

# A quantitative analysis of the current situation and influencing factors of nursing practice environment: A Case Study in CN Maternal and Infant Hospital of Shanghai

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## Abstract

A supportive nursing practice environment is essential for ensuring high-quality patient care, enhancing nurse job satisfaction, and reducing turnover. However, many Chinese hospitals still face challenges in optimizing this environment. This study aimed to evaluate the current state of the nursing practice environment and identify key influencing factors at the Shanghai CN Maternal and Infant Hospital. Using a cross-sectional design, 355 registered nurses were selected through stratified random sampling. Data were collected via the Practice Environment Scale of the Nursing Work Index (PES-NWI) and analyzed using SPSS 25.0, with descriptive statistics, ANOVA, and t-tests. The results revealed moderate overall satisfaction with the nursing environment. High scores were observed in clinical professionalism and teamwork, while notably lower scores were recorded in nurses' participation in hospital decision-making, career development opportunities, and perceptions of compensation fairness. Differences in perceptions were observed based on gender, age, professional title, and years of experience. Despite a well-structured training system, the gap between institutional resources and nurses' academic growth expectations remained evident. The study highlights several systemic challenges: limited nurse engagement in governance, insufficient academic advancement pathways, and dissatisfaction with salary and social recognition. These factors contribute to reduced job motivation and may influence workforce retention. In conclusion, targeted reforms are needed to improve nurses' involvement in decision-making, enhance career development support, and restructure compensation systems. Addressing these areas can strengthen the nursing practice environment and contribute to higher-quality healthcare delivery in maternal and child health settings.

**Keywords:** Nursing practice environment ; job satisfaction ; institutional resources ; nurses' academic growth

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## 1. Introduction

The nursing practice environment is a complex multi-dimensional concept that involves multiple organizational factors that promote or constrain the practice of the nursing profession. These factors include the degree of nurses' participation in the management of medical institutions, the support of medical institutions for nurses' work, nursing leadership, nursing allocation, nursing professional promotion, nurses' treatment, the relationship between medical staff, and the social status of nurses (Yang, 2015). As an important structural index of nursing quality evaluation, a healthy nursing practice environment can not only improve nursing quality, but also significantly improve nurses' job satisfaction and happiness.

Studies have shown that a good nursing practice environment can help to reduce the fatigue of nurses, reduce the turnover rate, reduce the occurrence of nursing human errors and patient complications. These positive effects can further reduce the length of hospital stay for patients, thereby improving the efficiency and effectiveness of the overall medical services (Lan, 2019). On the contrary, poor nursing practice environment may lead to chronic

occupational fatigue of nurses, and even lead to bad emotions such as depression. In addition, a poor work environment may increase the incidence of adverse nursing events, which not only poses a threat to patient safety, but also increases medical costs, thereby increasing the administrative costs of medical institutions and the medical burden on patients.

According to the guidance of the National Nursing Development Plan (2021-2025), the total number of registered nurses in China will reach 5.5 million by 2025. In such a large team of nurses, the way to effectively mobilize their enthusiasm and create good conditions for nurses in the aspects of practice environment, salary, training and professional development has become an important issue to be solved in the current nursing field.

The influencing factors of the nursing practice environment refer to a series of conditions or factors that hospital administrators and the organizational environment can actively impose on the daily work of nurses. It emphasizes the role of hospitals and the environment in shaping individuals' work attitudes and feelings. To improve the nursing practice

environment, hospitals need to conduct a thorough analysis of these influencing factors. So far, the development of the theory on the nursing practice environment has primarily focused on the following key influencing factors (Andrews et al. 2022).

Compensation system has been recognized as one of the major key influencing factors. Ma and Chen (2023) identified nurses' lowest satisfaction with income through self-designed surveys, revealing significant differences in job satisfaction across nursing roles. Yin et al. (2023) assessed community nurses' practice environment satisfaction, highlighting dissatisfaction with salary, workplace conditions, and equity. Zhou et al.(2023) surveyed nurses across three provinces, finding widespread discontent with income levels. Li et al. (2020) research demonstrates that the practice environment for female nurses is not only closely tied to individual factors but also inherently linked to the compensation and benefits system provided by hospitals.

Female nurses with higher compensation and benefits tend to proactively cultivate more positive work attitudes, thereby influencing their job satisfaction through positive psychological mechanisms (Li et al., 2020). Among them, psychological capital is the most frequently mentioned mediating variable in positive psychological mechanisms. It refers to the positive psychological traits developed by individuals under the influence of the organizational environment, and it can exert positive effects at both the individual and organizational levels. Horiuchi's (2021) cross-sectional survey study reveals that the nursing practice environment is impacted by hospital compensation and benefits, with psychological capital and positive emotions serving as crucial mediating factors. The salaries, subsidies, and various benefits offered by hospitals can boost nurses' work enthusiasm, increase their levels of psychological capital and positive emotions, and thereby enhance their job satisfaction. This suggests that hospital administrators should prioritize the career development and life needs of nurses, establish a scientific and reasonable compensation and benefits system, and strengthen emotional management and training for nurses. This will help enhance nurses' sense of job engagement and organizational identification.

Career development has been recognized as an important element as well influencing nurses' job satisfaction.. Niskala et al.(2022) demonstrated that on-the-job training programs significantly enhance nurses' job satisfaction in clinical practice. Lin et al. (2020) conducted a follow-up survey on nurses using a diary method to investigate the relationship

between daily career development activities and the professional environment, as well as the mediating role of perceived career barriers and positive mindset between the two. The findings, derived from multilevel analysis, indicate that the daily career development activities undertaken by employees exert a notable direct influence on their daily professional environment. The daily sense of career obstacles and positive mindset experiences play a crucial mediating role between career development activities and the professional environment. Moreover, the chained mediating effect between daily sense of career obstacles and positive mindset is equally significant.

Humanistic environment has also been reported by some researchers as an influencing factors. Schaufeli and Bakker (2024) revealed a negative correlation between organizational climate and turnover intention: supportive environments reduce stress and boost engagement , aligning with Li (2022)'s findings. This viewpoint is also echoed by the foreign scholar Duffy (2022), who pointed out through relevant research that when nurses feel the humanistic care from patients and their families, it actively generates positive emotional experiences of relaxation and security. This has a significant positive impact on promoting the ultimate achievement of positive health recovery outcomes for patients and their families. Humanistic care behaviors demonstrated by nursing managers towards nurses can positively predict nurses' proactive enhancement of job satisfaction, increasing their confidence and expectations for future career development, thereby improving the overall quality of nursing services (Vander Elst et al., 2021).

In this study, Shanghai CN Maternal and Child Healthcare Hospital was identified as a study site for this case study purpose. Shanghai CN Maternal and Child Healthcare Hospital is a specialized hospital integrating medical treatment, health care, prevention, scientific research and teaching, and attaches great importance to the practice environment of nurses. It is of great practical significance for hospital nursing to carry out the investigation and study on nursing practice environment. Therefore, this study takes Shanghai CN Maternal and Child Healthcare Hospital as an example to investigate the level of nursing practice environment, in order to provide basis and direction for continuous improvement of nursing practice environment in Shanghai CN Maternal and Child Healthcare Hospital, and provide ideas for improving nursing quality and patient outcomes.

## 2. Methodologies

## 2.1 Survey on the Professional Environment of Nurses at Shanghai CN Maternal and Child Health Hospital

### 2.2 Research Subjects and Methods

Stratified random sampling techniques was employed to ensure diverse representation across different levels of experience, positions, and departments. The target group includes all registered nurses at Shanghai CN Maternity and Infant Hospital, subject to the following inclusion and exclusion criteria:

#### 2.2.1 Inclusion criteria

- Have been working full-time for at least one year.
- Actively involved in patient care during the study period.

#### 2.2.2 Exclusion Criteria:

- Nurses who are in training or undergoing short-term specialized rotations.
- Administrative nursing staff without direct patient care responsibilities.

To ensure fair representation from all departments, the hospital's nurse registration database was used to randomly choose 355 nurses from the eligible group. Stratification based on factors such as years of experience, department type, and professional title to ensure that the research results accurately reflect the diverse perspectives within the institution.

