

Analysis of Emotional Management Status and Influencing Factors Among Nursing Students

Ping Wang, Meixiang Wang, Huangxue Shi

School of International Nursing, Hainan Vocational University of Science and Technology, Haikou 571137, Hainan, China

**Author to whom correspondence should be addressed.*

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Abstract: *Objective:* To investigate the emotional management status of nursing students and analyze its influencing factors, providing evidence for developing targeted intervention measures. *Methods:* Convenience sampling was employed to select 193 nursing students from a university in Hainan Province as research subjects between December 2024 and January 2025. A cross-sectional survey was conducted using a demographic questionnaire and the Undergraduate Nursing Students' Emotional Management Competence Questionnaire. Descriptive analysis, *t*-tests, analysis of variance (ANOVA), and multiple linear regression analysis were performed using SPSS 27.0 software. *Results:* The nursing students' total emotional management score was (78.17 ± 12.62) points, indicating an upper-middle level. Scores across dimensions, from highest to lowest, were: emotional expression ability (23.03 ± 4.22), emotional facilitation ability (21.45 ± 4.34), emotional cognition ability (18.46 ± 3.44), and emotional regulation ability (15.23 ± 2.82). Univariate analysis revealed that academic performance significantly influenced emotional management ability (all $p < 0.05$). Multivariate linear regression analysis indicated that academic performance predicted emotional management ability ($p < 0.05$). *Conclusion:* Nursing students demonstrated generally good emotional management ability with room for improvement, and academic performance emerged as a key influencing factor. Recommendations include strengthening emotion management education in higher education institutions, integrating it into practical teaching, encouraging nursing students to enhance self-management, and fostering a supportive campus culture to collectively improve students' emotion management abilities and professional competence.

Keywords: Nursing students; Emotion management; Influencing factors

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1. Introduction

Emotion management refers to an individual's ability to promptly recognize their own and others' emotions, regulate negative emotions, mobilize positive emotions to guide thinking, and express emotions appropriately to promote physical and mental health and professional success^[1]. For nursing students, strong emotional management skills are particularly crucial. The nursing profession is characterized by high intensity, high stress, and high emotional investment. As the future backbone of clinical nursing, nursing students' emotional management abilities directly impact their clinical performance, patient care quality, and career development^[2].

As a vital source of the nursing workforce, cultivating emotional management skills among university nursing

students holds special significance. University nursing students are in a critical phase of developing professional competence, facing multiple challenges such as theoretical learning, clinical practice, and professional identity formation, which can easily lead to emotional fluctuations. Domestic and international studies indicate that nursing students commonly experience varying degrees of emotional management difficulties, with high rates of negative emotions like anxiety and depression ^[3]. However, systematic research on the emotional management abilities of university nursing students remains relatively scarce, particularly lacking in-depth analysis of influencing factors. Understanding the current state of emotional management and its influencing factors among nursing students in Hainan holds significant importance for developing targeted educational interventions, enhancing students' professional competence, and improving the quality of nursing services. Therefore, this study aims to assess the current state of emotional management among nursing students at a university in Hainan through a cross-sectional survey, analyze its influencing factors, and provide empirical evidence for optimizing the nursing education system and enhancing students' emotional management capabilities.

2. Subjects and methods

2.1. Study population

Convenience sampling was employed to select nursing students from a Hainan university as research subjects between December 2024 and January 2025.

2.1.1. Inclusion criteria

- (1) Full-time enrolled nursing students;
- (2) Informed consent and voluntary participation in the study.

2.1.2. Exclusion criteria

- (1) Students on leave of absence, withdrawn, or on extended leave;
- (2) Individuals with severe cognitive or communication impairments preventing questionnaire completion.

2.2. Sample size calculation

Based on Kendall's sample size calculation principle, the sample size should be at least 5–10 times the number of questionnaire items. The Emotional Management Ability Questionnaire used in this study comprises 21 items. Calculated at 5 times the item count with a 20% non-response rate allowance: $N = 21 \times 5 \times (1 + 20\%) = 126$.

2.3. Research instruments

2.3.1. General information questionnaire

Self-designed by the researcher, comprising 10 items: gender, age, place of origin, only child status, student leadership role, academic performance, scholarship receipt, monthly living expenses, family structure, and parental parenting style.

2.3.2. Emotional management ability questionnaire for nursing undergraduates

The Chinese version developed by Du Juan was adopted, comprising 21 items across 4 dimensions ^[4]. Emotional Cognition Ability (5 items), Emotional Regulation Ability (4 items), Emotional Expression Ability (6 items), and Emotional Promotion Ability (6 items). It employs a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree), yielding a total score range of 21–105 points, where higher scores indicate stronger emotional management abilities. The questionnaire demonstrated good reliability and validity with an overall Cronbach's α coefficient of 0.874.

