Perceived Image of the Nursing Profession among Undergraduate Nursing Students: A Cross-Sectional Study

Taghreed Hussien Aboelola[1*], Leticia P. Lopez[2], Anu Sam Jacob[3], Aseel Jabbar Alanezi[4], Dhai Bande[5], Lamis Shafi[6], Shadan Nashmee Alanezi[7] and Nashwa Alsayed Ibrahim[8]

[1-3]Public Health Nursing Department, Northern Border University, Arar, Kingdom of Saudi Arabia

[4-7]Northern Border University, Arar, Kingdom of Saudi Arabia

[8]Head of Nursing Administration, British University, Egypt

Author Designation: [1]Registered Nurse, [2,3]Lecturer/Clinical Instructor, [4-7]Internship Student Trainee, [8]Professor

*Corresponding author: Taghreed Hussien Aboelola (e-mail: tagreed.mohammed@nbu.edu.sa).

Abstract **Objectives:** The global nursing profession has undergone significant changes in recent decades because of factors such as rising life expectancy, chronic illnesses, shorter hospital stays overall, advancements in medicine and technology and the idea that patients are clients. This study aims to determine the attitudes and perceptions of pre-graduate nursing students towards their profession at Northern Border University, Arar, Saudi Arabia. A cross-sectional quantitative survey design, a convenience or census sampling electronic questionnaire administration employed to gather quantitative data from university nursing students regarding nursing profession attitudes and perceptions. The sample size of the total population is 274 students from first to fourth year nursing. The questionnaire was distributed electronically via university email lists and social media platforms such as WhatsApp groups to reach a wide audience. **Results:** The strongest observed relationship was between Attitude and Practice ($r = 0.379$, $p<0.001$), indicating that students who hold more positive attitudes toward nursing are substantially more likely to have strong perceptions about its practice. Additionally, attitude showed a significant positive correlation with Practice ($r = 0.379$, $p<0.001$). These correlations suggest that increases in awareness are associated with improvements in attitude and practice and that attitude has a stronger relationship with practice than awareness does. **Conclusion:** Students showed very high awareness, moderate attitudes and high practice-related perceptions, recognizing nursing's values, societal importance and professional demands. Positive correlations were found among awareness, attitude and practice, with a stronger link between attitude and practice, highlighting the role of affective commitment in professional readiness.

Key Words Nursing Profession, Nursing, Image as Perceived, Undergraduate Nursing Student

INTRODUCTION

The image of the nursing profession plays a critical role in workforce recruitment and retention, influencing career choice and long-term commitment among nursing students [1]. A positive professional image can attract new entrants and sustain motivation, while negative perceptions may contribute to shortages and high turnover rates [1]. Nursing students' views are shaped by multiple factors, including clinical experiences, mentorship, media portrayals, societal attitudes and institutional culture [2,3]. These perceptions often evolve throughout their education, affecting professional identity and readiness for practice [3].

Although global research has explored determinants of nursing image, evidence from the Saudi and broader Arab context remains limited [4,5], despite the region's growing demand for qualified nurses. Understanding how undergraduate nursing students perceive the profession is essential for designing strategies that strengthen professional identity, improve educational experiences and enhance retention. This study addresses this gap by examining the perceived image of nursing among undergraduate students at Northern Border University in Saudi Arabia.

These patterns have led to advancements in the function of the nurse, such as academization, more responsibility and wider use of electronics and technology [6]. The nursing profession offers complete healthcare to the public by means of management, research, consulting, collaboration, illness prevention, health promotion and health education [7].

Aboelola *et al*.: Perceived Image of the Nursing Profession among Undergraduate Nursing Students: A Cross-Sectional Study

jOMS

Nurses make a tremendous contribution, yet they are not given enough credit. They work in demanding settings, which can cause stress and exhaustion. According to estimates, inadequate pay, a subpar administrative structure and an increasing workload are the reasons why thirty percent of nurses dislike working as nurses [8]. Nursing students' opinions, which fluctuate throughout their education, are either good or negative based on prior research and literature [9].

On the other hand, 57.9% of students at South Valley University in Egypt expressed unfavorable opinions on nursing [10]. Research has demonstrated several factors, including gender, academic year [11-12], family support, senior nurse observation [13-14] and firsthand interactions with nurses, might impact a nursing student's views about the nursing profession. The impressions that nursing students have of the field are derived from their own experiences as well as their superficial observations of nurses' behaviors. Despite having a bad reputation, the occupation is extremely demanding. [15]. In Punjab, India, receptive nursing students held differing opinions on the field. While 23.9% disagreed, the majority (81.9%) thought there was room for personal development in the field. Almost half (51.5%) said there was no chance to find a better spouse through their line of work, but 86.8% thought there were greater prospects overseas [16]. It is believed that nurses are inferior to doctors and should follow their instructions [17]. Nursing was a traditionally feminine profession that didn't require a formal degree. Early Christian times saw the emergence of organized nursing groups [18].

Therefore, this study aimed to assess the awareness, attitudes and practice-related perceptions of the nursing profession among undergraduate nursing students at Northern Border University, Saudi Arabia.

Primary Objective

To assess the perceptions and attitudes of undergraduate nursing students regarding the image of the nursing profession.

Secondary Objectives

- To examine the influence of demographic factors (e.g., age, gender, year of study) on the perceived image of the nursing profession among undergraduate nursing students
- To explore the relationship between students' career intentions and their perception of the nursing profession.
- To identify the key factors shaping nursing students' perceptions of the profession (e.g., media portrayal, clinical experiences, faculty influence)

Background

Health care organizations and local communities are putting pressure on nursing schools to boost student enrollment and produce more graduates to cover existing shortages and meet future demand. Thirty percent of employment for certified nurses is vacant now [19]. Increasing enrolment could be the answer, but it might not be sufficient because some admitted students to nursing programs drop out or quit the field after graduation because they decide nursing is not for them [20].

