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Article

Academic Motivation, Professional Self-Concept, and Self-Esteem in BScN Students and Nursing Interns: A Cross-Sectional Study from Pakistan

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ABSTRACT

Background: Transitioning from nursing education to professional practice is psychologically demanding, often resulting in decreased motivation, self-concept, and self-esteem, which can compromise clinical performance and increase attrition. Despite global awareness of these issues, limited evidence exists from South Asian settings, particularly Pakistan, on how these psychological constructs evolve across academic years. **Objective**: This study aimed to assess and compare levels of academic motivation, professional self-concept, and self-esteem among Bachelor of Science in Nursing (BScN) students and nursing interns, and to explore interrelationships among these variables. **Methods**: A descriptive cross-sectional study was conducted at Aga Khan University School of Nursing and Midwifery, Karachi. A total of 300 participants were recruited using non-probability sampling. Data were collected via validated self-report instruments: the Academic Motivation Scale (AMS), the Professional Self-Concept of Nurses Inventory (PSCNI), and the Rosenberg Self-Esteem Scale (RSES). Ethical approval was obtained from the Aga Khan University Ethics Review Committee (Ref No. 5005-SON-ERC-17), in compliance with the Declaration of Helsinki. Statistical analysis was conducted using SPSS v27, employing Kruskal-Wallis tests, Spearman's correlation, and descriptive statistics. **Results**: Interns exhibited the lowest scores in self-esteem (Median = 20.06), professional self-concept (Mean = 65.11 ± 15.99), and intrinsic motivation (IMK = 22.16), while Year II students showed the highest PSC (Mean = 78.11 ± 7.12). Significant differences were noted in motivation and PSC across academic years ($p < 0.001$), and amotivation increased with seniority (Interns: AM = 12.76). PSC positively correlated with multiple motivational subscales (e.g., IMK: $r = 0.142$, $p = 0.014$), while RSES showed no significant correlation with motivation. **Conclusion**: A declining trend in motivation, self-concept, and self-esteem toward the end of nursing training suggests an urgent need for targeted psychological and educational interventions to strengthen students' professional development and retention. These findings advocate for mentorship and emotional support programs during late academic phases to enhance workforce readiness and patient care outcomes.

Keywords: Academic Motivation; Professional Self-Concept; Self-Esteem; Nursing Students; Internship; Psychological Adaptation; Cross-Sectional Studies

INTRODUCTION

The transition from school to university marks a critical period of psychological, emotional, and physical adjustment for students, particularly those entering professional disciplines such as nursing. This period often involves heightened stress, and many students fail to complete their education due to academic pressure, self-doubt, and psychological fatigue (1,2). Feelings of inadequacy and low self-esteem can significantly undermine motivation, reducing persistence in both higher education and future employment. At the university where this study was conducted, the attrition rate among nursing students increased from 5% in 2012 to 12% in 2013 and peaked at 21% in 2014, before declining to 10% in 2015 (Aga Khan University, personal communication, August 9, 2017). Student attrition remains a global concern, with developed nations such as the United States, Australia, and several European countries reporting similarly high rates (3). The United Kingdom's National Audit

Office, for example, documented a 15% attrition rate among nursing students in a single academic year (2). Motivation is a crucial determinant of students' learning behavior, affecting their focus, engagement, and academic persistence. It governs the direction, intensity, and durability of learning efforts among nursing students (8). A variety of factors can erode motivation in nursing education, including entering the profession unwillingly, exposure to negative social stereotypes, rapid theoretical and clinical learning demands, the intimidating hospital environment, insufficient clinical exposure, and strained educator-student relationships (9,10). These demotivating elements require active intervention by nurse educators, who play a pivotal role in inspiring students and preparing them to become competent, confident professionals and role models (11).

Alongside motivation, professional self-concept—an individual's perception of their own professional competence and identity—plays a significant role in shaping nursing performance and job satisfaction. A weak self-concept in nursing students can stem from limited occupational interest, inadequate preparation, lack of societal recognition of nursing, difficulty transitioning into practice, and uncertainty about professional alignment (12,13). These challenges negatively affect not only the individual's confidence and performance but also patient satisfaction and care quality (12,14). Professional identity is largely formed during academic training, and the development of a strong self-concept during this phase is essential to cultivate professional commitment and distinction (15).

