Post-Print: Construction of a Localized Palliative Care Model in Elderly Care Institutions

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Abstract

Background: With the development of population aging and the increasing number of patients with multiple chronic conditions, disabilities, and dementia, the implementation model of hospice care warrants exploration and research. Objective: To establish a scientific, standardized, and feasible hospice care model for elderly care institutions. Methods: Through literature review and semi-structured interviews, a Delphi questionnaire for a localized hospice care model in elderly care institutions was initially developed. Fifteen experts in hospice care medicine, nursing, administration, and social work from Shanghai were selected for two rounds of Delphi consultation, and senior hospice care experts were invited for group interviews. Results: Through two rounds of expert consultation and group interviews, the construction of a localized hospice care model for elderly care institutions was established, including three first-level items (required resources and conditions, content and procedures, evaluation indicators) and 36 second-level items. Conclusion: The localized hospice care model for elderly care institutions demonstrates good scientific validity and reliability, providing a reference for quality end-of-life medical and health services for elderly patients.

Full Text

Preamble

Construction of a Localized Hospice Care Model in Elderly Nursing Care Institutions

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Abstract

Background: With the development of an aging society, the increasing prevalence of chronic comorbidities and disability/dementia makes the implementation model of hospice care worthy of discussion and investigation. **Objective:** To establish a scientific, standardized, and feasible hospice care model for elderly nursing institutions. **Methods:** Through literature retrieval and semi-structured interviews, a consultation questionnaire for a localized hospice care model in elderly nursing institutions was initially developed. Fifteen experts in hospice care, medical care, nursing, administration, and social work in Shanghai were selected for two rounds of consultation, and senior hospice care experts were invited for group interviews. **Results:** Through two rounds of expert consultation and group interviews, the construction of a localized hospice care model for elderly nursing institutions was determined, including three primary items and 36 secondary items covering required resources and conditions, content and processes, and evaluation indicators. **Conclusion:** The localized hospice care model for elderly nursing institutions demonstrates good scientific validity and reliability, providing a reference for high-quality medical and health services at the end of life for elderly patients.

Keywords: Elderly Patients; Nursing Institutions; Localization; Hospice Care; Delphi Technique

Introduction

The National Bureau of Statistics' Seventh National Population Census Bulletin [1] shows that China' s population aged 60 and above reached 264 million, accounting for 18.70% of the total population. As society ages, long-term medical care and nursing for chronic comorbidities, disability, and dementia, as well as hospice care during the terminal stage, have become important components of addressing healthcare needs in an aging society and represent the top priority in medical security for the elderly population. Elderly nursing institutions are currently one of the important integrated medical and elderly care service providers for nursing patients and hospice services [2]. How to construct a hospice care

service suitable for China' s current social development has become an urgent issue in building a "Healthy China." The State Council' s Notice on the "14th Five-Year Plan for National Aging Undertakings and Elderly Care Service System" [3] points out that, following the principle of "full informed consent and voluntary choice,"medical and health institutions should be promoted to provide hospice care services, expand hospice care pilots, and promote the standardized and standardized construction of hospice care institutions. Hospice care has been incorporated into the construction of elderly health service systems and serves as a component of the special action to enhance the integration of medical care and elderly care.

Based on the characteristics of the elderly population and diseases, combined with China' s national conditions, institutional framework, and cultural background, this study constructs a localized hospice care model to serve as a reference for elderly nursing institutions to implement hospice care.

1. Methods

1.1 Establishment of the Model Construction Team

A five-member research team was formed to construct the localized hospice care model for elderly nursing institutions. All members had relevant experience in hospice care theory and practice, including two nursing managers and three medical managers. The team was primarily responsible for initially drafting the expert consultation questionnaire framework through literature review, selecting experts, distributing and collecting consultation questionnaires, conducting expert interviews, and analyzing the research results.

1.2 Development of the Consultation Questionnaire

1.2.1 Literature Search Chinese keywords including "elderly," "elderly patients," "nursing homes/medical nursing institutions," "hospice care," and "Delphi/expert consultation" were used to search the China Medical Journal Full-Text Database and Wanfang Database. English keywords including "the elderly," "Elderly Patients," "Nursing institutions," "hospice, hospice care," and "Delphi, expert consultation" were used to search Medline, PubMed, and other English databases.

1.2.2 Semi-Structured Interviews Through literature review and document reference, the team developed an interview outline and conducted semi-structured interviews with five experts to revise the questionnaire items. This initially formed the consultation questionnaire for the localized hospice care model in elderly nursing institutions, primarily covering three aspects: required resources and conditions, content and processes, and evaluation indicators.

