

Correlation between sense of professional gain and psychological resilience among junior nurses

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Abstract: To investigate the current status of sense of professional gain and psychological resilience among junior nurses, and to analyze their correlation and the factors associated with sense of professional gain, we used convenience sampling to recruit 234 nurses clinical with experience ≤ 5 years from six secondary and tertiary hospitals in Guangdong Province between March and April, 2026. A general information questionnaire, the 10-item Connor-Davidson Resilience Scale, and the Nurses' Sense of Professional Gain Questionnaire were administered. Independent-samples t tests, one-way analysis of variance, Pearson correlation analysis, and multiple linear regression analysis were performed. The psychological resilience and sense of professional gain scores among junior nurses were 35.72 ± 6.41 and 78.63 ± 10.18 , respectively; the two were positively correlated ($r=0.685$, $P<0.001$). Multiple linear regression analysis showed that years of work experience, shift work status, average number of night shifts per month, average daily working hours, and job satisfaction were associated with sense of professional gain (all $P<0.05$), with an adjusted R^2 of 0.387 for the model. Psychological resilience is closely associated with sense of professional gain among junior nurses, and sense of professional gain is also associated with years of work experience, shift arrangements, working hours, and job satisfaction. Nursing managers may improve junior nurses' occupational experiences by enhancing their ability to adapt to stress, optimizing shift scheduling, and strengthening professional support.

Keywords: junior nurses; sense of professional gain; psychological resilience; correlation; cross-sectional study

1 Introduction

Nursing personnel are an important component of the healthcare system. Junior nurses are at a critical stage in the transition from academic learning to clinical practice, and their professional adaptation is closely related not only to their individual career development but also to nursing quality, patient safety, and nursing workforce stability [1]. Because of their relatively limited clinical experience, junior nurses are more susceptible to accumulated occupational stress, burnout, and increased turnover intention when faced with an intensive work pace, complex nurse-patient communication, rotating night shifts, and emergency management [2]. Therefore, identifying modifiable factors in their career development from the two perspectives of positive occupational experiences and the ability to adapt to stress has practical significance.

Sense of professional gain refers to nurses' positive perceptions of professional value, positive emotions, personal growth, and social support during their professional practice, and is associated with the work environment and positive professional behaviors [3]. Psychological resilience reflects an individual's ability to maintain adaptation and restore equilibrium when facing stress, difficulties, or setbacks, and is an important psychological resource for coping with stress among nursing personnel [4]. Previous studies indicate that sense of professional gain has become an important positive psychological indicator in research on nurses' occupational experiences. However, more studies of junior nurses are needed to provide evidence that simultaneously examine the relationship between sense of professional gain and psychological resilience and work-related factors [5]. This study aims to investigate the current status of sense of professional gain and psychological resilience among junior nurses and to analyze their correlation and the factors associated with sense of professional gain, thereby providing evidence to nursing management.

2 Participants and methods

2.1 Participants

Convenience sampling was used to recruit junior clinical nurses from six secondary and tertiary hospitals in Guangdong Province between March and April, 2026. The inclusion criteria were: holding a Nursing Practicing Qualification Certificate; having ≤ 5 years of clinical work experience; being currently employed and on active duty; and being able to communicate normally and willing to participate in the survey. The exclusion criteria were: nurses undertaking further training, nursing interns, and nonclinical nursing personnel; having experienced a major life event in the previous 3 months; and submitting incomplete questionnaires or questionnaires with obvious logical inconsistencies.

The sample size was estimated using the empirical formula for multiple linear regression, $N \geq 50 + 8m$ [6], where m is the number of independent variables included in the analysis. Approximately 13 general characteristics and main analytical variables were included in this study, yielding a minimum estimated sample size of 154. Allowing for 10%–20% of questionnaires being invalid, containing missing responses, or exhibiting logical inconsistencies, the planned sample size was at least 193. A total of 273 questionnaires were distributed, and 234 valid questionnaires were obtained, giving a valid response rate of 85.7%. The actual sample size met the requirements for the correlation and multiple linear regression analyses in this study.

This study used an anonymous questionnaire. All data were used solely for the research project, and all information was kept strictly confidential. All participants provided informed consent and participated voluntarily.

2.2 Survey instruments

2.2.1 General information questionnaire

The questionnaire was designed by the researchers according to the study objectives and comprised 13 items: sex, age, highest educational attainment, marital status, years of work experience, department, professional title, type of work position, shift work status, average number of night shifts per month, average daily working hours, nurse-to-patient ratio, and job satisfaction.