Undergraduate students who view nursing as a respected, critical element of healthcare delivery are more likely to assert themselves professionally and collaborate effectively with other healthcare providers, thereby enhancing patient care outcomes. The image of the profession as seen by students can influence their long-term career ambitions. If students perceive nursing as a field with ample opportunities for specialization, leadership and growth, they are more likely to pursue advanced roles such as nurse practitioners, educators, or administrators, further enriching the profession and healthcare at large. The image of nursing perceived by students often aligns with the broader public image of the profession. Therefore, it is essential for nursing educators, practitioners and leaders to promote a positive, empowering image of the profession to support the development of skilled, passionate nurses for the future. The image of the nursing profession plays a crucial role in shaping the attitudes and motivations of undergraduate nursing students. How these students perceive their future career can significantly influence their commitment, identity and professional development.

The nursing profession has historically faced challenges in public perception, often influenced by societal stereotypes, media portrayals and cultural norms. Undergraduate nursing students' views of the profession are crucial, as these perceptions shape their motivation, professional identity and career commitment. Nursing image (NI) the attempt to recruit nursing personnel depends largely on the image of the nursing profession and is one of the many challenges that health systems must overcome. Ever since the nineteenth century, the issue of nurses' image has been described as problematic and although it has changed drastically since then, it is still not high. At first, the profession was perceived as feminine and maternal, comprising activities such as protection, care, bathing and laundry [21]. The question is not only about the positive or public nursing image (NI), but also the perception of who is suited to a nursing career, how much expertise is needed, how hard it is and which personality traits are required to work as a nurse. For example, nursing has always been considered a feminine profession, less suited to men. This perception impacts on how the profession is perceived in general.

Societal and Media Influences

Studies indicate that media portrayals often depict nurses as subordinate to physicians, focusing on caregiving roles rather than leadership or advanced practice [22]. These images can diminish the perceived value of nursing as a profession, leading to misaligned expectations among students.

Professional Identity Formation

The professional image of nursing is directly linked to the experiences and exposure students receive during their education. Emphasizes how institutional culture and facilitator support impact student learning and professional development. [23]. Positive reinforcement from faculty and healthcare teams fosters pride and a sense of belonging in the profession.

Aboelola *et al.*: Perceived Image of the Nursing Profession among Undergraduate Nursing Students: A Cross-Sectional Study

jOMS

Gender and Cultural Factors

Cultural perceptions of nursing vary globally, with some societies viewing it as a traditionally female-dominated field. Gender stereotypes can influence male nursing students' experiences, often making them feel isolated or undervalued. This study found that gender stereotypes persist, influencing male students' sense of belonging and professional identity, despite generally neutral or positive attitudes among peers [24-25].

Challenges and Opportunities

Nursing students often cite inadequate recognition, work stress and societal undervaluation as barriers to professional identity development. However, initiatives to improve the visibility of advanced nursing roles and leadership opportunities have shown promise in reshaping perceptions. Synthesizes evidence showing male students often experience marginalization, questioning of career choice and exclusion from certain specialties [26].

Theoretical Framework: Image of the Nursing Profession as Perceived by Undergraduate Nursing Students.

Figure 1 illustrates the conceptual framework guiding this study. It shows that socio-demographic factors, educational experiences and clinical exposure serve as independent variables influencing the perceived image of the nursing profession among undergraduate nursing students. This perception is reflected in three dimensions: awareness, attitude and practice. The framework is grounded in Social Identity Theory, which explains how individuals internalize professional roles as part of their identity and Role Theory, which clarifies expectations and behaviors associated with the nursing role. This theoretical framework for this study integrates concepts from social identity theory, symbolic interactionism and professional socialization models to explain how nursing students perceive the image of the profession.

Research Hypothesis

H0 There are no significant differences between the attitude and practices of undergraduate nursing students when they are grouped according to their sociodemographic profile

- **H1:** There is a significant difference in the perceived image of the nursing profession between male and female nursing students
- **H2:** Students in higher academic years have a more positive image of the nursing profession compared to those in lower years

Significance of the Study

The conception of this study would be a great help in extensive knowledge about the image of nursing profession as perceived by undergraduate nursing students. The essential result of this study would be significant and beneficial to the following:

- **Nursing Student:** Any individual formally enrolled in a College of Nursing pursuing a Bachelor of Science in
- Nursing or Graduate degree
- **Undergraduate Student:** Is a college or university student who has not yet received a bachelor's or similar degree
- **Future Researchers:** The information that is presented in the study may be used as a guide or as reference data in new studies related to the image of nursing profession as perceived by undergraduate nursing students. These may also be used as a basis in testing other findings from other related studies
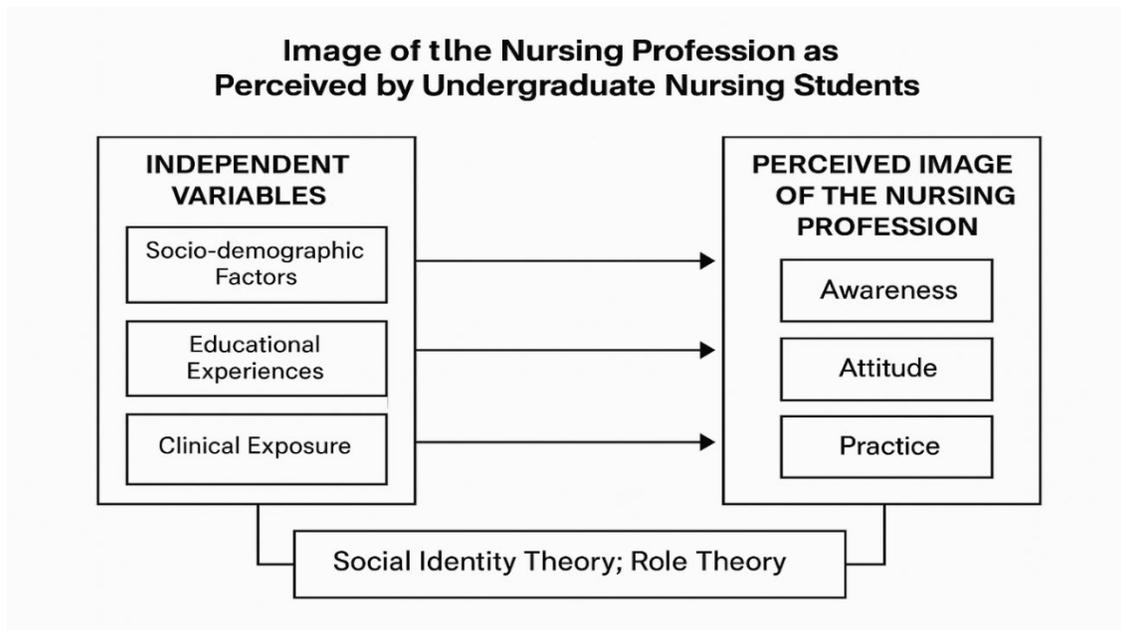