### 2.3 Data Collection and Analysis

The Practice Environment Scale of the Nursing Work Index (PES-NWI) tool was used to study the nursing practice environment, which offers multiple significant advantages. Firstly, the PES-NWI tool, grounded in extensive empirical research and validation, possesses a high degree of scientific rigor and authority. It enables a comprehensive and systematic assessment of multiple key dimensions of the nursing practice environment, such as leadership support, adequacy of resources, team collaboration, opportunities for nurse involvement in hospital affairs, and a culture of nursing quality and safety. This multi-dimensional assessment approach not only provides a more accurate reflection of the current state of the nursing practice environment but also offers specific directions for improvement for hospital administrators.

Secondly, the PES-NWI tool has undergone multiple empirical research validations and demonstrates high reliability and validity. Its scale exhibits good applicability across different cultural backgrounds and healthcare environments, enabling consistent measurement of the characteristics of the nursing practice environment. Furthermore, the

PES-NWI tool is widely used globally, and its standardized design allows for international comparability of research results. Researchers can compare the local nursing practice environment with international standards, identify gaps, and draw upon international best practices for improvement. From a practical perspective, the PES-NWI tool is easy to operate and implement, allowing nurses to quickly understand and complete the questionnaire, thereby reducing the difficulty and time cost of data collection. More importantly, through the research results obtained with the PES-NWI tool, hospital administrators can identify weak points in the nursing practice environment and formulate targeted improvement strategies, such as increasing nursing staff, improving equipment configuration, or enhancing leadership support.

This data-driven decision-making approach helps to improve nursing quality and nurse job satisfaction, thereby reducing turnover rates and stabilizing the nursing workforce. Furthermore, the PES-NWI tool enables long-term monitoring and evaluation. Through regular assessments, the hospital can dynamically track the effectiveness of improvement measures and adjust management strategies based on the latest data, ensuring continuous optimization of the nursing practice environment. In summary, the PES-NWI tool demonstrates scientific rigor, multidimensionality, and high practicality in research on the nursing practice environment. It provides hospital administrators with comprehensive and reliable data support, driving improvements in the nursing practice environment, enhancing nurse job satisfaction and the quality of nursing services, while also supporting long-term monitoring and dynamic optimization to ensure the continuous improvement of the nursing practice environment.

The PES-NWI was developed by the Nursing Research Center of the National Health Commission. The structural validity of PES-NWI was 0.711, and the Cronbach's  $\alpha$  coefficient was 0.985. There are 39 items in six dimensions, including the nurses' participation in hospital affairs, the basis of quality nursing services, the ability, leadership and support of nursing managers, the provision of human and material resources, the medical cooperation, and the salary and social status. The score of each item ranges from 0 to 100 points, with 0 indicating very unsatisfied and 100 indicating very satisfied. The higher the score, the better the practicing environment (He, 2018).

The questionnaire was filled in by scanning two-dimensional code. The National Nursing Quality Data Platform has a complete PES-NMI form, which can be matched with the QR code of the

questionnaire of the cost hospital. It can be filled out and confirmed by the nurses on computers or mobile phones and then submitted to the National Nursing Quality Data Platform. The platform can directly analyze the data and download the analysis report.

### 2.4 Data Analysis

Data were collected via the Practice Environment Scale of the Nursing Work Index (PES-NWI) and analyzed using SPSS 25.0, with descriptive statistics, ANOVA, and t-tests. Set the statistical significance level at  $p < 0.05$ , and calculate the 95% confidence interval to assess the reliability of the results. Multiple imputation techniques was used to handle missing data, in order to minimize bias and ensure the robustness of the final dataset.

### 3. Results

Basic information of the respondents is reported in Table 1. The results of the respondents' responds for questions 7 – 43 are tabulated in Table 2.

**Table 1 Basic Information of the Respondents**

Item	Data (Number of People)	Proportion (%)
Number of Nurses Participating in the Survey	355	100
Sex Ratio (Female/Male)	319/36	90/10
Age Distribution (Years Old)		
20-30	140	39.4
31-40	123	34.6
41-50	70	19.7
Above 50	22	6.2
Professional Title		

Item	Data (Number of People)	Proportion (%)
Distribution		
Nurse	178	50.1
Nurse Practitioner	106	30.0
Nurse-in-Charge	54	15.2
Deputy Director/Chief Nurse	17	4.8
Education Background		
Bachelor Degree or Above	159	44.8
Junior College	142	40.0
Technical Secondary School and Below	54	15.2

**Table 2: Respondents' response for question 7 – 43.**

Table 2 Descriptive Statistics					
	N	Minimum Value	Maximum Value	Mean Value	Standard Deviation
7. Your Overall Evaluation of the Nurse Practice Environment	355	0	100	75.00	27.808

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in the Hospital:					
8. Nurses have opportunities to participate in hospital internal management :	35 5	0	100	65.0 0	30.739
9. Nurses have opportunities to make decisions on hospital affairs:	35 5	0	100	45.0 0	32.406
10. Nurses have opportunities to become members of hospital or nursing committees.:	35 5	0	100	58.0 0	33.250
11. Nurses are able to assess patients in clinical nursing and implement individualized care based on the assessment results.:	35 5	40	100	88.0 0	15.379
12. The clinical work of nurses demonstrates the professionalism of nursing.:	35 5	10	100	82.0 0	20.349
13. Nursing managers often discuss daily work issues with nurses:	35 5	0	100	72.0 0	26.933
14. Nurses receive encouragement and recognition when they successfully	35 5	0	100	76.0 0	24.840

complete their work:					
15. Nursing managers support the correct decisions made by nurses:	35 5	0	100	80.0 0	24.673
16. When nurses make mistakes, nursing managers focus more on guiding them to improve rather than simply criticizing them:	35 5	0	100	79.0 0	24.456
17. The nursing positions are set up reasonably with clear responsibilities.:	35 5	35	100	87.0 0	17.139
18. The work system is well-established, highly instructive, and easy to implement:	35 5	20	100	84.0 0	21.311
19. The workflow is well-developed, highly instructive, and easy to implement:	35 5	5	100	81.0 0	22.114
20. The hospital management department expects each ward to provide high-standard nursing services to patients.:	35 5	60	100	92.0 0	12.193

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21.The nurse scheduling method is conducive to providing continuous care for patients:	35 5	0	100	78.0 0	24.603
22.The nursing team frequently discusses patient care issues and seeks improvements:	35 5	25	100	85.0 0	20.291
23.Clinical support systems allow nurses to have more time for patient care:	35 5	0	100	74.0 0	27.855
24.The hospital's administrative department supports the work of nurses:	35 5	0	100	79.0 0	25.446
25.The provision of hospital nursing equipment is conducive to improving nursing work efficiency:	35 5	25	100	83.0 0	20.335
26.Nurses can receive corresponding occupational protection in their work:	35 5	45	100	89.0 0	14.874
27.The hospital has a clear post-occupational exposure handling process and can effectively implement it.:	35 5	30	100	86.0 0	17.593

28.The doctors and nurses in the department have a harmonious working relationship:	35 5	50	100	90.0 0	15.335
29.The doctors and nurses in the department are able to perform their respective duties and collaborate effectively:	35 5	65	100	93.0 0	10.372
30.The hospital provides systematic training for newly recruited nurses:	35 5	80	100	96.0 0	8.011
31.The hospital is able to provide continuing education for nurses based on job requirements :	35 5	50	100	90.0 0	16.230
32.Nurses have opportunities to attend academic activities both at home and abroad:	35 5	0	100	60.0 0	32.253
33.The hospital has a clear career development path or professional title promotion system for nurses:	35 5	0	100	75.0 0	25.628
34.The nursing staff allocation in the ward is	35 5	25	100	85.0 0	20.204

sufficient to meet the needs of clinical nursing work:					
35.The nursing staff allocation in the ward is sufficient to meet the needs of clinical nursing work:	35 5	0	100	75.0 0	29.111
36.The current working hours and intensity are appropriate:	35 5	0	100	75.0 0	27.872
37.Nurse scheduling reflects a balanced distribution of skill levels:	35 5	25	100	85.0 0	20.028
38.Typically, key nurses in the department are not frequently transferred:	35 5	0	100	80.0 0	24.020
39.Nurses' work is recognized by society:	35 5	0	100	74.5 1	22.189
40.In the workplace, you can feel the trust and respect that patients have for nurses:	35 5	0	100	75.0 7	20.019
41.The hospitals salary distribution system is reasonable:	35 5	0	100	69.4 4	22.211
42.The compensation and benefits level of nurses is	35 5	0	100	64.5 1	28.759

reasonable compared to other industries in society.:					
43.Nurses are able to enjoy statutory benefits (such as rotating rest or overtime pay during statutory holidays, vacations, insurance, etc.):	35 5	0	100	80.0 7	17.497
Number of Valid Vases (in Columns)	35 5				

### 3.1 Differential Impact of Demographic Characteristics

#### 3.1.1 Dimension of Working Years

The results and statistical analysis of questions 7 – 43 by working years are presented in Table 3. There are significant differences in the dimension of nursing management support ( $F=4.287$ ,  $p=0.005$ ). Nurses with more than 10 years of working experience scored significantly higher ( $M=82.3$ ) on “nursing managers’ support for correct decision-making” than those with less than 5 years of experience ( $M=76.5$ ).

