



Original Article



Association of Perceived Professional Identity with Academic Year Among Undergraduate Nursing Students at a Public Sector College of Nursing in Rawalpindi: A Cross-Sectional Study

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ABSTRACT

Professional identity is a crucial element in the growth and development of nurses as professionals. The process of professional identity formation begins when students internalize the principles and values of nursing and gain a deeper understanding of their professional roles.

Objective: To measure the professional identity of undergraduate nursing students and its association with their academic year. **Methods:** A cross-sectional analytical study was conducted from January to August 2024 at a Public-Sector College of Nursing in Rawalpindi. A total of 226 nursing students were selected using universal sampling. Data were collected using the Professional Identity Five Factors Scale, which includes demographic data and measures the level of professional identity. **Results:** The mean total score of the students' perceived professional identity was 87.07 ± 14.129 , indicating a moderate level of professional identity. No significant differences were observed between academic years ($p > 0.05$). **Conclusions:** It was concluded that this study provides the first comprehensive evaluation of undergraduate nursing students' perceived professional identities in Pakistan, establishing baseline data for this crucial aspect of nursing education. Enhancements to the curriculum, mentorship programs, and opportunities for hands-on learning can support students in further developing their professional identities and better preparing for careers in nursing.

INTRODUCTION

Professional Identity (PI) refers to the sense of attachment, commitment, and self-concept individuals develop as members of their selected profession [1]. In classic literature in this field, PI is often understood as a dynamic process of individuals positioning themselves in connection to their social environment. It involves a series of practices that shape one's sense of self within one's present or anticipated professional life [2]. Nursing students acquire knowledge and skills throughout their

educational journey, a process that significantly influences the development of their PI. These acquired elements contribute to a distinct transition from being lay individuals to emerging as professional healthcare workers [3]. PI among nursing students plays a vital role in helping them smoothly transition from being a nursing student to becoming qualified. This approach not only strengthens their dedication to the profession but also elevates patient care quality and raises patient satisfaction levels [4]. The



necessity of moving students from feeling like a nurse to acting like a nurse, as well as learning to "be" a nurse through experience, they advocated for nursing to change from an "emphasis on socialization and role play to an emphasis on formation. The nursing educational experience should encourage the development of PI [5, 6]. PI is directly correlated with these factors such as retention of students and their purpose to remain or depart the nursing profession [6]. However, meeting this condition presents substantial obstacles in Pakistan. The 2020-2021 Pakistan Economic Survey reported that Pakistan had 116,659 registered nurses in 2020 for its approximately 200 million populations. The nurse-patient ratio in the general wards of Pakistani hospitals stands at 1:40, whereas the Pakistan Nursing Council suggests a recommended ratio of 3:10 [7]. According to reports, Pakistan's dwindling number of licensed nurses is due to their relocation overseas in quest of higher-paying work opportunities. This trend is linked to factors like workplace challenges, prioritization of career goals, decreased career contentment and present work experiences [8]. PI issues result in challenges in education and healthcare delivery, including a lack of clinical mentoring, and expertise, heavy workloads, and limited inter-professional collaboration [9]. Nursing students' socialization in clinical settings contributes to the development of their PI by teaching them new roles, skills, knowledge, and behaviours. Understanding non-clinical placement determinants improves PI development, stress reduction, satisfaction with work, and emotional resilience in nurses [10]. Being a professional requires having a strong professional identity since it is a key component of successful practice in the field of healthcare and an indication of both professional and personal contentment [11]. Students' professional identities serve as both a vital indicator of their values and a critical window into their aspirations for their professional development. Learning engagement is seen as a predictor of the standard of higher education as well as an assessment metric for students' experiential progress [12]. A study conducted at Port Say General Hospital America found a statistically significant correlation between undergraduate nursing students' age and their PI scores [13]. Similarly, prior research identified strong associations between students' places of birth, academic levels, and PI [14]. Additionally, the study reported a significant correlation (between nursing students' PI and factors such as school level, educational background, and their willingness to pursue a nursing major [15]. A study at the University of Australia explored the development of PI during pre-registration nursing education and its relationship with higher education. It found that elements such as professional socialization, identity, belonging, clinical placements, and the role of

educators significantly influence PI development [16]. Similarly, a study conducted in Iran assessed the PI of 221 nursing students across three nursing and midwifery colleges. The study concluded that the Iranian nursing education system did not adequately support the positive development of students' PI, as reflected in the average scores being lower than expected but still above the minimum threshold [17].

This study aims to measure the PI of undergraduate nursing students and its association with their academic year.