Self-esteem, defined as the personal evaluation of one's worth and self-regard, is a foundational psychological trait influencing academic and professional behaviors. It is shaped by internal and external factors, such as personal accomplishments, recognition by peers and society, and emotional support from family (16,18). Nursing education must therefore aim to enhance students' self-esteem by integrating theoretical instruction with practical skill-building in a supportive environment (18). Low self-esteem is often linked with disengagement, poor professional identity, and high dropout rates, underscoring its importance in nursing education. Despite the established significance of these constructs—motivation, professional self-concept, and self-esteem—limited research exists within the context of nursing students in Pakistan. While international literature highlights the correlations between these psychological attributes and academic or clinical performance, little is known about how these variables evolve over the four-year BScN program and into the internship period. This gap in evidence warrants a focused investigation to understand the dynamics of student development in the Pakistani nursing education system. This study, therefore, aims to assess the levels and interrelationships of academic motivation, professional self-concept, and self-esteem among nursing students and interns at a premier nursing institution in Pakistan. Specifically, it seeks to examine how these psychological attributes vary across different years of academic progression and determine whether significant associations exist between them.

MATERIALS AND METHODS

This study employed a descriptive cross-sectional design using a quantitative research approach to assess academic motivation, professional self-concept, and self-esteem among nursing students and interns. The study was conducted at the Aga Khan University School of Nursing and Midwifery, Karachi (AKU-SONAM-P), a private institution recognized as a benchmark for nursing education in Pakistan since its establishment in 1980. The study population included all students enrolled in the Baccalaureate of Science in Nursing (BScN) program and nursing interns during the 2018–2021 academic cycles. Inclusion criteria encompassed all actively enrolled students across the four academic years and interns who had completed their final year of the BScN program. Students who were absent on the day of data collection or declined participation were excluded.

Participants were recruited using a non-probability convenience sampling method. The initial sample size was calculated using an online sample size calculator, with a 95% confidence level and a 5% margin of error, from a total population of 680 students and interns. The required sample was estimated at 246, which was further increased by 20% to compensate for potential non-response or incomplete forms. The final sample comprised 300 participants. Informed consent was obtained from all participants. Recruitment took place following scheduled lectures, during which students were invited to voluntarily participate in the study. Lists of eligible participants were obtained from the academic and clinical offices. A trained data collector was engaged to facilitate data collection from the nursing interns, with the primary author providing detailed instructions and supervision during the initial stages to ensure data integrity.

Data were collected using a self-administered questionnaire containing 80 items, divided into four sections. Section A comprised 15 items capturing demographic characteristics, socio-economic background, and motivations for entering the nursing profession. Section B included the 10-item Rosenberg Self-Esteem Scale, a validated tool widely used to assess global self-worth. Section C contained 28 items adapted from the Professional Self-Concept of Nurses Instrument (PSCNI), which evaluates aspects of professional identity and role perception. Section D used the 27-item Academic Motivation Scale (AMS), designed to assess intrinsic, extrinsic, and amotivation dimensions among students. Participants were given 30 to 40 minutes to complete the questionnaires in a classroom or seminar setting. All instruments used in the study were in English and had been previously validated for use among healthcare students in similar educational settings.

This research received ethical approval from the Ethical Review Committee at Aga Khan University Hospital under reference number 5005-SON-ERC-17 and was conducted in compliance with the ethical principles of the Declaration of Helsinki. Permissions for data collection were obtained from the Assistant Dean of Undergraduate BScN Programs, the Medical Director, and the Associate Dean of Clinical Affairs. Participation was strictly voluntary, and confidentiality of responses was ensured through anonymized data handling and secure storage of completed forms.