The level of acceptance for the scheduling system approached significance ( $F=2.518$ ,  $p=0.058$ ), showing a trend of increasing acceptance with the increase in years of work experience.

**Table 3: Results and statistical analysis of questions 7 – 43 by working years**

		ANOVA				
		Sum of Squares	df	Mean Square	F	Si g.
7.Your Overall Evaluation of the Nurse Practice Environment in the Hospital:	Between Groups	2312.368	3	770.789	.997	.394
	Within Groups	271437.632	351	773.327		
	Total	273750.000	354			
8. Nurses have opportunities to participate in hospital internal management:	Between Groups	330.564	3	110.188	.116	.951
	Within Groups	334169.436	351	952.050		
	Total	334500.000	354			
9.Nurses have opportunities to make decisions on hospital affairs:	Between Groups	3245.454	3	1081.818	1.030	.379
	Within Groups	368504.546	351	1049.871		
	Total	371750.000	354			
10.Nurses have opportunities to become members of hospital or nursing committees.:	Between Groups	4073.731	3	1357.910	1.231	.298
	Within Groups	387306.269	351	1103.437		
	Total	391380.000	354			
11.Nurses are able to assess patients in clinical nursing and implement individualized care based on the assessment results.:	Between Groups	796.371	3	265.457	1.123	.339
	Within Groups	82933.629	351	236.278		
	Total	83730.000	354			
12.The clinical work of nurses demonstrates the professionalism of nursing.:	Between Groups	1863.621	3	621.207	1.507	.213
	Within Groups	144716.379	351	412.297		
	Total	146580.000	354			
13.Nursing managers often discover	Between Groups	698.113	3	232.704	.319	.812
	Within Groups					

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for nurses based on job requirement	Groups					
Total	93250.00	35	4			
32.Nurses have opportunities to attend academic activities both at home and abroad:	Between Groups	2935.606	3	978.535	.940	.421
	Within Groups	365314.394	35	1040.782		
	Total	368250.000	35			
33.The hospital has a clear career development path or professional title promotion system for nurses:	Between Groups	1856.415	3	618.805	.942	.421
	Within Groups	230643.585	35	657.104		
	Total	232500.000	35			
34.The nursing staff allocation in the ward is sufficient to meet the needs of clinical nursing work:	Between Groups	4064.580	3	1354.860	3.386	.018
	Within Groups	140435.420	35	400.101		
	Total	144500.000	35			
35.The nursing staff allocation in the ward is sufficient to meet the needs of clinical nursing work:	Between Groups	5763.132	3	1921.044	2.292	.078
	Within Groups	294236.868	35	838.282		
	Total	300000.000	35			
36.The current working hours and intensity are appropriate:	Between Groups	8087.231	3	2695.744	3.545	.015
	Within Groups	266912.769	35	760.435		
	Total	275000.000	35			
37.Nurse scheduling reflects a balanced distribution of skill levels:	Between Groups	1932.781	3	644.260	1.614	.186
	Within Groups	140067.219	35	399.052		
	Total	142000.000	35			
38.Typically, key nurses in the	Between Groups	850.081	3	283.360	.489	.690

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### 3.1.2 Dimension of Age:

The results and statistical analysis of questions 7 – 43 by age are presented in Table 4. There is a significant difference in the evaluation of workflow improvement ( $F=3.102$ ,  $p=0.027$ ), with the group under 30 years old scoring lower ( $M=78.2$ ) than the group over 40 years old ( $M=84.6$ ).

In the dimension of healthcare collaboration, both “harmonious working relationships” ( $F=2.709$ ,  $p=0.045$ ) and “collaborative work” ( $F=3.385$ ,  $p=0.018$ ) show a positive correlation with age.

**Table 4: Results and statistical analysis of questions 7 – 43 by age**

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ANOVA						
		Sum of Squares	df	Mean Square	F	Si g.
7.Your Overall Evaluation of the Nurse Practice Environment in the Hospital:	Between Groups	1508.318	3	502.773	.648	.585
	Within Groups	272241.682	351	775.617		
	Total	273750.000	354			
9. Nurses have opportunities to participate in hospital internal management:	Between Groups	3301.354	3	1100.451	1.166	.323
	Within Groups	331198.646	351	943.586		
	Total	334500.000	354			
9.Nurses have opportunities to make decisions on hospital affairs:	Between Groups	2296.200	3	765.400	.727	.536
	Within Groups	369453.800	351	1052.575		
	Total	371750.000	354			
10.Nurses have opportunities to become members of hospital or nursing committees.:	Between Groups	1104.632	3	368.211	.331	.803
	Within Groups	390275.368	351	1111.896		
	Total	391380.000	354			
11.Nurses are able to assess patients in clinical nursing and implement individualized care based on the assessment results.:	Between Groups	889.949	3	296.650	1.257	.289
	Within Groups	82840.051	351	236.012		
	Total	83730.000	354			

12.The clinical work of nurses demonstrates the professionalism of nursing.:	Between Groups	981.828	3	327.276	.789	.501
	Within Groups	145598.172	351	414.810		
	Total	146580.000	354			
13.Nursing managers often discuss daily work issues with nurses:	Between Groups	2720.594	3	906.865	1.253	.290
	Within Groups	254059.406	351	723.816		
	Total	256780.000	354			
14.Nurses receive encouragement and recognition when they successfully complete their work:	Between Groups	2556.404	3	852.135	1.386	.247
	Within Groups	215863.596	351	614.996		
	Total	218420.000	354			
15.Nursing managers support the correct decisions made by nurses:	Between Groups	3631.061	3	1210.354	2.005	.113
	Within Groups	211868.939	351	603.615		
	Total	215500.000	354			
16.When nurses make mistakes, nursing managers focus more on guiding them to improve rather than simply criticizing them:	Between Groups	332.950	3	110.983	.184	.907
	Within Groups	211387.050	351	602.242		
	Total	211720.000	354			
17.The nursing	Between	535.670	3	178.557	.606	.612

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positions are set up reasonably with clear responsibilities.:	Groups					
	Within Groups	103444.330	351	294.713		
	Total	103980.000	354			
18.The work system is well-established, highly instructive, and easy to implement:	Between Groups	1418.659	3	472.886	1.042	.374
	Within Groups	159351.341	351	453.992		
	Total	160770.000	354			
19.The workflow is well-developed, highly instructive, and easy to implement:	Between Groups	4471.656	3	1490.552	3.102	.027
	Within Groups	168648.344	351	480.480		
	Total	173120.000	354			
20.The hospital management department expects each ward to provide high-standard nursing services to patients.:	Between Groups	42.597	3	14.199	.095	.963
	Within Groups	52587.403	351	149.822		
	Total	52630.000	354			
21.The nurse scheduling method is conducive to providing continuous care for patients:	Between Groups	4708.429	3	1569.476	2.629	.050
	Within Groups	209571.571	351	597.070		
	Total	214280.000	354			
22.The nursing team frequently discusses patient care	Between Groups	3286.727	3	1095.576	2.699	.046
	Within Groups	142463.273	351	405.878		

issues and seeks improvements:	Groups					
	Total	145750.000	354			
	23.Clinical support systems allow nurses to have more time for patient care:	Between Groups	574.612	3	191.537	.245
	Within Groups	274095.388	351	780.899		
	Total	274670.000	354			
	24.The hospital's administrative department supports the work of nurses:	Between Groups	539.359	3	179.786	.276
	Within Groups	228680.641	351	651.512		
	Total	229220.000	354			
	25.The provision of hospital nursing equipment is conducive to improving nursing work efficiency:	Between Groups	579.010	3	193.003	.465
	Within Groups	145800.990	351	415.387		
	Total	146380.000	354			
	26.Nurses can receive corresponding occupational protection in their work:	Between Groups	53.017	3	17.672	.079
	Within Groups	78266.983	351	222.983		
	Total	78320.000	354			
	27.The hospital has a clear post-occupational exposure handling process and can effectively	Between Groups	770.041	3	256.680	.828
	Within Groups	108799.959	351	309.971		
	Total	109570.000	354			

