% CI)** | Low | 86 | 38.56 |
| | Normal | 103 | 46.18 |
| | High | 34 | 15.24 |

Regarding association of selected socio-demographic variables and emotional intelligence, diet was found to be statistically associated with emotional intelligence of the nursing students (p-value=0.002) whereas program, type of family, religion, father and mother educational status, work experience, training received and age of the students were

not statistically significant with the overall emotional intelligence score (p-value=0.164, 0.508, 0.128, 0.993, 0.194, 0.111, 0.629 & 0.060 respectively). This illustrates that undergraduate nursing students having mixed diet were emotionally intelligent as depicted by Table 3.

**Table 3: Association between Selected Socio-demographic Variables & Emotional Intelligence (N=223)**

| Variables | Category | f | EI Mean Rank | EI Sum of Rank | P-value |
|---|---|---|---|---|---|
| **Program*** | PBBN | 105 | 118.35 | 12427.00 | 0.164 |
| | BSN | 118 | 106.35 | 12549.00 | |
| **Type of Diet*** | Vegetarian | 15 | 161.83 | 2427.50 | **0.002** |
| | Mixed | 208 | 108.41 | 22548.50 | |
| **Type of Family*** | Nuclear | 185 | 113.29 | 20959.00 | 0.508 |
| | Joint | 38 | 105.71 | 4017.00 | |
| **Religion**** | Hindu | 208 | 109.85 | 0.128 | |
| | Buddhist | 13 | 136.58 | | |
| | Christian | 2 | 176.00 | | |
| **Father's Educational Status*** | Illiterate | 3 | 111.67 | 335.00 | 0.993 |
| | Literate | 220 | 112.00 | 24641.00 | |
| **Mother's Educational Status**** | Illiterate | 10 | 137.85 | 1378.50 | 0.194 |
| | Literate | 213 | 110.79 | 23597.50 | |
| **Work Experience** | Yes | 102 | 119.48 | 12186.50 | 0.111 |
| | No | 121 | 105.70 | 12789.50 | |
| **Training received*** | Yes | 27 | 117.61 | 3175.50 | 0.629 |
| | No | 196 | 111.23 | 21800.50 | |
| **Age of the Students (in years)**** | 15-20 | 63 | 95.83 | 0.060 | |
| | 20-25 | 151 | 118.69 | | |
| | 25-30 | 9 | 112.94 | | |
| **Mean age ± S.D** | | | **(21.78 ± 2.154) years** | | |
| **Median age (IQR)** | | | **22 (20-23) years** | | |

**Key: * Mann-Whitney U test **Kruskal Wallis test**
**PBBN: Post Basic Bachelor in Nursing**
**BSN: Bachelor of Science in Nursing**
**EI: Emotional Intelligence**

Above all of the findings conclude that diet, father's educational status, age of the students, work experience, Program (PBBN & BSN) and religion were the factors influencing emotional intelligence of the undergraduate nursing students.

## 4. Discussion

This is a descriptive study, which was intended to assess the emotional intelligence of undergraduate nursing students. A total of 223 undergraduate nursing students were included in the study.

Regarding association between subscales of emotional intelligence, father's educational status, age of the students, type of diet, work experience and program were significantly associated with self-awareness subscales (p-value=0.043, 0.025, 0.018, 0.008 & 0.006 respectively). This signifies that undergraduate nursing students whose father's were literate, belonging to age group (25-30) years, having mixed diet, having work experience and belonging to PBBN were more self-aware as illustrated by their total percentage rank score which is similar to findings of the study done by Muhammad Akbar[4], Austyn Snowden[5], Maryam Vahidi[6] with respect to literate father, father's literacy, increasing age of the students and work experience.

A study conducted by Nagia and Omar[7] found that consumption of a healthy diet was also

correlated with exercise participation. The study results indicate this sample of nursing students participated in a healthy lifestyle and reported high EI which is in accordance with the findings of the present study. This identifies that undergraduate nursing students having mixed diet were more self-regulated in the study.

According to the results of this study conducted by Masoumeh Bagheri Nesami et al,[8] found that most students possess high levels of positive religious coping and EI, which is similar to the findings of the present study. Father's educational status, age of the students, type of diet, work experience, religion, program were not significantly associated with motivation subscale (p-value= 0.436, 0.702, 0.911, 0.743 & 0.967 respectively). This signifies that nursing students following Buddhism were more motivated than the others in the study.

Regarding subscale empathy, age of the students was significantly associated with empathy (p-value=0.011) whereas father's educational status, type of diet, work experience, religion, program were not statistically associated with empathy (p-value=0.351, 0.095, 0.142, 0.416 and 0.275 respectively). This concludes that undergraduate nursing students belonging to age group (20-25) years were more empathetic than the others.

Type of diet, work experience and program were statistically significant with sub scale social skills (p-value=0.013, 0.012 & 0.025 respectively) whereas father's educational status, age of the students and religion were not statistically significant with social skills of the students (p=value=0.933, 0.060 & 0.393 respectively). This illustrates that undergraduate nursing students having mixed diet, having no work experience and PBBN program were more social than the others in the study.

The study found that about 46% of the students had normal & about 15% had high level of emotional intelligence.