Data were analyzed using SPSS version 27. Descriptive statistics such as means, medians, standard deviations, and frequency

distributions were computed to summarize demographic characteristics and scale scores. The Kruskal-Wallis H test was used to examine differences in motivation, self-concept, and self-esteem across academic years. Spearman's correlation coefficient was used to assess associations among the three psychological variables. A p-value of less than 0.05 was considered statistically significant for all inferential tests. No imputation was performed for missing data; only complete responses were included in the final analysis.

RESULTS

A total of 300 participants, including BScN students from all four academic years and nursing interns, were enrolled in the study. Their demographic characteristics are detailed in Table 1. The mean age of participants was 21.29 years (SD ±1.8), with a majority being female (87.3%, n = 252). Most participants were Muslims (99%), Pakistani nationals (96.7%), and had received their previous education in English (90.7%, p = 0.013). A significant portion of the participants resided in hostels (61.7%, p = 0.039), and the largest income bracket reported was less than 1 lac PKR annually (59.3%, p = 0.022).

Regarding professional orientation, 80.7% (n = 242) had willingly chosen nursing (p = 0.044), and 90.3% (n = 271) considered nursing an important part of society (p = 0.004). Furthermore, 91.7% (n = 275) intended to pursue an MScN post-graduation (p = 0.006), and 69.7% (n = 209) planned to work after their internship (p = 0.037). A relatively high satisfaction with the nursing profession was observed (73.3%, n = 220; p = 0.033). As for the reasons behind choosing nursing, the most cited was self-interest (39.3%, n = 118), followed by job security (24.3%, n = 73), and family influence (18.7%, n = 56), with a statistically significant difference among these reasons (p = 0.048).

Table 1: Demographic Characteristics of Study Participants (N = 300)

Variable	Category	n (%)	p-value
Gender	Male	38 (12.7)	0.218[1]
	Female	252 (87.3)	
Age (years)	Mean ± SD	21.29 ± 1.8	—
Academic Year	Year I	60 (20.0)	—
	Year II	55 (18.3)	
	Year III	67 (22.3)	
	Year IV	55 (18.3)	
	Interns	63 (21.0)	
Religion	Muslim	297 (99.0)	—
	Non-Muslim	3 (1.0)	
Nationality	Pakistani	290 (96.7)	—
	Foreigner	10 (3.3)	
Ethnicity	Urdu	74 (24.7)	0.026[1]
	Gilgiti	79 (26.3)	
	Chitrali	70 (23.3)	
	Sindhi	31 (10.3)	
	Others (incl. Punjabi, Pashto)	46 (15.3)	
Medium of Schooling	English	272 (90.7)	0.013[1]
	Urdu/Others	28 (9.3)	
Current Residence	Hostel	185 (61.7)	0.039[1]
	Family Home	115 (38.3)	
Family Income (PKR/year)	< 1 lac	178 (59.3)	0.022[1]
	1–5 lacs	82 (27.3)	
	> 5 lacs	40 (13.3)	
Chose Nursing Willingly	—	242 (80.7)	0.044[1]
Considers Nursing Important	—	271 (90.3)	0.004[1]
Plans MScN Post-Graduation	—	275 (91.7)	0.006[1]
Will Work after Internship	—	209 (69.7)	0.037[1]
Satisfied with Nursing Career	—	220 (73.3)	0.033[1]
Reason for Choosing Nursing	Self-Interest	118 (39.3)	0.048[2]
	Easy Job Availability	73 (24.3)	
	Family Wish	56 (18.7)	
	Couldn't Enter Other Programs	26 (8.7)	
	Others	27 (9.0)	

[1]Chi-square test used for categorical variables across academic years or gender. [2]p-value here reflects overall distribution across 5 categories. "—" indicates that the p-value was not applicable or not analyzed for that variable.

In terms of self-esteem levels (Table 2), year one students showed the highest median score (25.15 ± 5.12), with 9 reporting high, 40 average, and 11 low self-esteem. Interestingly, year three students reported the highest number of participants with high self-esteem (n = 14), while interns exhibited the lowest median score (20.06 ± 5.53) and the highest number of low self-esteem cases (n = 28). Overall, 165 participants had average self-esteem, 46 had high self-esteem, and 89 had low self-esteem.

