

Application Effect of Hierarchical Nursing Management Model in Hospital Nursing Management

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Abstract: *Objective:* To explore the implementation plan of the hierarchical nursing management model and its application effect in actual hospital work, and propose more effective and guaranteed management measures to provide reference for the improvement of modern medical and nursing service quality. *Methods:* Based on a controlled experiment, 68 nursing staff from our hospital from March 2024 to February 2025 were enrolled and randomly divided into two groups with 34 cases in each group. The control group adopted conventional management, while the observation group implemented the hierarchical nursing management model to form a new working mode. Finally, their performance in work enthusiasm, nursing quality, as well as patient satisfaction and assessment scores were discussed. *Results:* The data of the observation group showed that it was superior to the control group in multiple indicator dimensions (patient satisfaction, work enthusiasm, work efficiency, nursing quality, and assessment scores), and the difference was statistically significant ($p < 0.05$). *Conclusion:* In hospital nursing management work, there is an urgent need to implement modern and effective management models, and the hierarchical nursing management model is one of them. It has truly reversed the concept of nursing staff, making them realize the importance of maintaining work enthusiasm and fulfilling their duties. Moreover, through the penetration of modern management concepts, it has effectively improved the level of professional nursing services and patient satisfaction, and contributed to the harmony of doctor-patient relations.

Keywords: Hierarchical nursing management model; Hospital nursing; Management; Quality; Satisfaction

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1. Introduction

The public pays attention to their own health and puts forward higher requirements for nursing services. Hospitals also keep up with the times, adjust their working modes, and deepen their efforts in nursing management. The hierarchical nursing management model has unique value and connotation, which can give full play to the

maximum potential of nursing staff at different levels and with different abilities, and satisfy patients to achieve a win-win situation. In today's era, with the improvement of economic level, national health awareness is constantly growing, and the demand for health protection, medical experience and nursing quality is rising. In terms of nursing services, it is becoming more professional, continuous, humanistic and refined, forming many unwritten rules and new standards in the industry^[1]. Medical institutions at all levels actively adapt to industry development trends and patient needs, take the initiative to optimize service processes, innovate working modes, continue to deepen efforts in the field of nursing management, and constantly promote the transformation of nursing work towards standardization, scientization and efficiency, supporting the improvement of overall medical level with high-quality nursing services. As an important practical model in the modern nursing management system, the hierarchical nursing management model has unique application value and management connotation. Based on the ability and qualifications of nursing staff, it scientifically allocates resources to achieve a management pattern of job-personnel matching, special personnel for special tasks, and division of labor and cooperation. Moreover, the implementation of the hierarchical management model has greatly improved work efficiency, reduced corresponding losses, maximized the strengths of nursing staff, and laid a solid foundation for the transformation and upgrading of the hospital's modern management model^[2]. In this way, senior nurses focus on review affairs management, and can also influence more junior nurses, arouse their work enthusiasm, and promote the steady improvement and long-term development of the overall team quality. The optimized resource allocation makes the entire care service process smoother and more personalized, reduces nursing risks, and improves patients' medical experience, which can be described as achieving multiple goals with one action.

2. Materials and methods

2.1. General information

Based on a controlled experiment, 68 nursing staff from our hospital from March 2024 to February 2025 were enrolled and randomly divided into two groups with 34 cases in each group.

(1) Group A (control group)

Included 18 male and 16 female nursing staffs, accounting for 52.94% and 47.06% respectively; the minimum age was 23, the maximum age was 40, with an average of (31.61 ± 0.12) years; educational background: all had college degree or above; professional titles: 2 (5.88%) associate chief nurses, 7 (20.59%) senior nurses, 11 (32.35%) nurses, and 14 (41.18%) junior nurses.

(2) Group B (observation group)

Included 19 male and 15 female nursing staffs, accounting for 55.88% and 44.12% respectively; the minimum age was 21, the maximum age was 36, with an average of (29.53 ± 0.84) years; educational background: all had college degree or above; professional titles: 3 (8.82%) associate chief nurses, 8 (23.53%) senior nurses, 9 (26.47%) nurses, and 14 (41.18%) junior nurses. The baseline data between the two groups were comparable ($p > 0.05$).

