

# Correlation between Clinical Internship Environment and Professional Identity of Undergraduate Student Nurses on Clinical Internship

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**Abstract** [Objectives] To explore the correlation between the clinical internship environment and professional identity of undergraduate student nurses on clinical internship. [Methods] From September 8, 2023 to January 8, 2024, a questionnaire survey was conducted among 315 undergraduate student nurses on clinical internship from 3 comprehensive third-grade class A hospitals in the region. The survey tools included General Information Questionnaire, Student Nurse Professional Identity Questionnaire, and Clinical Internship Environment Evaluation Scale. [Results] The total score of professional identity of the undergraduate student nurses on clinical internship was  $(59.55 \pm 12.78)$  points, and the total score of clinical internship environment was  $(129.31 \pm 16.02)$  points, both at medium to high levels. There was a significant positive correlation between clinical internship environment and professional identity ( $r = 0.547, P < 0.001$ ). [Conclusions] The clinical internship environment is closely related to the professional identity of undergraduate student nurses on clinical internship. It is necessary to optimize the internship environment in a targeted manner to enhance the professional identity of student nurses, thereby stabilizing the nursing talent team.

**Key words** Undergraduate student nurses on clinical internship, Professional identity, Clinical internship environment

## 1 Introduction

Under the background of the *Healthy China 2030 Planning Outline*, the nursing team serves as the core force for national health. However, the problem of nurse shortage in China is prominent, mainly attributed to the low employment rate of student nurses and high turnover rate of practicing nurses<sup>[1]</sup>. As the reserve force of nursing professionals, the professional identity of student nurses is crucial to the stability of the nursing team. Essentially, professional identity refers to a clear understanding of career goals and professional capabilities, and it constitutes the emotional foundation for adhering to the nursing profession<sup>[2]</sup>. In China, the overall professional identity of student nurses is at a medium to upper level, but there is still room for improvement<sup>[3]</sup>. Studies have shown that work pressure and psychological issues cause fluctuations in the professional identity of student nurses, which changes dynamically during the internship period from initial enthusiasm to burnout due to pressure in the later stage<sup>[4]</sup>. Early foreign studies have confirmed that internship experience and instructors play a vital role in shaping the professional identity of student nurses<sup>[5]</sup>. Clinical internship is a critical period for student nurses to transition their professional roles and develop professional identity, and the internship environment is a core influencing factor. A positive internship environment is fundamental to improving the comprehensive quality of student nurses. Henderson<sup>[6]</sup> pointed out that student nurses' perception of instructors' care affects their sense of belonging and willingness to engage in the nursing profession. Domestic studies have also verified that satisfaction with the intern-

ship environment is strongly correlated with professional identity; hierarchical discrimination in clinical departments can lead to a lack of sense of belonging and the emergence of pressure among student nurses, thereby affecting their professional attitudes<sup>[7]</sup>. This study aimed to investigate the current status of internship environment and professional identity of student nurses, analyze the correlation between the two factors and the adverse factors in the internship environment, and propose optimization suggestions. The ultimate goal is to alleviate the negative feelings of student nurses, enhance their professional identity, and contribute to the implementation of the Healthy China strategy.

## 2 Subjects and methods

**2.1 Subjects** From November 2023 to January 2024, 351 student nurses on internship from 3 comprehensive third-grade class A hospitals in the region were selected as research subjects based on the accessibility and convenience of the researchers.

### 2.2 Research methods

**2.2.1 Research tools.** (i) General Information Questionnaire: It included items such as gender, age, whether the student was an only child, personality, household registration location, education background, internship duration and department in the hospital, professional title of the instructor, and whether the nursing major was chosen voluntarily. (ii) Clinical Internship Environment Questionnaire: Compiled by Chu Yanxiang<sup>[8]</sup>, this questionnaire covered 6 dimensions (teaching methods, teacher quality, learning opportunities, interpersonal relationships, work atmosphere, and organizational support) with a total of 30 items. The Cronbach's  $\alpha$  coefficient of the scale was 0.887, indicating good reliability. A Likert-5 rating scale was used (1 = strongly disagree to 5 = strongly agree), with a total score ranging from 30 to 150 points. A higher score indicated a more favorable clinical intern-