Table 3 presents the Spearman's correlation matrix, illustrating associations among self-esteem (RSES), professional self-concept (PSCNI), and motivation subcomponents. The correlation between RSES and PSCNI was weak and not statistically significant (r = 0.056, p = 0.331). Notably, PSCNI showed significant positive correlations with intrinsic motivation to know (IMK; r = 0.142, p = 0.014), extrinsic motivation identified regulation (EMId.R; r = 0.147, p = 0.011), and intrinsic motivation to experience stimulation (IMS; r = 0.181, p = 0.002), suggesting that higher professional self-concept is moderately linked with motivation factors. Conversely, amotivation (AM) had significant negative correlations with almost all motivation subcomponents and PSCNI (e.g., IMK: r = –0.316, p < 0.001; EMER: r = –0.206, p < 0.001), indicating that higher levels of amotivation are inversely related to professional engagement and motivation. The professional self-concept (PSC) scores across academic years and internship are detailed in Table 5. Year II students had the highest mean (78.11 ± 7.12) and median (78.11) PSC scores, followed by year III (mean = 75.07 ± 11.83). Interns had the lowest PSC score (mean = 65.11 ± 15.99), with a statistically significant difference observed among the groups (p = 0.000). These results suggest a downward trend in professional self-concept from the mid-program years to the internship period.

Table 2: Median Scores of Academic Motivation Subscales by Academic Year and Internship (N = 300)

Year of Study	IMK	IMA	IMS	EMId.R	EMIn.R	EMER	AM
Year I	22.75	21.63	18.33	23.02	22.48	21.37	8.48
Year II	23.75	21.62	20.27	22.98	22.29	21.27	9.38
Year III	23.16	22.30	21.00	23.85	23.97	22.48	11.52
Year IV	24.31	23.38	22.16	24.62	24.55	24.33	10.16
Interns	22.16	18.70	18.78	20.08	21.49	20.65	12.76
p-value	0.046	0.000	0.000	0.005	0.000	0.000	0.001

Abbreviations: IMK: Intrinsic Motivation to Know; IMA: Intrinsic Motivation to Accomplish; IMS: Intrinsic Motivation to Experience Stimulation; EMId.R: Extrinsic Motivation Identified Regulation; EMIn.R: Extrinsic Motivation Introjected Regulation; EMER: Extrinsic Motivation External Regulation; AM: Amotivation

Table 3: Self-Esteem Scores by Year of Nursing Career (N = 300)

Year of Study	Median	SD	High (>30)	Average (20–29)	Low (<20)
Year I	25.15	±5.12	9	40	11
Year II	20.71	±5.12	7	34	14
Year III	23.49	±6.87	14	33	20
Year IV	21.64	±7.34	8	31	16
Interns	20.06	±5.53	8	27	28
Total	22.25	±6.32	46	165	89

Table 4: Spearman's Correlation Matrix (r-values with p-values in parentheses)

Variables	PSCNI	EMER	IMK	EMId.R	IMS	AM	IMA	EMIn.R
RSES	0.056 (0.331)	0.084 (0.147)	0.046 (0.424)	–0.007 (0.906)	0.113 (0.051)	–0.070 (0.226)	–0.041 (0.474)	0.069 (0.236)
PSCNI	—	0.058 (0.319)	0.142* (0.014)	0.147* (0.011)	0.181** (0.002)	–0.031 (0.590)	0.119* (0.039)	0.193** (0.001)
EMER		—	0.605** (0.000)	0.644** (0.000)	0.527** (0.000)	–0.206** (0.000)	0.545** (0.000)	0.616** (0.000)
IMK			—	0.735** (0.000)	0.599** (0.000)	–0.316** (0.000)	0.594** (0.000)	0.605** (0.000)
EMId.R				—	0.585** (0.000)	–0.355** (0.000)	0.623** (0.000)	0.629** (0.000)
IMS					—	–0.167** (0.004)	0.561** (0.000)	0.553** (0.000)
AM						—	–0.230** (0.000)	–0.231** (0.000)
IMA							—	0.662** (0.000)
EMIn.R								—