2.1.1. Inclusion criteria

- (1) Informed and fully supportive of the research;
- (2) Aged 21–40;
- (3) Working in the hospital for more than 3 years;

- (4) Possessing high cognitive, understanding and language expression abilities

2.1.2. Exclusion criteria

- (1) Withdrawing midway from the research;
- (2) Refusing to participate in the research;
- (3) Intern nurses;
- (4) Incomplete general data

2.2. Methods

2.2.1. Control group: Implementing traditional nursing management model

Conventional nursing management methods were adopted. The head nurse uniformly arranged work content and generally assigned general work tasks; unified standards were implemented for training and assessment, a flexible scheduling system and work assessment system were implemented, and the work status of nursing staff was regularly inspected. The above were adaptively adjusted according to the nursing needs of each department, the level and work experience of nursing staff, etc.

2.2.2. Observation group: Implementing hierarchical nursing management model

A new hierarchical nursing management model was adopted to clearly divide the levels, powers and responsibilities of nurses with different seniority. For nursing staff at three different levels (high, medium and low), the upper-level nursing staff were responsible for the lower-level ones, and all regulations and requirements on nursing work rules within the level must be followed. At the same time, the lower-level staff should fully cooperate with the upper-level work, obey the leadership and instructions, and work together to make work efficiency more efficient and the working environment and atmosphere more harmonious.

- (1) On the basis of fully grasping the actual abilities and work status of nursing staff at all levels, the head nurse should scientifically divide groups according to reasonable principles and select suitable candidates to serve as responsible group leaders and team members.
- (2) When setting the responsible group leader, the professional title requirement should be clarified, such as having a nurse or above title, and being a senior nursing staff with rich experience and proficient skills; being able to fully master the professional knowledge and operational skills required by the department and having outstanding daily work performance^[3]. Other members of the group should have good compliance and be able to steadily improve their professional quality and operational ability under the guidance of the responsible group leader and responsible nurse.
- (3) Combine the actual situation of the hospital to formulate and continuously improve the assessment system to effectively improve the overall work quality of each nursing group and strengthen the comprehensive ability of nursing staff. At the same time, implement a feasible competition mechanism to promote a positive competition atmosphere among nursing staff; conduct regular performance assessments to objectively evaluate the daily work efficiency, skill operation level and nursing service quality of nursing staff.
- (4) In the daily treatment of clinical patients, senior nursing staff should not only strengthen the verification of the implementation of medical orders but also play a leading role in guiding intermediate-level nursing staff to complete various nursing tasks with high quality and prevent nursing errors. Junior nursing staff

should regularly summarize and report their daily work content to the head nurse and take the initiative to learn new knowledge and skills emerging in nursing practice.

- (5) The head nurse should fully supervise the work implementation of medium and junior nursing staff, timely point out and summarize the problems and deficiencies in their work; through weekly regular meetings, assign work tasks, clarify key content and relevant precautions, and help nursing staff at all levels clearly recognize their own shortcomings^[4,5]. For existing problems, the department head nurse should organize special training and assessment, and regularly submit phased work reports to the nursing department; at the same time, implement a reward and punishment system, commend those with outstanding performance, fully mobilize the enthusiasm and initiative of nursing staff, and further promote the optimization and improvement of the clinical nursing management system^[6].

2.3. Observation indicators

2.3.1. Patient satisfaction

Questionnaires were distributed in the hospital to evaluate and score the nursing staff of the control group and the observation group by patients in the department. Among them, a score greater than 95 points was rated as very satisfied, a score between 75 and 95 points was rated as satisfied, and a score less than 75 points was regarded as dissatisfied. The scores of nursing staff in groups A and B were counted:

Patient satisfaction = (very satisfied + basically satisfied)/total number of cases × percentage.

2.3.2. Work enthusiasm, work effect and nursing quality level

Evaluations were made by hospital managers, nursing staff, etc. On the basis of the previous scale, more indicators were referred to evaluate the actual work situation of nursing staff in the control group and the observation group, and scores were given from the aspects of work efficiency and quality, work enthusiasm, etc. A higher score indicates that the nursing staff has high work efficiency, enthusiasm and professionalism, and the final nursing quality is good; on the contrary, the work attitude, enthusiasm and quality need to be improved.

2.3.3. Assessment scores

Dynamic monitoring of operations before and after nursing was carried out to evaluate the theoretical and nursing operation levels of nursing staff in the control group and the observation group. Referring to the general examination content, strict scoring was carried out. A higher score indicates that the nursing staff has a high level of knowledge and professional skills; on the contrary, it indicates that the professional ability of the nursing staff needs to be improved.