2.4. Survey method

A cross-sectional survey design was adopted, with electronic questionnaires distributed via the "Wen Juan Xing" platform.

Participants were informed of the study's purpose and significance prior to completion and provided informed consent. Questionnaire completion took approximately 10–15 minutes.

2.5. Statistical methods

Data analysis was performed using SPSS 27.0 software. Normally distributed quantitative data were described as mean $\pm$ standard deviation ($\bar{x} \pm s$), while categorical data were presented as frequency and percentage. Intergroup comparisons were performed using *t*-tests or analysis of variance (ANOVA). Multivariate linear regression analysis was employed to explore influencing factors. The significance level was set at $\alpha = 0.05$.

3. Results

3.1. General characteristics of study participants

This study surveyed 193 nursing students, including 46 males (23.8%) and 147 females (76.2%); Age distribution: ≤ 18 years old (3, 1.6%); 19–22 years old (92, 47.7%); > 22 years old (98, 50.8%); Place of origin: Rural (101, 52.3%); Town (64, 33.2%); City (28, 14.5%); 170 non-only children (88.1%); 83 former student leaders (43.0%); 141 average academic performers (73.1%), 47 above-average performers (24.4%), 5 below-average performers (2.6%); 127 monthly living expenses of ¥ 1000–1500 (65.8%); 187 students (96.9%) came from two-parent families; 123 students (63.7%) reported their parents used a democratic parenting style. **Table 1** for details.

Table 1. General characteristics of student caregivers (n=193)

Variable	Category	Frequency(n)	Percentage (%)
Gender	Male	46	23.8
	Female	147	76.2
Age(years)	≤ 18	3	1.6
	19–22	92	47.7
	> 22	98	50.8
Place of Origin	Urban	28	14.5
	Town	64	33.2
	Rural	101	52.3
Only Child	Yes	23	11.9
	No	170	88.1
Previous Student Leadership Experience	Yes	83	43.0
	No	110	57.0
Academic Performance	Good, Received Scholarships	47	24.4
	Average, No Scholarships	141	73.1
	Poor, Failed Courses	5	2.6
Monthly Allowance (CNY)	< 1000	22	11.4
	1000-1500	127	65.8
	> 1500	44	22.8
Family Structure	Two Parents	187	96.9
	Single Parent	5	2.6
	Remarried	1	0.5
Parenting Style	Authoritarian	18	9.3
	Democratic	123	63.7
	Permissive	52	26.9

3.2. Nursing students' emotional management scores

The total emotional management score for nursing students was (78.17 ± 12.62). Scores across dimensions, from highest to lowest, were: Emotional Expression Ability (23.03 ± 4.22), Emotional Facilitation Ability (21.45 ± 4.34), Emotional Regulation Ability (15.23 ± 2.82), and Emotional Cognition Ability (18.46 ± 3.44). **Table 2.** for details.

Table 2. Scores for dimensions of emotional management ability among nursing students (n = 193)

Dimension	Number of items	Maximum score	Maximum value	Minimum value	Total score ($\bar{x} \pm s$)	Average score per item ($\bar{x} \pm s$)
Emotional cognition	5	25	25	5	18.46 ± 3.44	3.69 ± 0.69
Emotional regulation ability	4	20	20	4	15.23 ± 2.82	3.81 ± 0.71
Emotional expression ability	6	30	30	6	23.03 ± 4.22	3.84 ± 0.70
Emotional facilitation ability	6	30	30	6	21.45 ± 4.34	3.58 ± 0.72
Emotional management score	21	105	104	23	78.17 ± 12.62	3.72 ± 0.60

3.3. Univariate analysis of nursing students' emotional management abilities

Univariate analysis revealed statistically significant differences in total emotional management scores among nursing students based on academic performance and scholarship status ($p < 0.05$). Students with better academic performance scored significantly higher (83.21 ± 11.68) than those with average (76.64 ± 12.60) or poorer performance (73.80 ± 10.66). Differences based on other factors such as gender, age, and place of origin were not statistically significant (all $p > 0.05$). **Table 3.** for details.