2.2.2 10-item Connor-Davidson resilience scale

The 10-item Connor-Davidson Resilience Scale (CD-RISC-10) was used [7], with the Chinese version based on a relevant Chinese adaptation study [8]. The scale contains 10 items. In this study, the electronic questionnaire adopted a five-point Likert scoring system ranging from 1 (never) to 5 (always), with total scores ranging from 10 to 50. Higher scores indicate greater psychological resilience. Cronbach's α for the scale in this study sample was 0.892.

2.2.3 Nurses' sense of professional gain questionnaire

The survey items in this study were based on the Nurses' Sense of Professional Gain Questionnaire developed by Hu

Jing et al.[9]. The version comprised 29 items scored on a four-point scale ranging from 1 (strongly disagree) to 4 (strongly agree), with total scores ranging from 29 to 116. Higher scores indicate a stronger sense of professional gain. Cronbach's α for the questionnaire in this study sample was 0.924.

2.3 Data collection and quality control

Electronic questionnaires were distributed through the Wenjuanxing platform. Before the survey, the researchers explained the study objectives, participant eligibility criteria, completion requirements, and principles of data confidentiality to the nursing departments and department heads at each hospital. The department heads assisted in sharing the questionnaire link. An informed consent statement was provided on the first page of the questionnaire, and participants proceeded to complete the questionnaire after confirming their consent. In principle, each account or device was limited to one submission, and completion took approximately 3–5 min. After collection, the questionnaires were independently reviewed by two researchers who had received standardized training. The review focused on inclusion and exclusion criteria, missing responses, completion time, consecutive identical responses, and logical inconsistencies. Questionnaires were excluded if the completion time was excessively short, all answers were identical, >10% of items were missing, or the respondent did not meet the inclusion criteria.

2.4 Statistical analysis

Statistical analyses were performed using SPSS 26.0. Categorical data were expressed as frequencies and percentages [n (%)], and normally distributed continuous data were expressed as mean $\pm$ standard deviation ($\bar{x}\pm s$). Independent-samples *t* tests were used to compare sense of professional gain scores between two groups, and one-way analysis of variance was used for comparisons among multiple groups. Pearson correlation analysis was used to examine the relationship between psychological resilience and sense of professional gain. The total sense of professional gain score was used as the dependent variable, and variables with $P<0.05$ in the univariate analysis were entered into a multiple linear regression model. The variance inflation factor (VIF) was used to assess multicollinearity. $P<0.05$ was considered statistically significant.

3 Results

3.1 General characteristics of junior nurses

The 234 junior nurses were predominantly female, aged 21–24 years, held a bachelor's degree, and worked rotating shifts. The most common average number of night shifts per month was 3–4, and the most common average daily working hours were 9–10 h. Job satisfaction was predominantly rated as "neutral" or "satisfied". See Table 1.

Table 1. General characteristics of 234 junior nurses

Characteristic	Group	Number (n)	Percentage (%)
Sex	Female	219	93.59
	Male	15	6.41
Age	≤ 20 years	21	8.97
	21–24 years	189	80.77
	25–28 years	20	8.55
	≥ 29 years	4	1.71
Highest education level	Secondary vocational education or below	11	4.70
	College diploma	97	41.45
	Bachelor's degree	126	53.85

Characteristic	Group	Number (n)	Percentage (%)
Years of work experience	≤1 year	102	43.59
	2 years	73	31.20
	3 years	31	13.25
	4–5 years	28	11.97
Shift work	Yes	196	83.76
	No	38	16.24
Average monthly night shifts	1–2	42	17.95
	3–4	107	45.73
	5–8	65	27.78
	≥9	20	8.55
Average daily working hours	≤8 h	56	23.93
	9–10 h	112	47.86
	11–12 h	48	20.51
	>12 h	18	7.70
Job satisfaction	Very dissatisfied	12	5.13
	Dissatisfied	36	15.38
	Neutral	89	38.03
	Satisfied	68	29.06
	Very satisfied	29	12.39

3.2 Psychological resilience and sense of professional gain scores among junior nurses

The total psychological resilience score among junior nurses was (35.72±6.41). The highest-scoring item was "Going through hardship makes me stronger" [(4.12±0.78)], and the lowest-scoring item was "I recover easily from illness, injury, and difficulties" [(3.05±0.82)]. The total sense of professional gain score was (78.63±10.18).

3.3 Correlation between psychological resilience and sense of professional gain

Pearson correlation analysis showed that the total psychological resilience score was positively correlated with the total sense of professional gain score among junior nurses ($r=0.685$, $P<0.001$).