Figure 1: Conceptual Framework (Adapted from Willetts and Clarke, 2014; O'Rourke, 2021)

Aboelola *et al.*: Perceived Image of the Nursing Profession among Undergraduate Nursing Students: A Cross-Sectional Study

jpoms

- **School:** Is the place you go to learn and any institution at which instruction is given in a particular discipline: When you school someone, it means you've educated or put that person in his or her place
- **Nurses:** It is to care for a person or an animal while they are ill: He gave up his job so that he could nurse his mother at home. Is a person whose job is to care for people who are ill or injured, especially in a hospital. Nurses can be licensed health care professionals who practice independently or are supervised by a physician, surgeon or dentist

METHODS

Study Design

This study employed a mixed-methods approach using an equal-status design, integrating quantitative components to provide a comprehensive understanding of the perceived image of the nursing profession among undergraduate nursing students.

Setting and Study Period

The study was conducted at the College of Nursing, Northern Border University, located in Arar City, Kingdom of Saudi Arabia. This institution offers undergraduate nursing programs and serves as a primary academic center for nursing education in the Northern Frontier region. The research took place during the academic semester, specifically between October 1, 2024 and November 15, 2024, allowing sufficient time for participant recruitment, data collection and initial analysis.

Population and Sampling

The study population consisted of undergraduate nursing students enrolled in the College of Nursing at Northern Border University, ranging from first year to fourth-year levels. These students were selected because they represent different stages of nursing education, which may influence their perception of the nursing profession. A total of 274 students participated in the study. The sampling approach used was convenience sampling, where all eligible students present during the data collection period and willing to participate were included. Inclusion criteria were:

- Being an enrolled undergraduate nursing student (1st–4th year at Northern Border University
- Willingness to provide informed consent

Exclusion Criteria Included

- Students on academic leave or not actively attend classes during the study period
- Students who declined to provide consent

Sample Size Justification

All nursing students at the university were invited to participate in the survey. A total of 274 students responded to the invitation, representing cohorts from first year through fourth-year levels.

Instrument/Scale Used

Data was collected using a structured questionnaire designed to assess the perceived image of the nursing profession among undergraduate nursing students. The questionnaire was developed based on a review of relevant literature and previously validated instruments measuring professional image and perception in nursing.

The tool consisted of two main sections:

- **Demographic Information:** Including age, gender, academic year and career intentions
- **Perceived Image Scale:** A series of statements rated on a 5-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree), covering dimensions such as professional status, roles and responsibilities, societal respect and media influence

The questionnaire was distributed electronically via Google Forms and the link was shared with participants through official university communication channels and student groups. This method ensured ease of access and allowed participants to complete the survey at their convenience.

Data Collection Procedure

Quantitative data collection. A structured self-administered questionnaire consisting of two sections was used:

- The sociodemographic section included the independent variables; age, gender, marital status and year of study
- The third section on attitudes was adopted from the Attitudes to the Nursing Profession Scale (ASNP) developed by Kuban and Kasiki in 2011, which consists of 40 items. The subscales of attitudes are characteristics of the nursing profession, preference for the nursing profession [27] and general attitude towards the nursing profession [27-28]. The original instrument is a five-point Likert-type scale with scores ranging from a minimum of 40 to a maximum of 200

A total score of 120 or above indicates a positive attitude toward the profession. For this study, a four-point Likert scale was employed, where 1 represents 'strongly disagree' and 4 represents 'strongly agree.' The internal consistency of the original scale, as measured by Cronbach's alpha, is 0.91. In the present study, Cronbach's alpha was 0.865.

Statistical Analysis

- Data was entered and analyzed using IBM SPSS Statistics software, version 20.0 (Armonk, NY: IBM Corp)
- Qualitative data were summarized using frequencies and percentages
- Quantitative data were described using range (minimum and maximum), mean, standard deviation and median

Normality Testing

The Kolmogorov-Smirnov test was applied to assess the normality of quantitative variables. Additionally, visual inspection of histograms and Q-Q plots was performed to confirm distribution patterns. A p-value >0.05 indicated normal distribution. If normality assumptions were not met, appropriate non-parametric tests were used.

Table 1: Reliability Statistics

	Cronbach's Alpha	No. of Items
Factor 1: Awareness	0.865	18
Factor 2: Attitude	0.862	11
Factor 3: Practice	0.807	9

Inferential Tests

- Student's t-test: For comparing two groups when data were normally distributed
- F-test (ANOVA): For comparing more than two groups when data were normally distributed
- Pearson correlation coefficient: To assess the relationship between two normally distributed quantitative variables
- For non-normal data, Mann-Whitney U test and Kruskal-Walli's test were considered

Reliability Analysis

The internal consistency of the perception scale was evaluated using Cronbach's alpha, with values ≥0.70 considered acceptable (Table 1).

