

A Study on the Application of Audible Thinking Combined with Case Teaching Method in the Teaching of Nursing Room Visits for Trained Nurses

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Abstract: *Objective:* To investigate the effect of using audible thinking combined with the case teaching method in the teaching of nursing checkups for regulation nurses. *Methods:* The period was April 2023–April 2024, and a randomized controlled group study was carried out in which 76 regulation nurses in our hospital were randomly divided into a research group and a control group, with 38 regulation nurses in each group. The control group used conventional teaching methods, and the research group used audible thinking combined with the case teaching method, comparing the two groups' independent learning ability scores, assessment scores, and teaching satisfaction. *Results:* Independent learning ability score: after teaching, the research group was significantly higher than the control group ($P < 0.05$); Assessment results: the research group was considerably higher than the control group ($P < 0.05$); Teaching satisfaction: the research group was significantly higher than the control group ($P < 0.05$). *Conclusion:* The use of audible thinking combined with the case teaching method in the teaching of nursing room visits for trained nurses can improve independent learning ability and assessment results and increase teaching satisfaction.

Keywords: Audible thinking; Case teaching method; Trained nurses; Nursing room teaching

Online publication: September 5, 2024

1. Introduction

Regulation training is an important stage before nurses formally enter the workplace, and its main role is to improve nurses' business ability and comprehensive quality so that they can provide patients with high-quality nursing services. In the standardized nurse teaching program, nursing room teaching occupies an important position, which can improve the ability of nurses to combine theory and practice. Conventional nursing room teaching is centered on the teacher and nurses completing various operations according to the teacher's requirements, with insufficient learning initiative and unable to improve their clinical thinking ability^[1]. Audible thinking combined with the case teaching method is a new nursing room teaching program. Its main

feature is to take nurses as the core of teaching, with typical cases as the entry point of teaching, instructing nurses to express their thinking about the instances through oral expression and then deeply understand the process of diagnosis and treatment of diseases ^[2]. In this study, 76 samples of regular nurses were selected to explore the application effect of audible thinking combined with the case teaching method.

2. Data and methods

2.1. General information

The time zone is April 2023–April 2024, and a randomized controlled group study was conducted in which 76 regulation nurses in the hospital were randomly divided into a study group and a control group, with 38 regulation nurses in each group, all of whom were female. The age of the study group was 19–22 years old, with an average of (21.04 ± 1.18) years old, and the age of the control group was 20–22 years old, with an average of (20.97 ± 1.08) years old, and there was no significant difference in the comparison of the general information of the two groups ($P > 0.05$).

Inclusion criteria: (1) Nursing major, complete the nursing course of study. (2) Achievement of school assessment. (3) Know the content of the study and participate in the study voluntarily.

Exclusion criteria: Personal reasons do not agree to participate in this study.

2.2. Methods

The control group adopts the conventional teaching method: The teacher explains the nursing checkup process, key points and precautions for the training nurses in advance, leads the training nurses to checkup, observes the clinical symptoms of the patients, collects the medical history data, understands the results of the examination and guides the training nurses to complete the nursing diagnosis and formulate the nursing measures. The teacher summarized the classroom after the nursing room visit and instructed the trained nurses to master the main points of the nursing room visit.

The research group adopted audible thinking combined with the case teaching method and the specific programs are as follows:

- (1) Pre-preparation of nursing room teaching. Teachers study and research the relevant knowledge of audible thinking teaching in advance, master the teaching process, teaching methods and precautions, select appropriate specialty cases in combination with the requirements of the syllabus and develop specific teaching programs.
- (2) Audible thinking training. Teachers train trained nurses in audible thinking, which contains three training sessions. The first part of the training guides the trained nurses to identify the problem to be solved, analyze what information needs to be collected in the process of obtaining the answer to the problem, how to organize the content of the resources, and what inspiration can be obtained in the process of integrating the information. In the second session, the trained nurses were asked to analyze and reflect on the contents related to the topic based on the case and the information found. In the third session, the trained nurses are asked to check whether the information is complete and whether additional information is needed. Teachers guide the nurses to express the above thinking through language and ask them to practice repeatedly, to master the method of audible thinking.
- (3) Audible thinking combined with the case teaching method.
 - (a) Pre-teaching preparation. Teachers inform the trained nurses about the case and the learning objectives in advance and ask the trained nurses to study the case content in advance and check the relevant information independently.

- (b) Nursing room teaching. The teacher instructed the trained nurses to complete nursing observation at the bedside, to understand the patient's clinical symptoms and physical examination results and to carry out nursing assessment. Subsequently, the nurses will be divided into several groups, each group according to the audible thinking process to complete the case report, the content of the report includes nursing assessment and diagnostic results, nursing goals, nursing program, nursing effect assessment, etc., the nurses report the process, the teacher appropriately pointing guidance, put forward, please say out loud what you think, and what needs to be added and so on prompts.
- (c) Discussion and summary. At the end of the nursing checkup, the teacher will summarize the teaching, organize the trained nurses to discuss the case, analyze the problems of nursing measures and nursing process reported by each group, and put forward the guidance. After the discussion, the teacher summarizes the classroom, points out the advantages and shortcomings of the trained nurses in the nursing checkup, and explains the key points and difficulties of the nursing checkup in detail with the case.

2.3. Evaluation criteria

- (1) Before and after the teaching, self-assessment nursing students' independent learning ability scale was used to evaluate the independent learning ability of the two groups of trained nurses, including information quality, learning cooperation ability, learning motivation, self-management ability, with a full score of 10 points, and the higher the score, the stronger the independent learning ability.
- (2) The assessment scores of the two groups of trained nurses were counted.
- (3) Adopt a self-made satisfaction questionnaire to count the teaching satisfaction of the two groups of trained nurses.