1.3 Selection of Consultation and Interview Experts

The consultation participants were 15 experts selected from community health service centers, secondary and tertiary hospitals, and universities, engaged in hospice care medical management, nursing management, social work, teaching, and policy research. Expert selection criteria: continuous work in hospice care-related fields for five years or more; bachelor' s degree or higher; associate senior or senior professional title.

Based on questionnaire feedback, technical titles, and familiarity with professional theory and practice, five senior experts with high participation and strong authority were selected from the 15 consultation experts for face-to-face discussions on the consultation results and opinions.

1.4 Expert Consultation and Interviews

Two rounds of consultation questionnaires were distributed to 15 experts via email or WeChat. The results of both rounds were discussed at two expert face-to-face meetings. Items were screened based on meeting all three criteria: importance score mean $ $4.32, full score ratio $ $46.67%, and coefficient of variation $ $0.27, combined with expert opinions and suggestions and team discussions.

Data were entered in Excel and double-checked. Statistical analysis was performed using SPSS 20.0 software. Descriptive analysis of each item was presented as mean ± standard deviation and coefficient of variation. Expert enthusiasm was represented by questionnaire response rate and percentage of experts providing opinions and suggestions. Expert opinion concentration was measured by the full score ratio of items. Kendall' s coordination coefficient and P-value were used to evaluate expert opinion coordination. Expert authority coefficient represented the degree of expert authority.

2. Results

2.1 Basic Information of Consultation Experts (Table 1)

Basic Information of Consultation Experts (n=15)

2.2 Expert Enthusiasm

Experts demonstrated high enthusiasm in this study. The response rate for both rounds of consultation questionnaires distributed to 15 experts reached 100%. In the first round, 11 experts (73.3%) provided opinions and suggestions; in the second round, 8 experts (53.3%) provided suggestions.

2.3 Expert Authority Level

The expert authority coefficient, determined by the basis for expert judgment and familiarity with the subject, represents the degree of expert authority. The

results of two rounds of expert consultation showed high authority levels, with coefficients of 0.89 and 0.94, respectively, both >0.8.

2.4 Expert Opinion Concentration

Each item was scored for importance on a 1-5 scale, with higher scores indicating greater importance. A higher full score ratio indicated greater item importance. Expert opinion concentration was analyzed using mean, standard deviation, coefficient of variation, and full score ratio. After expert opinion and team discussion, items in the first-round questionnaire with mean importance score <4.32, coefficient of variation >0.27, and full score ratio <0.46 were deleted or revised. The revised questionnaire was then distributed for the second round. In the second-round questionnaire, all items met the screening criteria except for "Integrated Traditional Chinese Medicine Symptom Control" (mean 3.87) and "TCM Physician Involvement in TCM Symptom Control."

2.5 Expert Opinion Coordination

Kendall' s coordination coefficient represents the degree of disagreement among all experts on all indicators. A larger coefficient indicates higher coordination. After two rounds, Kendall' s coordination coefficients for primary and secondary indicators were 0.54, 0.18 and 0.59, 0.10, respectively (P<0.05) (Table 1), with statistically significant tests, indicating reliable study conclusions.

Kendall' s Coordination Coefficient in the Second Round (P<0.05, P<0.01)

2.6 Expert Consultation Results

Based on discussion of first-round results, two items were revised ("Respect patients' spiritual needs and provide appropriate spiritual comfort based on resources" and "Hospice co-care period not exceeding 30 days"). Eight items were deleted: "Hospital must establish hospice co-care team," "TCM external treatment for wound management," "Comfort therapies (music, massage, etc.)," "Assessment of patients' spiritual and religious needs," "Religious and spiritual care," "Integration of TCM and Western medicine for terminal state judgment and TCM death syndrome judgment," "Good death treatment," and "Respect patients' spiritual needs and provide appropriate spiritual comfort based on resources." Items were adjusted to: "Hold hospice multidisciplinary collaborative co-care discussions," "Clinical symptom control," "Integrated TCM symptom control," "Compliance with Hospice Care Practice Guidelines (National Health Office Medical Development [2017] No. 5)," and "Service recipient satisfaction evaluation." The second-round results (Table 2) showed all items met screening requirements, with importance scores of 3.87-5.00, coefficient of variation of 0-0.25, and full score ratio of 63%-100%.

Second-Round Expert Consultation Results for Hospice Care Model

2.7 Expert Group Interview Results

At the expert group interview meeting, experts discussed the localized hospice care model for elderly nursing institutions, proposing to highlight localized characteristics based on specific national and local conditions: (1) Add multidisciplinary cooperation in hospice care to indicator items; (2) Adjust the hospice co-care period; (3) Integrate and streamline symptom control items; (4) Increase service diversity; (5) TCM techniques should be conducted under professional guidance, with appropriate techniques selected based on conditions; (6) Evaluation mechanisms should involve both service quality and ethical evaluation.

