An Investigation of Nurse Clinicians' Opinions on Standardized Training Methods for Nurses

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Abstract: Objective: We try to explore new standardized training methods for nurses to further improve the standardized training system for nurse clinicians. Methods: Based on study of previous literature, we used self-designed questionnaires to investigate 262 nurse clinicians. Their opinions on through what training methods they most expect to receive the 25 standardized training contents and the common ways through which they acquire professional knowledge were collected. Results: Most nurses expect the 25 training contents for new nurses to be imparted through instruction of supervisors and intensive teaching mode; the nurses prefer diverisified training methods; they acquire professional nursing knowledge mainly through textbooks, lectures and training on special topics, internet, new media (WeChat, QQ or Official Accounts), literature database searching and other channels. There is significant difference in the number of nurses who acquire professional nursing knowledge through new media between new nurses, and middle and senior nurses (χ^2=5.828, P=0.016). Conclusions: When giving standardized training for new nurses, we should choose appropriate training methods according to the training contents. Diversified training can meet different needs of different nurses. We encourage new standardized training mode combined with internet and new media to save training cost and improve training effect.

Keywords: Standardized Training, Training Method, Diversified Training, Nurse

1. Introduction

With the change of the medical model, people's higher demand for nursing care, and the continuous growth of hospital business at all levels, nurses are facing higher requirements for their nursing theoretical knowledge, nursing skill and quality. New graduated nurses are required to realize the transition from students to professional nurses, and should be proficient in the basic knowledge and skills of nursing so that they can be qualified for clinical nursing work. However, at present, wave of new nurses who are lack of standardized training in the clinical frontline in a short time, may pose a certain threat to the quality of clinical care and safety of the patients [1-3]. In 2016, the National Health and Family Planning Commission issued the *Training Syllabus for New Nurses (Trial)* [4] to further emphasize the necessity and importance of standardized training for new nurses to ensure the quality of clinical nursing work and the development of nursing talents which also reflects China's emphasis on training for new nurses. Newly graduated nurses are the most basic part of the nursing team. Their growth is related to the overall quality of the nursing team. Standardized training is an important means to help new nurses grow, and it is also an important part of training qualified nursing talents.

The current shortage of nursing talents and the increasing training costs makes how to effectively conduct standardized training for new nurses so that new nurses can meet clinical front-line needs as soon as possible an important issue? Some scholars have discussed the requirements of standardized training contents for nurses [5-7]. Their discussions cover topics such as strengthening the training of basic nursing knowledge, theory and skills, introducing training in emergency response abilities, first aid skills, etc. Their studies also focus on

clinical practical work ability and multi-level and multi-form standardized training for nurses. However, studies on nurses' opinions on standardized training methods are still few. This study, combined with the literature on standardized training for new nurses, adopts a self-designed questionnaire survey to focus on new nurses' needs of standardized training methods, so as to provide a basis for further improving the standardized training system for new nurses.

2. Methods and Participants

2.1. Design of Questionnaire

Based on the relevant literature on standardized training for new nurses, the Training Syllabus for New Nurses (Trial) [4], and Standardized Training Materials for Nurses in Guangdong Province (Primary) [8], we designed a preliminary questionnaire for standardized training methods for new nurses. We selected ten clinical nurses for interviews and pre-surveys. After repeated revisions, we finished the final version of questionnaire which included the questionnaire for general situation and questionnaire for standardized training methods for new nurses. The questionnaire for standardized training methods for new nurses mainly consists of the most desirable training methods for nurses for the 25 standardized training contents and common channels for obtaining professional knowledge.

2.2. Participants

We used convenience sampling to include 300 nurses from 4 grade A class three general hospitals in Guangzhou as participants. The inclusion criteria were 1) nurses who graduated from nursing colleges, including technical secondary school, junior college, had undergraduate or higher education background; 2) those who passed Chinese Licensure Examination for Nurse; 3) those who have engaged in clinical nursing work at the chosen hospital for 3 months or more; 4) nurses who volunteered to participate in this investigation.

2.3. Investigation Method

After receiving consent from the selected hospitals, we conducted the investigation when the hospital organized intensive learning for the nurses. The questionnaires adopted same guidelines and anonymous surveys.

2.4. Collection and Statistical Analysis of Data

We numbered the valid questionnaires and used Epidata 3.1 software for double entry. SPSS13.0 statistical software was used to process the data. We conducted descriptive statistical analysis of the general situation and the choice of training methods of the participants using the mean, standard deviation and / or percentage. We employed chi-square test to explore the difference in the percentages of the nurses who made different choices between nurses at different levels ($\alpha=0.05$).

3. Results

3.1. Collection of Questionnaires and General Data of the Participants

We distributed 300 questionnaires and collected 291 among which 29 questionnaires with blank items more than 20%, errors and answers in a certain pattern were excluded. The 262 remained were valid questionnaires and the effective rate of the collected questionnaires was 90.0%. The average age of 262 participants was 30.5 ± 8.38; their working years ranged from half a year to 23 years; 259 were females and 3 were males; 116 were new nurses (working years $\leq$ 3 years) and 146 middle- and senior-level nurses (working years > 3 years).