2.4. Statistical methods

SPSS 23.0 software was used to analyze the data of the study, a *t*-test was used for measurement with mean \pm standard deviation (SD) and a χ^2 test was used for count data %, $P < 0.05$ was considered as the existence of difference at the statistical level.

3. Results

3.1. Comparison of independent learning ability scores between the two groups

Autonomous learning ability score: the research group was significantly higher than the control group after teaching ($P < 0.05$). See **Table 1**.

Table 1. Comparison of independent learning ability scores between the two groups (mean \pm SD)

Group	Information quality		Learning cooperation skills		Learning motivation		Self-management skills	
	Pre-teaching	Post-teaching	Pre-teaching	Post-teaching	Pre-teaching	Post-teaching	Pre-teaching	Post-teaching
Research group (<i>n</i> = 38)	6.04 \pm 0.77	8.79 \pm 1.24	5.79 \pm 0.68	8.81 \pm 0.85	6.28 \pm 0.97	8.94 \pm 0.89	6.05 \pm 0.84	9.02 \pm 0.75
Control group (<i>n</i> = 38)	5.98 \pm 0.82	7.15 \pm 0.92	5.84 \pm 0.79	7.04 \pm 0.62	6.35 \pm 1.04	8.12 \pm 0.47	5.93 \pm 0.81	8.14 \pm 0.38
<i>t</i> -value	0.329	6.548	0.296	10.371	0.303	5.022	0.634	6.452
<i>P</i> -value	0.743	0.000	0.768	0.000	0.762	0.000	0.528	0.000

3.2. Comparison of appraisal scores between the two groups

Appraisal scores: the study group was significantly higher than the control group ($P < 0.05$). See **Table 2**.

Table 2. Comparison of the assessment scores of the two groups (mean \pm SD)

Group	Case study results	Nursing case results
Research group ($n = 38$)	93.05 \pm 2.48	91.02 \pm 2.96
Control group ($n = 38$)	87.26 \pm 1.97	85.14 \pm 1.77
<i>t</i> -value	11.269	10.510
<i>P</i> -value	0.000	0.000

3.3. Comparison of teaching satisfaction between the two groups

Teaching satisfaction: the research group is significantly higher than the control group ($P < 0.05$). See **Table 3**.

Table 3. Comparison of teaching satisfaction between the two groups ($n/\%$)

Group	Number of cases of satisfaction with teaching	Satisfaction with teaching
Research group ($n = 38$)	37	37 (97.4)
Control group ($n = 38$)	32	32 (84.2)
χ^2 -value	/	3.933
<i>P</i> -value	/	0.047

4. Discussion

Regulated nurses have a short graduation time, lack of clinical practice experience, and insufficient ability to combine theory with practice, and cannot provide high-quality nursing services for patients [3]. Nursing room teaching is an important part of the teaching system of trained nurses, which can improve the level of nurses' specialized nursing skills so that nurses can apply theoretical knowledge to practice, and then improve their nursing ability.

This study confirms that the independent learning ability score of trained nurses in the research group is higher than that of the control group after teaching. Analyzing the specific reasons, the conventional teaching method is centered on the teacher, and the trained nurses complete the nursing operation under the guidance of the teacher, lack of independent thinking, and independent learning ability cannot be improved. The audible thinking joint case teaching method takes the trained nurses as the core of teaching. The teacher informs the trained nurses about the content of the case in advance and instructs them to complete the case pre-study by themselves and consult the relevant information, which can stimulate their learning initiative [4]. During the nursing room teaching period, the trained nurses take the initiative to think about the nursing program of the case and express the content of the thinking in the language, and the teacher gives guidance in the process of their expression and comprehensively supervises the learning process of the trained nurses, which can help them master the correct learning method, and then enhance the ability of independent learning [5]. The results of this study confirm that the examination results of trained nurses in the study group are higher than those of the control group. Analyzing the specific reasons, it can be seen that the classroom participation of the trained nurses in the conventional teaching method is low, the teacher fails to adequately train their active thinking ability, and the trained nurses are unable to apply the theoretical knowledge in practice, which leads to their

low assessment scores. In the method of joint case teaching with audible thinking, the teacher takes the trained nurses as the core and provides them with sufficient space for thinking and opportunities for expression [6]. During the teaching process, the teacher adjusts the teaching process and teaching methods, informs the trained nurses of the teaching objectives and case content in advance, and guides them to take the initiative to study the case and consult the information, which can improve the autonomy of learning. In the case reporting process, the teacher requires the trained nurses to express the thinking process through language, the teacher gives guidance and summarizes the classroom at the end of the training nurses' report, which can help the trained nurses consolidate the theoretical knowledge they have learned, and make the knowledge they have learned more rational and form a complete system, which can promote the trained nurses' theoretical knowledge level and practical ability to improve simultaneously and improve their assessment scores significantly [7]. This study shows that the teaching satisfaction of trained nurses in the research group is higher than that of the control group. Compared with the conventional teaching methods, the audible thinking joint case teaching method is more interesting, trained nurses can fully participate in all teaching sessions after thinking about the content of the case can be expressed freely, and the teacher, through the interaction with the trained nurses, can point out its advantages and shortcomings, trained nurses' theoretical combined with practical ability can be significantly improved, and the satisfaction with the teaching is significantly improved [8].

5. Conclusion

In summary, the use of audio thinking and case teaching methods in teaching nursing room visits for nurses in training can improve their independent learning ability and assessment results and increase their satisfaction with teaching. During the study period, fewer nurses were enrolled in the training program, and the specific application of audible thinking combined with the case teaching method still needs further research.

Disclosure statement

The author declares no conflict of interest.

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