Significance Level

The significance of results was judged at a 5% level (p<0.05). Data was analyzed using IBM SPSS v20. Normality was assessed using Kolmogorov–Smirnov. Descriptive statistics, Pearson correlation, independent t-tests and one-way ANOVA were used. Statistical significance was set at p<0.05.

RESULTS

Table 2 showed the socio-demographic characteristics of 274 nursing students. Most students (77%) were female and 76.6% were aged 18–25, indicating a predominantly young female population. Marital status revealed that 64.6% (177) were single and 35.4% (97) were married. When examining the level of education, the largest group was fourth-year students, representing 53.3% (146 students).

Table 3 explained nursing students' awareness levels across several aspects, a notable 98.2% (269 students) agreed that nurses should be good people and 98.5% (270 students) felt that nursing is indispensable to society. Similarly, 97.8% (268 students) recognized the need for qualities like calmness and self-control in nursing.

Table 4 this table presents most students (83.6%) indicated they would practice nursing under any circumstance and 87.2% expressed admiration for the profession. Additionally, 92.3% conveyed love for the nursing field and 97.1% considered it honorable. However, 66.4% indicated they would prefer unemployment over practicing nursing, reflecting mixed sentiments about job satisfaction.

Table 5 highlighted nursing students' perceptions of practice-related aspects. An overwhelming majority (96.7%) acknowledged the significant responsibilities associated with the profession and 93.1% saw it as one requiring sacrifice. Most students (87.6%) acknowledged nurses' impact on societal health, while 70.4% felt that the profession had not yet achieved the recognition it deserves.

Table 2: Distribution of the Studied Nursing Students According to Socio-Demographic Characteristics (n = 274)

Socio-Demographic Characteristics	No.	Percentage
Age (years)		
18-25	210	76.6
26-35	36	13.1
Up to 35	28	10.2
Sex		
Male	63	23.0
Female	211	77.0
Marital Status		
Single	177	64.6
Married	97	35.4
Level of Education		
2nd Year of Nursing Student	39	14.2
3rd Year Nursing Student	71	25.9
4th Year Nursing Student	146	53.3
Other	18	6.6

SD: Standard Deviation

Table 6 presented descriptive statistics for the three factors assessed: awareness, attitude and practice. The scores ranged from a minimum of 1.0 to a maximum of 18.0 in awareness. Attitude scores ranged from 0.0 to 11.0, with a mean of 7.28. For practice, scores ranged from 2.0 to 9.0 pointing to generally high levels of practice-related perception among students.

Table 7 showed the matrix correlation between Awareness, Attitude and Practice, highlighting the relationships among these factors. The Pearson coefficient ® was used to assess correlations, revealing that Awareness was positively correlated with Attitude (r = 0.140, p = 0.020) and Practice (r = 0.191, p = 0.001). Additionally, Attitude showed a significant positive correlation with Practice (r = 0.379, p <0.001).

Table 8 stated the relationship between socio-demographic characteristics and the total scores of Awareness, Attitude and Practice. In terms of age groups, the differences in mean scores for Awareness, Attitude and Practice were not statistically significant, as indicated by the ANOVA results (p>0.05). In gender comparisons, males had a slightly higher mean Attitude score (8.05±2.45) than females (7.05±2.28), with this difference being statistically significant (p = 0.005). However, no significant differences were observed for Awareness or Practice scores between males and females. Similarly, no statistically significant differences were found between marital status or level of education and the total scores of Awareness, Attitude, or Practices, with all p-values above 0.05.

Table 9 presented a linear regression analysis examining the mean Awareness score according to socio-demographic variables. It found that Age and Marital Status were significant predictors of Awareness. Specifically, Age had a positive relationship with Awareness (B = 0.491, p = 0.037), indicating that an increase in age was associated with a higher Awareness score. Marital Status also had a significant effect, with a negative coefficient (B = -0.712, p = 0.031), suggesting that being married was associated with lower Awareness scores. The model explained a small proportion of the variance in Awareness (R^2 = 0.030, p = 0.088), indicating limited predictive power.

Table 3: Distribution of the studied nursing students according to items Factor 1: Awareness (n = 274)

Q	Factor 1: Awareness	No No.	No %	Yes No.	Yes %
1	Nursing cannot afford any mistakes	96	35.0	178	65.0
2	Nursing can only be practiced with enthusiasm	48	17.5	226	82.5
3	Nursing will continue as long as humanity exists	17	6.2	257	93.8
4	Nursing is a profession that requires continuous reading and keeping up with technology	22	8.0	252	92.0
5	What I like most about nursing is the opportunity it provides to help people	10	3.6	264	96.4
6	Nursing is a profession that requires skill as well as knowledge	12	4.4	262	95.6
7	I believe that nursing is one of the leading professions that includes an important dimension of conscience	6	2.2	268	97.8
8	Nursing requires a lot of patience	13	4.7	261	95.3
9	I believe that the spiritual satisfaction of nursing is more important than the material satisfaction	14	5.1	260	94.9
10	Nurses should be compassionate	12	4.4	262	95.6
11	The nursing profession requires more compassion than other professions	21	7.7	253	92.3
12	I believe that nurses are indispensable members of the health team	7	2.6	267	97.4
13	Nurses should be good people	5	1.8	269	98.2
14	I believe that communication is very important in nursing	19	6.9	255	93.1
15	Nursing is a sacred and noble profession because it provides direct service to people	8	2.9	266	97.1
16	I think it is important for nurses to have personal qualities such as a sense of humor, insight, sincerity and charity	17	6.2	257	93.8
17	I think nursing is an indispensable profession for society	4	1.5	270	98.5
18	I think nursing requires calmness and self-control	6	2.2	268	97.8

Table 4: Distribution of the Nursing Students Studied According to Factor 2: Attitude Items (n = 274)