3.2. Choices of the Standardized Training Methods for New Nurses

The results of the training methods that the 262 nurses most wanted for the 25 standardized training contents for new nurses are shown in the Table 1. It can be seen from Table 1 that the training methods that nurses want are mostly instructor-led and intensive teaching methods. For specialized nursing operations, specialized instruments and equipment, most nurses (> 50%) chose instructor-led mode to learn and for first-aid knowledge and skills, precautions for taking medicines, emergency response plans, and hospital infection knowledge, they chose intensive teaching mode. In addition, nurses tend to choose diversified training methods for different training contents.

Table 1. Investigation of Standardized Training Methods for New Nurses (n=262).

Training contents	Intensive teaching mode		Instructor-guided mode		Nursing round	
	number	percentage (%)	number	percentage (%)	number	percentage (%)
Basic nursing knowledge	119	45.4	67	25.7	6	2.3
Specialized nursing knowledge	101	38.5	105	40.1	29	11.1
Psychological nursing knowledge	80	30.5	33	12.6	38	14.9
Critical thinking training	50	19.1	67	25.4	69	26.1
Practice of nursing procedures	74	28.2	51	19.4	80	30.4
Core nursing systems and norms	123	46.9	68	21.6	14	5.3
Specialized nursing operation skills	56	21.4	171	65.3	10	3.8
Use of specialized instruments and equipment	68	26.0	166	63.3	3	1.1
First aid knowledge and skills	139	53.0	87	33.2	7	2.7
Patient safety management	91	34.7	68	25.9	64	24.5
Disease emergency response	124	47.3	101	38.4	16	6.1

Training contents	Intensive teaching mode		Instructor-guided mode		Nursing round	
	number	percentage (%)	number	percentage (%)	number	percentage (%)
Care for critically ill patients	75	28.6	106	40.5	69	26.4
Terminal care	83	31.6	87	33.3	13	5.0
Health education formulation and implementation	74	28.2	60	22.8	71	27.2
Notes on the use of common drugs in specialty	133	50.7	82	31.4	4	1.5
Notes for common specialist examination	108	41.4	93	35.6	5	1.9
Communication principles and skills	65	24.7	97	37.1	12	4.6
Emergency response plan	149	56.9	98	37.4	0	0.0
Prevention and management of adverse events	104	39.7	108	41.3	14	5.3
Hospital infection knowledge	169	64.5	47	18.0	0	0.0
Emotion management	75	28.6	21	8.0	0	0.0
Code of ethics and conduct in nursing	97	37.0	54	20.7	0	0.0
Nursing etiquette and spirit	82	31.3	45	17.3	0	0.0
Career planning	118	44.9	52	19.9	0	0.0
Others (English, PPT making, etc.)	74	28.2	14	5.3	0	0.0

Table 1. *Continued.*

Training contents	Group learning		New media		Self-learning	
	number	percentage (%)	number	percentage (%)	number	percentage (%)
Basic nursing knowledge	5	1.8	18	6.9	47	17.9
Specialized nursing knowledge	8	3.1	7	2.7	12	4.5
Psychological nursing knowledge	23	8.8	59	22.0	29	11.2
Critical thinking training	39	14.9	21	8.0	17	6.5
Practice of nursing procedures	36	13.7	13	5.2	8	3.1
Core nursing systems and norms	11	4.2	26	9.9	20	7.6
Specialized nursing operation skills	13	5.0	9	3.4	3	1.1
Use of specialized instruments and equipment	13	5.0	12	4.6	0	0.0
First aid knowledge and skills	16	6.5	12	4.6	0	0.0
Patient safety management	18	6.9	14	5.3	7	2.7
Disease emergency response	6	2.3	15	5.7	0	0.0
Care for critically ill patients	9	3.4	3	1.1	0	0.0
Terminal care	25	9.5	43	16.4	11	4.1
Health education formulation and implementation	19	7.3	29	11.1	9	3.4
Notes on the use of common drugs in specialty	22	8.4	12	4.6	9	3.4
Notes for common specialist examination	28	10.7	18	6.9	9	3.5
Communication principles and skills	34	13.0	33	12.6	21	8.0
Emergency response plan	0	0.0	9	3.4	6	2.3
Prevention and management of adverse events	26	9.9	6	2.3	4	1.5
Hospital infection knowledge	16	6.1	21	8.0	9	2.4
Emotion management	25	9.5	93	35.6	48	18.3
Code of ethics and conduct in nursing	14	5.3	78	29.7	19	7.3
Nursing etiquette and spirit	17	6.5	99	37.6	19	7.3
Career planning	17	6.5	45	17.2	30	11.5
Others (English, PPT making, etc.)	14	5.3	73	27.9	87	33.2

3.3. Common Channels for Acquiring Nursing Knowledge

Nurses mainly obtain nursing professional knowledge through 5 channels: textbooks, special lectures and trainings, internet, new media (WeChat / QQ or official account) and literature databases. There is a difference between new nurses ($\leqq$ 12 months) and middle and senior nurses (working age $\geq$ 5 years) in acquiring nursing professional knowledge through new media channels. The number of new nurses who acquire nursing knowledge through new media account for 48.3% while middle and senior nurses only account for 33.6%, which is statistically different (χ^2=5.828, P=0.016), as shown in Table 2.

