

Construction and Application of a Training System for Internet + Traditional Chinese Medicine Nursing Services in Primary Hospitals

Huiying Yang*

Lishui Hospital of Traditional Chinese Medicine, Lishui, Zhejiang Province (323000), China

*Corresponding author: Huiying Yang Lishui Hospital of Traditional Chinese Medicine, Lishui, Zhejiang Province (323000), China

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ABSTRACT

Objective: To construct a training system of “Internet + Traditional Chinese Medicine (TCM) nursing services” suitable for primary hospitals, and to explore its application effects in improving nurses’ informatization ability, TCM nursing knowledge, self-efficacy and job competence, so as to provide a reference training mode for primary medical institutions to carry out TCM nursing services.

Methods: A quasi-experimental study design was adopted. Eighty nurses from a primary hospital were selected and randomly divided into an experimental group and a control group with 40 nurses in each group using a random number table method. The experimental group received a comprehensive training mode including online theoretical learning, offline skill training, task supervision and case discussion with the support of an Internet platform; the control group adopted the traditional offline teaching and skill demonstration training. The training cycle was 8 weeks. The Chinese Nurse Informatics Competency Scale (CNICS), TCM Nursing Knowledge Assessment Questionnaire, General Self-Efficacy Scale (GSES) and Nursing Competency Questionnaire (NCQ) were used to evaluate the two groups before and after the intervention respectively.

Results: After the intervention, the scores of the experimental group in informatization ability, TCM nursing knowledge, self-efficacy and job competence were significantly higher than those of the control group ($P < 0.05$). Compared with before the intervention, the experimental group had a significant improvement in all abilities, with statistically significant differences ($P < 0.05$).

Conclusion: The constructed “Internet + TCM nursing services” training system has good feasibility and effectiveness, which can significantly improve the informatization ability, professional knowledge, self-efficacy and job competence of primary nurses. It is conducive to promoting the standardized and professional development of TCM nursing services in primary hospitals and is worthy of popularization and application in primary medical institutions.

Keywords: Internet +; Traditional Chinese Medicine Nursing; Training System; Informatization Ability; Self-Efficacy; Job Competence; Primary Hospital;

Abbreviations: TCM: Traditional Chinese Medicine; CNICS: The Chinese Nurse Informatics Competency Scale; GSES: General Self-Efficacy Scale; NCQ: Nursing Competency Questionnaire

Introduction

With the in-depth advancement of the national “Internet + Healthcare” strategy, the application of the Internet in the nursing field has gradually deepened, providing a new development direction for the innovation of nursing service models [1]. In 2019, the National Health Commission launched the pilot work of “Internet + nursing services”,

clearly proposing to use information means to provide patients with continuous nursing, home nursing and health management services. At the same time, the Outline of the Strategic Plan for the Development of Traditional Chinese Medicine (2016-2030) points out the need to vigorously strengthen the construction of the TCM nursing team, popularize appropriate TCM nursing technologies, and promote the sinking of TCM services to the grassroots [2]. Therefore,

carrying out TCM nursing services in primary hospitals has become an important measure to promote the inheritance and innovation of TCM and improve the grassroots medical service capacity [3]. However, at present, nursing staff in primary hospitals have problems such as weak basic TCM nursing skills, insufficient mastery of operational skills, and low informatization application ability, which restrict the popularization and implementation of TCM nursing services. Traditional offline training is limited by time, venue, personnel and other conditions, and it is difficult to meet the needs of continuous learning and personalized learning [4]. Internet learning, with its convenience, flexibility and traceability, can provide a more efficient learning platform for primary nurses, which is conducive to making up for the deficiencies of traditional training [5]. Existing studies have shown that Internet-based blended training models can improve learners' participation and learning effects, but their application in the field of TCM nursing training in primary hospitals is still relatively limited [6]. Therefore, based on the actual situation of primary hospitals, this study constructed a "Internet + TCM nursing services" training system and verified its effectiveness through a quasi-experimental research method, aiming to provide a replicable and promotable training strategy for primary medical institutions to carry out TCM nursing services and a new path for improving TCM nursing ability.