3.4 Univariate analysis of sense of professional gain

Univariate analysis showed statistically significant differences in sense of professional gain scores among junior nurses according to years of work experience, shift work status, average number of night shifts per month, average daily working hours, job satisfaction, and educational attainment (all $P<0.05$), as shown in Table 2.

Table 2. Univariate analysis of sense of professional gain among junior nurses ($\bar{x}\pm s$, points)

Variable	Group	Number	Total professional gain score	F/t value	P value
Years of work experience				12.357	<0.001
	≤1 year	102	72.35±9.64		
	2 years	73	78.61±8.72		
	3 years	31	83.27±7.51		
	4–5 years	28	85.42±6.83		

Variable	Group	Number	Total professional gain score	F/t value	P value
Shift work				9.872	<0.01
	Yes	196	76.18±9.85		
	No	38	83.56±8.24		
Average monthly night shifts				8.643	<0.001
	1–2	42	82.73±7.96		
	3–4	107	78.52±8.61		
	5–8	65	74.36±9.27		
	≥9	20	70.15±10.32		
Average daily working hours				10.526	<0.001
	≤8 h	56	84.25±7.88		
	9–10 h	112	78.92±8.96		
	11–12 h	48	73.84±9.35		
	>12 h	18	69.72±10.41		
Job satisfaction				25.718	<0.001
	Very dissatisfied	12	65.24±8.37		
	Dissatisfied	36	70.58±9.12		
	Neutral	89	76.39±8.75		
	Satisfied	68	82.47±7.63		
	Very satisfied	29	87.61±6.94		
Education level				4.218	0.016
	Secondary vocational education or below	11	73.18±9.43		
	College diploma	97	76.94±9.68		
	Bachelor's degree	126	80.36±10.12		

Note: t tests were used for comparisons between two groups, and one-way analysis of variance was used for comparisons among multiple groups.

3.5 Multiple linear regression analysis of sense of professional gain

The total sense of professional gain score was used as the dependent variable, and variables with $P < 0.05$ in the univariate analysis were included as independent variables in the multiple linear regression analysis. The coding of the independent variables is shown in Table 3. The results showed that years of work experience, shift work status, average number of night shifts per month, average daily working hours, and job satisfaction were all associated with sense of professional gain (all $P < 0.05$). The adjusted R^2 of the model was 0.387, explaining 38.7% of the variance in the total sense of professional gain score, with $F = 16.243$ and $P < 0.001$. VIF values for all variables were < 10 , indicating no evident multicollinearity. See Table 4.

Table 3. Coding of independent variables

Independent variable	Coding
Years of work experience	≤ 1 year=1, 2 years=2, 3 years=3, 4–5 years=4
Shift work	No=0, Yes=1
Average monthly night shifts	1–2 shifts=1, 3–4 shifts=2, 5–8 shifts=3, ≥ 9 shifts=4
Average daily working hours	≤ 8 h=1, 9–10 h=2, 11–12 h=3, > 12 h=4
Job satisfaction	Very dissatisfied=1, Dissatisfied=2, Neutral=3, Satisfied=4, Very satisfied=5
Education level	Secondary vocational education or below=1, College diploma=2, Bachelor's degree=3, Master's degree or above=4

Table 4. Multiple linear regression analysis of professional gain among junior nurses

Variable	B value	SE	β value	t value	P value	VIF
Constant	45.217	3.156	—	14.327	< 0.001	—
Years of work experience	2.843	0.521	0.265	5.457	< 0.001	1.342
Shift work	-3.125	0.947	-0.148	-3.299	0.001	1.278
Average monthly night shifts	-2.074	0.413	-0.217	-5.022	< 0.001	1.415
Average daily working hours	-1.856	0.382	-0.183	-4.858	< 0.001	1.396
Job satisfaction	3.572	0.614	0.321	5.817	< 0.001	1.307

Note: B denotes the unstandardized regression coefficient; SE, standard error; β , standardized regression coefficient; and VIF, variance inflation factor.

4 Discussion

4.1 Current status of psychological resilience and sense of professional gain among junior nurses

The psychological resilience score in this study sample was (35.72 ± 6.41). Junior nurses are at a stage of clinical role transition and experience accumulation and must continually draw on psychological resources when caring for critically ill patients, communicating with patients, assisting with resuscitation, and rotating through night shifts. Previous research has indicated that insufficient clinical experience, stress associated with role transition, and inadequate support systems are associated with psychological resilience among junior nurses [10]; the development of psychological resilience among nursing staff is also interrelated with coping styles, work stress, and organizational support [11]. Therefore, nursing managers should continue to attend to junior nurses' abilities to recognize stress, regulate emotions, and cope positively with occupational stress.

