

# Application of Teaching Mode in TCM Characteristic Workshop Integrating Medical Treatment and Healthcare for Elderly Care Competency Development

Juan Zheng<sup>1</sup>, Shimei Fan<sup>1</sup>, Junhua Ma<sup>1</sup>, Qiongying Xu<sup>2</sup>, Li Zhao<sup>3</sup>, Huijun Gou<sup>1\*</sup>

<sup>1</sup>Guangyuan Hospital of Traditional Chinese Medicine, Guangyuan, Sichuan, China

<sup>2</sup>Guangyuan Mental Health Center, Guangyuan, Sichuan, China

<sup>3</sup>Guangyuan First People's Hospital, Guangyuan, Sichuan, China

*\*Author to whom correspondence should be addressed.*

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**Abstract:** *Objective:* To investigate the effectiveness of a competency-oriented TCM workshop teaching model for integrated medical and elderly care in geriatric nursing positions. *Methods:* A stratified sampling method was employed to select 100 nurses from three integrated medical-care institutions in Guangyuan City. Using digital randomization, they were divided into a control group (conventional teaching model) and an educational reform group (competency-oriented TCM workshop model). The two groups were compared in training performance, evaluation of teaching models, job competency, and TCM nursing service quality. *Results:* The educational reform group demonstrated statistically significant higher scores ( $P < 0.05$ ), better evaluations of teaching models, enhanced job competencies, and improved TCM nursing service quality compared to the control group. *Conclusion:* This competency-oriented TCM workshop teaching model effectively enhances nursing competencies in geriatric care, fully leverages TCM's unique advantages, better meets elderly patients' medical and care needs, and improves the elderly experience in integrated medical-care institutions.

**Keywords:** Elderly care; Job competence; Integration of medical and nursing; TCM workshop

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## 1. Introduction

According to the Blue Book on Healthy Aging: Healthy Aging Index Report of Large and Medium-sized Cities in China (2019–2020) It is estimated that by 2053, China will reach the peak of population aging, with the elderly population reaching 487 million, It will account for a quarter of the world's elderly population and become the country with the largest number of elderly people in the world Home <sup>[1]</sup>. The elderly are prone to chronic diseases due to the decline of physiological functions and aging of tissues and organs. According to the survey, the

incidence of chronic diseases in the elderly aged 60 and above was 53.90%, among which the incidence of chronic disease comorbidity was the most prevalent comorbidity combination, accounting for 65.16%, is hypertension combined with arthritis or rheumatism<sup>[2, 3]</sup>. Meanwhile, the number of disabled elderly individuals continues to rise. Projections indicate that by 2050, China's elderly population with disabilities will reach 91.4 million, including 12.05 million severely disabled seniors<sup>[4]</sup>. Additional survey data reveal that 24.5% of people aged 60 and above experience cognitive impairment, with a dementia prevalence rate of 5%. The primary mortality risk factors for the elderly include cancer, disability, cognitive decline, and dementia, all of which significantly impact their quality of life<sup>[5-7]</sup>. To address China's aging population challenges, the country has introduced an integrated medical-care model that combines healthcare resources with elderly care services, maximizing social resource utilization<sup>[8]</sup>. This approach has gradually become an inevitable choice for China's aging society<sup>[9]</sup>.

In recent years, various policies and documents have proposed proactive measures to address China's aging population. These initiatives emphasize leveraging the unique advantages of traditional Chinese medicine (TCM) to enhance its integration with elderly care services. Key strategies include standardizing TCM nursing training programs, continuously improving service quality, innovating care models, and maximizing TCM's role in disease prevention, treatment, and rehabilitation. Efforts are being made to extend TCM nursing services into geriatric care and chronic disease management, thereby elevating the quality of TCM-assisted elderly healthcare. This approach aims to drive high-quality development in geriatric departments of TCM hospitals and meet the growing health needs of senior citizens<sup>[10-13]</sup>.

Currently, many medical colleges and hospitals, both domestically and internationally, have attempted to introduce workshop teaching models into education, achieving some positive outcomes. However, in practical applications, trainees tend to overlook key instructional elements<sup>[14, 15]</sup>. Position-oriented teaching models focus on training objectives but lack engaging formats, making it difficult to stimulate learners' enthusiasm and initiative. To address this, this study implements and evaluates the application of a position competency-oriented workshop teaching model for elderly care positions within integrated medical-nursing systems. The findings provide substantial evidence for standardizing management practices and innovating training models in Guangyuan's integrated medical-nursing institutions, enhancing caregivers' professional competencies, and meeting the diverse needs of elderly patients. Additionally, these insights offer feasible strategies to promote the healthy development of similar integrated elderly care initiatives across regions.