Subjects and Methods

Research Subjects

A total of 80 clinical nurses from a primary hospital who planned to participate in the "Internet + TCM nursing services" training from January 2024 to December 2024 were selected. They were randomly divided into an experimental group and a control group with 40 nurses in each group using a random number table method.

Inclusion criteria:

1. Engaged in clinical nursing in primary medical institutions for ≥ 1 year;
2. Voluntarily participated in the study and completed the entire training process;
3. Possessed a smart phone and basic network usage ability.

Exclusion criteria:

1. Those whose job transfer or leave affected the training progress during the training period;
2. Those with severe psychological or communication disorders;
3. Those who refused to cooperate with follow-up visits.

There were no statistically significant differences in baseline data such as age, educational background and nursing years between the two groups ($P > 0.05$), indicating good comparability.

Research Methods

Establishment of a Research Group: To ensure the scientificity of the construction of the training system and the standardization of its implementation, a research group with the participation of multiple departments was established.

1. **Formulate the overall research plan and training content framework:** Put forward training objectives, content system and evaluation criteria based on relevant national policy documents and the current situation of primary hospitals.
2. **Develop and optimize the Internet training platform:** Cooperate with technical personnel to set up functional modules such as course push, skill demonstration, online test, follow-up record and learning data statistics to ensure the platform is easy to operate and has complete functions.
3. **Organize the construction of the training teaching team:** Select clinical backbones with TCM nursing technical qualifications and teaching experience as lecturers and skill instructors, and unify their teaching and assessment standards through centralized training.
4. **Supervise the implementation and quality control of training:** Regularly check whether online courses are pushed in a timely manner and whether learning tasks are completed to ensure the unity and controllability of the implementation of the intervention plan.
5. **Conduct phased evaluation and plan adjustment:** Hold regular research meetings based on platform data, trainee feedback and teaching records to revise training content or methods and improve training effects.

Through multidisciplinary cooperation and standardized management, the scientificity, continuity and implementability of the training system are ensured.

Formulation of the Training Plan: Based on the Pilot Work Plan for Internet + Nursing Services, Technical Operation Specifications for Traditional Chinese Medicine Nursing (2021) and the current situation of TCM nursing ability of primary nursing staff, a systematic "Internet + TCM nursing" training system was constructed. The training content was expanded from four levels: theory, skill, application and management, including:

(1) Online theoretical learning module

Relying on the Internet platform to push recorded courses, systematic theoretical learning related to TCM nursing was carried out, the main contents of which included:

- a. Basic theories of TCM, such as yin-yang and five elements, zang-fu organs and meridians;

- b. Principles of TCM syndrome differentiation and nursing for common diseases;
- c. Theoretical basis of appropriate TCM nursing technologies commonly used at the grassroots level.

At the same time, supporting online knowledge assessments were carried out to consolidate learning effects and improve learning quality.

(2) Skill operation training module

According to national specifications, the training content of technologies such as auricular point pressing, moxibustion, cupping, scraping and traditional Chinese medicine hot compress pack was set up. The accuracy of trainees' operation and their clinical application ability were improved through standard operation videos, offline skill demonstrations and situational simulation.

(3) Internet platform application module

Centering on the actual needs of grassroots "Internet + nursing services", training on the application ability of the Internet platform was organized, focusing on improving nurses' abilities in the following aspects:

- a. Ability of online assessment and health education content release;
- b. Ability of standardized filling of follow-up records and nursing data processing;
- c. Ability of nursing service process management and risk early warning identification.

Through the training of this module, nurses' proficiency in platform application and service quality in the smart nursing service system were further improved.

(4) Quality management module

Contents such as standardized processes of TCM nursing services, quality evaluation indicators, risk management and requirements for keeping records of materials were integrated into the training, so that nurses could master the key points of quality control in the whole service process.

(5) Assessment and feedback mechanism

A three-dimensional comprehensive evaluation of training effects was adopted including theoretical test, skill operation assessment and platform task completion rate to ensure the improvement of knowledge, skills and application ability.

