

Self-Awareness and Psychosocial Correlates Among Undergraduate Nursing Students: A Multicenter Cross-Sectional Study

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Abstract

Self-awareness, a core element of emotional intelligence, supports coping, ethical decision-making, and safe patient care, yet evidence from Pakistan remains limited. This multicenter cross-sectional study assessed self-awareness and its psychosocial correlates among 190 BSN students from two public nursing colleges in Jamshoro, Sindh, Pakistan (July–August 2025). Students completed the Life Skills Survey Tool (LiSST) and a demographic form. T-tests and ANOVA examined group differences, and multiple linear regression identified independent predictors. Participants' mean age was 21.6 years (SD = 1.7); 53.7% were female. Overall, self-awareness levels were moderate. In bivariate analyses, higher scores were observed for females, senior academic years, urban residents, and students with both parents alive ($p = 0.042, 0.018, 0.037$, and 0.049 , respectively). In the adjusted model, academic year ($\beta = 1.12, p = 0.004$), female gender ($\beta = 0.89, p = 0.032$), and parents' survival status (both alive: $\beta = 1.05, p = 0.041$) remained independent predictors; the model was significant ($F = 5.14, p < 0.001$) with Adjusted $R^2 = 0.232$. Coping with emotions and stress showed strong concurrent associations with self-awareness. These findings suggest that progression through training, female gender, and stable familial support are associated with greater self-awareness, whereas socioeconomic markers have a limited influence. Importantly, attention should be directed toward students with lower levels of self-awareness—such as males, those in earlier academic years, and those lacking stable family support—to provide tailored interventions that address their specific needs.

Keywords: Emotional Intelligence; Nursing Education; Psychosocial Factors; Life Skills.

Introduction

Nursing is widely recognised as a noble profession and the backbone of healthcare, entrusted with promoting health, preventing illness, and delivering compassionate, evidence-based care (International Council of Nurses [ICN], 2021). Nurses frequently face high-pressure situations,

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critical decision-making, and heavy workloads that demand not only technical expertise but also psychological resilience (Vahedian-Azimi et al., 2019). While nursing education traditionally emphasises clinical skills and patient management, it is equally important to prepare students for the emotional and interpersonal challenges inherent in the profession (Benner, 1984).

Emotional intelligence is a critical competency in this regard. It enables nurses to recognise, understand, and regulate their own emotions while responding effectively to those of others, thereby reducing stress and improving professional performance (Shahin, 2020). Among its components, self-awareness is particularly significant, as it allows students to identify their strengths, limitations, values, and emotional triggers, fostering personal growth, ethical decision-making, and improved patient outcomes (Chandio et al., 2024). Globally, research highlights emotional intelligence and self-awareness as essential for clinical reasoning, evidence-based practice, and the delivery of safe, high-quality care (Lal et al., 2025).

In Pakistan, emerging evidence underscores that self-awareness enhances the nurse–patient relationship, cultural competence, and conscientious practice (Alam et al., 2023). Emotionally intelligent nursing care has also been linked to enhanced empathy, improved communication, and increased patient satisfaction (Yang & Zou, 2025). Reflective thinking, closely tied to self-awareness, further contributes to safer decision-making and stronger therapeutic relationships (Goleman, 1995; Yang & Zou, 2025). Self-aware students are more likely to recognise their limitations, seek guidance, and adopt professional behaviours that reduce medical errors and strengthen collaboration (ICN, 2021; International Youth Foundation [IYF], 2021).

This study, therefore, aimed to assess self-awareness levels and examine their associations with psychosocial and demographic factors among undergraduate nursing students in Sindh, Pakistan. By identifying strengths and areas for development, the findings can inform the integration of targeted reflective and emotional intelligence training into nursing curricula. For students, this may translate into enhanced coping ability, reduced burnout, and improved readiness for clinical challenges. On a broader scale, developing self-aware nurses has the potential to improve the quality of care, strengthen patient trust, and contribute positively to community health outcomes.

Methodology

This study employed a descriptive, cross-sectional snapshot survey design to investigate self-awareness and associated psychosocial factors among undergraduate nursing students. The target population consisted of all 2nd- to 4th-year BSN students enrolled at the College of Nursing (Female) and Peoples Nursing School, Liaquat University of Medical & Health Sciences (LUMHS), Jamshoro, Sindh, Pakistan, who met the inclusion criteria. Sindh, one of Pakistan's four provinces, comprises 29 districts and is home to several public-sector nursing institutions. The two participating colleges were selected through randomisation to ensure representation from within the province.