The sense of professional gain score in this study sample was (78.63 ± 10.18). Sense of professional gain reflects nurses' subjective evaluations of positive experiences, such as professional value, growth, and support. Previous research suggests that the work environment, team support, career development opportunities, and positive feedback are closely associated with nurses' sense of professional gain [12]. Junior nurses have substantial learning needs and aspirations for growth early in their careers. In addition to skill competence, managers should attend to the quality of feedback, career development support, and work experiences.

4.2 Psychological resilience is positively correlated with sense of professional gain

This study showed that psychological resilience was positively correlated with sense of professional gain among junior nurses ($r=0.685$, $P<0.001$). Previous studies of junior nurses and emergency nurses have also suggested a positive

relationship between positive professional experiences and psychological resilience [13], as well as associations among sense of professional gain, psychological resilience, and positive work states such as work engagement [14]. Individuals with greater psychological resilience may be better able to maintain positive appraisals, regulate emotions, and actively seek resources in stressful situations, making it easier to perceive professional value and growth; conversely, positive professional experiences may provide emotional and cognitive resources for coping with stress [15]. Psychological resilience among junior nurses has also been found to be associated with indicators such as occupational burnout and workplace well-being [16]. It should be emphasized that this study was a cross-sectional survey, and these correlations cannot be used to infer the direction of causality between psychological resilience and sense of professional gain.

4.3 Factors associated with sense of professional gain

The multiple linear regression results showed that years of work experience, shift work status, average number of night shifts per month, average daily working hours, and job satisfaction were associated with sense of professional gain. More years of work experience were associated with higher sense of professional gain scores, potentially reflecting a gradual increase in nurses' positive experiences of professional value and personal growth as they accumulate clinical experience, adapt to their roles, and integrate into their teams. The relationship between the work environment and job satisfaction has received attention in multicenter studies of nurses [17]. For nurses at an early stage of employment, structured preceptorship, timely feedback, and clear pathways for growth may be more conducive to establishing stable professional experiences.

Shift work, more frequent night shifts, and longer average daily working hours were associated with lower sense of professional gain scores. A heavier workload may reduce recovery time and affect nurses' positive perceptions of professional value through fatigue, impaired sleep, and poorer work experiences. Existing studies have shown that sense of professional gain is associated with work engagement among junior nurses [18] and with sleep quality among ICU nurses [19]. Therefore, shift scheduling should account for both staffing requirements and recovery needs, minimizing unnecessary consecutive night shifts and excessively long working hours.

Job satisfaction had the largest absolute standardized regression coefficient in the regression model ($\beta=0.321$), indicating a relatively strong association with sense of professional gain. Job satisfaction represents a comprehensive evaluation of experiences across multiple aspects, including the work environment, support, development, and rewards. Nursing management may promote positive professional experiences by establishing consistent communication mechanisms, strengthening positive feedback, providing opportunities for growth, and improving support for stress management; stress management approaches such as mindfulness-based stress reduction have also received attention in research on occupational burnout among nurses [20]. However, the actual effectiveness of these management measures still requires further validation through longitudinal or intervention studies.

4.4 Implications for nursing management and study limitations

Based on the findings of this study, nursing managers may prioritize junior nurses who are at an early stage of employment, frequently rotate shifts, work more night shifts or longer hours, or have lower job satisfaction. Without imposing additional workloads, managers may consider incorporating stress recognition and emotion regulation into standardized training, optimizing the scheduling of consecutive night shifts and working hours, improving the support system involving head nurses, preceptors, and peers, and strengthening perceived organizational support through regular feedback, career development guidance, and accessible learning opportunities.

This study has the following limitations. First, the cross-sectional design precludes determination of temporal sequences and causal relationships among variables. Second, convenience sampling was used, and participants were

recruited from selected secondary and tertiary hospitals in Guangdong Province, limiting sample representativeness and the generalizability of the findings. Third, all data were obtained from self-report questionnaires and may be subject to common method bias and social desirability bias. Future research could use multicenter random or stratified sampling, longitudinal follow-up, and intervention studies to further validate the dynamic relationships among psychological resilience, work characteristics, and sense of professional gain.

5 Conclusion

Psychological resilience is positively correlated with sense of professional gain among junior nurses, and years of work experience, shift work status, average number of night shifts per month, average daily working hours, and job satisfaction are associated with sense of professional gain. Nursing managers may implement targeted management measures focused on support for adaptation to stress, shift scheduling optimization, and career development support, but the effectiveness of these interventions requires further research.

Conflicts of interest

The author declares no conflicts of interest regarding the publication of this paper.

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