The training system has a complete content structure and clear levels, which helps to improve the systematicness and operability of the training.

Intervention Method of the Experimental Group

Pre-Intervention Preparation

(1) Platform deployment and function test

One week before the start of the intervention, the research team deployed the "Internet + Nursing Service Training Platform" in the WeChat group and completed the system initialization settings. Focus on multiple rounds of tests on functional modules such as course push, learning task reminder, online test, homework submission, follow-up record filling and data background statistics to ensure the stable operation of the platform and accurate data recording.

(2) Establishment of a trainee management system

Researchers created a unique learning account for each nurse in the experimental group, and entered their basic information such as demographic data, practicing years, professional title and previous TCM nursing training experience. The platform automatically generated personal learning files to dynamically record nurses' learning progress, course completion, test scores and skill assessment results.

(3) Carrying out platform use training

Three days before the start of the intervention, a centralized platform operation training (about 60 minutes) was organized for nurses in the experimental group, including:

Course learning path and viewing requirements, homework and test submission methods, case discussion participation process, and follow-up and record filling specifications.

Through the combination of on-site demonstration and practical operation, all nurses could master the use of the platform proficiently.

(4) Baseline data collection

Before the formal intervention, a unified baseline evaluation was conducted on nurses in the experimental group, including:

Informatization ability level, mastery of TCM nursing related knowledge, self-efficacy and job competence.

Unified scales and test tools were used for the evaluation to provide a basis for the comparison of effects before and after the intervention.

Implementation of the Intervention Plan: The intervention cycle was 8 weeks, adopting a blended training mode of online theoretical learning + offline skill training + platform supervision and feedback (Table 1). The time arrangement and implementation frequency of each intervention element are as follows:

Table 1.

Training Content	Implementation Form	Specific Arrangement	Time/Frequency
Online theoretical learning	Platform course push	Push 2-3 class hours of video explanations on TCM nursing theory and operation every week, 20-30 minutes per class hour	2-3 times a week for 8 weeks
Online chapter assessment	Platform online test	Conduct an online test after completing each module, with automatic scoring by the system	Once a week
Offline skill operation training	Centralized training	Organized by the head nurse of the TCM department, adopting the mode of demonstration-practice-commentary	Once a week, 60-90 minutes each time
Platform task supervision	System reminder + manual supervision	Automatic reminders for learning tasks, follow-up filling and case reading; researchers check the completion rate every week	Continuous every week
Online case	WeChat group +	Conduct discussions on syndrome	Once every 2
Training Content	Implementation Form	Specific Arrangement	Time/Frequency
discussion	platform	differentiation, nursing and operation key points around typical cases	weeks, 4 times in total
Phased evaluation	Phased evaluation	Conduct a phased assessment in the 4 th week and feed back learning problems	Once
Final evaluation	Test + skill assessment	Complete the final evaluation in the 8th week of the intervention	Once

(1) Online theoretical learning

According to the preset course system, the platform regularly pushed TCM nursing related theoretical courses every week, covering basic TCM theories, principles of syndrome differentiation and nursing, and operation procedures of common appropriate TCM nursing technologies. Nurses were required to complete video learning within the specified time and participate in the corresponding chapter assessment, and the platform automatically recorded the learning duration and scores.

(2) Offline skill operation training

Unifiedly organized by the head nurse of the TCM department, centralized skill training was carried out once a week, focusing on appropriate TCM nursing technologies such as moxibustion, acupoint pressing and auricular point pressing. The training adopted the method of "centralized demonstration - group practice - on-site commentary", and provided targeted guidance for nurses with non-standard operation or weak mastery.

(3) Platform task supervision and reminder

The platform automatically pushed reminders for learning tasks, follow-up record filling and case reading according to the course progress. The research group logged in to the background every week to check the completion of tasks, and urged those who failed to complete on time through the WeChat group or private messages to ensure the in-place implementation of the intervention.

(4) Case discussion and real-time Q&A

An online case discussion was organized every two weeks, selecting typical clinical cases to guide nurses to conduct syndrome differ-

entiation analysis, nursing plan formulation and operation key point discussion. Researchers and TCM nursing experts answered questions online to promote the transformation of theoretical knowledge into clinical practice.