The total eligible student population was approximately 300. Sample size estimation was conducted using OpenEpi Version 3.01 with the following parameters: confidence level = 95%, absolute precision = 5%, anticipated proportion (p) = 0.50, and finite population correction applied. This yielded a minimum required sample of 169 participants. To enhance statistical power and allow for multivariate modelling, a 15% oversampling strategy was adopted, resulting in a target sample size of approximately 190. All eligible students were approached, and in cases where full census participation was not feasible, proportional stratified random sampling was applied by academic year and institution to maintain representativeness.

Data were collected via a self-administered questionnaire comprising the Life Skills Survey Tool (LiSST) (IYF, 2021)– 49 items validated by the International Youth Foundation, assessing four World Health Organisation (WHO) domains: self-awareness, decision-making/problem-solving, communication/interpersonal skills, and coping with emotions. The demographic and psychosocial characteristics form captured participants' age, gender, academic year of study, family structure (nuclear vs. joint), parents' survival status, type of residence (urban, rural, semi-urban), monthly household income, current living arrangement (day scholar vs. hosteller), and number of siblings. These variables were selected to reflect socio-demographic and familial influences previously identified as relevant to psychosocial development and self-awareness in nursing students.

A pilot test was conducted with 20 students from a comparable cohort to ensure clarity, cultural appropriateness, and content validity. Completion time averaged 20 to 25 minutes. Surveys were administered in paper format during scheduled academic sessions. No personal identifiers were collected, and informed consent was obtained prior to participation. Data was collected from July to August 2025.

Data analysis was conducted using SPSS Version 29.0. Reliability was assessed via Cronbach's alpha ($\alpha \geq 0.70$ considered acceptable). Descriptive statistics (means, standard deviations, medians, and frequencies) summarised participant characteristics and LiSST scores. Bivariate analyses included independent-sample t-tests, one-way ANOVA, and non-parametric equivalents (Mann–Whitney U, Kruskal–Wallis) when assumptions of normality and homogeneity of variance were not met.

To identify predictors of self-awareness, a multiple linear regression model was developed, with self-awareness score as the dependent variable and demographic plus psychosocial variables as independent variables. Model assumptions (normality, linearity, homoscedasticity, and absence of multicollinearity) were tested using residual plots, Q–Q plots, and Variance Inflation Factors (VIF). Model fit was evaluated using adjusted R^2 and the F-test for overall significance. Categorical predictors were dummy-coded before being included in the model. Results were reported as unstandardized and standardised beta coefficients (β) with 95% confidence intervals, and statistical significance was set at $p < 0.05$.

The Research Ethics Committee of LUMHS granted ethical clearance, and formal written permission was obtained from the heads of both participating institutions. All participants provided written informed consent, and confidentiality was maintained throughout the research process.

Results

A total of 190 undergraduate nursing students from the College of Nursing (Female) and Peoples Nursing School, Liaquat University of Medical & Health Sciences (LUMHS), Jamshoro, participated in the study, yielding a 100% response rate. All participants provided complete responses to the Life Skills Survey Tool (LiSST) and the socio-demographic questionnaire.

Demographic and socio-demographic characteristics are summarised in Table 1. Females formed a slight majority (53.7%). The mean age was 21.6 years ($SD = 1.7$), with the majority of students aged 21–23 years (53.2%). Nuclear families were more common (57.9%), and most students had both parents alive (87.9%). A majority resided in urban areas (47.4%), followed by rural (32.6%) and semi-urban (20.0%). Household income was below PKR 50,000 for 42.6% of participants. Slightly more than half were day scholars (54.2%), and the median number of siblings was 4 (IQR = 3–6).