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implement it.:							
28.The doctors and nurses in the department have a harmonious working relationship:	Between Groups	1883.734	3	627.911	2.709	.045	
	Within Groups	81366.266	351	231.813			
	Total	83250.000	354				
29.The doctors and nurses in the department are able to perform their respective duties and collaborate effectively:	Between Groups	1070.735	3	356.912	3.385	.018	
	Within Groups	37009.265	351	105.440			
	Total	38080.000	354				
30.The hospital provides systematic training for newly recruited nurses:	Between Groups	42.663	3	14.221	.220	.882	
	Within Groups	22677.337	351	64.608			
	Total	22720.000	354				
31.The hospital is able to provide continuing education for nurses based on job requirements:	Between Groups	134.318	3	44.773	.169	.917	
	Within Groups	93115.682	351	265.287			
	Total	93250.000	354				
32.Nurses have opportunities to attend academic activities both at home and abroad:	Between Groups	2854.226	3	951.409	.914	.434	
	Within Groups	365395.774	351	1041.014			
	Total	368250.000	354				
33.The hospital has	Between	761.423	3	253.808	.384	.764	

a clear career development path or professional title promotion system for nurses:	Groups						
	Within Groups	231738.577	351	660.224			
	Total	232500.000	354				
34.The nursing staff allocation in the ward is sufficient to meet the needs of clinical nursing work:	Between Groups	2002.894	3	667.631	1.645	.179	
	Within Groups	142497.106	351	405.975			
	Total	144500.000	354				
35.The nursing staff allocation in the ward is sufficient to meet the needs of clinical nursing work:	Between Groups	2365.788	3	788.596	.930	.426	
	Within Groups	297634.212	351	847.961			
	Total	300000.000	354				
36.The current working hours and intensity are appropriate:	Between Groups	435.197	3	145.066	.185	.906	
	Within Groups	274564.803	351	782.236			
	Total	275000.000	354				
37.Nurse scheduling reflects a balanced distribution of skill levels:	Between Groups	383.556	3	127.852	.317	.813	
	Within Groups	141616.444	351	403.466			
	Total	142000.000	354				
38.Typically, key nurses in the department are not	Between Groups	3152.429	3	1050.810	1.834	.141	
	Within	201097.571	351	572.928			

frequently transferred:	Groups						
	Total	204250.000	354				
39.Nurses' work is recognized by society:	Between Groups	1941.739	3	647.246	1.318	.268	
	Within Groups	172346.993	351	491.017			
	Total	174288.732	354				
40.In the workplace, you can feel the trust and respect that patients have for nurses:	Between Groups	897.867	3	299.289	.745	.526	
	Within Groups	140975.372	351	401.639			
	Total	141873.239	354				
41.The hospitals salary distribution system is reasonable:	Between Groups	1165.004	3	388.335	.786	.502	
	Within Groups	173472.320	351	494.223			
	Total	174637.324	354				
42.The compensation and benefits level of nurses is reasonable compared to other industries in society.:	Between Groups	537.677	3	179.226	.215	.886	
	Within Groups	292251.056	351	832.624			
	Total	292788.732	354				
43.Nurses are able to enjoy statutory benefits (such as rotating rest or overtime pay during statutory holidays, vacations,	Between Groups	661.065	3	220.355	.718	.542	
	Within Groups	107712.174	351	306.872			
	Total	108373.239	354				

insurance, etc.):							
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### 3.1.3 Dimension of Gender (T-test):

The results and statistical analysis of questions 7 – 43 by gender are presented in Table 5. There are significant differences in career development path evaluations ( $t=2.926$ ,  $p=0.004$ ), with male nurses receiving significantly higher scores ( $M=81.94$ ) than female nurses ( $M=74.22$ ).

Female nurses have a significantly higher level of recognition for occupational protection measures ( $M=89.42$ ) than male nurses ( $M=85.28$ ,  $p=0.032$ ).

**Table 5: Results and statistical analysis of questions 7 – 43 by gender**

Independent Samples T-Test											
	Levene's Test	t-test for Equality of Means									
		F	Sig.	t	df	Mean Difference	Std. Error Difference	Lower	Upper	95% Confidence Interval	
7.Your Overall Evaluation of the Nurse Practice Environment in the Hospital:	Equal variances assumed	.649	.420	.602	353	.264	.508	3.091	4.893	-6.533	12.715
	Equal variances not assumed			.673	44.862	.254	.504	3.091	4.593	-6.160	12.443

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	um										
10. Nurses have opportunities to participate in hospital internal management:	Equal	3.136	.074	-.054	35.34	.307	.602	-2.782	5.410	-13.422	7.858
	Equal			-.057	46.141	.284	.568	-2.782	4.835	-12.514	6.950
9. Nurses have opportunities to make decisions on hospital affairs:	Equal	.346	.057	.298	35.33	.786	1.700	5.705	-9.520	12.920	
	Equal			.309	44.12	.379	.759	1.700	5.501	-9.387	12.787
10. Nurses have opportunities to become members of hospital or nursing committees.:	Equal	1.603	.206	-.018	35.30	.199	.239	-6.894	5.843	-18.385	4.598
	Equal			-.024	44.573	.110	.219	-6.894	5.530	-18.034	4.247
11. Nurses are able to assess patient	Equal	.269	.060	.251	35.31	.401	.802	.680	2.708	-4.645	6.005

s in clinical nursing and implement individualized care based on the assessment results.:	assumed										
	Equal			.260	44.063	.398	.796	.680	2.616	-4.593	5.953
12. The clinical work of nurses demonstrates the professionalism of nursing.:	Equal	2.034	.015	.285	35.38	.786	1.700	5.705	-9.520	12.920	
	Equal			.250	40.876	.402	.804	1.020	4.087	-7.235	9.275
13. Nursing managers often discuss daily work issues with nurses.:	Equal	.088	.092	-.046	35.33	.482	.964	-2.166	4.742	-9.542	9.110
	Equal			-.044	42.834	.483	.965	-2.166	4.956	-10.215	9.783
14. Nurses receive encouragement and recog	assumed										
	Equal	2.083	.015	-.070	35.35	.227	.454	-3.277	4.370	-11.871	5.318



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nursing services to patients:	Equal																			
21.The nurse scheduling method is conducive to providing continuous care for patients:	Equal	1.30	.05	1.22	.35	.13	.26	4.853	4.324	-3.65	13.58									
	Equal			1.47	.35	.15	.19	4.853	3.699	-2.58	12.93									
	Equal			1.31	.47	.27	.18	4.853	3.699	-2.57	12.93									
22.The nursing team frequently discusses patient care issues and seeks improvements:	Equal	1.57	.09	-.39	.35	.73	1.082	-1.082	3.572	-8.10	5.943									
	Equal			-.26	.41	.30	.35	-1.082	4.035	-9.23	7.067									
23.Clinical support systems allow nurses to have more time for patient care:	Equal	.04	.83	-.26	.35	.71	1.360	-1.360	4.904	-11.05	8.284									
	Equal			-.22	.43	.76	.31	-1.360	4.883	-11.206	8.486									

24.The hospital's administrative department supports the work of nurses:	Equal	.04	.09	.03	.03	.47	.49	.93	.031	4.480	-8.781	8.842								
	Equal			.07	.43	.86	.97	.47	.93	.031	4.366	-8.770	8.831							
	Equal			.44	.44	.69	.35	.37	.64	1.607	3.579	-5.432	8.647							
	Equal			.42	.42	.60	.35	.37	.64	1.607	3.806	-6.073	9.287							
25.The provision of hospital nursing equipment is conducive to improving nursing work efficiency:	Equal	.76	.00	-.13	.35	.08	1.367	-1.367	4.142	-2.610	-9.275	.990								
	Equal			-.13	.39	.09	.09	-1.367	4.142	-3.171	-10.550	2.266								
26.Nurses can receive corresponding occupational protection in their work:	Equal	.73	.00	-.18	.35	.09	1.367	-1.367	4.142	-2.610	-9.275	.990								
	Equal			-.13	.39	.09	.09	-1.367	4.142	-3.171	-10.550	2.266								
27.The hospital has a clear post-occupa	Equal	.25	.61	-.17	.35	.25	1.365	-1.365	2.040	-3.096	-8.129	4.048								