(5) Phased and concluding evaluation

A phased assessment was conducted in the 4th week of the intervention to understand nurses' mastery of theories and skill operation levels, and provide feedback and adjustment suggestions. A final evaluation was conducted after the intervention, which served as an important basis for evaluating the intervention effect of the "Internet + Nursing Service Training Platform".

Intervention Method of the Control Group: The control group adopted the hospital's current traditional offline training mode for learning, without using the Internet platform or online learning resources. The training frequency and total duration were consistent with those of the experimental group to ensure the comparability of training duration between the two groups.

The specific intervention contents are as follows:

(1) Offline Theoretical Teaching

Senior lecturers from the TCM department and nursing department conducted theoretical teaching on basic TCM theories, principles of syndrome differentiation and nursing, and appropriate TCM nursing technologies in a centralized teaching mode. The teaching form was mainly PPT explanation, paper handout distribution and on-site Q&A, with 2-3 class hours arranged every week. Theoretical knowledge mainly relied on classroom teaching, and nurses needed to review by themselves after class, with no automatic recording and feedback mechanism in the classroom.

(2) Skill Operation Demonstration and Practice

Nurses were organized to carry out learning of operation demonstration of appropriate TCM nursing technologies (such as scraping, cupping, auricular point pressing, moxibustion, etc.) in the skill training room. The lecturers demonstrated on-site, and the trainees practiced by imitation in groups. The training focused on one-time centralized demonstration, and the number and quality of operation practices mainly relied on nurses' independent participation without continuous tracking and recording.

(3) Offline Centralized Assessment

Phased theoretical tests and skill operation assessments were carried out in the 4th and 8th weeks of the training cycle respectively. The assessment forms included paper-based written examination and on-site operation evaluation, and the lecturers scored according to unified scoring standards. After the assessment, the teachers gave centralized feedback, but did not provide continuous online learning tracking or individualized guidance.

(4) Lack of Continuous Learning Support and Feedback Mechanism

The control group was not connected to the Internet platform, so it could not obtain functions such as learning task reminders, online assessment, learning progress recording or follow-up management simulation training. Learning effects mainly relied on personal attendance and after-class review, lacking the support of visual learning data.

Evaluation Indicators

Chinese Nurse Informatics Competency Scale (CNICS): The Chinese Nurse Informatics Competency Scale (CNICS) was revised locally by domestic scholars based on the international informatization competency framework, which is suitable for evaluating nurses' mastery of information awareness, information knowledge and information skills. The scale consists of 30 items, using a 5-point Likert scale (1-5 points), with a total score of 30-150 points. A higher score indicates stronger informatization ability, usually a score < 90 points is a low level, 90-120 points is a medium level, and > 120 points is a high level. The Chinese version of the scale has good internal consistency, with a Cronbach's α coefficient of 0.89-0.94. In this study, the scale was used to evaluate the informatization application ability of nurses in both groups before and after the intervention to reflect the promotion effect of different training methods on informatization ability.

TCM Nursing Knowledge Assessment Questionnaire (Chinese Version): The TCM Nursing Knowledge Assessment Questionnaire was compiled based on the Basic Theories of Traditional Chinese Medicine, Technical Operation Specifications for Traditional Chinese Medicine Nursing and common clinical principles of syndrome differentiation and nursing, covering core knowledge such as basic TCM theories, syndrome differentiation and nursing, and appropriate TCM

nursing technologies. It consists of 40-60 objective multiple-choice questions with a total score of 100 points. The scoring method is cumulative scoring for correct answers, and a higher score indicates sufficient mastery of knowledge, among which a score < 60 points is insufficient mastery, 60-79 points is a medium level, and ≥ 80 points is good mastery. The Chinese version of the questionnaire has high reliability with a Cronbach's α coefficient of 0.87. This study used the questionnaire to evaluate nurses' mastery of TCM nursing theories before and after training to reflect the effect of the Internet + training mode on knowledge growth.