## **2. Materials and methods**

### **2.1. General information**

Through stratified sampling, three integrated medical and elderly care institutions in Guangyuan City were selected. Using digital randomization, 100 nursing staff members from January 2024 to January 2025 were chosen and randomly divided into two groups: the control group (50 nurses) and the teaching reform group (50 nurses). The control group consisted of 6 males and 44 females aged 23–42, while the teaching reform group included 5 males and 45 females aged 24–41.

#### **2.1.1. Inclusion criteria**

- (1) Registered nurses with a nursing license, working in integrated medical-nursing facilities for over one month but under 30 years with non-senior professional titles.

- (2) Demonstrated commitment to daily learning and good physical/mental health.
- (3) Voluntarily enrolled in this study.

### **2.1.2. Exclusion criteria**

- (1) Senior nurses working less than one month or over 30 years in integrated medical-nursing facilities.
- (2) Those who took leave or studied for  $\geq 6$  months during the research period.
- (3) Individuals with withdrawal intentions or poor learning capacity.
- (4) Nursing staff unwilling to participate. No statistically significant differences were found in general data between the two groups ( $P > 0.05$ ).

## **2.2. Research methods**

The control group adopts the conventional teaching mode, with teachers as the main body, and makes teaching plans according to the syllabus, curriculum, and class hour plan, and strictly completes theoretical teaching and skill training according to the plan.

### **2.2.1. Implementation of a geriatric care competency-oriented integrated medical and elderly care TCM workshop teaching model**

- (1) Develop and execute educational reform plans. The competency enhancement curriculum for geriatric care positions includes foundational theories, nursing practice skills, integrated medical-care management, and TCM nursing. Before instruction, instructors design modular content by organizing lessons around specific TCM nursing themes, incorporating clinical theories to bridge theory with practice.
- (2) Establish learning groups. Nursing staff are divided into 5 teams of 10 members each (including a team leader) to participate in the workshop-based teaching model, where leaders coordinate group activities.
- (3) Instructors distribute course materials in advance, allowing teams to review resources and identify key concepts.
- (4) Instructors evaluate group presentations through flexible formats like PPT presentations, live demonstrations, or scenario-based role-playing using typical case studies for interactive discussions.
- (5) Instructors address workshop questions and provide focused demonstrations based on group feedback.
- (6) Design clinical teaching cases for practical application.
- (7) Team members conduct post-learning reviews.
- (8) Instructors summarize workflow processes and quality standards. Teachers score the learning situation in workshop groups, that is, the same group members have the same results, which is conducive to improving students' sense of collective honor.

## **2.3. Observation indicators**

- (1) Comparison of test scores between the two groups of nurses.  
The two groups of nurses were assessed on theory and skills, with a full score of 100 points. The higher the score, the better the result, and the results were compared.
- (2) Comparison of nursing teachers' evaluations on teaching mode.  
The self-made teaching effect evaluation questionnaire was used to investigate the training of nurses. The survey contents included the integrity of teaching content, scientificity and rationality of teaching mode,

each item was scored out of 100 points, and the higher the score, the higher the evaluation.

(3) Comparison of job competence between nursing teams.

The evaluation was conducted using the “Nurse Core Competency Assessment Scale” developed by Hu Bo, Yang Xin, Gang Tingting, and colleagues. This scale evaluates 42 items across five dimensions: personal traits (8 items), clinical nursing skills (13 items), interpersonal communication (5 items), critical thinking (4 items), and professional development capabilities (12 items). Each item is scored on a 1–5 scale, with total scores ranging from 1 to 210 points. Higher scores indicate stronger job competence.

(4) Comparison of the quality of TCM nursing services between the two groups.

The self-made “TCM Nursing Operation Development Questionnaire” was used for investigation. The two groups of nurses were divided into three grades: excellent, good, and poor. The excellent rate was the sum of the proportion of excellent and good.

(5) Comparison of teaching satisfaction between the two groups of nurses.

The self-made teaching satisfaction questionnaire was used to investigate the surveyed nurses, who were divided into three levels: very satisfied, relatively satisfied, and dissatisfied. The total satisfaction rate was the sum of the very satisfied rate and the relatively satisfied rate.