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ship environment. (iii) Student Nurse Professional Identity Questionnaire: Developed by Hao Yufang<sup>[9]</sup>, this questionnaire consisted of 17 items and 5 dimensions, namely professional self-concept, benefits of staying in the profession and risk of leaving, social support and self-reflection, autonomy in career choice, and social persuasion. The Cronbach's  $\alpha$  coefficient was 0.827, showing good internal consistency. A Likert-5 rating scale was adopted (1 = strongly disagree to 5 = strongly agree), with a total score ranging from 17 to 85 points. A higher score reflected a stronger sense of professional identity.

**2.2.2 Survey methods.** An electronic questionnaire was created using Wenjuanxing (an online questionnaire platform), with detailed instructions explaining the research purpose and filling guidelines. With the assistance of the nursing department of each participating hospital, notifications and questionnaire QR codes were released in the WeChat groups of student nurses on internship. The student nurses completed the questionnaire voluntarily and anonymously, with only one submission allowed per IP address. The questionnaire could only be submitted if all items were completed.

**2.2.3 Statistical methods.** SPSS 25.0 software was used for statistical analysis. Descriptive statistics (including cases, rates, percentages, means, and standard deviations) were used to describe the general characteristics of the subjects and the scores of the scales. Pearson correlation analysis was used to explore the correlation between clinical internship environment and professional identity. A  $P$  value  $< 0.05$  was considered statistically significant.

### 3 Results and analysis

**3.1 General information of student nurses** General information of 315 undergraduate student nurses on clinical internship is listed in Table 1. From Table 1, it is evident that nearly 92% of the respondents in this group are female, around 60% live in rural areas, and nearly 60% have a monthly household income of less than 5 000 yuan. Approximately 80% are non-only children, close to 30% entered the nursing profession involuntarily, and roughly half express an intention to pursue postgraduate studies while the other half do not.

**3.2 Total score and scores of each dimension of professional identity** Total score and scores of each dimension of professional identity are listed in Table 2.

The total average score of professional identity was  $(59.55 \pm 12.78)$  points, at a medium level and higher than previous studies<sup>[12-13]</sup>. This is because the subjects were in the mid-internship stage, having completed the transition from "student" to "prospective nurse", they gained in-depth understanding of nurse-patient communication, nursing procedures, and team collaboration through practice, and accumulated experience in role adaptation and coping with high-intensity work. However, professional identity is affected by multiple factors: Some student nurses plan to take postgraduate exams or change careers, leading to insufficient intrinsic motivation; the gap between clinical reality and expecta-

**Table 1 General information of student nurses ( $n = 315$ )**

Item		Number ( $n$ )	Percentage (%)
Gender	Male	28	8.89
	Female	287	91.11
Household residence	Rural area	186	59.05
	Urban area	129	40.95
Monthly family income	< 3 000 yuan	38	12.06
	3 000 - 5 000 yuan	137	43.50
	> 5 000 yuan	140	44.44
Whether an only child	Yes	75	23.81
	No	240	76.19
Whether nursing major was chosen voluntarily	Yes	226	71.75
	No	89	28.25
Whether to engage in nursing profession after graduation	Yes	252	80.00
	No	63	20.00
Whether having the intention to take postgraduate entrance examination	Yes	150	47.62
	No	165	52.38

**Table 2 Total score and dimension scores of professional identity questionnaire**

Dimension	Scoring range points	Average score ( $\bar{x} \pm s$ ) // points
Professional self-concept	6 - 30	20.97 $\pm$ 4.44
Benefits of staying in the profession and risk of leaving	4 - 20	13.60 $\pm$ 3.04
Social comparison and self-reflection	3 - 15	9.81 $\pm$ 2.11
Autonomy in career choice	2 - 10	7.51 $\pm$ 1.43
Social persuasion	2 - 10	6.66 $\pm$ 1.76
Total scale score	17 - 85	59.55 $\pm$ 12.78

tions (*e. g.*, night shifts, holiday work, patient demands, employment pressure) causes fatigue and burnout; the traditional "valuing medicine over nursing" phenomenon and disrespect from patients/families affect their career planning. Thus, schools, hospitals, and instructors should strengthen collaboration; provide positive guidance, enhance daily communication, understand student nurses' needs, and provide support to make them feel "valued" and enhance their professional belonging.