2.4. Statistical methods

SPSS 18.0 statistical software was used for data analysis. $p < 0.05$ indicated that the difference was statistically significant.

3. Results

3.1. Comparison of nursing satisfaction between the control group and the observation group

Comparing the data in the table, it is obvious that the patient nursing satisfaction of the observation group is

higher, and that of the control group is at a general level, which meets $p < 0.05$. For details, refer to **Table 1**.

Table 1. Comparison of nursing satisfaction between the control group and the observation group [n(%)]

Group	Number of cases	Very satisfied	Satisfied	Dissatisfied	Satisfaction rate
Control group	34	16 (47.06)	10 (29.41)	8 (23.53)	26 (76.47)
Observation group	34	23 (67.65)	10 (29.41)	1 (2.94)	33 (97.06)
χ^2					6.275
p					0.012

3.2. Comparison of work situation and quality between the control group and the observation group

Comparing the data in the table, based on the control group, the observation group had higher scores in this item. It is obvious that the nursing staff in the observation group had higher work efficiency, higher work enthusiasm, and higher nursing quality level, which meets $p < 0.05$. For details, refer to **Table 2**.

Table 2. Comparison of work situation and quality between the control group and the observation group ($\bar{x} \pm s$, points)

Group	Number of cases	Work efficiency	Work quality	Work enthusiasm
Control group	34	86.35 \pm 1.56	84.18 \pm 2.89	87.51 \pm 2.62
Observation group	34	98.77 \pm 1.93	97.40 \pm 2.51	97.83 \pm 3.54
t		29.183	20.138	13.664
p		0.000	0.000	0.000

3.3. Comparison of professional assessment scores between the control group and the observation group

Comparing the data in the table, in the assessment scores before and after nursing management, the levels of both groups of personnel in the control group and the observation group have slightly improved, but the scores of the nursing staff in the observation group are higher, indicating that their professional level is superior to that of the control group, which meets $p < 0.05$. For details, refer to **Table 3**.

Table 3. Comparison of professional assessment scores between the control group and the observation group ($\bar{x} \pm s$, points)

Group	Number of cases	Theoretical knowledge		Operational skills	
		Before nursing management	After nursing management	Before nursing management	After nursing management
Control group	34	62.91 \pm 3.62	72.45 \pm 2.85	65.28 \pm 4.29	82.52 \pm 2.23
Observation group	34	63.63 \pm 3.84	81.56 \pm 2.77	64.80 \pm 4.01	92.64 \pm 2.95
t		0.796	13.366	0.477	15.957
p		0.429	0.000	0.635	0.000

4. Discussion

Nursing quality is not only directly related to the overall level of medical services but also profoundly reflects the hospital's management ability and treatment effect. Conventional and traditional nursing management models often ignore the differences in qualifications, professional titles and professional abilities of nursing staff, fail to achieve scientific division of labor, resulting in insufficient team collaboration, lack of systematic nursing services, and uneven personnel allocation. Some nurses work overloaded for a long time, affecting service quality and professional satisfaction^[7-9]. Therefore, it is particularly necessary to implement the hierarchical management model. It is necessary to emphasize the reasonable stratification and division of responsibilities according to the professional abilities, professional titles and qualifications of nursing staff. While clarifying post responsibilities, optimize the allocation of power and resources to ensure that all work is carried out in accordance with regulations and in an orderly manner. In this way, more systematic, professional and efficient nursing services can be provided to patients, thereby comprehensively improving nursing quality and the overall service level of the hospital^[10].

The controlled experiment of this study shows that stratification is crucial in hospital nursing management work. A survey of 68 randomly selected nursing staff in our hospital within one year shows that the observation group performs better than the control group by distinguishing the traditional management model from the implementation of the hierarchical nursing management model. This also indicates that the nursing management model in which the upper level manages the lower level, with mutual cooperation and clear powers and responsibilities, has positive significance. In practice, all levels can give play to their advantages and potential, actively and wholeheartedly engage in nursing work, and consciously maintain a good medical environment and doctor-patient relationship.

5. Conclusion

In conclusion, the implementation of hierarchical nursing management is of special significance for the modern development of hospital management models. Adjustments should be made in future hospital work. With its support in patient satisfaction, nursing staff's work performance and professional ability level, it will surely make positive contributions to the sustainable development of China's medical and health cause.

Disclosure statement

The authors declare no conflict of interest.

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