Table 1: Socio-demographic characteristics of undergraduate nursing students (n = 190)

Characteristic	Frequency (%)
Gender	
Female	102 (53.7)
Male	88 (46.3)
Age group (years)	
18–20	54 (28.4)
21–23	101 (53.2)
24–26	35 (18.4)
Mean $\pm$ SD age	21.6 $\pm$ 1.7
Academic Year	
2nd Year	63 (33.2)
3rd Year	64 (33.7)
4th Year	63 (33.2)
Family Type	
Nuclear	110 (57.9)
Joint	80 (42.1)
Parents' Survival Status	
Both alive	167 (87.9)
One/both deceased	23 (12.1)
Residence	
Urban	90 (47.4)
Rural	62 (32.6)
Semi-urban	38 (20.0)
Monthly Household Income (PKR)	
< 50,000	81 (42.6)
50,000–100,000	72 (37.9)
> 100,000	37 (19.5)
Living Arrangement	
Day scholar	103 (54.2)
Hosteller	87 (45.8)
Number of Siblings	Median = 4 (IQR = 3–6)

The mean self-awareness scores of undergraduate nursing students across socio-demographic characteristics are presented in Table 2. Independent-sample t-tests and one-way ANOVA were applied, as appropriate. Statistically significant differences ($p < 0.05$) were observed for gender, academic year, place of residence, and parents' survival status. Female students, those in higher academic years, students from urban areas, and those with both parents alive reported higher self-awareness scores. Other variables, including family type, monthly household income, and living arrangement, did not show significant associations with self-awareness.

Table 2: Self-awareness scores by socio-demographic characteristics of undergraduate nursing students (n = 190)

Characteristic	Mean $\pm$ SD Self-Awareness Score	p-value
Gender		
Female	36.4 $\pm$ 4.8	0.042*
Male	35.2 $\pm$ 5.1	
Age group (years)		
18–20	34.9 $\pm$ 4.7	0.091
21–23	36.3 $\pm$ 5.0	
24–26	37.1 $\pm$ 4.6	
Academic Year		
2nd Year	34.7 $\pm$ 4.8	0.018*
3rd Year	36.2 $\pm$ 4.9	
4th Year	37.0 $\pm$ 4.5	
Family Type		
Nuclear	36.1 $\pm$ 4.9	0.512
Joint	35.8 $\pm$ 4.8	
Parents' Survival Status		
Both alive	36.4 $\pm$ 4.8	0.049*
One/both deceased	34.7 $\pm$ 5.2	
Residence		
Urban	36.5 $\pm$ 4.6	0.037*
Rural	35.1 $\pm$ 4.9	
Semi-urban	35.9 $\pm$ 5.0	
Monthly Household Income (PKR)		
< 50,000	35.3 $\pm$ 4.8	0.064
50,000–100,000	36.2 $\pm$ 4.7	
> 100,000	36.8 $\pm$ 5.1	
Living Arrangement		
Day scholar	36.0 $\pm$ 4.9	0.803
Hosteller	35.9 $\pm$ 4.8	

*Significant at $p < 0.05$ (Independent-sample t-test or One-way ANOVA as appropriate).

Multiple linear regression analysis examining predictors of self-awareness is presented in Table 3. The dependent variable was the self-awareness score from the LiSST, while independent variables included gender, age group, academic year, residence, monthly household income, family type, living arrangement, and parents' survival status. After adjusting for all variables, academic year, gender, and parents' survival status remained significant predictors. Specifically, higher academic year was associated with increased self-awareness scores ($\beta = 1.12$, $p = 0.004$), female students scored on average 0.89 points higher than males ($p = 0.032$), and students with both parents alive scored 1.05 points higher compared to those with one/both deceased ($p = 0.041$). The overall model was statistically significant ($F = 5.14$, $p < 0.001$) and explained 23.2% of the variance in self-awareness scores (Adjusted $R^2 = 0.232$).

Table 3: Multiple linear regression analysis of predictors of self-awareness among undergraduate nursing students (n = 190)

Predictor Variable	B (Unstandardized Coefficient)	SE	β (Standardized)	95% CI for B	p-value
Gender (Female vs. Male)	0.89	0.41	0.14	0.09, 1.69	0.032*
Age group	0.27	0.19	0.10	-0.10, 0.64	0.152
Academic Year	1.12	0.38	0.21	0.37, 1.87	0.004*
Family Type (Joint vs. Nuclear)	-0.21	0.36	-0.03	-0.92, 0.50	0.562
Parents' Survival Status (Both alive vs. One/both deceased)	1.05	0.51	0.13	0.04, 2.06	0.041*
Residence (Urban vs. Rural/Semi-urban)	0.46	0.39	0.08	-0.31, 1.23	0.240
Monthly Household Income	0.18	0.14	0.09	-0.10, 0.46	0.206
Living Arrangement (Hosteller vs. Day Scholar)	-0.14	0.35	-0.02	-0.83, 0.55	0.685
<i>Model Summary:</i> Adjusted R ² = 0.232, F (8, 181) = 5.14, p < 0.001					
*Significant at p < 0.05					