METHODS

This cross-sectional analytical study was conducted from February to July 2023. An online software was used to collect data from a sample of 226 nursing students enrolled in the 2nd, 3rd, and 4th years of the Generic Bachelor of Science in Nursing (BSN) program. First-year student nurses were excluded since they had not yet begun their clinical rotations, an important part of their nursing education and PI formation. The research was conducted at a public Sector College of Nursing in Rawalpindi, Pakistan. All participants were female nursing students recruited from a single institution. The Professional Identity Five Factor Scale (PIFFS), an adopted questionnaire, was used for data collection. PIFFS is divided into two parts, the first part is to gather demographic characteristics, age, academic qualification (Previous schooling), year of BSN, and region. The second part of PIFFS consisted of 25 questions organized into five factors: Knowledge of professional practice (Items 1-6), Professional experience (Items 7-12), Role model in profession (Items 13-17), Professional self-efficacy (Items 18-23), Affinity to a certain profession (Items 24-25). All items, except one, used a five-point Likert scale, with responses ranging from 1 (Never True) to 5 (Definitely True). The exception was the question, "Do you already know what kind of work or profession you prefer?" which required a Yes or No response. The creators of PIFFS evaluated its psychometric properties, confirming high reliability. Construct validity was supported by robust structural validity, and the hypothesized five-factor model was found to be "extremely stable" [1]. The original instrument's reliability ranged between $\alpha=0.65$ and 0.85 across the five subscales. The internal consistency and concurrent validity of the PIFFS were verified with a Cronbach's alpha of 0.841 [18]. High perceived PI: Score above 75% (>91 out of 122). Low perceived PI: Score 75% or less (<91 out of 122) [14]. Data collection was conducted in March 2024 using a self-administration method following an introduction to the research topic. Statistical analysis was performed using SPSS version 27.0. Categorical variables were presented as frequencies and percentages, while quantitative variables were expressed as mean and standard deviation (SD). The Kolmogorov-Smirnov test was

used to assess the normal distribution of the data. Since the PI scores did not meet the assumption of normality, the Kruskal-Wallis test was used for inferential statistics to compare the professional identities of nursing students in their 2nd, 3rd, and 4th years. This study received approval from the Institutional Ethical Committee of the National University of Health Sciences Rawalpindi (Reference number: Re: 422-AAA-ERC-AFPGMI). The research adhered to ethical guidelines, following the Declaration of Helsinki, ensuring informed consent, voluntary participation, confidentiality, and the use of collected information solely for research purposes.

RESULTS

Among the participants, the majority (69.0%, $n=156$) were in the age group of 18 to 21 years, while 31.0% ($n=70$) were aged between 22 and 25 years. The vast majority of participants were intermediate-level student nurses, comprising 94.7% ($n=214$) of the total cohort, while only 5.3% ($n=12$) had other educational qualifications. Regarding academic year distribution, 31.9% ($n=72$) of the participants were second-year students, 36.3% ($n=82$) were third-year students, and 31.9% ($n=72$) were fourth-year students. Additionally, the study found that 67.7% ($n=153$) of the participants were from urban areas, while 32.3% ($n=73$) were from rural areas. This distribution highlights the predominance of urban students in nursing education at the Public Sector College of Nursing in Rawalpindi. Age, previous qualifications, year of BSN, region, and academic year are presented in table 1.

Table 1: Demographic Characteristics of the Study Participants

Demographic Variables	N (%)
Age of Respondent	
18-21	156 (69.0%)
22-25	70 (31.0%)
Previous Qualification	
Intermediate	214 (94.7%)
Baccalaureate	12 (5.3%)
Year of BSN	
2 nd Year	72 (31.9%)
3 rd Year	82 (36.3%)
4 th Year	72 (31.9%)
Home Residence	
Urban	153 (67.7%)
Rural	73 (32.3%)

The mean PI score was lowest among second-year students (84.74 ± 14.944), followed by fourth-year students (87.71 ± 14.459), and highest among third-year students (88.55 ± 12.966). A mean PI score of $87.07 (\pm 14.129)$ was obtained overall. This pattern implies that PI strengthens as students' advance, most likely due to more clinical exposure and real-world experience. To promote consistent PI development, focused support during early education is crucial, as seen by the increased standard

deviation of second-year results. Perceived PI scores among undergraduate nursing students vary over academic years, as seen in table 2.

Table 2: Mean Score of Perceived PI among Undergraduate Nursing Students

Groups	Number	Minimum PI	Maximum PI	Mean \pm SD
Second Year	72	45	114	84.74 ± 14.944
Third Year	82	41	111	88.55 ± 12.966
Fourth Year	72	46	113	87.71 ± 14.459
Overall	226	41	114	87.07 ± 14.129

38.05% of undergraduate nursing students have high perceived PI, which reflects stronger self-assurance, whereas 61.95% have low PI, which indicates less confidence in their positions. This implies that focused mentoring and clinical experience are required to improve students' PI, as shown in figure 1.

