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A Survey on the Current Status of Clinical Belonging Among Nursing Students and an Analysis of Influencing Factors

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Abstract

Objective To investigate and analyze the current status of clinical belonging among nursing interns. **Methods:** Convenience sampling was used to select 270 nursing interns from a Grade A tertiary hospital in Zhengzhou as study subjects, and the Clinical Belonging Scale was administered to assess their clinical belonging. **Results:** The mean score on the Clinical Belonging Scale was (94.28 ± 25.47) points. There were statistically significant differences ($P < 0.05$) in clinical belongingness scores among nursing interns based on educational background, duration of internship, department, primary reason for choosing nursing as a major, level of passion for nursing, and willingness to pursue clinical nursing work after graduation. Multiple linear regression analysis indicated that the current department, the primary reason for choosing nursing, the level of passion for the nursing profession, and the intention to pursue clinical nursing work after graduation were independent factors influencing clinical belonging among nursing interns ($P < 0.05$). **Conclusion:** Clinical belonging among nursing students is generally at a slightly below-average level, with the department they are currently assigned to, their primary reasons for choosing nursing as a major, their level of passion for the nursing profession, and their willingness to pursue a clinical nursing career after graduation being the main influencing factors.

Keywords: Nursing Students; Sense of Belonging in Clinical Settings; Survey of the Current Situation.

Introduction

Clinical belonging refers to the emotional experience of clinical healthcare professionals who subjectively feel recognized and accepted by others or a group ^[1]. This emotional experience has a significant impact on nurses' work performance, efficiency, and the quality of care ^[2]. Clinical internships are a critical stage in the professional socialization of undergraduate nursing students; a strong sense of belonging can enhance the effectiveness of

internships and reduce the likelihood of leaving the profession, whereas a low sense of belonging makes students more likely to abandon the nursing profession ^[3]. With the current demand for healthcare services continuing to grow, nursing students—as an integral part of the healthcare system—face increasing pressures from both work and study, leading to a significant decline in the quality of their clinical practice experiences ^[4]. Furthermore,

during their transition to becoming professional nurses, they often encounter a disparity between their ideals and reality, making them prone to role ambiguity and a diminished sense of clinical belonging. Therefore, understanding their sense of clinical belonging holds practical significance. Currently, although there are numerous tools for assessing clinical belonging available internationally, the lack of unified standards has hindered in-depth research on this topic. In China, research on clinical belonging is still in its infancy, and existing studies primarily focus on clinical practice aspects—such as skill assessments—while paying insufficient attention to psychological experiences [5]. A search on China National Knowledge Infrastructure (CNKI) using the keyword “clinical belonging” yielded 26 relevant articles published in the past five years. Among these, 15 studies focused on newly hired nurses or nurses undergoing standardized training, while 11 focused on student nurses. For example, a study by Yuan Niu et al. found that student nurses generally exhibited low levels of clinical belonging [6]. In summary, existing research on clinical belonging largely focuses on newly hired nurses or nurses undergoing standardized training, whereas studies on the clinical belonging of student nurses are relatively scarce, indicating significant room for further research.

Therefore, this study focuses on nursing students completing their clinical rotations at a Grade A-III hospital in Zhengzhou to investigate and analyze the current status of their sense of clinical belonging, with the aim of enhancing this sense of belonging and providing a reference for nursing administrators and educators in developing intervention plans to foster a sense of clinical belonging during the clinical rotation period.

1. Subjects and Methods

1.1 Study Population

From October to December 2025, 270 nursing interns were selected using convenience sampling from a Grade III, Class A hospital in Zhengzhou. Inclusion criteria: ①currently undergoing clinical internship;②duration of internship ≥ 3 months; ③provided informed consent and voluntarily participated in this study. Exclusion criteria: those who interrupted their internship for other reasons.

1.2 Research Methods

Using a questionnaire survey method, the researchers distributed the questionnaires on-site after obtaining approval from the hospital’s ethics committee. Prior to the survey, participants were

briefed on the purpose of the study, the instructions for completing the questionnaire, and the confidentiality policy. Responses were anonymous, and the questionnaires were collected on the spot. A total of 290 questionnaires were distributed, and 270 valid questionnaires were collected, resulting in a valid response rate of 93.10%.

