

Insights into and Corrective Strategies for the Current Severe Problems within China's Nursing System

Pi Hongying, Meng Wenwen, Zhang Jie, Zhi Chen, Zhao Ting

Chinese PLA General Hospital, Beijing 100853, China

Abstract: This paper uses literature review, questionnaire survey, and expert consultation to provide insights into the severe problems that exist within China's nursing system; analyze these problems in terms of the allocation of nursing human resources, the development and construction of the nursing discipline, and the realization of the value of nursing; and provide corrective strategies and suggestions. According to the results, problems exist regarding the allocation of nursing human resources in China and include the number of nurses, their educational backgrounds, the different age structure of nurses, and the stability of the nurse workforce. Professional curriculum design, talent training models, and financial investments reveal severe problems related to the development and construction of the nursing profession. Nursing services are low priced, nursing income is low, and the value of nursing is underestimated. These factors are key problems that hinder the development of the nursing profession. In light of these severe problems, this paper proposes corrective strategies and suggestions to strengthen team building in nursing, improve the quality of nursing services, accelerate professional training and the reconstruction of the nursing profession, improve the standard of nursing charge, and increase the remuneration package of nurses, with a view towards providing a basis for building a new nursing system.

Keywords: nursing system; nursing service; human resource; nursing economics; nursing profession construction

1 Introduction

Since the founding of New China, especially since the reform and opening up of its economy, China's nursing industry has developed rapidly and achieved remarkable results [1,2]. The number of nurses has steadily increased, the quality of nursing services has constantly improved, and the range of nursing services has expanded [3]. With the increasing aging population, the change in the human disease spectrum, and people's ever-increasing demand for health services, the status and role of health protection has gradually been elevated in the national economy and in social development. As one of the most important components of medical and healthcare human resources, nursing staff shoulder the chief responsibilities of medical and health services. They not only play an important role in the process of disease diagnosis and treatment in hospitals, but also

maximize their value in the community. Currently, the nursing system has been unable to cope with the demands from chronic care, elderly individuals, rehabilitation care, hospice care, and so on. Therefore, the nursing industry is confronted with unprecedented opportunities and challenges.

2 Existing problems

2.1 Problems in the allocation of nursing human resources

2.1.1 Insufficient quantity of nurses

By the end of 2015, China's doctor-to-nurse ratio was 1:1.07, the number of nurses per 1000 individuals was 2.36 [4], and the bed-to-nurse ratio was 1:0.68 [5]. Compared with the statistics from 2010, the above data indicate that these ratios have greatly improved, but there is still a large gap when compared to inter-

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Corresponding author: Pi Hongying, Chinese PLA General Hospital, Chief Nurse. Major research field is nursing management. E-mail: pihongying@hotmail.com.

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national standards and data from developed countries. According to the National Health and Family Planning Commission, the doctor-to-nurse ratio should be 1:2, which was 1:2.7 at the international level and 1:8.5 in developed countries [6]. The basic standard for the number of nurses per 1000 individuals (developed by the European Union) is over 8, which was 9.8 and 11.49 in the United States and Japan, respectively [7]. The bed-to-nurse ratio was 1:1.6, 1:1.2, and 1:0.9–1.2 [8] in the United States, France, and Japan, respectively.

2.1.2 Nurses are young and have relatively low levels of education, while the proportion of contract-based nurses has increased

By the end of 2015, nurses with college degrees and above accounted for 62.5% of the total nurses, while nurses with undergraduate degrees and above accounted for 14.6% of the total nurses [4]. According to a large-scale survey of 11 942 nurses in 87 domestic hospitals in 2016, 77.0% of the total nurses were aged 35 or younger. A total of 47.4% of nurses had nursing experience of five years or less. Contracted nurses accounted for as high as 53.74% of the total number of nurses, which was 15% higher than that from survey data in 2010 [5].