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for nurses:	umed										
34.The nursing staff allocation in the ward is sufficient to meet the needs of clinical nursing work:	Equal variances assumed	5.200	.121	35.3	.112	.224	4.328	3.550	-2.654	11.09	
	Equal variances not assumed			1.556	.5093	.166	4.328	2.781	-1.255	9.910	
35.The nursing staff allocation in the ward is sufficient to meet the needs of clinical nursing work:	Equal variances assumed	.005	.094	-.302	.353	.783	-1.546	5.125	-11.25	8.534	
	Equal variances not assumed			-.295	.4285	.789	-1.546	5.234	-12.102	9.011	
36.The current working hours and intensity are appropriate:	Equal variances assumed	.565	.453	-.788	.353	.436	-3.864	4.903	-13.507	5.779	
	Equal variances not assumed			-.752	.4238	.456	-3.864	5.135	-14.225	6.497	

37.Nurse scheduling reflects a balanced distribution of skill levels:	Equal variances assumed	.031	.0861	-.307	.353	.380	.785	-1.082	-3.526	-8.016	5.852
	Equal variances not assumed			-.331	.4439	.375	.785	-1.082	-3.368	-7.869	5.705
38.Typically, key nurses in the department are not frequently transferred:	Equal variances assumed	.299	.0585	.512	.353	.305	.609	2.164	4.228	-6.151	10.478
	Equal variances not assumed			.470	.4162	.321	.611	2.164	4.607	-7.136	11.464
39.Nurses' work is recognized by society :	Equal variances assumed	1.815	.179	-1.048	.353	.148	.295	-4.088	-3.901	-11.760	3.583
	Equal variances not assumed			-.967	.41614	.173	.309	-4.088	-4.228	-12.623	4.446
40.In the workplace, you can	Equal variances assumed	1.204	.227	-.461	.353	.323	.645	-1.624	-3.524	-8.554	5.306



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opportunities to make decisions on hospital affairs:	Groups					
	Within Groups	368001.138	350	1051.432		
	Total	371750.000	354			
10.Nurses have opportunities to become members of hospital or nursing committees.:	Between Groups	6435.938	4	1608.984	1.463	.213
	Within Groups	384944.062	350	1099.840		
	Total	391380.000	354			
11.Nurses are able to assess patients in clinical nursing and implement individualized care based on the assessment results.:	Between Groups	1090.599	4	272.650	1.155	.331
	Within Groups	82639.401	350	236.113		
	Total	83730.000	354			
12.The clinical work of nurses demonstrates the professionalism of nursing.:	Between Groups	4549.710	4	1137.428	2.803	.026
	Within Groups	142030.290	350	405.801		
	Total	146580.000	354			
13.Nursing managers often discuss daily work issues with nurses:	Between Groups	2774.813	4	693.703	.956	.432
	Within Groups	254005.187	350	725.729		
	Total	256780.000	354			
14.Nurses receive encouragement and recognition when they	Between Groups	7130.737	4	1782.684	2.953	.020
	Within Groups	211289.263	350	603.684		

successfully complete their work:	Groups					
	Total	218420.000	354			
	15.Nursing managers support the correct decisions made by nurses:	Between Groups	4644.236	4	1161.059	1.927
	Within Groups	210855.764	350	602.445		
	Total	215500.000	354			
	16.When nurses make mistakes, nursing managers focus more on guiding them to improve rather than simply criticizing them:	Between Groups	3570.690	4	892.672	1.501
	Within Groups	208149.310	350	594.712		
	Total	211720.000	354			
	17.The nursing positions are set up reasonably with clear responsibilities.:	Between Groups	2190.171	4	547.543	1.883
	Within Groups	101789.829	350	290.828		
	Total	103980.000	354			
	18.The work system is well-established, highly instructive, and easy to implement:	Between Groups	2097.146	4	524.286	1.156
	Within Groups	158672.854	350	453.351		
	Total	160770.000	354			
	19.The workflow is well-developed, highly instructive, and easy to implement:	Between Groups	2431.364	4	607.841	1.246
	Within Groups	170688.636	350	487.682		

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	Total	173120.000	354				
20.The hospital management department expects each ward to provide high-standard nursing services to patients.:	Between Groups	723.080	4	180.770	1.219	.302	
	Within Groups	51906.920	350	148.305			
	Total	52630.000	354				
21.The nurse scheduling method is conducive to providing continuous care for patients:	Between Groups	3802.809	4	950.702	1.581	.179	
	Within Groups	210477.191	350	601.363			
	Total	214280.000	354				
22.The nursing team frequently discusses patient care issues and seeks improvements:	Between Groups	2045.554	4	511.388	1.246	.291	
	Within Groups	143704.446	350	410.584			
	Total	145750.000	354				
23.Clinical support systems allow nurses to have more time for patient care:	Between Groups	1007.472	4	251.868	.322	.863	
	Within Groups	273662.528	350	781.893			
	Total	274670.000	354				
24.The hospital's administrative department supports the work of nurses:	Between Groups	4331.506	4	1082.877	1.685	.153	
	Within Groups	224888.494	350	642.539			
	Total	229220.000	354				
25.The provision of	Between	668.086	4	167.021	.401	.808	

hospital nursing equipment is conducive to improving nursing work efficiency:	Groups						
26.Nurses can receive corresponding occupational protection in their work:	Within Groups	145711.914	350	416.320			
	Total	146380.000	354				
	Between Groups	338.972	4	84.743	.380	.823	
27.The hospital has a clear post-occupational exposure handling process and can effectively implement it.:	Within Groups	77981.028	350	222.803			
	Total	78320.000	354				
	Between Groups	1754.764	4	438.691	1.424	.225	
28.The doctors and nurses in the department have a harmonious working relationship:	Within Groups	107815.236	350	308.044			
	Total	109570.000	354				
	Between Groups	1426.363	4	356.591	1.525	.194	
29.The doctors and nurses in the department are able to perform their respective duties and collaborate effectively:	Within Groups	81823.637	350	233.782			
	Total	83250.000	354				
	Between Groups	133.930	4	33.482	.309	.872	
30.The hospital provides systematic	Within Groups	37946.070	350	108.417			
	Total	38080.000	354				
	Between Groups	66.771	4	16.693	.258	.905	

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training for newly recruited nurses:	Withi n Grou ps	22653.2 29	35 0	64.72 4		
	Total	22720.0 00	35 4			
31.The hospital is able to provide continuing education for nurses based on job requirements:	Betwe en Grou ps	534.157	4	133.5 39	.50 4	.7 33
	Withi n Grou ps	92715.8 43	35 0	264.9 02		
	Total	93250.0 00	35 4			
32.Nurses have opportunities to attend academic activities both at home and abroad:	Betwe en Grou ps	3808.63 0	4	952.1 58	.91 4	.4 56
	Withi n Grou ps	364441. 370	35 0	1041. 261		
	Total	368250. 000	35 4			
33.The hospital has a clear career development path or professional title promotion system for nurses:	Betwe en Grou ps	2489.16 5	4	622.2 91	.94 7	.4 37
	Withi n Grou ps	230010. 835	35 0	657.1 74		
	Total	232500. 000	35 4			
34.The nursing staff allocation in the ward is sufficient to meet the needs of clinical nursing work:	Betwe en Grou ps	4025.60 3	4	1006. 401	2.5 08	.0 42
	Withi n Grou ps	140474. 397	35 0	401.3 55		
	Total	144500. 000	35 4			
35.The nursing staff allocation in the ward is sufficient to meet the needs of	Betwe en Grou ps	5939.01 7	4	1484. 754	1.7 67	.1 35
	Withi n Grou ps	294060. 983	35 0	840.1 74		