A study conducted by Kahraman N[9] found that there were no significant differences between emotional intelligence scores of the nurses according to demographic variables such as age, gender, marital status, having children. Higher total emotional intelligence scores were observed in those who had 10 years or longer experience, who found oneself successful in professional life, who stated that emotional intelligence, is an improvable skill and who previously received self-improvement training. Interpersonal skills were higher in those with a graduate degree and in nurses working in polyclinics and pediatric units.

Regarding association of selected socio-demographic variables and emotional intelligence, diet was found to be statistically associated with emotional intelligence of the nursing students (p-value=0.002) whereas program, type of family, religion, father and mother educational status, work experience, training received and age of the students were not statistically significant with the overall emotional intelligence score (p-value=0.164. 0.508, 0.128, 0.993, 0.194, 0.111, 0.629 &

0.060 respectively). This illustrates that undergraduate nursing students having mixed diet were emotionally intelligent.

Emotional intelligence can be developed. The process begins with self-awareness, enhanced through self-care behaviors, such as exercise and journaling. Reading popular self-help literature also can improve self-awareness. After a nurse becomes self-aware, the next phase is to develop an awareness of others. This can be learned using the same type of techniques in the self-awareness stage. The final step is the development of empathy. Through discipline and effort, an individual can learn to actively listen to others. This type of listening fosters empathy. Through the development of emotional intelligence, the nurse can improve personally and professionally, a win-win situation for all involved [10]. For this purpose, the factors such as diet, literacy of the parents, work experience, age, religion etc… should be considered.

## 5. Conclusion

The study concluded that nearly half of the undergraduate nursing students had normal level of emotional intelligence. The domains of emotional intelligence as self-awareness, self-regulation, motivation, empathy and social skills were affected by the socio-demographic variables such as educational status of parents, work experience, healthy diet, religion & age of the undergraduate nursing students. Thus, these factors should be considered for enhancing emotional intelligence among undergraduate nursing students.

## Limitations of the Study

This study is a pioneer study and other longitudinal studies are required to achieve the better results in Butwal, Rupandehi. The size of our sample was small and so we cannot generalize the results among all other undergraduate nursing students. This study was a cross-sectional study and done in only one nursing college having program up to baccalaureate level only. So, evaluating changes in students' emotional intelligence grades from entering the university to graduation was not possible.

## Competing Interests

The authors declare that they have no competing interests.

## Acknowledgments

The authors wish to thank the nursing students and faculties of Sanjeevani College of Medical Sciences, Kalikanagar, Butwal, Rupandehi, Nepal who devoted their time to making this study a success.

## References

[1]. Foster K, Fethney J, McKenzie H, Fisher M, Harkness E, Kozlowski D. Emotional Intelligence increases over time: A longitudinal study of Australian pre-registration nursing

students. Nurse Educ Today. 2017.55:65-70. Epub 2017 May 15.

[2]. Eraydin S, Karagozoqlu S. Investigation of self-compassion, self-confidence and submissive behaviors of nursing students studying in different curriculums. Nurse Educ Today. 2017.54:44-50. Epub 2017 Apr 12.

[3]. Lewis GM, Neville C, Ashkanasy NM. Emotional intelligence and affective events in nurse education: A narrative review. Nurse Educ Today. 2017.53: 34-40. Epub 2017 Apr 7.

[4]. Muhammad A, Asghar A.S, Ejaz A.K, Masud A. Relationship Between Emotional Intelligence and Academic Achievement among Higher Secondary School Students. Pakistan J Psy. 2011;42(2):43-56.

[5]. Austyn S, Rosie S, JennyY, Hannah C, Fiona C, Norrie B. The relationship between emotional intelligence, previous caring experience and mindfulness in student nurses and midwives: a cross sectional analysis. Nurs Ed today. 2015; 35(1 152-158.

[6]. Maryam V, Hossein NA, Mohammad AB. The Relationship between Emotional Intelligence and Perception of Job Performance among Nurses in North West of Iran. J Hindawi Scientifica. 2016. Article ID 9547038, 5 pages, http://dx.doi.org/10.1155/2016/9547038.

[7]. Nagia Saleh Ali, Omar Samir Ali. (2016). Stress perception, lifestyle behaviours and emotional intelligence in undergraduate nursing students. Journal of Nursing Education and Practice. 6(10): 16-22.

[8]. Nesami MB, Goudarzian AH, Zarei H, Esameili P, Pour MD, Mirani H. The Relationship Between Emotional Intelligence With Religious Coping And General Health of Students. Mater Sociomed. 2015;27(6):412-416.

[9]. Kahraman N, Hicdurmaz D. Identifying Emotional Intelligence Skills of Turkish Clinical Nurses According to Socio-demographic and Professional Variables. J Clin Nurs. 2016;25(7-8):1006-1015.

[10]. Reeves A. Emotional intelligence: Recognizing and Regulating Emotions. AAOHN J. 2005;53(4):172-176.

## Correspondence Author Profile

Binisha Sinha, Lecturer (M. Sc. Child Health Nursing), Sanjeevani College of Medical Sciences, Butwal, Rupandehi, Nepal (Email: me_binisha@yahoo.com).