2.8 Construction of the Localized Hospice Care Model for Elderly Nursing Institutions

After two rounds of consultation and expert interviews, and referencing the second-round results with team discussion, the final localized hospice care model framework for elderly nursing institutions was formed. The model comprises three components: required resources and conditions, content and processes, and evaluation indicators. Required resources and conditions form the foundation for implementing hospice care in elderly nursing institutions, including qualifications for institutions, departments, and personnel configuration. Content and processes constitute the main body of hospice care implementation, primarily including symptom management, comfort care, daily living care, psychological intervention, and humanistic care, with corresponding techniques integrated based on local acceptance of TCM and through multidisciplinary collaboration. Service processes involve assessment, admission, and integration of hospice co-care based on elderly nursing foundations. Evaluation indicators ensure standardization and normalization of the hospice care model.

The structure of indicators at all levels is scientifically sound and reliable, with credible consultation results and certain scientific and application value. Each work item originated from the second-round expert consultation results, supplemented by expert interview findings, ultimately forming the localized hospice care model for elderly nursing institutions.

3. Discussion

3.1 Reliability of the Localized Hospice Care Model for Elderly Nursing Institutions

This study explored the construction of a localized hospice care model for elderly nursing institutions based on the Delphi method. The model' s reliability can be evaluated through expert enthusiasm, representativeness, authority, and coordination of expert opinions. The 15 participating experts came from community health service centers, secondary and tertiary general and specialized hospitals, and universities, engaged in hospice care medical care, nursing, management, social work, teaching research, and policy research. The localized hospice care

model for elderly nursing institutions was constructed based on theory and expert practical experience, demonstrating good scientific validity and reliability. In discussing revisions, the study fully considered localized national conditions. For example, adjusting the hospice co-care period from 30 days to 180 days combined expert experience with updated hospice service specifications, better meeting clinical practice requirements. Regarding the localized advantages of TCM in hospice care, experts recommended guidance and participation from TCM professionals, which is clinically significant for actively promoting TCM characteristics while ensuring scientific rigor. Emphasizing the evaluation and supervision system serves as oversight and guarantee for the normal operation and compliance of the hospice care model in elderly nursing institutions.

3.2 Practicality of the Localized Hospice Care Model for Elderly Nursing Institutions

The World Health Organization defines hospice care as active care for patients with no hope of cure rather than passive treatment, controlling pain and other symptoms to maximize quality of life for patients and families. Hospice care concepts are consistent globally, though practice methods vary across countries due to different national conditions and cultural backgrounds. As a country with increasingly serious aging, China must explore a suitable hospice care model. Elderly nursing institutions have important practical significance for improving hospice care that suits current social conditions and meets existing social needs, based on medical services and elderly care. In the United States, hospice care reform attempts have integrated hospice care with long-term care institutions, with studies showing these programs greatly improved end-of-life care quality in nursing institutions, benefiting elderly patients [4]. This study' s model integrates hospice care into elderly nursing institutions to improve end-of-life quality for the elderly. It constructs a basic framework: establishing basic qualification conditions as the foundation for implementing hospice care, using content and processes as the key to practical operation, and employing evaluation indicators as supervision and guarantee for service quality. These three components complement each other, implementing respect for patient wishes, service quality improvement, and humanistic care, providing a direction for end-of-life care in elderly nursing institutions with high practicality.

3.3 Necessity of Constructing a Localized Hospice Care Model for Elderly Nursing Institutions

As social aging intensifies and demands for quality of life at the end of life increase, hospice care has become a universal social service need. Elderly nursing institutions must continuously develop to meet social demands, requiring hospice care strategies adapted to China's current social development characteristics and historical cultural traditions [5]. Currently, with tight integration of medical care and elderly care beds in general hospitals, most elderly patients choose nursing institutions for elderly care, and these elderly individuals are mostly

advanced in age with multiple coexisting diseases. Therefore, constructing a localized hospice care model for elderly nursing institutions is necessary.