Regarding motivation subscales, Table 6 reveals a shifting pattern from intrinsic to extrinsic motivation across academic progression. Year IV students scored highest in intrinsic motivation to know (IMK = 24.31), intrinsic motivation to accomplish (IMA = 23.38), and other extrinsic subcategories. However, interns showed a decline in intrinsic motivation (IMK = 22.16, IMA = 18.70) and had the highest amotivation score (AM = 12.76), reinforcing the observation of motivational decline during the internship phase. All motivation subscale differences across groups were statistically significant (IMK: p = 0.046; IMA: p = 0.000; IMS: p = 0.000; EMId.R: p = 0.005; EMIn.R: p = 0.000; EMER: p = 0.000; AM: p = 0.001). RSES: Rosenberg Self-Esteem

Scale; PSCNI: Professional Self-Concept for Nurses Instrument; EMER: Extrinsic Motivation External Regulation; IMK: Intrinsic Motivation to Know; EMId.R: Extrinsic Motivation Identified Regulation; IMS: Intrinsic Motivation to Experience Stimulation; AM: Amotivation; IMA: Intrinsic Motivation to Accomplishment; EMIn.R: Extrinsic Motivation Introjected Regulation Note: *p < 0.05; **p < 0.01

Collectively, these findings underscore that while early-year students demonstrate relatively higher intrinsic motivation, professional self-concept, and self-esteem, these parameters begin to decline in the later years, particularly during internship. The statistically significant differences across key psychological constructs (Tables 2, 5, and 6) point toward the need for targeted interventions—especially during the transitional period from student to practitioner.

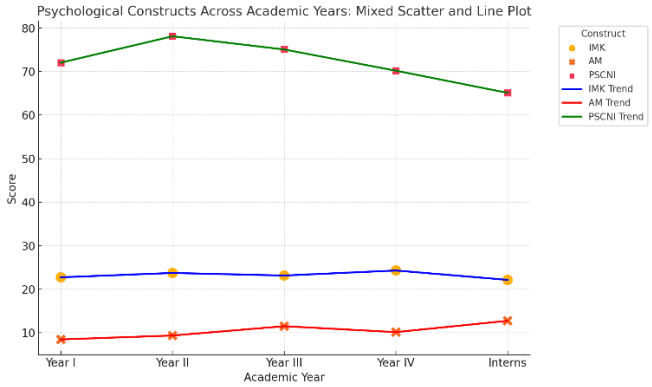

Figure 1 Psychological Constructs across Academic Years

DISCUSSION

The transition from student to healthcare professional in nursing is marked by a complex interplay of cognitive, emotional, and social demands. This study revealed that levels of academic motivation, professional self-concept (PSC), and self-esteem vary significantly across the academic years, with a clear declining trend among senior students and nursing interns. These findings have important implications for educational design and psychosocial support mechanisms within nursing education programs.

The observed decline in intrinsic motivation from junior to senior academic years aligns with the challenges of academic fatigue, increased clinical responsibilities, and the pressures of professional readiness. In this study, Year I to III students demonstrated stronger intrinsic motivational profiles, whereas Year IV students and interns exhibited greater extrinsic motivation and higher amotivation scores (Table 6). This shift may be attributed to external stressors such as impending licensure, employment uncertainty, or institutional cultures that undervalue intrinsic reinforcement in later training stages. Similar findings were reported by Pramilaa in India, who also documented diminishing motivation across academic years, though the pattern in our study diverges by showing a sharper motivational drop during the internship phase (20). This discrepancy may reflect differing institutional structures and the extent of psychological preparation provided during transitions.