1.3 Research Tools

Design a general information questionnaire that includes demographic characteristics (gender, age, educational background), internship-related information (duration of internship, current department, main reasons for choosing nursing as a major), and professional attitudes (level of passion for nursing, willingness to pursue clinical nursing work after graduation).

The Chinese version of the Clinical Sense of Belonging Scale (BES-CPE) [8], adapted by Tian Jing [7], comprises three dimensions—communication, self-esteem, and efficacy—and consists of 34 items. It uses a 5-point Likert scale with positive scoring, where scores from 1 to 5 represent “completely disagree” to “completely agree,” respectively. The total score ranges from 34 to 170, with higher scores indicating a stronger sense of clinical belonging [9]. The scale’s scoring categories are as follows: 34–79 points represent the low-level range; 79–125 points represent the moderate-level range; and 125–170 points represent the high-level range. This scale demonstrates good reliability and validity (Cronbach’s α coefficient of 0.934).

1.4 Statistical Methods

Statistical analysis was performed using SPSS 26.0 software. Categorical variables, such as gender and educational level, were presented as frequency distributions and percentages (%); continuous variables were expressed as mean ± standard deviation ($\bar{x} \pm s$). Tests for differences were conducted using the independent samples t-test or one-way analysis of variance (ANOVA), while multivariate analysis was performed using multiple linear regression. A P-value of <0.05 was considered statistically significant.

2. Results

2.1 Scores and Comparisons of Clinical Belonging Among Nursing Students

See Table 1 for details on the scores for clinical belonging among nursing students.

Table 1 Overall Profile of Clinical Belonging Among Nursing Students (n=270)

Name	Number of Items	Median	Score ($\bar{x} \pm s$)	Average Score per Item
Efficacy Dimension	7	3.57	24.50±5.88	3.50±0.84
Communication Dimension	13	2.00	33.80±14.17	2.60±1.09
Self-Esteem Dimension	14	2.00	35.98±16.24	2.57±1.16
Total Score	34	2.85	94.28±25.47	2.77±0.75

Clinical belonging among nursing students with different characteristics varies to varying degrees; the scores are shown in Table 2.

Table 2 Comparison of Clinical Belonging Scores Among Nursing Students with Different Characteristics (n=270)

Item	Number of Cases (%)	Score	t/F-value	P-value
Gender	Male	32 (11.85)	88.74±29.24	-1.309
	Female	238 (88.15)	95.20±24.82	
Age	18–20	44 (16.30)	100.30±20.74	2.048
	21–23	147 (54.44)	95.20±29.58	
	24–26	63 (23.33)	88.40±17.00	
	≥27	16 (5.93)	93.84±20.74	
Educational Level	Associate's	186 (68.89)	96.22±28.22	2.369
	Degree	84 (31.11)	89.76±17.68	
	Bachelor's			
	Degree			
Internship Duration	3–6 months	8 (2.96)	57.46±24.82	28.382
	6–9 months	96 (35.56)	106.76±25.50	
	More than 9 months	166 (61.48)	88.74±21.76	
Current Department	Internal Medicine	56 (20.74)	98.60±21.76	4.205
	Surgery	59 (21.85)	95.20±24.14	
	Obstetrics/Gynecology or Pediatrics	84 (31.11)	97.58±25.84	
	Emergency Department/ICU/Operating Room	41 (15.19)	79.90±29.58	
	Other	30 (11.11)	95.20±22.44	
Main Reason for Choosing Nursing	Personal Interest	45 (16.67)	99.96±22.44	6.659
	Family advice	38 (14.07)	93.16±25.16	
	Employment prospects	104 (38.52)	99.96±22.10	
	Admission through alternative placement	72 (26.67)	81.94±28.22	
	Other	11 (4.07)	98.60±26.18	
Level of Passion for Nursing	Very passionate	51 (18.89)	126.48±11.22	90.598
	Fairly passionate	33 (12.22)	115.94±6.80	
	Average	82 (30.37)	85.68±21.08	
	Not very passionate	69 (25.56)	80.58±15.30	
	Not passionate at all	35 (12.96)	74.46±20.74	