Q	Factor 2: Attitude	No No.	No %	Yes No.	Yes %
1	I would practice nursing in any situation	45	16.4	229	83.6
2	I have always admired the nursing profession	35	12.8	239	87.2
3	I do not want my children to become nurses	173	63.1	101	36.9
4	I love the nursing profession	21	7.7	253	92.3
5	I could never practice nursing	161	58.8	113	41.2
6	Nursing is an honorable profession	8	2.9	266	97.1
7	I think nursing is not a fun profession	171	62.4	103	37.6
8	I would not prefer nursing unless there is no other choice	157	57.3	117	42.7
9	Nursing is very close to my ideal profession in my mind	50	18.2	224	81.8
10	I think nursing is a promising profession	17	6.2	257	93.8
11	I would rather be unemployed than practice nursing	182	66.4	92	33.6

Table 5: Distribution of the Studied Nursing Students According to Factor 3: Practice Items (n = 274)

Q	Factor 3: Practice	No No.	No %	Yes No.	Yes %
1	Nursing is a profession that requires sacrifice	19	6.9	255	93.1
2	I think that not everyone can become a nurse	35	12.8	239	87.2
3	Nursing is a very stressful profession	65	23.7	209	76.3
4	Nursing is a profession that requires taking on great responsibilities	9	3.3	265	96.7
5	I think that nurses among all health care workers have the most contact with patients	14	5.1	260	94.9
6	Job opportunities are more abundant in the nursing profession	22	8.0	252	92.0
7	Nurses work in very difficult conditions	36	13.1	238	86.9
8	I think that the nursing profession has not reached the level it deserves	81	29.6	193	70.4
9	I think that the health of society depends on nurses	34	12.4	240	87.6

Table 6: Descriptive Analysis of the Nursing Students Studied According to Total Score (n = 274)

	Min. - Max	Mean±SD	Median
Factor 1: Awareness	1.0-18.0	16.77±2.06	17.0
Factor 2: Attitude	0.0-11.0	7.28±2.35	6.0
Factor 3: Practice	2.0-9.0	7.85±1.39	8.0

Table 7: Matrix Correlation for Awareness, Attitude and Practice

		Factor 1: Awareness	Factor 2: Attitude	Factor 3: Practice
Factor 1: Awareness	r	1	0.140*	0.191*
	p	-	0.020*	0.001*
Factor 2: Attitude	r	-	1	0.379*
	p	-	-	<0.001*
Factor 3: Practice	r	-	-	1
	p	-	-	-

r: Pearson coefficient *: Statistically significant at p≤0.05

Aboelola *et al.*: Perceived Image of the Nursing Profession among Undergraduate Nursing Students: A Cross-Sectional Study

jpms

Table 8: Relation between Total Score and Socio-Demographic Characteristics (n = 274)

Socio-Demographic Characteristics	N	Factor 1: Awareness Mean±SD	Factor 2: Attitude Mean±SD	Factor 3: Practice Mean±SD
Age (years)				
18-25	210	16.66±2.23	7.38±2.41	7.88±1.38
26-35	36	17.14±1.53	7.08±2.08	7.67±1.57
Up to 35	28	17.14±1.01	6.75±2.27	7.89±1.23
F (p)		1.350 (0.261)	1.030 (0.358)	0.362 (0.696)
Sex				
Male	63	16.87±1.74	8.05±2.45	7.87±1.57
Female	211	16.74±2.15	7.05±2.28	7.84±1.33
t (p)		0.451 (0.653)	2.892* (0.005*)	0.147 (0.883)
Marital Status				
Single	177	16.85±1.96	7.30±2.41	7.95±1.31
Married	97	16.63±2.25	7.24±2.25	7.66±1.51
t (p)		0.838 (0.403)	0.209 (0.834)	1.687 (0.093)
Level of Education				
2nd Year of Nursing Student	39	16.46±2.91	7.21±2.81	7.85±1.39
3rd Year Nursing Student	71	16.56±2.51	7.45±2.37	7.75±1.54
4th Year Nursing Student	146	16.95±1.52	7.17±2.24	7.91±1.33
Other	18	16.78±1.73	7.61±2.25	7.78±1.35
F (p)		0.906 (0.439)	0.358 (0.783)	0.239 (0.869)

SD: Standard deviation, t: Student t-test F: F for One way ANOVA test p: p value for comparison between the categories studied, *: Statistically significant at p≤0.05

Table 9: Linear Regression Analysis of Mean Awareness According to Socio-Demographic Variables using t- Test

	B	SE	Beta	t	p	95% CI LL	UL
Age	0.491	0.234	0.156	2.093	0.037*	0.029	0.952
Gender	-0.277	0.318	-0.057	0.872	0.384	-0.902	0.348
Marital Status	-0.712	0.328	-0.165	2.173	0.031*	-1.358	-0.067
Level of Education	0.156	0.158	0.062	0.993	0.322	-0.154	0.467

R^2 = 0.030, F = 2.050, p = 0.088

Table 10: Linear Regression Analysis of mean Attitude According to Socio-Demographic Variables using t-Test

	B	SE	Beta	t	p	95% CI LL	UL
Age	-0.453	0.264	-0.126	1.714	0.088	-0.974	0.068
Gender	-1.207	0.358	-0.216	3.369	0.001*	-1.912	-0.502
Marital Status	-0.138	0.370	-0.028	0.374	0.709	-0.866	0.590
Level of Education	0.102	0.178	0.035	0.572	0.568	-0.248	0.452

R^2 = 0.050, F = 3.541*, p = 0.008*

Table 11: Linear Regression Analysis of Mean Practice According to Socio-Demographic Variables using t-Test

	B	SE	Beta	T	p	95% CI LL	UL
Age	0.104	0.159	0.049	0.655	0.513	-0.209	0.417
Gender	-0.184	0.215	-0.056	0.856	0.393	-0.608	0.240
Marital Status	-0.443	0.222	-0.153	1.994	0.047*	-0.881	-0.006
Level of Education	0.043	0.107	0.025	0.400	0.689	-0.168	0.253

R^2 = 0.016, F = 1.075, p = 0.369

Table 10 illustrates a linear regression analysis of the mean Attitude score based on socio-demographic characteristics. Gender was found to be a statistically significant predictor (B = -1.207, p = 0.001), with females displaying lower Attitude scores compared to males. Age, although negatively related to Attitude, was not significant (p = 0.088). Marital Status and Level of Education showed no significant impact on Attitude. The model's R² value was 0.050, suggesting that only 5% of the variance in Attitude scores could be explained by these socio-demographic factors (p = 0.008).