## 2.4. Statistical methods

The survey data were sorted and input into Excel, and the statistical data were analyzed by SPSS25.0 software. According to the characteristics of the data, the measurement data were expressed as  $(\bar{x} \pm s)$  and tested by t-test or ANOVA; the frequency data were expressed as (n,%) and tested by non-parametric tests such as chi-square test, with  $\alpha = 0.05$  as the test level.

## 3. Results

### 3.1. Compare the theoretical and nursing skills operation test scores of the two groups of nurses

The results showed that the theoretical score and nursing skill operation score of the teaching reform group were significantly higher than that of the control group, with statistical significance ( $P < 0.05$ ), as shown in **Table 1**.

**Table 1.** Theoretical and nursing skills test scores of the two groups of nurses ( $\bar{x} \pm s$ , points)

| Group                  | Number of participants (names) | Speculative knowledge | Nursing skills operation |
|------------------------|--------------------------------|-----------------------|--------------------------|
| Control group          | 50                             | $75 \pm 6.53$         | $82 \pm 6.68$            |
| Education reform group | 50                             | $86 \pm 8.09$         | $89 \pm 8.56$            |
| <i>t</i>               |                                | 4.92                  | 5.56                     |
| <i>P</i>               |                                | 0.00                  | 0.00                     |

### 3.2. Comparison of teaching mode evaluation between two groups of nurses

The results showed that the scores of teaching content integrity, teaching mode scientificity, and teaching mode rationality of nurses in the teaching reform group were significantly higher than those in the control group, with statistical significance ( $P < 0.05$ ), as shown in **Table 2**.



**Table 2.** Comparison of teaching mode evaluation between two groups of nurses ( $\bar{x} \pm s$ , score)

| Group                  | Number of participants (names) | Integrity of teaching content | Scientific teaching mode | Rationality of teaching mode |
|------------------------|--------------------------------|-------------------------------|--------------------------|------------------------------|
| Control group          | 50                             | 79.42 $\pm$ 7.71              | 76.15 $\pm$ 7.87         | 77.12 $\pm$ 7.79             |
| Education Reform group | 50                             | 85.76 $\pm$ 8.54              | 86.55 $\pm$ 8.43         | 87.30 $\pm$ 8.34             |
| <i>t</i>               |                                | 4.60                          | 4.79                     | 4.93                         |
| <i>P</i>               |                                | 0.00                          | 0.00                     | 0.00                         |

### 3.3. Comparison of job competence between the two groups of nurses

The results showed that the scores of good personal characteristics, clinical nursing ability, support and interpersonal communication ability, critical clinical thinking ability, professional construction and development ability of nurses in the teaching reform group were significantly higher than those in the control group ( $P < 0.05$ ), with statistical significance (Table 3).

**Table 3.** Comparison of job competence evaluation between the two groups of nurses ( $\bar{x} \pm s$ , score)

| Group                  | Number of participants (names) | Good personal qualities | Clinical nursing competence | Support and interpersonal communication skills |
|------------------------|--------------------------------|-------------------------|-----------------------------|--|
| control group          | 50                             | 30.13 $\pm$ 4.02        | 51.64 $\pm$ 6.08            | 23.56 $\pm$ 2.14                               |
| Education reform group | 50                             | 33.35 $\pm$ 4.54        | 56.53 $\pm$ 5.71            | 24.89 $\pm$ 3.28                               |
| <i>t</i>               |                                | 2.92                    | 4.05                        | 3.91   |
| <i>P</i>               |                                | < 0.05                  | < 0.05                      | < 0.05   |

  

| Group                  | Number of participants (names) | Critical clinical thinking ability | Ability to develop and build specialties | Total points       |
|------------------------|--------------------------------|------------------------------------|--|--------------------|
| Control group          | 50                             | 22.67 $\pm$ 3.39                   | 12.55 $\pm$ 2.43                         | 148.55 $\pm$ 17.79 |
| Education reform group | 50                             | 24.50 $\pm$ 4.08                   | 14.03 $\pm$ 2.87                         | 153.21 $\pm$ 18.03 |
| <i>t</i>               |                                | 3.98                               | 4.98                                     | 4.92               |
| <i>P</i>               |                                | < 0.05                             | < 0.05                                   | < 0.05             |

### 3.4. Comparison of TCM nursing service quality between the two groups

The results showed that the excellent rate of TCM nursing operation in teaching reform group was significantly higher than that in control group ( $P < 0.05$ ), and the difference was statistically significant (Table 4).