Willingness to engage in clinical nursing work after graduation	Willing	59 (21.85)	102.00±29.24	7.805
	Undecided	155 (57.41)	95.20±22.78	
	Unwilling	56 (20.74)	83.98±25.16	

2.2 Multiple Linear Regression Analysis of Factors Affecting Clinical Belonging Among Nursing Students

With the total score for clinical belonging among nursing students on clinical rotation set as the dependent variable, this study selected key independent variables closely associated with it—such

as educational background, duration of clinical rotation, current department, primary reasons for choosing the nursing major, level of passion for the nursing major, and willingness to pursue clinical nursing work after graduation—based on univariate analysis. Using multiple linear regression, the study examined the magnitude of the effects of each independent variable on the dependent variable as well as the relationships among them. See Table 3 for details.

Table 3 Independent Variable Assignments

Independent Variable	Assignment Method
Educational Background	Associate's degree = 0, Bachelor's degree = 1
Internship Duration	3–6 months = 0, 6–9 months = 1, 9 months or more = 2
Current Department	Internal Medicine = 0, Surgery = 1, Obstetrics/Gynecology or Pediatrics = 2, Emergency Department/ICU/Operating Room = 3, Other = 4
Main Reason for Choosing Nursing	Personal Interest = 0, Family Recommendation = 1, Job Prospects = 2, Admission via Alternative Placement = 3, Other = 4
Level of Passion for Nursing	Very Passionate = 0, Fairly Passionate = 1, Moderate = 2, Not Very Passionate = 3, Not Passionate at All = 4
Willingness to Pursue Clinical Nursing Work After Graduation	Willing = 0, Undecided = 1, Unwilling = 2

The results of the multiple linear regression analysis (Table 4) show that the current department, the primary reason for choosing the nursing major, the level of passion for the nursing major, and the willingness to engage in clinical nursing work after graduation were ultimately included in the regression equation ($P < 0.05$) as independent predictors of clinical belonging among nursing

students. Among these, the level of passion for the nursing major had the strongest positive predictive effect on clinical belonging. The overall test of the regression model was statistically significant ($F = 42.036$, $P < 0.001$), with an adjusted R^2 of 0.550, indicating that the aforementioned variables account for 55.0% of the variance in clinical sense of belonging.

Table 4 Multiple Linear Regression Analysis of Factors Influencing Clinical Belonging Among Nursing Students (n=270)

Variable	B-value	SE	β	t-value	P-value
Constant	4.623	0.286	—	16.173	<0.001
Educational Level	0.169	0.122	0.105	1.389	0.166
Internship Duration	-0.067	0.060	-0.049	-1.113	0.267
Current Department	-0.056	0.025	-0.094	-2.274	0.024
Main Reason for Choosing Nursing	-0.081	0.028	-0.120	-2.903	0.004
Level of passion for the nursing major	-0.402	0.025	-0.690	-15.854	<0.001
Willingness to pursue clinical nursing work after graduation	-0.164	0.048	-0.143	-3.436	0.001

3. Discussion

3.1 Clinical belonging among nursing students is at a slightly below-average level

This study shows that the total score for clinical belonging among nursing students was (94.28 ± 25.47) points, which falls within the moderate range. This indicates that their overall clinical belonging is at a slightly below-average level, showing a certain gap compared to the study by Chen Meigui et al. on clinical belonging among nursing students at a Grade A Level III hospital in Qingdao (score: 108.26 ± 13.59 points, classified as high) [10], where scores were 108.26 ± 13.59 —a high level—indicating a certain disparity. Dimension analysis revealed that the efficacy dimension scored the highest, attributable to the professional skills training courses provided by nursing schools prior to the clinical placement. Scores for the communication and self-esteem dimensions were lower, reflecting significant deficiencies in clinical communication and self-worth. Given the lack of experience among these nursing students, these areas require urgent improvement.