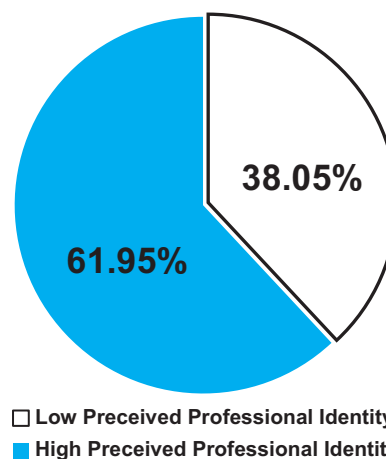


Figure 1: Level of Perceived PI Among Undergraduate Nursing Students

The normality of the overall PI score was assessed using the Kolmogorov-Smirnov test. The p -value < 0.05 represents that the data is not normally distributed. Therefore, the Kruskal-Wallis test, an alternative to ANOVA, was applied, as shown in table 3.

Table 3: Test of Normality (Kolmogorov Smirnov Test)

Variables	Statistic	df	Sig.
Overall Score of Professional Identity	0.079	226	0.002

The Kruskal-Wallis test was applied to compare the PI scores among the 2nd-year, 3rd-year, and 4th-year students. The p -value > 0.05 indicates no statistically significant difference in PI scores across the three groups, as shown in table 4.

Table 4: Association of the PI and Academic Years of BSN (2nd Year, 3rd Year, 4th Year)

Academic Year	Mean PI Score	n (Sample Size)	Kruskal-Wallis H	P-Value
2 nd Year	84.74	72	2.390	0.303
3 rd Year	88.55	82		
4 th Year	87.71	72		

DISCUSSION

This study aimed to measure the PI of undergraduate nursing students and identified its association with the academic year of BSN. The results showed that students' overall PI level was moderate and there was no association between the academic year and PI level. The process of developing a PI is not linear; rather, it is marked by phases of advancement, frequently connected to shift or transition, and sporadic periods of regression [19]. Similar trends have been reported in previous studies the PI score among nursing students was also moderate and highlighted that the future job positioning of undergraduate nursing students was not sufficiently clear [20]. Similarly, another study revealed that nursing interns had a moderate PI level (mean score: 4.02 ± 0.63) [15]. This moderate score suggests that nursing interns, like the students in this study, may not have fully developed their professional identities. While they demonstrate a basic understanding of their roles and responsibilities, a degree of doubt or insecurity about their professional stance remains also found that PI among students is generally weak, with significant variations influenced by factors such as academic performance, parental educational background, being an only child, and holding student leadership roles [21]. The findings indicated that all group comparisons had p -values > 0.05 , suggesting statistical insignificance. This research shows that the perceived PI among second-year, third-year, and fourth-year nursing students do not significantly differ from one another. As a result, the nursing students' professional identities remain consistent throughout these academic years. A similar study found that nursing students' PI remained statistically insignificant throughout the semester [6]. A 2024 study in China found a positive link between perceptions of clinical nursing work and PI. Final-year undergraduate nursing students had the highest identity scores, especially those enthusiastic about nursing during the COVID-19 pandemic. Indifferent students had lower scores, followed by those who viewed clinical nursing as too risky ($F=6.98$, $p<0.05$) [20]. Students with more clinical exposure demonstrated a stronger PI, as shown by a significant positive correlation between professional experience and PIFFS scores ($r=0.693$, $p<0.001$). Clinical work in the third and fourth years, particularly experiences lasting over eight months, significantly enhanced PI [22]. Similarly, the findings of [13] contrast slightly with the current study. They found that most nurses in their study were content with their level of self-responsibility, and approximately three-quarters of participants exhibited a strong PI. This shows how students view their professional duties may be influenced by life experience and maturity. Due to their increased practical exposure and deeper absorption in nursing education, third and fourth-year students showed stronger confidence in

their jobs than second-year students, indicating that educational level also had a significant impact on PI.

CONCLUSIONS

It was concluded that the study examined the level of PI among undergraduate nursing students and found it to be moderate (87.3). However, the academic year of the BSN program did not influence the PI level. To better understand how nursing students form their professional identities, future studies should explore additional factors such as practical experience and mentorship.

Authors Contribution

Conceptualization: SS

Methodology: SS, MA, SZ, MSUR

Formal analysis: MA, SZ

Writing review and editing: MA, SZ

All authors have read and agreed to the published version of the manuscript.

Conflicts of Interest

The authors declare no conflict of interest.

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