Table 3. Univariate analysis of total emotion management scores among nursing students with different characteristics (n = 193)

Variable	Category	Total emotion management score	t/F	p
Gender	Male	76.89 ± 14.18	-0.784	0.434
	Female	78.56 ± 12.11		
Age(years)	≤ 18	70.33 ± 8.62	1.195	0.305
	19–22	77.25 ± 12.44		
	> 22	79.27 ± 12.83		
Place of origin	Urban	79.50 ± 17.31	0.951	0.388
	Town	79.47 ± 10.46		
	Rural	76.97 ± 12.36		
Only child	Yes	77.74 ± 15.45	-0.172	0.863
	No	78.22 ± 12.24		
Previous student leadership Experience	Yes	79.71 ± 14.59	1.482	0.140
	No	77.00 ± 10.82		
Academic performance	Good, Received Scholarships	83.21 ± 11.68	5.321	0.006
	Average, No Scholarships	76.64 ± 12.60		
	Poor, Failed courses	73.8 ± 10.66		

Table 3 (Continued)

Variable	Category	Total emotion management score	<i>t/F</i>	<i>p</i>
Monthly allowance (CNY)	< 1000	78.41 ± 12.83	0.255	0.858
	1000–1500	77.64 ± 11.62		
	> 1500	79.59 ± 16.39		
Family structure	Two Parents	78.35 ± 12.58	1.336	0.265
	Single Parent	75.00 ± 13.25		
	Remarried	59		
Parenting style	Authoritarian	78.28 ± 15.15	0.808	0.447
	Democratic	78.94 ± 12.08		
	Permissive	76.29 ± 12.99		

3.4. Multiple linear regression analysis of students' emotional management ability

Multivariate linear regression analysis (stepwise method) was conducted using total emotion management scores as the dependent variable and statistically significant variables from univariate analysis as independent variables. Results indicate that academic performance predicts emotion management ability ($p < 0.05$), with regression equation $R^2 = 0.053$, $F = 5.321$, $p = 0.006$. **Table 4** for details.

Table 4. Multiple linear regression analysis of nursing students' emotional management ability (n = 193)

Variable	B	SE	β	t	p
Constant	83.213	1.8	-	46.218	0.000
Academic performance	-6.574	2.079	-0.232	-3.162	0.002

4. Discussion

4.1. Analysis of current emotional management status among nursing students

The study findings indicate that the average emotional management ability score among vocational nursing students was (78.17 ± 12.62), reflecting an above-average level. This aligns with the conclusions of Yangi's research^[5]. It suggests that most vocational nursing students possess a certain level of emotional management ability, enabling them to cope with emotional challenges in daily academic and personal life. However, significant variations and room for improvement remain. Analysis of scores across dimensions reveals that the highest mean score was for emotional expression (3.84 ± 0.70), while the lowest mean score was for emotional regulation (3.58 ± 0.72). Students demonstrated strongest emotional expression abilities, indicating most can appropriately convey their emotions, a critical skill for personal growth, nursing education, and clinical practice. The lowest scores were observed in emotional facilitation, reflecting weaker abilities in leveraging emotions to drive personal and team development. Possible reasons include: at the individual level, some students lack self-awareness of their emotions, preventing them from translating positive feelings into action; others suffer from low self-confidence and unclear goals, hindering the effective utilization of positive emotions. Educationally, vocational colleges may lack systematic training programs in emotional facilitation. Even when such courses exist, they often lack practical components and case-based teaching, making it difficult for students to apply learned skills. Family and school environments also play a role. For instance, insufficient emotional support at home or a lack of positive atmosphere at school can diminish nursing students' motivation to enhance their emotional promotion abilities. Furthermore, society's

high demands on the nursing profession often lead students to focus more on emotional regulation and stress resilience, potentially neglecting the cultivation of emotional promotion skills. Differences in cultural environments also influence nursing students' understanding and acceptance of emotional promotion, affecting the development of this ability.