Discussion

This study explored socio-demographic predictors of self-awareness among undergraduate nursing students using the Life Skills Survey Tool (LiSST). The results indicated that gender, academic year, and parents' survival status were significant predictors, while family type, income, and living arrangements showed no notable associations. These findings emphasise the impact of individual, family, and educational factors on students' capacity for self-reflection. They also suggest that although socio-economic factors may not directly influence self-awareness, personal characteristics and progression through nursing school are crucial for its development.

Regarding gender, female nursing students scored significantly higher in self-awareness than their male peers. This aligns with the literature, which indicates that women tend to participate more in reflective practice, emotional regulation, and interpersonal sensitivity —key aspects of self-awareness (Al-Qahtani & Al-Dwaikat, 2022). In regions where nursing is primarily a female profession, cultural socialisation might further strengthen caring identities and reflective skills. However, research from other settings reveals no notable gender differences, suggesting that cultural and educational structures play a significant role in moderating these outcomes (Park et al., 2024).

In terms of Academic advancement and self-awareness, students in higher academic years showed greater self-awareness, supporting evidence that progression through nursing education fosters personal growth, emotional maturity, and reflective thought (Alharbi et al., 2025). Supervised clinical exposure, simulation, and guided reflection offer opportunities for identity formation, echoed in studies from diverse settings where senior students consistently demonstrate enhanced self-reflective competence (Al-Qahtani & Al-Dwaikat, 2022).

About family stability as psychosocial scaffolding, a notable finding was that students with both parents alive reported significantly higher self-awareness than those who had lost one or both parents. This corresponds with evidence supporting the protective influence of parental stability and emotional support on psychological well-being and self-esteem, which are foundational for self-awareness (Bano et al., 2022; Rehmani et al., 2020).

In context, Socio-economic factors, although income and residence were associated with self-awareness in univariate analyses, these associations became non-significant after controlling for

confounders. This suggests that socio-economic advantages do not directly influence self-awareness, and may instead act through mediating psychosocial mechanisms. Emerging research supports this interpretation, demonstrating that mindful self-care, reflection, and emotional regulation can mitigate stress irrespective of economic background (Ehsan et al., 2024).

Theoretical framework development occurs through dynamic interactions between the individual and multiple environmental systems (Bronfenbrenner, 1979). In nursing education, this framework has been employed to explain how family, institutional, and sociocultural contexts shape students' self-reflection and professional identity (Flemming et al., 2022). Similarly, the *Resilience Framework* emphasises that stable psychosocial environments and supportive networks buffer stress and foster adaptive coping, thereby strengthening reflective capacity. Recent applications in nursing research also highlight that resilience-building interventions enhance emotional regulation, self-awareness, and coping in academic and clinical settings (Thomas & Asselin, 2018).

Conclusion

This study highlights the pivotal role of self-awareness in undergraduate nursing students, demonstrating that academic progression, gender, and parental support significantly shape self-reflective capacities. By identifying these determinants, the findings provide a foundation for integrating targeted reflective exercises and emotional intelligence development into nursing curricula. Embedding self-awareness and enhancing strategies within formal education can promote students' coping skills, reduce burnout, and improve their readiness for clinical challenges. Beyond individual benefits, fostering self-aware nurses has the potential to elevate the quality of patient care, strengthen patient trust, and contribute positively to broader community health outcomes, thereby reinforcing the critical professional competencies emphasised in nursing education.

Future Implications

This study highlights the importance of integrating self-awareness development into nursing curricula. Including structured reflection, emotional intelligence modules, and guided self-assessment can help students better manage stress, improve empathy, and enhance decision-making. On a larger scale, fostering self-awareness in nurses has significant implications for healthcare outcomes, as it improves patient–nurse communication, builds trust, and reduces errors caused by emotional or cognitive overload. By incorporating strategies that promote reflective and self-aware practitioners, nursing programs can graduate professionals who are not only technically skilled but also psychologically resilient and patient-focused, ultimately improving the quality of care and supporting healthier communities.

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