General Self-Efficacy Scale (GSES, Chinese Version): Nursing self-efficacy was measured by the Chinese version of the General Self-Efficacy Scale (GSES), which was compiled by Schwarzer and later localized and verified for reliability and validity by domestic scholars. The scale consists of 10 items with a single-dimensional structure, using a 4-point Likert scale (1-4 points), with a total score of 10-40 points. A higher score indicates a stronger sense of self-efficacy when individuals face tasks and challenges. The scale has no fixed grades, but it is generally believed that a score < 25 points is a low level, 25-30 points is a medium level, and > 30 points is a high level. The Chinese version of GSES has good internal consistency with a Cronbach's α coefficient of 0.87. This study used it to evaluate the changes in nurses' confidence and psychological ability in the process of learning TCM nursing skills.

5.3.4. Nursing Competency Questionnaire (NCQ, Chinese Version): Nurses' job competence was evaluated by the Chinese version of the Nursing Competency Questionnaire (NCQ), which was established based on the nursing post competency model and verified in multiple studies after local revision in China. The scale includes four dimensions: professional knowledge, clinical skills, communication and coordination ability, and health education ability, with a total of 36 items, using a 5-point Likert scale (1-5 points), with a total score of 36-180 points. A higher score indicates stronger comprehensive job competence. The Chinese version of the scale has good reliability with a Cronbach's α coefficient of 0.91, and shows stable performance in terms of construct validity and content validity. This study used the scale as a comprehensive final indicator to evaluate the impact of the training system on the improvement of nurses' overall ability.

Data Collection and Quality Control

The data of this study were collected and entered by two uniformly trained researchers in accordance with the principle of double entry by two persons to ensure the accuracy and consistency of the data. The whole research process adopted a unique coding method to manage the research subjects' information to avoid the exposure of individual identities, thus protecting the participants' privacy to the greatest extent. All learning process data were automatically generated and recorded by the Internet training platform, including learning duration, course completion rate, online test scores and skill task submission status, so as to reduce errors and biases caused by manual

recording. The research group regularly audited the training implementation, data recording quality and platform operation status to ensure the consistency and standardization of intervention measures at different stages, thus improving the reliability and internal validity of the research results.

Statistical Methods

SPSS 26.0 software was used for statistical analysis in this study. Measurement data with normal distribution were expressed as mean \pm standard deviation ($\bar{x}\pm s$), and independent sample t-test was used for inter-group comparison; measurement data with non-normal distribution were expressed as median and interquartile range [M (P25,

P75)], and Mann-Whitney U test was used for inter-group comparison. Count data were expressed as frequency and percentage, and χ^2 test or Fisher's exact test was used for inter-group difference analysis. All tests were two-tailed, with the significance level set at $\alpha = 0.05$, and $P < 0.05$ indicated a statistically significant difference.

Results

Comparison of Baseline Data

There were no statistically significant differences in age, educational background, professional title, nursing years and other aspects between the two groups ($P > 0.05$), indicating good comparability (Table 2).

Table 2: Comparison of baseline data between the two groups.

Indicator	Experimental group (n=40)	Control group (n=40)	t/χ^2	P
Age (years, $\bar{x}\pm s$)	30.2 \pm 4.5	29.7 \pm 4.8	0.45	0.65
Nursing years (years, $\bar{x}\pm s$)	7.1 \pm 2.8	6.8 \pm 3.0	0.45	0.65
Educational background (college and above, n/%)	32 (80.0)	30 (75.0)	0.27	0.6

Comparison of Informatization Ability Scores

After the intervention, the scores of information awareness, in-

formation knowledge, information skills and total score of the experimental group were significantly higher than those of the control group, with statistically significant differences ($P < 0.05$) (Table 3).

Table 3: Comparison of informatization ability scores between the two groups ($\bar{x}\pm s$).