**3.3 Clinical Internship Environment** Total score and scores of each dimension of clinical internship environment are listed in Table 3.

**Table 3 Total score and dimension scores of clinical internship environment evaluation scale**

Dimension	Scoring range points	Average score ( $\bar{x} \pm s$ ) // points
Teaching methods	5 - 25	22.21 $\pm$ 2.96
Teacher quality	5 - 25	20.83 $\pm$ 2.99
Learning opportunities	5 - 25	20.66 $\pm$ 3.04
Interpersonal relationships	5 - 25	20.72 $\pm$ 3.06
Work atmosphere	5 - 25	21.06 $\pm$ 2.96
Organizational support	5 - 25	21.81 $\pm$ 3.06
Total score	30 - 150	129.31 $\pm$ 16.02

The results showed that the total score of clinical internship environment evaluation was  $(129.31 \pm 16.02)$  points, higher than 50% of the maximum total score (150 points), indicating that undergraduate student nurses had a relatively high evaluation of the clinical internship environment. The possible reasons are as follows: First, the participating hospitals provided favorable internship environments and teaching resources. Sufficient clinical practice allowed student nurses to integrate theoretical knowledge with clinical practice, realizing the unification of theory and practice. Meanwhile, advanced medical equipment enabled them to learn content not covered in textbooks and keep pace with cutting-edge technologies, broadening their professional horizons. In addition,

clinical instructors' teaching style (integrating diseases of different systems through typical cases and personalized nursing) helped student nurses overcome unfamiliarity with clinical work and adapt to the fast-paced environment quickly<sup>[10]</sup>. Among all dimensions, "teaching methods" scored the highest  $(22.21 \pm 2.96)$  points, suggesting it is a key factor affecting internship experience. Therefore, clinical instructors should provide systematic and professional guidance to improve student nurses' internship satisfaction and effectiveness<sup>[11]</sup>.

**3.4 Correlation between internship environment and professional identity** Correlation between clinical internship environment and professional identity are listed in Table 4.

**Table 4** Correlation between clinical internship environment and professional identity (*r* value)

	Total score of clinical internship environment	Teaching methods	Work atmosphere	Interpersonal relationships	Organizational support	Learning opportunities	Teacher quality
Total score of professional identity	0.547 **	0.490 **	0.531 **	0.505 **	0.487 **	0.509 **	0.521 **
Professional self-concept	0.474 **	0.458 **	0.468 **	0.410 **	0.415 **	0.420 **	0.466 **
Benefits of staying and risk of leaving	0.515 **	0.433 **	0.502 **	0.493 **	0.472 **	0.493 **	0.470 **
Social comparison and self-reflection	0.408 **	0.347 **	0.394 **	0.377 **	0.387 **	0.371 **	0.393 **
Social persuasion	0.417 **	0.393 **	0.459 **	0.465 **	0.413 **	0.473 **	0.447 **
Autonomy in career choice	0.450 **	0.431 **	0.417 **	0.425 **	0.370 **	0.429 **	0.431 **

**NOTE** \*\*  $P < 0.01$  indicates extremely significant correlation.

The study confirmed that the total score of clinical internship environment and its dimensions were significantly positively correlated with professional identity and its dimensions ( $P < 0.05$ ). The internship environment is the primary channel for student nurses to understand the nursing profession. A harmonious environment helps form positive professional concepts, while an unfavorable one leads to negative perceptions. Therefore, nursing managers should pay attention to the impact of the internship environment, improve the environment, strengthen care for student nurses, and enhance their professional accomplishment to boost professional identity.

## 4 Conclusions

Differences in the internship environment have significant impacts on the formation of student nurses' professional identity, and a good environment positively promotes professional identity. Hospital managers should attach importance to student nurses' psychological and self-esteem needs, create a favorable environment to enhance their professional identity, and emphasize the role of clinical internship environment education in shaping values of student nurses.

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