2.1.3 The nursing workforce is unstable, and nursing personnel see high turnover rates

The phenomenon of resignation among nurses is serious. A large number of experienced nurses are drained. According to a survey with a large sample, the turnover rate of nurses was 10.2%–11.2% in China, and 56.94% of nurses had turnover intentions. In particular, the turnover rate in some developed coastal cities was significantly higher than the nationwide average [9]. Some hospitals saw a total nurses' turnover rate of up to 22% in the past three years [10].

2.2 Problems in the development of the nursing profession

2.2.1 The unreasonable professional curriculum design

In 2011, nursing was formally approved as a Tier-1 discipline, but its Tier-2 and Tier-3 discipline structure has not been developed [11]. At present, the nursing education curriculum mainly follows the curriculum used in traditional medicine specialties. However, the specialty features of nursing are vague [12]. Nursing for elderly individuals, rehabilitation nursing, community nursing, psychological nursing, and other fields are less actively practiced, while nursing economics, nursing informatics, and other emerging nursing-related fields have not been fully implemented [13]. Education curricula at all levels overlap, thereby leading to a waste of educational resources and failure to highlight professional-grade objectives.

2.2.2 Incomplete education training model

First, although nursing education involves a multi-level

education system including technical secondary school, junior college, an undergraduate education, and a graduate education, the lack of the social need to monitor authoritative professional nursing organizations and the development of professional training objectives has led to various schools of education that have no scientific, objective guidelines for curriculum design and professional training. Second, the existing nursing education training mode is relatively singular and fails to meet the demands of social and economic development for pluralism and the diversity of nursing. Poor industry participation leads to nursing professional training standards that fail to closely align with industry demands. Currently, a weak service capacity for rehabilitation nursing, nursing for elderly individuals, and other fields has been exposed [14]. China's nursing specialization education and advanced education are relatively weak [15]. By contrast, as a country with the most comprehensive nursing profession construction, the United States regards social need as the basic starting point, where practitioners include specialist nurses, clinical nursing experts, midwives, case management nurses, educators, quality-promoting nurses, and so on [16].

2.2.3 Inadequate funding

Base construction, professional training, and nursing-related scientific research require funding. In China, the cost of training nurses or midwives is merely 1/13 to 1/9 of that in the eastern and western parts of Europe and Latin America and 1/34 to 1/27 of that in the western parts of Europe and North America [17]. Insufficient nursing funding not only limits nursing enrollment, but also reduces the average resources available for nursing personnel and greatly affects the quantity and quality of professional nursing training.

2.3 Unreasonable nursing fees and lack of embodiment of nursing values

2.3.1 Few charging items for nursing services

In the 2001 edition of *Criteria for National Medical Service Price Items (for Trial Implementation)*, only about 30 charging items are related to nursing, accounting for 1% of the total 3971 fee-charging items [18]. According to the 2012 edition of *Criteria for National Medical Service Price Items*, under further revision and improvement, nursing-related charging items increased to more than 100. However, in the implementation of the pricing, new additions have not been included in the list of charging items in many provinces [19].

2.3.2 There are generally low prices for nursing services with a wide gap between the price and the actual costs

In China, fees for nursing services are priced by the local price bureau. The current fee scale follows that of the planned economy period (which is only 10% of the nursing cost). Take Beijing as an example. In Beijing, the current fee for nursing

services is charged in accordance with the *Uniform Medical Service Fee Scale of Beijing Municipality* (issued by the Beijing Municipal Price Bureau and Beijing Municipal Bureau of Health in 1999), which has not changed in the past 15 years. In Beijing, the daily nursing fee at Level 1, Level 2, and Level 3 is 9, 7, and 5 yuan, respectively. However, domestic nursing experts have examined these fees and concluded that daily nursing fees at Level 1, Level 2, and Level 3 should be 90, 70, and 50 yuan, respectively [20].