Dimension	Time	Experimental group (n=40)	Control group (n=40)	t	P
Information awareness	Before intervention	32.1 \pm 5.2	31.8 \pm 5.4	0.24	0.81
	After intervention	40.5 \pm 4.8	35.2 \pm 5.1	4.93	0.00
Information knowledge	Before intervention	28.6 \pm 4.9	28.3 \pm 4.8	0.26	0.79
	After intervention	38.4 \pm 5.0	33.1 \pm 4.7	4.74	0.00
Information skills	Before intervention	30.5 \pm 5.1	30.2 \pm 5.3	0.25	0.80
	After intervention	42.2 \pm 4.9	36.4 \pm 5.2	5.01	0.00
Total score	Before intervention	91.2 \pm 10.4	90.3 \pm 10.5	0.38	0.70
	After intervention	121.1 \pm 11.8	104.7 \pm 12.6	6.12	0.00

Comparison of TCM Nursing Knowledge Scores

After the intervention, the TCM nursing knowledge score of the experimental group was significantly higher than that of the control group ($P < 0.01$) (Table 4).

Table 4: Comparison of TCM nursing knowledge scores between the two groups ($\bar{x} \pm s$).

Time	Experimental group (n=40)	Control group (n=40)	t value	P value
Before intervention	62.5±8.2	63.1±7.9	0.34	0.74
After intervention	86.4±6.9	75.2±7.5	7.19	0.00

Comparison of Self-Efficacy Scores

After the intervention, the self-efficacy of the experimental group was significantly improved, and the score was higher than that of the control group ($P < 0.01$) (Table 5).

Table 5: Comparison of self-efficacy scores between the two groups ($\bar{x} \pm s$).

Time	Experimental group (n=40)	Control group (n=40)	t value	P value
Before intervention	24.1±3.5	24.4±3.6	0.38	0.71
After intervention	31.8±3.2	27.5±3.4	5.51	0.00

Comparison of Job Competence Scores

After the intervention, the experimental group had significantly higher scores in professional knowledge, skill level, communication ability, education ability and total score than the control group ($P < 0.05$) (Table 6).

Table 6: Comparison of job competence scores between the two groups ($\bar{x} \pm s$).

Dimension	Experimental group (n=40)	Control group (n=40)	t value	P value
Professional knowledge	42.5±4.6	37.8±5.1	4.26	0.00
Skill level	41.2±4.8	36.5±4.9	4.13	0.00
Communication ability	39.7±4.2	35.1±4.7	4.34	0.00
Education ability	38.1±3.9	34.5±4.3	3.78	0.00
Total score	161.5±12.6	143.9±13.1	5.63	0.00

Discussion

The Internet + Training Mode Significantly Improves Nurses' Informatization Ability

The results of this study showed that the scores of the experimental group nurses in information awareness, information knowledge and information skills were significantly higher than those of the control group ($P < 0.05$). This indicates that the multimodal training mode based on the Internet platform can effectively improve the informatization application ability of primary nurses. Traditional training is limited by time and venue, while Internet training is flexible and repeatable, enabling nurses to learn and consolidate content at any time according to personal needs, which significantly improves learning efficiency [7]. At the same time, the platform can provide real-time feedback on learning progress and test results, prompting learners to find deficiencies in a timely manner and make targeted improvements, which is consistent with the existing research view that information-based training can enhance the autonomous learning ability of nursing staff [8]. In addition, the development background of "Internet + nursing services" puts forward higher requirements for primary nurses to master information technology, including operations such as online assessment, service recording and health education push. Through simulating online service processes and repeatedly using system functions, the experimental group became more proficient in the operation of information systems, and their information processing and data recording abilities were significantly improved. This shows that the Internet training mode not only enhances nurses' informatization ability, but also lays an important foundation for the popularization of smart nursing at the grassroots level.