Table 11 showed a linear regression analysis examining the mean Practice score in relation to socio-demographic characteristics. Marital Status was the only significant predictor of Practice scores, with a negative relationship (B = -0.443, p = 0.047), indicating that married individuals had lower Practice scores. Age, Gender and Level of Education did not show statistically significant associations with Practice. The model had an R² value of 0.016 and was not statistically significant overall (p = 0.369), indicating that socio-demographic variables had minimal explanatory power for Practice scores.

DISCUSSION

The study presents the following findings as the socio-demographic profile are young, female, single and in higher program years, reflects patterns reported regionally and internationally [27-29]. These traits influence stress and

Aboelola *et al*.: Perceived Image of the Nursing Profession among Undergraduate Nursing Students: A Cross-Sectional Study

jpms

academic needs, highlighting the importance of tailored support systems. Despite nursing's reputation as a high-stress profession, students showed an overwhelmingly positive image of nursing, with 98% affirming its societal indispensability. This optimism, consistent with global literature, may stem from strong altruistic values and the profession's perceived nobility, which outweigh stress concerns [25-30]. The belief that nursing will persist as long as humanity exists (93.8%) reinforces its perceived permanence. However, the finding that 66.4% would prefer unemployment over nursing suggests concerns about working conditions and recognition issues widely documented worldwide [29-31]. Finally, while students recognize nursing's societal impact, 70.4% feel it lacks adequate recognition, echoing international calls for stronger advocacy and visibility [8-32].

The findings reveal that 76.3% of students acknowledge nursing as a stressful profession, consistent with global evidence linking occupational stress to burnout and attrition [28-33]. Despite this, students maintain a highly positive image of nursing, with strong awareness of its values and societal role (mean = 16.77, SD = 2.06). Attitude scores were moderate (mean = 7.28, SD = 2.35), echoing Table 3 findings where 66.4% indicated they might prefer unemployment over nursing. Such reservations align with global concerns about workload, recognition and compensation [29-34]. Practice-related perceptions were high (mean = 7.85, SD = 1.39), reinforcing recognition of nursing's demanding responsibilities and societal impact.

The positive but modest correlation between Awareness and Attitude (r = 0.140, p = 0.020) suggests that knowledge contributes to favorable attitudes but is not sufficient alone; personal experiences and anticipated job conditions also play a role [29]. Overall, these insights underscore the need for nursing education to combine technical training with resilience-building, coping strategies and advocacy skills to sustain commitment in practice. The correlation between Awareness and Practice (r = 0.191, p = 0.001) and between Attitude and Practice (r = 0.379, p<0.001) indicates that while knowledge supports practice perceptions, attitudes exert a stronger influence on readiness for professional engagement. This aligns with literature emphasizing that enthusiasm and commitment are critical drivers of nursing behaviors [8,27]. Educational strategies should therefore combine knowledge-building with attitude-enhancing interventions such as mentorship and immersive clinical experiences.

Gender differences were notable in Attitude scores, with males scoring higher (8.05±2.45 Vs 7.05±2.28; p = 0.005). This may reflect deliberate career choice and strong vocational commitment among male students, as reported in regional studies [27]. However, similar Awareness and Practice scores across genders suggest standardized training mitigates knowledge gaps. No significant differences by marital status or education level further support the idea that shared academic culture shapes professional perceptions more than personal demographics. Overall, these findings highlight that while socio-demographic factors have limited impact on Awareness and Practice, gender may influence attitudes. Exploring male students' motivations could inform strategies to foster positive attitudes across all nursing students, ensuring sustained engagement despite anticipated stress and systemic challenges. Regression analysis (Table 10) identified Marital Status as the only significant predictor of Practice scores (B = -0.443, p = 0.047), with married students reporting lower perceptions than singles [34].

Age, Gender and Education level showed no significant effects, consistent with earlier findings that shared curriculum and clinical training largely shape practice-related perceptions. The low R² (0.016) and non-significant overall model (p = 0.369) indicate socio-demographic factors have minimal explanatory power, suggesting that experiential factors such as clinical exposure quality, mentorship and workload are more influential. Practically, these results underscore the need for supportive measures for married students while reaffirming the central role of educational experiences in fostering readiness for nursing practice.

The findings indicate that nursing students exhibit high awareness, moderate attitudes and strong practice-related perceptions, yet anticipate stress and systemic challenges. Correlations show that while awareness supports practice perceptions (r = 0.191, p = 0.001), attitudes exert a stronger influence (r = 0.379, p<0.001), underscoring the need for strategies that build both knowledge and positive attitudes through mentorship and immersive clinical experiences. Gender differences in attitudes, with males scoring higher, suggest exploring their motivations to foster similar positivity among all students. Regression analysis revealed marital status as the only significant predictor of practice perceptions (B = -0.443, p = 0.047), pointing to the need for tailored support for married students. The low R² (0.016) confirms that socio-demographics have minimal impact compared to experiential factors like clinical exposure and mentorship.