2.3.3 Nurses' income is too low

Internationally, the pay for medical personnel is generally higher than that of civil servants and employees in other industries. Different nursing positions have different pay levels. Stronger specialties that require work experience offer higher pay. The latest data released by PayScale's official website shows that the average annual income of registered nurses is about 59 000 to 76 000 USD [21]. However, in China, nurses' income is generally low. According to the nursing management situation survey conducted from April to May 2015, 72.3% of the respondents were dissatisfied with their pay, while 67.24% of the respondents thought their pay was inconsistent with the local consumption level [22]. Low pay and remuneration have led to a high turnover rate of nurses.

3 Corrective strategies and suggestions

3.1 Increase the nursing workforce and improve the quality of nursing services

3.1.1 Increase the number of nurses

It is necessary to improve authorized nursing positions in medical care institutions at all levels, increase the number of nurses to meet the needs of medical institutions at all levels, standardize the bed-to-nurse ratio as soon as possible, and adapt the number of hospital nurses to the clinical workload. Based on the actual number of beds, bed rotation and utilization rates, and direct and indirect nursing workload indicators, we should strengthen research to explore scientific and reasonable configuration methods of nursing human resources. After identifying the responsibility and qualification of nurses in different positions, we should fully consider the nurses at different levels and utilize their potential in accordance with their professional advantages in the corresponding positions. Simultaneously, we should strengthen the research on the allocation of nursing human resources in health service institutions such as community hospitals and elderly care centers to promote the development of nursing within the community.

3.1.2 Improve the quality of nurses

It is essential to optimize the quality of nurses, systematically plan different nurse training models, and raise the proportion of

nurses who have an educational background of junior college education and above. It is necessary to intensify the training of new nurses, specialist nurses, nursing managers, community nurses, and midwives and improve nursing services and management levels. In light of China's national conditions, it is also necessary to explore the potential to establish long-term medical care nursing opportunities for elderly individuals, chronic rehabilitation care, and the like; encourage community health service institutions and township health centers to provide long-term nursing services for patients suited for home care; accelerate the integration of medical care and pension; promote the construction of service standards for elderly individuals; improve the level of elderly nursing services; and meet elderly individuals' needs for health services.

3.1.3 Implement vertical management for nursing

On the basis of an initial exploration of management outcomes in a number of hospitals, it is necessary to establish and implement a hospital nursing position management system and appoint a vice president of nursing. The hospital nursing management may include the nursing department with several committees, such as the continuing education committee, the personnel management committee, the nursing quality control committee, and the performance appraisal committee. Nursing managers, who are proficient in management science and have nursing expertise, may carry out vertical management of the finance, materials, and personnel rights involved in nursing. It is necessary to have a centralized management to ensure the quality of nursing work and a unified management for nursing human resources and achieve efficient control and low-consumption nursing with regard to personnel, finance, and material.

3.2 Accelerate the development of the profession and establish a future-oriented and practical professional training model

3.2.1 Establish clear nursing professional training objectives

With reference to the experience of developed countries or regions, industry associations may lead or cooperate with competent authorities to clarify training objectives at various levels, develop standards for nursing education accordingly, and design and organize the corresponding curriculum in accordance with the unified standards. The scale of education at all levels should be set in line with clinical practice. Nursing education level design should be aligned with the clinical position capacity of nurses. Thus, the required capacity of different clinical positions should correspond to the training objectives and standards for nursing education at different levels. In this paper, a general idea is hereby proposed for the training objectives and standards for nursing education based on expert advice. Nursing education is divided into three parts: pre-service education (technical secondary school, junior college, and undergraduate education), in-service

education (specialized education), and advanced education (advanced nursing practice education and graduate education). For nursing specialty education, it is necessary to introduce related courses and improve the examination and certification processes. Advanced education should clearly cultivate two types of nursing professionals (clinical and scientific academic research), improve the availability corresponding nursing positions, and enable nurses to achieve career development.