Nursing students who have just begun their clinical rotations lack experience, and their communication with patients, family members, and healthcare professionals inevitably falls short in terms of communication skills and methods. If they are questioned by patients due to procedural errors, they are highly prone to self-doubt, which can lead to a loss of professional self-esteem. Relevant domestic studies indicate that there is a strong correlation between nursing students' professional attitudes and their sense of clinical belonging; a negative professional attitude can significantly reduce their level of clinical belonging [11].

3.2 Analysis of Factors Affecting Clinical Belonging Among Nursing Students

3.2.1 Current Department

This study found that nursing students in high-stress departments such as the emergency department, ICU, and operating room scored lower on clinical belonging than those in general departments such as internal medicine, surgery, and obstetrics/gynecology or pediatrics. In the emergency department, ICU, and operating room, patients' conditions are often critical and rapidly changing, and nursing standards are stringent; nursing students are highly susceptible to negative emotions due to their own professional shortcomings. At the same time, work in these departments is demanding, interpersonal communication is limited, and departments place greater emphasis on work efficiency, making it difficult for nursing students to receive adequate guidance and recognition, which consequently lowers their sense of belonging. It is recommended that clinical training hospitals develop department-specific mentoring plans and assign experienced clinical instructors; reasonably schedule nursing students' work hours while setting aside ample time for team communication; strengthen targeted pre-service training to enhance students' ability to adapt to their roles; and provide nursing students with more encouragement and support [12].

3.2.2 Primary Reasons for Choosing the Nursing Major

This study found that nursing students admitted through "program reassignment" or "family recommendation" (non-voluntary choices) reported lower clinical sense of belonging than those who chose nursing based on "personal interest," "employment prospects," or "other" reasons (voluntary choices). Students who did not voluntarily choose the nursing major generally lack

intrinsic motivation for professional study, tend to view clinical internships as an academic burden, and struggle to form strong emotional bonds with the ward team and the nursing profession. It is recommended that institutions provide orientation education on professional identity for students admitted through reallocation to enhance their understanding of and commitment to the nursing profession; they should also establish personalized career planning guidance courses to explore each student's career interests based on their individual characteristics and strengthen their willingness to actively integrate into the clinical setting [13].

3.2.3 Level of Passion for the Nursing Major

This study found that the higher the level of passion, the stronger the sense of clinical belonging. Nursing students with a high level of passion demonstrate professional identity and a proactive attitude toward learning, and are willing to acquire knowledge and skills during their clinical rotations; those with a low level of passion adopt a passive attitude toward clinical practice, lack the willingness to communicate proactively, and struggle to adapt to the clinical environment. It is recommended that nursing schools integrate knowledge of nursing ethics and related topics into theoretical coursework to help students appreciate the happiness and sense of accomplishment that nursing work brings to people; clinical hospitals should provide students with a platform to participate in teaching activities, allowing them to experience the professional fulfillment derived from managing patients' health [14].

3.2.4 Willingness to Pursue Clinical Nursing Work After Graduation

This study found that nursing students who explicitly expressed a willingness to pursue clinical nursing work after graduation had a higher sense of clinical belonging than those who were "undecided" or "unwilling" to pursue clinical work. Students with clear career intentions view their clinical rotations as a process of building professional experience; they proactively hone their skills and participate in department activities, thereby gaining a sense of belonging; In contrast, nursing students considering a career change lack clear internship goals, adopt a passive attitude, and neglect interpersonal communication, making it difficult for them to develop a sense of belonging within the department. It is recommended to implement personalized career guidance to correct cognitive biases; provide opportunities for rotations across multiple departments to clarify career paths; enhance social recognition and professional dignity in nursing; foster a correct understanding of the profession's value; and guide students toward developing positive career aspirations [15].

4. Summary

This study found that clinical belonging among nursing students on clinical rotations is generally at a slightly below-average level, indicating significant room for improvement. The current clinical department, the primary reasons for choosing nursing as a major, the degree of passion for the nursing profession, and the willingness to pursue a career in clinical nursing after graduation are independent factors influencing clinical belonging among nursing students on clinical rotations. It is recommended that higher education institutions and clinical training hospitals collaborate to optimize nursing education and clinical practice components, improve the clinical rotation environment, and strengthen professional identity education in order to enhance clinical belonging among nursing students on clinical rotations.

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