4.2. Analysis of factors influencing nursing students' emotional management

4.2.1. Academic achievement factors

This study found that nursing students with excellent academic performance and scholarship recipients exhibited relatively higher total emotional management scores, showing a statistically significant gradient difference among groups ($p < 0.05$): “excellent > average > poor”. This result aligns with the findings of Ruiz et al ^[6]. Further multivariate linear regression analysis revealed that academic performance is a significant factor influencing nursing students' emotional management abilities ($p < 0.05$). This phenomenon may result from multiple contributing factors. First, academic performance reflects an individual's cognitive abilities, learning strategies, and psychological adaptability to a certain extent. Students with higher grades typically possess stronger information processing and problem-solving abilities, along with more flexible thinking. Consequently, they can more rapidly and accurately identify their emotional states when facing fluctuations and employ appropriate strategies for regulation. Second, receiving scholarships not only provides material incentives but also enhances nursing students' self-efficacy and sense of accomplishment psychologically, thereby increasing their initiative and stability in emotional regulation. When confronting academic and life pressures, such students often exhibit more positive attitudes and higher emotional resilience ^[7]. Moreover, high-achieving students tend to employ adaptive emotional regulation strategies such as positive cognitive reappraisal, problem-focused coping, and seeking social support. This enables them to effectively mitigate the interference of negative emotions and maintain sound psychological states. In contrast, students with relatively lower academic performance may frequently experience negative emotions like anxiety and inferiority due to academic setbacks. Without effective emotional regulation tools, they are prone to falling into a vicious cycle of “poor academic performance, emotional distress, further decline in academic performance”. Therefore, educational practice should emphasize the systematic cultivation of emotional management skills by integrating emotional education into the nursing curriculum. This should be combined with psychological support and learning environment optimization to establish a comprehensive intervention mechanism. This approach not only enhances nursing students' emotional regulation abilities but also supports their academic progress and holistic development, laying a solid psychological foundation for future clinical nursing practice.

4.2.2. Analysis of other influencing factors

Although single-factor analysis revealed no statistically significant differences in variables such as gender and place of origin, certain trends were observed: Female nursing students scored slightly higher than males; students from urban areas scored slightly higher than those from rural areas; and nursing students holding student leadership positions scored slightly higher than those without such roles. These trends partially align with findings from Sun Xiaomei's research, though they may not have reached statistical significance due to insufficient sample size ^[8]. The slightly higher scores among female nursing students may be influenced by sociocultural, physiological, psychological, educational, and social support factors. Traditionally, women are perceived as more adept at expressing emotions and socializing, making them more likely to seek help for emotional issues and preferring communication as a resolution strategy. In contrast, men typically favor self-management ^[9]. Male nursing students should be encouraged to prioritize their emotional well-being by learning emotional management techniques through reading, courses, or counseling to enhance their coping abilities and better thrive in the nursing profession. Nursing students from urban backgrounds scored higher than those from rural areas, with statistically significant differences in emotional promotion ability ($p < 0.05$). This disparity may stem from variations in educational resources and teaching methods, family economic and cultural environments, and sociocultural influences. Urban families emphasize emotional guidance for children; exposure to diverse cultures fosters emotional cognition, while parents encourage and support emotional expression while teaching regulation techniques. Rural parents, often preoccupied with

livelihood or holding differing educational beliefs, may adopt a more permissive parenting style. They tend to pay less attention to emotional communication with their children, potentially emphasizing resilience and self-restraint. This can inadvertently suppress the expression and discussion of emotions, thereby limiting the natural development of emotional competence^[10]. Nursing students who served as student leaders scored higher than their peers in emotional cognition and regulation, with statistically significant differences ($p < 0.05$). This indicates that the pressures encountered in student leadership roles, such as organizing activities, resolving conflicts, and handling emergencies, hone emotional regulation skills, gradually fostering a habit of calmness under pressure. Shouldering responsibilities drives improvements in self-management and emotional control. In daily interactions, these students must perceive others' emotional shifts and understand differing viewpoints, enhancing their emotional awareness and expression while elevating overall emotional management proficiency.

5. Conclusion

This study indicates that nursing students exhibit above-average emotional management abilities, with relatively strong expression skills but room for improvement in emotional facilitation. Academic performance significantly influences emotional management capacity. Therefore, institutions should optimize curricula by integrating emotional management education into nursing programs, enhance faculty training to improve teachers' emotional guidance capabilities, implement practical activities like group counseling and psychological workshops, establish emotional support groups to foster peer assistance. Encourage students to engage in self-reflection through emotional journaling; teach emotion regulation techniques like mindfulness meditation and relaxation training. Create a supportive campus environment to reduce unnecessary stressors; establish mental health service systems offering professional counseling. This study's strengths include standardized measurement tools, adequate sample size, and comprehensive statistical analysis. However, its cross-sectional design precludes causal inference, single-institution sampling may limit generalizability, and self-reported data may introduce bias. Future research could enhance quality through longitudinal designs, multi-center sampling, and objective assessment methods.

About the author

Wang Ping, (1958.9-) female, Han nationality, native of Wanning City, Hainan Province, education: bachelor's degree, chief nurse/professor, engaged in clinical nursing and nursing education;

Shi Huangxue, (2002.6—), female, Han nationality, native place: Ledong County, Hainan Province, education: undergraduate, professional title: nurse, research direction: psychological nursing.

Disclosure statement

The authors declare no conflict of interest.

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