3.2.2 Systematic planning for the Tier-2 discipline

With reference to the experience of developed countries or regions and based on expert advice, it is proposed that pre-service education of the Tier-2 discipline should mainly focus on training midwives, psychiatric nurses, and public health nurses. It is advisable to learn from the British or Japanese training models. The curriculum should include nursing public courses (for one year) and core specialist and secondary specialist courses (for two to three years). The practice section should include general nursing practice and specialist practice. In China, community nurses and nurses for elderly individuals lack training. The main training model in developed countries or regions is the differentiation of specialist nurses, in which specialization certificate education (one to two years, including practice) is provided for nurses with clinical experience.

3.2.3 Provide more guaranteed funding

Competent national authorities should strengthen the emphasis and support for the construction of the nursing profession, provide funding assistance, and ensure the realization of the nursing profession's construction goals.

3.3 Improve the structure of nursing service fees and raise nurses' income

3.3.1 Establish a reasonable nursing service pricing method and improve the pricing process and cost of accounting

Price and health authorities of local governments should follow the keynote of the central authorities as soon as possible, comply with the requirements for expanding medical reform, develop a health service administration system that aligns with the market economy under governmental macro-control, ensure timely and reasonable adjustment of nursing service prices for various items, and narrow the gap between nursing service fees and costs. Price authorities should invite experts in clinical nursing, nursing economy, social economics, medical law, and several other fields to determine nursing prices together and extensively solicit opinions from all sectors of society. In the process of organizing and implementing nursing cost accounting, it is necessary to establish a nursing service classification system, apply modern computer and network technology to solve the calculation problems in the cost accounting process, and gradually give birth to a nursing cost management system software.

3.3.2 Promote the coordinated development of nursing insurance and nursing service and fully acknowledge the role of insurance in fee control

The future development of China's nursing insurance requires long-term social nursing insurance, providing basic guarantees for nursing services for elderly individuals, supplemented by long-term commercial nursing insurance, rendering diverse nursing services and meeting the nursing needs of different groups. Nursing technology services may be mainly covered by social nursing insurance. Value-added nursing services, such as home care and outreach nursing services, may be covered by commercial nursing insurance. Legislation should be intensified. For example, it is necessary to promulgate the *Law on Long-term Nursing Insurance*; give clear provisions for contents, criteria, payment methods, and audit procedures of nursing insurance; and make long-term nursing insurance markets run in an orderly manner. This will not only promote the coordinated development of nursing insurance and nursing services, but also allow different groups to enjoy appropriate nursing services and satisfy their security needs.

3.3.3 Improve the value-added nursing service fee charging system

Establishment of a position demand-oriented charging system for specialist nursing and specific nursing is required. It is necessary to implement an access system for specialist nurses in the operating room, intensive care unit, emergency room, blood purification center, coronary care unit, and other key departments; set an access threshold according to the professional level of nurses (such as qualification, work experience, specialist theory, and clinical practice capability); raise professional and technical content; develop a specialist nursing fee scale; and highlight the value of nursing. With respect to the market of nursing services oriented to society, community, and family, it is necessary to tap into the potential nursing market and pursue new methods of developing the nursing economy while promoting patient health, reducing readmission rate, and cutting medical expenses.

3.3.4 Ensure an appropriate pay level and rationalize the differences between pay levels

Medical institutions must guarantee a benefit package for nurses and raise the wage and benefit levels for frontline clinical nurses. With respect to an overall increase in the pay level of nurses, it is necessary to improve the performance appraisal system linked with quantity, quality, technical difficulty, and patient satisfaction with respect to nursing services; place more emphasis on clinical nursing practice in income distribution, professional title, promotion, reward, and outstanding professional appraisal for nurses; and establish incentive mechanisms committed to stabilizing the clinical nursing team and fully arousing clinical nurses' enthusiasm. It is necessary to ensure that nurses under the contract system and permanent establishment enjoy the same

remuneration and achieve equal pay for equal work, more pay for more work, and high pay for excellent work.

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