**Table 4.** Comparison of the excellent rate of TCM nursing service quality between the two groups [name (%)]

| Group                  | Number of participants (names) | Ample  | Good people | Difference | Good rate |
|------------------------|--------------------------------|--------|-------------|------------|-----------|
| Control group          | 50                             | 18(36) | 23(46)      | 9(18)      | 41(82)    |
| Education reform group | 50                             | 29(58) | 19(38)      | 2(4)       | 48(96)    |
| $X^2$                  |                                |        |             |            | 7.32      |
| <i>P</i>               |                                |        |             |            | 0.01      |

### 3.5. Compare the satisfaction of nurses in both groups

The results showed that the satisfaction of nurses in the teaching reform group with the teaching mode was significantly higher than that in the control group ( $P < 0.05$ ), and the difference was statistically significant (Table 5).

**Table 5.** Comparison of satisfaction between the two groups of nurses [name (%)]

| Group                  | Number of participants (names) | Very satisfied | I'm satisfied | Discontent | Overall satisfaction |
|------------------------|--------------------------------|----------------|---------------|------------|----------------------|
| Control group          | 50                             | 18(36)         | 23(46)        | 9(18)      | 41(82)               |
| Education reform group | 50                             | 29(58)         | 20(40)        | 1(2)       | 49(98)               |
| $\chi^2$               |                                |                |               |            | 5.11                 |
| $P$                    |                                |                |               |            | 0.02                 |

## 4. Discussion

Medical nursing education serves as an effective approach to cultivate high-quality clinical practitioners in healthcare, with the primary goal of developing well-rounded professionals who meet the demands of China's modern economic development<sup>[7, 8]</sup>. As China faces an increasingly aging population, integrated medical-care facilities are proliferating. With the growing application of nursing in modern medicine and the rising demand for traditional Chinese medicine (TCM) care among elderly patients, the requirements for TCM nursing personnel have significantly increased. However, cultivating clinical TCM nursing professionals presents certain pedagogical challenges<sup>[16, 17]</sup>. The current conventional clinical teaching model has inherent limitations that prevent fundamental improvements in nurses' understanding and skills regarding TCM care, necessitating urgent reforms<sup>[18, 19]</sup>.

The research findings demonstrated that nurses in the educational reform group achieved significantly higher scores in theoretical knowledge and nursing skill assessments compared to the control group ( $P < 0.05$ ). Their evaluations of teaching content completeness, scientific pedagogical models, and instructional rationality all surpassed those of the control group ( $P < 0.05$ ). Furthermore, nurses in the reform group scored notably better in personal qualities, clinical nursing competencies, interpersonal communication skills, critical clinical thinking, and professional development capabilities than their counterparts ( $P < 0.05$ ). Notably, the reform group exhibited a substantially higher rate of excellent and good ratings for traditional Chinese medicine (TCM) nursing procedures ( $P < 0.05$ ) and greater satisfaction with the teaching model ( $P < 0.05$ ). Unlike conventional teaching methods, this innovative approach focuses on enhancing competency in elderly care positions within integrated medical-nursing institutions. Through workshop-based training centered on job competency, nurses are empowered as active participants in the learning process. To fulfill these responsibilities, they must demonstrate keen observational skills, rapid response capabilities, and collaborative problem-solving abilities—essential qualities for professional growth. Strict adherence to standardized TCM nursing protocols not only improves technical proficiency but also strengthens clinical nursing competencies. The workshop format effectively enhances communication skills while fostering reflective practice through post-assessment problem-solving exercises.

Moreover, this teaching model has gained widespread recognition among nurses in integrated medical-nursing institutions. The workshop format encourages nurses to engage in self-directed learning through interactive cycles, including group practice, discussions, and evaluations, which continuously enhance their professional development. This process also allows instructors to gain valuable insights<sup>[20, 21]</sup>, achieving the ideal of mutual growth between teaching and learning. Furthermore, repeated TCM nursing practice sessions reinforce theoretical

knowledge while bridging theory with practical application, fostering a sense of accomplishment throughout the learning journey<sup>[22, 23]</sup>. These comprehensive approaches collectively improve nurses' overall competencies, thereby elevating their professional competence in clinical settings.

## 5. Conclusion

In summary, the integrated medical and elderly care workshop model with TCM characteristics, which focuses on competency development for senior care positions, combines experiential learning, participatory engagement, and interactive elements. This innovative approach demonstrates remarkable training effectiveness, enabling caregivers to rapidly enhance their professional competencies within a short timeframe. By leveraging the unique advantages of traditional Chinese medicine, it addresses the multidimensional needs of seniors, improves their healthcare experience, and lays a solid foundation for implementing comprehensive health management throughout the life cycle of elderly patients.

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## Disclosure statement

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