3.4 Localization Characteristics

3.4.1 Human Resources Localization Characteristics Reasonable human resources are the basic guarantee for quality service provision in nursing institutions [6] and a necessary prerequisite for implementing long-term elderly services and hospice care, which is also related to elderly safety management evaluation indicator systems [7]. Besides doctors and nurses as core hospice care members, nursing assistants play important roles in hospice care in elderly nursing institutions, while rehabilitation therapists, nutritionists, social workers, and volunteers are auxiliary members [8]. In hospice care, family members are both service recipients and participants. Hospice care emphasizes team-based co-care involving medical staff, nurses, assistants, and family members, which complements human resources in elderly nursing institutions. The personnel guarantee and characteristics of nursing assistants meet the needs of China' s current aging society and represent an important factor for elderly nursing institutions to provide hospice care services, with service quality and care skills requiring training based on localized needs.

3.4.2 Multidisciplinary and Multi-Field Holistic Hospice Care Holistic and comprehensive care [9,10] includes symptom control, comfort care, psychosocial support, humanistic care, and other multidisciplinary and multi-field needs [11]. Technical capabilities provided by elderly nursing institutions are limited, requiring integration of multiple resources and leveraging multidisciplinary collaboration to achieve integrated co-care and improve comprehensive hospice care service quality. Traditional Chinese medicine is the essence of China' s traditional medicine and localization. Integrating TCM or combining Chinese and Western medicine has important enhancing effects on hospice care service effectiveness. Techniques such as herbal medicine, acupuncture, massage, aromatherapy, and music therapy have unique effects on relieving physical and psychological discomfort in advanced elderly patients, with good treatment compliance among elderly patients who accept traditional Chinese medicine.

3.4.3 Localized Humanistic Characteristics Chinese society has a long-standing traditional culture, with the "family-oriented"concept emphasizing family, clan, and local roots. Fulfilling filial piety when parents age is a moral responsibility everyone should undertake. Elderly nursing institutions can strengthen communication and guidance, create conditions, and encourage and foster family companionship to meet the spiritual needs of terminally ill patients. Different life experiences, behavioral principles, values, and family backgrounds determine different life attitudes. When providing spiritual support, individualized spiritual beliefs must also be respected.

3.4.4 Considering Elderly Patient Acceptance, Early Implementation of Localized Life Education Receiving hospice care only at the terminal stage of disease can easily lead to primary goals being limited to physical pain and symptom control, without sufficient time to address patients' psychosocial and spiritual suffering [12]. The incomplete life view of "emphasizing life while avoiding death" [13] remains quite common. A person who has never thought about "death" will inevitably be more fearful and flustered when death approaches compared to someone who has seriously contemplated death, while the latter can cherish and love every day of life more. Studies show that short-term hospice care can negatively impact quality of life for terminally ill patients and caregivers, as well as end-of-life care quality [14]. Influenced by traditional concepts, views on life and death are important factors affecting the development of hospice care for the elderly in China. Western traditional culture consists of Greco-Roman and Christian cultures, while Chinese traditional culture comprises Confucian, Taoist, and Buddhist cultures [15]. Influenced by traditional culture, Chinese elderly more commonly believe in Buddhism and Taoism. In elderly nursing institutions, hospice care can combine localized traditional culture to implement life education early, while personalized integration based on elderly people' s beliefs, such as Buddhism, can help them accept a view of life and death suitable to their beliefs, reducing end-of-life suffering.

3.4.5 Professional Assessment and Ethical Review Due to the characteristic of elderly nursing institution patients receiving long-term medical care, once disease progresses irreversibly into the terminal stage, qualified hospice care medical staff must intervene in assessment to integrate hospice care based on disease diagnosis and treatment, achieving co-care or continuous care to improve end-of-life quality. Simultaneously, from the perspective of respecting life and maintaining dignity, ethical review protects the rights of elderly patients and ensures standardized hospice care implementation. Hospice care development is a multi-level dynamic process based on learning from foreign experiences, allowing for localized understanding of hospice care ethics.

3.4.6 Funding Considerations In addition to Chinese elderly people' s retirement pensions, with the development of the medical security system and expansion of medical insurance coverage, various medical insurance funds serve as important financial support. Hospice care in nursing institutions can combine regional security systems or resources such as basic medical insurance and long-term care insurance [16] to increase support for hospice care medical and nursing expenses. Given China' s current development status, incorporating hospice care into long-term care insurance could be a localized development measure for hospice care.

This study constructed a localized hospice care model for elderly nursing institutions based on Delphi expert consultation [17] combined with expert group interviews, incorporating standards, processes, and quality evaluation with high scientific validity and practicality. The localized hospice care model for elderly

nursing institutions, combining social development and national conditions, provides reference for improving end-of-life care for the elderly. This study has completed the first phase of indicator construction, with subsequent clinical pathway and practice research to further verify the scientific validity and practicality of this evaluation system in practical application, gradually improving it to promote hospice care quality enhancement.

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Note: Figure translations are in progress. See original paper for figures.