Policy Implications
For Nursing Schools

- Integrate resilience and stress management training into curricula to address anticipated occupational stress
- Expand mentorship programs and role modeling to strengthen attitudes and professional identity
- Flexible scheduling and academic support for married students to balance family responsibilities
- Promote gender-inclusive strategies to leverage positive attitudes among male students and reduce stereotypes

For the Ministry of Health

- Improve working conditions and compensation to reduce attrition and align with global standards
- Enhance public recognition campaigns to elevate nursing's status and visibility
- Invest in clinical training infrastructure to ensure high-quality experiential learning
- Develop retention policies that address workload, career progression and mental health support for nurses

Aboelola *et al.*: Perceived Image of the Nursing Profession among Undergraduate Nursing Students: A Cross-Sectional Study

jpms

Study Limitations

Single-site study, self-report questionnaire, cross-sectional design prevents causal inference and female-dominant sample limits gender generalizability. The research was conducted at one university (Northern Border University), which may limit the generalizability of results to other nursing programs or regions. It is recommended that nursing education programs and healthcare institutions strengthen strategies that sustain high awareness levels while fostering more positive attitudes toward the profession, particularly among female and married students who showed lower scores in certain domains. Initiatives may include value-driven curricula, mentorship programs, stress management training and public campaigns to enhance nursing's image and recognition. Additionally, workplace policies should address job satisfaction concerns to encourage long-term professional engagement and reduce attrition.

CONCLUSION

This study explored nursing students' awareness, attitudes and practice-related perceptions toward the profession, along with the influence of socio-demographic factors. Students showed very high awareness, moderate attitudes and high practice-related perceptions, recognizing nursing's values, societal importance and professional demands. Positive correlations were found among awareness, attitude and practice, with a stronger link between attitude and practice, highlighting the role of affective commitment in professional readiness. Regression analysis revealed that age, gender and marital status had statistically significant but modest effects, explaining minimal variance. Educational experiences, clinical exposure and personal motivation appeared more influential than demographics. Despite high regard for nursing, some students expressed concerns about job satisfaction and recognition, pointing to systemic challenges such as workload, societal perceptions and professional visibility. These factors may affect long-term retention and commitment. The findings underscore the need for strategies that build awareness, strengthen attitudes and enhance practice while improving professional recognition and advocacy.

Implications for Nursing Practice

The findings highlight the need for sustained value-based education, mentorship and clinical exposure to reinforce positive attitudes and high practice standards among nursing students. Efforts to enhance the professional's public image and address workplace stressors are essential to translating high awareness into consistent professional commitment, thereby improving care quality and nurse retention.

Recommendation and Future Directions

- **Multi-University Cohort Studies:** Expanding research to include multiple universities would enhance the generalizability of findings and allow comparisons across different educational environments, cultural contexts and curricula. Such studies could identify systemic factors influencing nursing students' perceptions and professional identity on a broader scale

- **Qualitative Exploration of Professional Identity:** While quantitative data provides measurable trends, qualitative approaches such as interviews or focus groups can uncover deeper insights into how students construct their professional identity. This exploration would help understand the emotional, cultural and experiential factors shaping attitudes toward nursing

- **Interventions to Improve Perception of Nursing:** Developing and testing targeted interventions, such as mentorship programs, media campaigns and curriculum enhancements, could strengthen students' attitudes and commitment to the profession. These strategies should aim to address misconceptions, improve societal recognition and foster resilience among future nurses

Conflicts of Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data Sharing Statement

The data that supports the findings of this study are available on request from the corresponding author due to privacy or ethical restrictions.

Ethical Statement

This study was conducted in accordance with the ethical principles outlined in the Declaration of Helsinki. Prior to data collection, approval was obtained from the College of Nursing, Northern Border University, as part of the academic requirements for undergraduate research project number "NBU-FFR-2025-2001-01".

REFERENCES

[1] Moghbeli, G. *et al.* "Public image of nursing: an integrative review of challenges and solutions." *BMC Nursing*, vol. 24, 2025, p. 573, https://doi.org/10.1186/s12912-025-03160-3.

[2] Ejupi, V. *et al.* "Exploring influential factors shaping nursing as a profession and science in healthcare systems: a systematic literature review." *Healthcare (Basel)*, vol. 13, no. 6, 2025, p. 668, https://doi.org/10.3390/healthcare13060668.

Aboelola *et al.*: Perceived Image of the Nursing Profession among Undergraduate Nursing Students: A Cross-Sectional Study

jpms

[3] Neumbe, I.M. *et al.* "Attitudes and perceptions of undergraduate nursing students towards the nursing profession." *PLOS ONE*, vol. 18, no. 7, 2023, e0280700, https://doi.org/10.1371/journal.pone.0280700.

[4] Elmorshedy, H. *et al.* "Contemporary public image of the nursing profession in Saudi Arabia." *BMC Nursing*, vol. 19, 2020, p. 47, https://doi.org/10.1186/s12912-020-00442-w.

[5] Al-Khunizi, A. *et al.* "The nursing image in Saudi Arabia: a narrative review on what it was and what is our vision." *International Journal of Medical Research and Health Sciences*, vol. 10, no. 10, 2021, pp. 108–115.

[6] Wakefield, M. *The future of nursing 2020–2030: charting a path to achieve health equity.* National Academies Press, 2021, https://doi.org/10.17226/25982.

[7] Buchan, J. *et al. Ageing well? policies to support older nurses at work.* International Centre on Nurse Migration, 2020.

[8] International Council of Nurses. *The global nursing shortage and nurse retention.* ICN, 2021.

[9] Midilli, T.S. and N. Durgun. "Nursing students' attitudes toward the nursing profession in western Turkey and affecting factors." *IOSR Journal of Nursing and Health Science*, vol. 6, no. 1, 2019, pp. 55–60.

[10] Fahmy, S. *et al.* "Attitude of nursing students towards nursing profession at South Valley University." *IJRDO Journal of Health Sciences and Nursing*, vol. 5, no. 6, 2023, pp. 19–34.