Table 2. *Channels for Acquiring Professional Nursing Knowledge.*

Channels for acquiring professional nursing knowledge	Number	Percentage (%)
Textbooks	246	93.9
Special lectures and training	193	73.7
Internet	154	58.8
New media (WeChat/QQ or official account, etc.)	105	40.1*
Literature databases	28	10.7

note:* new nurse ($\leqq$ 12 months) vs. middle and senior Nurses (working age $\geq$5 years).

4. Discussion

4.1. Choosing Appropriate Training Methods for Different Standardized Training Contents

The results of this study show that nurses tend to choose different training methods for different standardized training contents, which is consistent with other related research [9]. The reasons may be related to the characteristics of different training contents: first aid knowledge and skills, the use of commonly used drugs in specialty, emergency response plans, and hospital infection knowledge are relatively theoretical, generalized and abstract, and require systematic and consistent training. Intensive training and special lectures can help learners learn and memorize systematically. Specialist operations and the use of specialist equipment are relatively practical skills. Hence, nurses need to be trained under the guidance of a mentor in combination with cognitive and behavioral training. The practice of nursing procedures, care for critically ill patients, critical thinking training, formulation and implementation of health education, patient safety management and other theoretical contents are more integrated with clinical practice. That is to say training of these contents pays more attention to the training of clinical thinking and analytical skills, and nursing rounds and group discussion are more appropriate training methods. Analysis of the results of this survey suggests that the knowledge of first aid and hospital infection are applicable to the training for all new nurses, and intensive teaching method is recommended to effectively save training costs. Specialized skills are applicable training content for some specialized nurses and can be trained by instructors, which also can deepen the communication between nurses at different levels and ne nurses can obtain clinical work experience [10]. Therefore, when conducting standardized training for new nurses, appropriate training methods should be selected according to the training contents to improve the training effect.

4.2. Employment of Diversified Training Methods to Meet the Needs of Standardized Training for New Nurses

According to the results of this study, for the same content, different nurses prefer different training methods, which may be due to differences in nurses' individual learning preferences. It can be seen from table 1 that the training methods that nurses want are mostly instructor-led and intensive teaching methods. Hence, diversified training methods are recommended. According to Kolb's model of experiential learning [11], people show different learning tendencies during the learning process, including preferences for learning styles, which are generally divided into principle, experience, practical, and thinking style. People adopting principle style tend to learn through intensive teaching mode, lectures, etc. Those adopting experience and practical types prefer instructor-led mode, case studies and group discussions. Group learning is a training method that people belonging to thinking type prefer. Therefore, as an individual, each nurse has his/her own learning preferences. We suggested that in the standardized training, the new nurse's learning style and their personalized training method should be considered. Besides, diversified training methods should be adopted to meet the diversified needs of standardized training methods for nurses.

4.3. Using Internet and New Media to Establish a Standardized Training Model for New Nurses

In the survey, a considerable number of nurses choose new media as the means to learn various training contents. That is mostly because the network information explosion and popularity of smart phones render new media communication methods such as WeChat / QQ become inseparable from people's daily lives. Delivery of relevant training content through new media allows new nurses to make full use of time to simply and quickly learn relevant knowledge anytime and anywhere. In terms of the channels for obtaining nursing knowledge, although textbooks are still the most important ones, compared with middle and senior nurses, the proportion of new nurses using new media to obtain nursing knowledge is relatively higher. This may be related to the fact that new nurses are younger and more familiar with and keen on new media communication. This also provides an opportunity for the development of new media training models. In the United States, Taiwan and other regions, online media has become a popular training means for nurses [12-14]. However, it is relatively rare to provide training for new nurses through the Internet and new media in China [15]. With the advent of the mobile Internet era, especially the 5G era, the latest professional information can be searched via the Internet anytime and anywhere, and standardized training methods for nurses will become more diverse and personalized [16]. In the current highly networked era, how to make use of the characteristics of the Internet and new media to establish a standardized training model for new nurses, increase the interest of new nurses in learning professional knowledge, save training costs, and improve training effect, is still worth further discussion.

5. Conclusions

In summary, newly graduated nurses are the most basic part of the nursing team. Strengthening training in basic nursing knowledge, theory and skills, introducing training in emergency response abilities and first aid skills, and carrying out multi-level and multi-form standardized training for nurses are important means to help new nurses improve. During the standardized training for new nurses, appropriate training methods should be selected according to the standardized training contents. Diversified training methods can be adopted to meet the needs of different nurses for standardized training methods. It is also encouraged to, in combination of the characteristics of the Internet and new media, establish a standardized training model for new nurses to save training costs and improve training effect.

Acknowledgements

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