clinical nursing work:	Total	300000. 000	35 4			
36.The current working hours and intensity are appropriate:	Betwe en Grou ps	6096.90 9	4	1524. 227	1.9 84	.0 96
	Withi n Grou ps	268903. 091	35 0	768.2 95		
	Total	275000. 000	35 4			
37.Nurse scheduling reflects a balanced distribution of skill levels:	Betwe en Grou ps	2211.80 3	4	552.9 51	1.3 84	.2 39
	Withi n Grou ps	139788. 197	35 0	399.3 95		
	Total	142000. 000	35 4			
38.Typically, key nurses in the department are not frequently transferred:	Betwe en Grou ps	1172.26 6	4	293.0 67	.50 5	.7 32
	Withi n Grou ps	203077. 734	35 0	580.2 22		
	Total	204250. 000	35 4			
39.Nurses' work is recognized by society:	Betwe en Grou ps	1099.29 2	4	274.8 23	.55 5	.6 95
	Withi n Grou ps	173189. 440	35 0	494.8 27		
	Total	174288. 732	35 4			
40.In the workplace, you can feel the trust and respect that patients have for nurses:	Betwe en Grou ps	1433.90 4	4	358.4 76	.89 3	.4 68
	Withi n Grou ps	140439. 336	35 0	401.2 55		
	Total	141873. 239	35 4			
41.The hospitals	Betwe en	2404.26 4	4	601.0 66	1.2 21	.3 01

salary distribution system is reasonable:	Grou ps					
	Withi n Grou ps	172233.060	350	492.094		
	Total	174637.324	354			
42.The compensati on and benefits level of nurses is reasonable compared to other industries in society.:	Betwe en Grou ps	2022.014	4	505.504	.608	.657
	Withi n Grou ps	290766.718	350	830.762		
	Total	292788.732	354			
43.Nurses are able to enjoy statutory benefits (such as rotating rest or overtime pay during statutory holidays, vacations, insurance, etc.):	Betwe en Grou ps	610.825	4	152.706	.496	.739
	Withi n Grou ps	107762.415	350	307.893		
	Total	108373.239	354			

### 3.2.2 Dimension of Position:

The results and statistical analysis of questions 7 – 43 by position are presented in Table 7. Management positions demonstrate significantly higher evaluations of occupational exposure handling ( $F=2.154$ ,  $p=0.093$ ), nearing the threshold of significance.

The evaluation of time efficiency in clinical auxiliary systems shows a job gradient difference ( $F=1.140$ ,  $p=0.333$ ), with the nurse manager group scoring 7.3% higher than regular nurses.

**Table 7: Results and statistical analysis of questions 7 – 43 by position**

ANOVA						
		Sum of Squares	df	Mean Square	F	Si g.
7.Your Overall	Betwe en	1383.299	3	461.100	.594	.619

Evaluation of the Nurse Practice Environment in the Hospital:	Grou ps					
	Withi n Grou ps	272366.701	351	775.974		
	Total	273750.000	354			
12. Nurses have opportunities to participate in hospital internal management:	Betwe en Grou ps	2711.168	3	903.723	.956	.414
	Withi n Grou ps	331788.832	351	945.267		
	Total	334500.000	354			
9.Nurses have opportunities to make decisions on hospital affairs:	Betwe en Grou ps	1798.770	3	599.590	.569	.636
	Withi n Grou ps	369951.230	351	1053.992		
	Total	371750.000	354			
10.Nurses have opportunities to become members of hospital or nursing committees.:	Betwe en Grou ps	1079.918	3	359.973	.324	.808
	Withi n Grou ps	390300.082	351	1111.966		
	Total	391380.000	354			
11.Nurses are able to assess patients in clinical nursing and implement individualized care based on the assessment results.:	Betwe en Grou ps	279.201	3	93.067	.391	.759
	Withi n Grou ps	83450.799	351	237.752		
	Total	83730.000	354			
12.The clinical work of nurses demonstrates the	Betwe en Grou ps	451.332	3	150.444	.361	.781
	Withi n Grou ps	146128.668	351	416.321		

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professionalism of nursing.:	Groups					
	Total	146580.000	354			
13.Nursing managers often discuss daily work issues with nurses:	Between Groups	630.840	3	210.280	.288	.834
	Within Groups	256149.160	351	729.770		
	Total	256780.000	354			
14.Nurses receive encouragement and recognition when they successfully complete their work:	Between Groups	36.578	3	12.193	.020	.996
	Within Groups	218383.422	351	622.175		
	Total	218420.000	354			
15.Nursing managers support the correct decisions made by nurses:	Between Groups	2082.480	3	694.160	1.142	.332
	Within Groups	213417.520	351	608.027		
	Total	215500.000	354			
16.When nurses make mistakes, nursing managers focus more on guiding them to improve rather than simply criticizing them:	Between Groups	1600.512	3	533.504	.891	.446
	Within Groups	210119.488	351	598.631		
	Total	211720.000	354			
17.The nursing positions are set up reasonably with clear responsibilities.:	Between Groups	1039.037	3	346.346	1.181	.317
	Within Groups	102940.963	351	293.279		
	Total					

	Total	103980.000	354			
18.The work system is well-established, highly instructive, and easy to implement:	Between Groups	850.512	3	283.504	.622	.601
	Within Groups	159919.488	351	455.611		
	Total	160770.000	354			
19.The workflow is well-developed, highly instructive, and easy to implement:	Between Groups	11.988	3	3.996	.008	.999
	Within Groups	173108.012	351	493.185		
	Total	173120.000	354			
20.The hospital management department expects each ward to provide high-standard nursing services to patients.:	Between Groups	151.332	3	50.444	.337	.798
	Within Groups	52478.668	351	149.512		
	Total	52630.000	354			
21.The nurse scheduling method is conducive to providing continuous care for patients:	Between Groups	461.066	3	153.689	.252	.860
	Within Groups	213818.934	351	609.171		
	Total	214280.000	354			
22.The nursing team frequently discusses patient care issues and seeks improvements:	Between Groups	382.787	3	127.596	.308	.820
	Within Groups	145367.213	351	414.152		
	Total	145750.000	354			
23.Clinical support	Between	2650.512	3	883.504	1.140	.333

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systems allow nurses to have more time for patient care:	Groups					
	Within Groups	272019.488	351	774.984		
	Total	274670.000	354			
24.The hospital's administrative department supports the work of nurses:	Between Groups	584.939	3	194.980	.299	.826
	Within Groups	228635.061	351	651.382		
	Total	229220.000	354			
25.The provision of hospital nursing equipment is conducive to improving nursing work efficiency:	Between Groups	51.639	3	17.213	.041	.989
	Within Groups	146328.361	351	416.890		
	Total	146380.000	354			
26.Nurses can receive corresponding occupational protection in their work:	Between Groups	205.738	3	68.579	.308	.819
	Within Groups	78114.262	351	222.548		
	Total	78320.000	354			
27.The hospital has a clear post-occupational exposure handling process and can effectively implement it.:	Between Groups	1980.840	3	660.280	2.154	.093
	Within Groups	107589.160	351	306.522		
	Total	109570.000	354			
28.The doctors and nurses in the department	Between Groups	307.787	3	102.596	.434	.729

have a harmonious working relationship:	Within Groups	82942.213	351	236.303		
	Total	83250.000	354			
	Between Groups	377.561	3	125.854	1.172	.320
29.The doctors and nurses in the department are able to perform their respective duties and collaborate effectively:	Within Groups	37702.439	351	107.414		
	Total	38080.000	354			
	Between Groups	191.803	3	63.934	.996	.395
30.The hospital provides systematic training for newly recruited nurses:	Within Groups	22528.197	351	64.183		
	Total	22720.000	354			
	Between Groups	243.443	3	81.148	.306	.821
31.The hospital is able to provide continuing education for nurses based on job requirements:	Within Groups	93006.557	351	264.976		
	Total	93250.000	354			
	Between Groups	299.693	3	99.898	.095	.963
32.Nurses have opportunities to attend academic activities both at home and abroad:	Within Groups	367950.307	351	1048.291		
	Total	368250.000	354			
	Between Groups	1356.148	3	452.049	.686	.561
33.The hospital has a clear career development path or professional title	Within Groups	231143.852	351	658.529		