[11] Glew, P.J. *et al.* "Relationships between academic support, student retention and academic performance." *Nurse Education in Practice*, vol. 64, 2022, p. 103403, https://doi.org/10.1016/j.nepr.2022.103403.

[12] Mai, B.H. *et al.* "Attitudes and perceptions towards nursing profession among nursing students at Hue University of Medicine and Pharmacy." *Journal of Problem-Based Learning*, vol. 5, no. 2, 2018, pp. 55–62, https://doi.org/10.24313/jpbl.2018.5.2.55.

[13] Gebrezgabher, Z.T. and G.B. Abera. "Assessment of nurses' knowledge and attitude towards nursing profession at public hospitals in Mekelle Town, Tigray, Ethiopia." *Global Journal of Medical Research: K Interdisciplinary*, vol. 17, no. 1, 2017.

[14] Patidar, A.B. *et al.* "Future nurses' perception towards profession: a cross-sectional survey in Punjab State." *Nursing and Midwifery Research Journal*, vol. 7, no. 4, 2011, pp. 175–185.

[15] Oyedele, E. *et al.* "Perception of undergraduate nursing students about nursing profession: a study of University of Jos, Nigeria." *International Journal of Nursing and Health Sciences*, vol. 2, no. 5, 2019, pp. 60–66.

[16] Drasiku, A. *et al.* "Clinical teaching of university-degree nursing students: Are the nurses in practice in Uganda ready?" *BMC Nursing*, vol. 20, no. 1, 2021, pp. 1–10, https://doi.org/10.1186/s12912-021-00597-y.

[17] Ministry of Health Uganda. *MOH HRH data #1.* 2020.

[18] Dahshan, M.E.A.E. and H.A.M. Youssef. "Nursing students' perception about nursing as a professional career choice at Taif University, Saudi Arabia." *International Journal of Novel Research in Healthcare and Nursing*, vol. 5, no. 3, 2018, pp. 407–420.

[19] Grinberg, K. and Y. Sela. "Perception of the image of the nursing profession and its relationship with quality of care." *BMC Nursing*, vol. 21, no. 1, 2022, pp. 1–9, https://doi.org/10.1186/s12912-022-00830-4.

[20] González, H. *et al.* "The image of nursing in the media: A scoping review examining research studies starting in 1981 until 2021." *International Nursing Review*, vol. 70, no. 1, 2023, pp. 95–102, https://doi.org/10.1111/inr.12833.

[21] Walker, F. *et al.* "Exploring clinical facilitation and student learning on undergraduate nursing placements through a community of practice lens: A qualitative study." *Contemporary Nurse*, vol. 60, no. 2, 2024, pp. 192–207, https://doi.org/10.1080/10376178.2024.2347874.

[22] Gayathri, T. and T. Chandrasekarayya. "Nursing students' experiences of gender bias: A literature review." *International Journal of Scientific Research and Engineering Development*, vol. 8, no. 3, 2024.

[23] Stanley, D. *et al.* "The male of the species: a profile of men in nursing." *Journal of Advanced Nursing*, vol. 72, no. 5, 2016, pp. 1155–1168, https://doi.org/10.1111/jan.12905.

[24] Hoeve, Y. *et al.* "The nursing profession: Public image, self-concept and professional identity discussion paper." *Journal of Advanced Nursing*, vol. 70, no. 2, 2014, pp. 295–309, https://doi.org/10.1111/jan.12177.

[25] Mohammadi, F. *et al.* "A study of how moral courage and moral sensitivity correlate with safe care in nursing special care." *Nursing Open*, vol. 9, no. 5, 2022, pp. 2718–2727, https://doi.org/10.1002/nop2.1268.

[26] Schmidt, B.J. and E.C. McArthur. "Professional nursing values: A concept analysis." *Nursing Forum*, vol. 53, no. 2, 2018, pp. 131–139, https://doi.org/10.1111/nuf.12216.

[27] Fawaz, M.A. *et al.* "Challenges facing nursing education in the advanced healthcare environment." *International Journal of Africa Nursing Sciences*, vol. 9, 2018, pp. 105–110, https://doi.org/10.1016/j.ijans.2018.10.005.

[28] Shah, M.K. *et al.* "Prevalence of and factors associated with nurse burnout in the United States." *JAMA Network Open*, vol. 4, no. 2, 2021, e2036469, https://doi.org/10.1001/jamanetworkopen.2020.36469.

[29] Aiken, L.H. *et al.* "Hospital nurse staffing and patient mortality, nurse burnout and job dissatisfaction." *JAMA*, vol. 288, no. 16, 2002, pp. 1987–1993, https://doi.org/10.1001/jama.288.16.1987.

[30] Fagermoen, M.S. "Professional identity: values embedded in meaningful nursing practice." *Journal of Advanced Nursing*, vol. 25, no. 3, 1997, pp. 434–441, https://doi.org/10.1046/j.1365-2648.1997.1997025434.x.

[31] Fletcher, A. "Defining student engagement: A literature review." 2007, accessed January 2025, https://soundout.org/defining-student-engagement-a-literature-review/.

[32] Abera, G.B. and Z.T. Gebrezgabher. "Assessment of nurses' knowledge and attitude towards nursing profession at public hospitals in Mekelle Town, Tigray, Ethiopia." *Global Journal of Medical Research*, vol. 17, no. K1, 2017, pp. 9–14.

[33] Hellín Gil, M.F. *et al.* "Relationship between job satisfaction and workload of nurses in adult inpatient units." *International Journal of Environmental Research and Public Health*, vol. 19, no. 18, 2022, p. 11701, https://doi.org/10.3390/ijerph191811701.

[34] D'Silva, K.M.J. *et al.* "A study to assess the attitude towards nursing profession among nursing students in the selected college at Mangalore." *International Journal of Health Sciences Research*, vol. 5, no. 1, 2018, pp. 156–164.