Professional self-concept followed a similar declining trajectory. Year II students reported the highest PSC scores, which steadily declined among Year IV and intern groups (Table 5), consistent with findings by Jahromi et al. and Wang et al., who emphasized the role of curricular environments in shaping PSC (22, 24). Educational systems that fail to integrate positive reinforcement, mentorship, and student inclusion in decision-making processes risk eroding students' self-perception as competent professionals. The current study echoes Arthur and Thorne's assertion that well-structured clinical education and the presence of skilled, confident role models are vital for sustaining PSC across training years (23). The decline in PSC among interns in our study suggests a failure to maintain this psychosocial scaffolding as students approach graduation, placing them at higher risk of disillusionment and attrition—a concern validated by existing literature on early career nursing turnover (21).

Self-esteem patterns observed in this cohort also deviated from traditional expectations. While longitudinal studies like that of İlhan et al. reported increasing self-esteem across nursing education (25), our results indicate higher self-esteem among Year I and III students, with noticeable declines in Year II, IV, and interns (Table 2). The drop among interns is particularly concerning, suggesting that the clinical reality may not align with their prior expectations or that institutional support systems weaken at this critical stage. Previous studies have implicated inadequate faculty-student relationships, clinical stress, and unclear academic expectations as factors undermining student self-esteem (27, 28). Although 55% of our sample exhibited moderate self-esteem, this proportion is significantly lower than the 97.5% reported in an Indian cohort (26), pointing to potential cultural or systemic differences in the learning climate or support mechanisms.

When correlating these psychosocial constructs, the study found only a weak, non-significant association between self-esteem and professional self-concept ($r = 0.056$, $p > 0.05$), in contrast to the significant relationships reported by Sabanciogullari and Dogan (30) and Arthur et al. (31), who emphasized the mutual reinforcement of self-perception and self-worth in nursing identity. The lack of a significant correlation in our cohort may be due to unmeasured confounders such as mental health status, social support, or individual resilience, which future studies should investigate. Nevertheless, professional self-concept showed consistent positive associations with several intrinsic and extrinsic motivation domains, reinforcing the theoretical model that PSC acts as a mediator between motivation and professional behavior (Table 3). This is supported by Yilmaz and Kumsar's findings that professional identity enhances engagement and academic persistence (33).

Clinically, these findings are consequential. Nurses entering the workforce with diminished self-concept and waning intrinsic motivation may be less resilient, less likely to pursue continued education, and more prone to early career burnout. Institutions must invest in proactive strategies that maintain motivation and foster self-esteem—especially during transitional phases such as final year placements and internships. These may include

mentorship programs, reflective learning activities, and stress management workshops tailored to the nursing context.

While the study offers valuable insights, it is not without limitations. The cross-sectional design restricts causal interpretations and does not account for intra-individual change over time. Although the sample size was robust (N = 300), it was drawn from a single institution, which limits generalizability. Additionally, self-report measures are susceptible to social desirability and recall bias. Future studies should adopt longitudinal designs and consider incorporating qualitative methods to explore contextual and experiential nuances.

In conclusion, the downward trends in motivation, professional self-concept, and self-esteem observed in this study underscore the psychological vulnerabilities of nursing students, particularly in their final academic year and internship period. Educational institutions must recalibrate their support systems to sustain students' internal motivation and positive identity development throughout their academic journey. Strengthening faculty mentorship, integrating mental health resources, and tailoring clinical education to bolster confidence and role clarity could mitigate attrition and enhance long-term professional retention. Future research should explore targeted interventions and their longitudinal effects on these psychosocial constructs to guide evidence-based reform in nursing education.

CONCLUSION

This study identified a progressive decline in academic motivation, professional self-concept, and self-esteem among BScN students and nursing interns, with the most pronounced deficits observed during the internship phase. These findings highlight critical psychological and educational gaps during the transition from student to clinical practitioner, suggesting that the quality of nursing education and mentorship significantly impacts the professional identity and emotional well-being of future nurses. Addressing these issues is imperative for improving nurse retention, enhancing patient care, and fostering a resilient nursing workforce. Clinically, interventions aimed at sustaining intrinsic motivation and nurturing professional self-concept are essential to optimize care outcomes and reduce burnout. Future research should explore longitudinal changes and evaluate targeted educational and psychosocial strategies to reinforce professional development and emotional readiness among nursing trainees.

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