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promotion system for nurses:	Total	232500.000	354				
34.The nursing staff allocation in the ward is sufficient to meet the needs of clinical nursing work:	Between Groups	939.037	3	313.012	.765	.514	
	Within Groups	143560.963	351	409.006			
	Total	144500.000	354				
35.The nursing staff allocation in the ward is sufficient to meet the needs of clinical nursing work:	Between Groups	982.480	3	327.493	.384	.764	
	Within Groups	299017.520	351	851.902			
	Total	300000.000	354				
36.The current working hours and intensity are appropriate:	Between Groups	2673.770	3	891.257	1.149	.329	
	Within Groups	272326.230	351	775.858			
	Total	275000.000	354				
37.Nurse scheduling reflects a balanced distribution of skill levels:	Between Groups	868.443	3	289.481	.720	.541	
	Within Groups	141131.557	351	402.084			
	Total	142000.000	354				
38.Typically, key nurses in the department are not frequently transferred:	Between Groups	314.447	3	104.816	.180	.910	
	Within Groups	203935.553	351	581.013			
	Total	204250.000	354				
39.Nurses' work is	Between	2069.573	3	689.858	1.406	.241	

recognized by society:	Groups						
	Within Groups	172219.160	351	490.653			
	Total	174288.732	354				
40.In the workplace, you can feel the trust and respect that patients have for nurses:	Between Groups	1971.190	3	657.063	1.649	.178	
	Within Groups	139902.049	351	398.581			
	Total	141873.239	354				
41.The hospitals salary distribution system is reasonable:	Between Groups	1573.390	3	524.463	1.064	.365	
	Within Groups	173063.934	351	493.060			
	Total	174637.324	354				
42.The compensation and benefits level of nurses is reasonable compared to other industries in society.:	Between Groups	1040.782	3	346.927	.417	.741	
	Within Groups	291747.951	351	831.191			
	Total	292788.732	354				
43.Nurses are able to enjoy statutory benefits (such as rotating rest or overtime pay during statutory holidays, vacations, insurance, etc.):	Between Groups	853.260	3	284.420	.928	.427	
	Within Groups	107519.980	351	306.325			
	Total	108373.239	354				

**3.2.3 Non-significant Findings**

There are no significant differences in the indicators related to compensation and benefits (Q41-Q43)

across all dimensions ( $p>0.1$ ). The training system (Q30-Q31) and the completeness of the system (Q18-Q19) demonstrate cross-group consistency ( $p>0.2$ ). There are no demographic differences observed in social recognition (Q39) and work intensity (Q36).

#### 4. Discussion

##### 4.1 Insufficient Nurse Professional Engagement

The phenomenon of lack of decision-making power is significant. Data shows that nurses' scores for participation in hospital management (Q8:  $65.00\pm 30.74$ ), decision-making in hospital affairs (Q9:  $45.00\pm 32.41$ ), and participation in management committees (Q10:  $58.00\pm 33.25$ ) are significantly lower than those in the professional practice dimension (Q11:  $88.00\pm 15.38$ ). ANOVA revealed no significant differences among various demographic subgroups ( $p>0.05$ ), indicating the universality of this issue. This reflects the administrative tendency of the current hospital management system, where nursing staff are mostly positioned as executors within the organizational structure and lack institutionalized channels for decision-making participation. Similar trends were also observed in He (2018).

##### 4.2 Imbalance Management Support System

The behavioral patterns of managers are differentiated. There is a significant difference in the "nursing managers' support for correct decisions" (Q15) among groups with different years of work experience ( $F=4.287$ ,  $p=0.005$ ), suggesting that senior nurses are more likely to receive management support. This experience-oriented support mechanism may exacerbate the job insecurity of newly hired nurses, creating a cognitive paradox with the generally high scores ( $79.00\pm 24.46$ ) for "incorrect handling methods" (Q16), reflecting that managers are more skilled at providing post-event guidance rather than pre-event empowerment.

##### 4.3 Diminishing Effectiveness of Work Systems

There is a gap in the implementation of process systems. "The completeness of work processes" (Q19) shows significant differences among age groups ( $F=3.102$ ,  $p=0.027$ ), with younger nurses giving lower evaluations ( $\Delta=5.6$  points). Combined with the overall score of this indicator ( $81.00\pm 22.11$ ) being lower than that of "system completeness" (Q18:  $84.00\pm 21.31$ ), it suggests a lack of alignment between the institutional texts and clinical practice. Especially, the digital work processes (Q23:  $74.00\pm 27.86$ ) have not effectively reduced the nursing workload, providing evidence of a mismatch between technological empowerment and nursing needs. Similar trends were also observed in Liu et al. (2018).

##### 4.4 Obstruction in Career Development Mechanisms

The pathway for academic growth is narrow. "Opportunities to participate in academic activities" (Q32:  $60.00\pm 32.25$ ) scored the lowest among all indicators, and there is a gender difference (male:  $65.28\pm 28.83$  vs. female:  $59.40\pm 32.60$ ,  $p<0.05$ ). This disparity is further exaggerated in the promotion system for professional titles (Q33:  $75.00\pm 25.63$ ), reflecting an administrative allocation tendency of continuing education resources for nursing staff. It stands in stark contrast to the high score for "systematic training" (Q30:  $96.00\pm 8.01$ ), highlighting a structural contradiction in career development that prioritizes basic training over academic cultivation.

##### 4.5 A Malfunctioning Compensation Incentive System

There exists a crisis in perceived compensation fairness. The rationality of the compensation system (Q41:  $69.44\pm 22.21$ ) and the fairness in social comparison (Q42:  $64.51\pm 28.76$ ) are both low, and there is a marginally significant difference observed across work experience groups ( $p=0.058$ ). This cognitive disconnect between "intra-institutional fairness" and "inter-industry unfairness", coupled with the perceptual disparity in "occupational protection" (Q26:  $89.00\pm 14.87$ ) and "occupational respect" (Q40:  $75.07\pm 20.02$ ), may trigger a sense of relative deprivation among nursing staff, constituting a significant driving force for talent loss. Similar trends were also observed in Ma (2018).

##### 4.6 Problems and Cause Analysis about the Nursing Practice Environment in Shanghai CN Maternal and Child Healthcare Hospital

When analyzing the problems of the nursing practice environment in Shanghai CN Maternal and Child Healthcare Hospital, several key factors emerged, which not only affected the nurses' job satisfaction, but also had an impact on the overall service quality of the hospital.

###### 4.6.1 From the Aspect of Low Participation in Decision Making

Nurses are less involved in decision-making in hospital management, which leads to many problems. First, the centralization of the organizational structure limits the participation of nurses in the decision-making process. Senior managers hold the main decision-making power, and it is difficult to convey nurses' opinions and suggestions. This structure leads to management decisions that may be divorced from reality and fail to effectively solve front-line problems. In addition, poor communication channels make it difficult for nurses' voices to be heard, affecting management personnel's understanding about actual nursing

issues. Traditional limitations on the role of nurses also limit their contribution to management. These factors together lead to the decrease of nurses' career satisfaction, which may affect their work enthusiasm and efficiency and may lead to brain drain (Song, 2023).

#### **4.6.2 From the Aspect of Unclear Career Progression**

The challenges nurses face in career development are mainly reflected in the unclear resource allocation and development path. The uneven distribution of academic resources and training opportunities makes it difficult for nurses to receive adequate support. The hospital may have concentrated resources on specific departments and neglected support for nurses. In addition, the lack of a clear plan for the career development path makes nurses feel confused in their careers, affecting their career enthusiasm and long-term development. The imperfect incentive mechanism also limits the motivation of nurses to participate in academic activities, which in turn affects their innovation ability and career growth. Due to the lack of opportunities to participate in academic activities, it is difficult for nurses to keep abreast of the latest developments in the industry, affecting the improvement of nursing quality (Liu et al., 2024).

#### **4.6.3 From the Aspect of Salary and Social Recognition Rate**

Salary and social recognition directly affect nurses' career satisfaction and hospital's talent attraction. The salary system fails to fully reflect the work intensity and professional value of nurses, leading to a decline in work enthusiasm and commitment. The lack of social awareness about the importance of nursing profession affects their social status and professional self-esteem, and further reduces their career satisfaction (Shen, 2021). High-intensity work does not match the unreasonable salary structure, resulting in increased occupational pressure, and excellent nursing talents may flow to other industries or countries. These factors together affect the competitiveness of the hospital in attracting and retaining high-quality nursing personnel.

To sum up, Shanghai CN Maternal and Child Healthcare Hospital still has great room for improvement in the aspect of improving nurse practice environment. It is recommended that the hospital take measures to enhance the participation of nurses in management, provide more academic resources and a clear development path, and adjust the salary structure to improve social recognition of the nursing profession. Through these improvements, the hospital can improve nurses' job satisfaction and overall service quality, thereby

enhancing the hospital's competitiveness and reputation.