The Improvement of TCM Nursing Knowledge is More Obvious

This study found that the TCM nursing knowledge score of the experimental group was significantly higher than that of the control group ($P < 0.01$), indicating that the Internet + training mode has obvious advantages in knowledge mastery. TCM nursing knowledge emphasizes the holistic concept, syndrome differentiation and nursing, and operational specifications, with a highly structured knowledge system and strong theoretical logic. By pushing course content through the Internet platform, nurses can repeatedly learn videos, graphic explanations and typical cases, thus understanding the core points of TCM nursing theory more deeply and improving the level of knowledge internalization. At the same time, the platform sets up phased tests and feedback, which is conducive to promoting the circular consolidation of knowledge, enabling nurses to form a stable cognitive structure in the continuous process of learning-testing-correction [9]. Many studies also point out that online learning has a sig-

nificant effect in promoting knowledge retention and transfer, and is especially suitable for learning content with strong theoretical properties [10,11]. In addition, forms such as case discussion and online Q&A provided by the Internet platform increase interactivity and clinical relevance, making the learning of TCM nursing knowledge no longer only stay at the theoretical level, but directly related to clinical application, improving the practical value of learning [12].

The Improvement of Self-Efficacy Promotes the Mastery of Skills

Self-efficacy is an important psychological factor affecting nurses' actual skill performance and behavior. The results of this study showed that the self-efficacy of nurses in the experimental group was significantly higher than that in the control group ($P < 0.01$), indicating that the Internet + training system has a positive promoting effect on the psychological level of nurses [13]. From the perspective of social cognitive theory, self-efficacy is affected by many factors, including mastery experience, vicarious experience, verbal persuasion and emotional state. The training program of this study enhanced their self-efficacy through the following ways:

- 1. Continuous accumulation of mastery experience:** repeated operations combining online and offline made nurses gain successful experience in TCM nursing technologies (such as moxibustion, auricular point pasting, etc.), thus enhancing their confidence;
- 2. Observational learning and case demonstration:** standardized operation videos and typical cases on the platform enabled nurses to obtain behavioral demonstration through "vicarious experience";
- 3. Real-time feedback and encouragement mechanism:** automatic system evaluation and online teacher guidance improved nurses' sense of accomplishment [14];
- 4. Reducing learning anxiety and pressure:** online learning has a high degree of freedom, and nurses can arrange learning according to their own pace, reducing the tension caused by traditional face-to-face assessment. Therefore, this training mode not only improves nurses' skill level, but also helps them establish confidence in the application of TCM nursing technologies, laying a psychological foundation for future clinical practical application.

Comprehensive Job Competence is Enhanced

This study showed that the experimental group had significantly higher scores in all dimensions of the job competence scale such as professional knowledge, skill level, communication ability and health education ability than the control group ($P < 0.05$). Job competence is a key indicator of whether nurses are competent for clinical work, and also an indispensable comprehensive ability for primary hospitals to carry out "Internet + nursing services" and TCM nursing services [15].

The advantage of the Internet training system is that it can integrate theoretical learning, operation training and follow-up management into one, enabling nurses to understand the overall process and work requirements of TCM nursing services more comprehensively in the learning process [16]. At the same time, functions such as case discussion and online collaboration on the platform promote the improvement of clinical thinking and communication ability, enabling nurses to interact with patients better and provide personalized health education and nursing services [17]. The development of TCM nursing services in primary hospitals is faced with problems such as insufficient personnel and limited training opportunities. The results of this study show that the Internet training mode can realize the systematic improvement of nurses' ability through technical means under the condition of limited resources, providing important support for the standardization and development of grassroots TCM nursing services.

Conclusion

The training system of "Internet + TCM nursing services" for primary hospitals constructed in this study has achieved significant effects in improving nurses' informatization ability, TCM nursing knowledge, self-efficacy and job competence, indicating that this training mode has good feasibility and practical value. The flexibility, interactivity and traceability of the Internet platform make the training process more standardized and systematic, which can effectively make up for the limitation of insufficient training resources in primary hospitals. This training mode not only meets the needs of primary nurses for the improvement of TCM nursing knowledge and skills, but also is more in line with the national strategic direction of promoting Internet + healthcare and the inheritance and development of TCM. In the future, it can be popularized and applied in more primary medical institutions, and the training methods can be further optimized in combination with intelligent means, such as adding artificial intelligence assessment and virtual operation simulation, to improve the accuracy of training and learning effects, and provide continuous motivation for promoting the high-quality development of grassroots TCM nursing services.

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Huiying Yang. Biomed J Sci & Tech Res



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