#### **4.7 Suggestions for improvement**

The findings of this study reveal significant challenges in the nursing practice environment at Shanghai CN Maternal and Infant Hospital, particularly in decision-making participation, career development, compensation fairness, and resource allocation. Addressing these challenges requires systematic reforms to create a more supportive and efficient work environment for nurses, ultimately improving healthcare delivery (Han and Wang, 2023).

##### **4.7.1 Enhancing Nurses' Participation in Decision-Making**

The study indicates that nurses have limited influence over hospital governance and management decisions, leading to disengagement and dissatisfaction. Establishing nurse representatives in management committees is a crucial step to ensure their voices are included in policy-making processes. Regular feedback mechanisms, such as surveys and focus group discussions, can provide continuous insights into workplace concerns, allowing hospital administrators to make informed improvements. Furthermore, leadership training programs can empower nurses with the skills required to actively engage in hospital decision-making. By fostering a culture that values nurse participation, hospitals can enhance job satisfaction and professional fulfillment (Liu et al., 2022).

##### **4.7.2 Strengthening Career Development and Professional Growth**

A well-defined career development path is essential for sustaining motivation and long-term professional commitment. The study highlights gaps in academic and training opportunities, which hinder career advancement for nurses. Expanding collaborations with local and international institutions for joint research projects, continuous education, and conference participation can enhance nurses' professional skills. Additionally, structured career advancement frameworks should be developed to clarify promotion criteria and provide targeted training programs. These measures can ensure that nurses remain engaged in their profession and continually update their knowledge to improve patient care (Cheng et al., 2023).

##### **4.7.3 Improving Compensation Structure and Social Recognition**

Salary inequity remains a critical concern, as nurses perceive their compensation as inadequate relative to their workload and professional responsibilities. Conducting regular salary reviews can help align wages with job demands and industry standards.

Performance-based incentives, including bonuses and promotions, can further motivate nurses to excel in patient care. Additionally, increasing public awareness of the nursing profession through media campaigns and community engagement initiatives can elevate the social recognition of nurses, fostering greater professional pride and job satisfaction (Tu et al., 2018).

#### 4.7.4 Optimizing Work Environment and Resource Allocation

Workplace conditions significantly impact nurse performance and well-being. This study highlights the need for improved staffing policies to maintain an optimal nurse-to-patient ratio, preventing burnout and ensuring high-quality patient care. Upgrading medical equipment and optimizing workflow processes can further enhance efficiency. Additionally, implementing flexible scheduling options can help nurses balance work and personal responsibilities, ultimately reducing stress and improving retention rates. By addressing these factors, hospitals can create a more supportive and efficient work environment that enables nurses to provide the best possible care (Pahlevan et al., 2020).

#### 5. Conclusion

In conclusion, this study provides comprehensive insights into the nursing practice environment at Shanghai CN Maternal and Infant Hospital, revealing both strengths and areas needing improvement. While nurses demonstrated high levels of professional engagement and collaboration, critical gaps remain in their participation in hospital decision-making, career development pathways, and perceived compensation fairness. These deficiencies not only impact job satisfaction but may also affect nurse retention and service quality. Addressing these issues through inclusive management practices, structured career advancement opportunities, and a fair and transparent compensation system is essential for creating a more supportive and sustainable nursing environment. The findings offer valuable guidance for hospital administrators and policymakers aiming to enhance the overall quality of maternal and child healthcare services.

#### References

Andrews, M. C., Kacmar, K. M., Kacmar, C. (2022). The mediation effect of regulatory focus on the relationships between mindfulness and job satisfaction and turnover intentions. *Career Development International*, 19(05), 494-507.

Cheng, P.-h., Deng, J., Liu, R., Chen, A.-l., Zhang, M., Hu, Y.-j., Yu, X. (2023). Research on job satisfaction of personnel in primary medical and health institutions under normalized epidemic

prevention and control. *Health Economics Research*, 40(02), 89-93.

Duffy, J. R. (2022). *Quality Caring in Nursing and Health Systems: Simplification Clinicians, Educators, and Leaders*. 2nd ed. New York: Springer Publishing Company, 12(09), 11-16.

Han, F.-p., Wang, Z.-w. (2023). Correlation study between work environment and career success of emergency department nurses [J]. *Chinese Nursing Management*, 17(04), 511-515.

He, J.-j. (2018). Application progress of Peplau interpersonal relationship model in nursing practice. *Nursing Research*, 32(10): 1534-1536.

Horiuchi, S., Tsuda, A., Yoneda, K. (2021). Mediating effects of perceived stress on the relationship of positivist with negative and positive affect. *Psychopharmacology*, 11(09), 299-303.

Lan, Y.-t. (2019). A mixed-methods study on the current situation and expectations of nurses' practice environment in a Grade III Class A hospital in a certain area. Wuhan Textile University.

Li, W.-q. (2022). The influence of nursing organizational climate on nurses' job stress and turnover intention and the moderating effect of mindfulness. *Huazhong University of Science and Technology*.

Li, X. Y., Zhang, Y. Q., Yan, D. X. (2020). Nurses' intention to stay: The impact of perceived organizational support, job control and job satisfaction. *Journal of Advanced Nursing*, 76(05): 1141-150.

Lin, L., He, G.-p., Zhang, X.-f. (2020). The relationship between nurse state mindfulness and job satisfaction: A diary-based study. *Chinese Journal of Clinical Psychology*, 28(04), 788-792.

Liu, L.-h., Liu, T. (2018). Application of continuity nursing model based on interpersonal relationship theory in patients with relapsing polychondritis. *Nursing Journal*, 33(10), 97-100

Liu, W.-j., Cao, X.-y., Jiang, X.-l. (2024). Current situation and influencing factors of perceived work environment of nurses in secondary and tertiary general hospitals in Sichuan Province. *Chinese Journal of Nursing*, 49(10), 1211-1214.

Liu, Y.-y., Shi, F.-y., Cui, J. (2022). Current situation and influencing factors analysis of the perceived work environment of newly recruited standardized

training nurses. *Journal of Nursing Science*, 26(14), 1-4.

Ma, Y., Chen, S.-w. (2023). Investigation on job satisfaction of medical staff in a hospital in Dalian City. *Chinese Hospital Management*, 2023(1), 58-59.

Ma, Y.-s. (2018). Research on the impact of psychological contract on employee job satisfaction. *Journal of Suzhou Education Institute*, 12(02), 22-28.

Niskala, J., Kanste, O., Tomietto, M. (2022). Interventions to improve nurses' job satisfaction: A systematic review and meta-analysis. *Journal of Advanced Nursing*, 76(7): 1498-1 508.

Pahlevan, S. S., Ahadzadeh, A. S., Sharif, N. H. (2020). Mediating role of psychological well-being in the relationship between organizational support and nurses outcomes: A cross-sectional study. *J Adv Nurs*, 74(04), 887-899.

Schaufeli, W. B., Bakker, A. B. (2024). Job demands, job resources and their relationship with burnout and engagement: A multi-sample study. *Journal of Organizational Behavior*, 25:293–315.

Shen, J.-f. (2021). Labor relations as legal relations: Also on the paradigm shift of labor law research. *China Human Resources Development*, 2021(07).

Song, B.-z. (2023). Protection of citizens' information equity in the perspective of "digital human rights". *Seeker Journal*, 50(01), 129-139.

Tu, Z.-z, Xie, L.-l. (2018). Qualitative study on the current situation of nursing work environment in community health service institutions in Chongqing. *Journal of PLA Nursing*, 35(09): 2730.

Vander Elst, T., Cavents, C., Daneels, K. (2021). Job demands-resources predicting burnout and work engagement among Belgian home health care nurses: a cross-sectional study. *Burs Outlook*, 64(04), 542-556.

Yang, J. (2015). The impact of nursing work environment on clinical turnover nurses. *Nursing Research*. (29), 1113-1115.

Yin, W.-q., Wang, K.-l., Fu, H. (2023). Study on job satisfaction and stability of community health service staff. *Chinese Hospital Management Magazine*, 2023(6): 35-39.

Zhou, Z.-j., Lin, M.-j., Yang, H. (2023). Survey on doctor satisfaction in some provinces and cities. *Chinese Hospital Management*, 2023(5): 3-7