



Research on the Application of Traditional Chinese Medicine Health Services in the Prevention and Treatment of Hypertension in Primary Hospitals Based on SWOT+4R Theory

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Abstract

Objective: To investigate and analyze the influencing factors and countermeasures arising from the management of hypertensive patients in communities through the application of traditional Chinese medicine (TCM) health services in primary hospitals. **Methods:** This study employs SWOT analysis, considering internal strengths and weaknesses as well as external opportunities and threats, and combines it with the 4R theoretical model to deeply explore how primary hospitals can effectively manage hypertensive patients using TCM health services. **Results:** In the prevention and treatment of hypertension, primary hospitals have significant advantages in TCM health services, which can be fully utilized to improve the effectiveness and level of hypertension management. **Conclusion:** Primary hospitals play a crucial role in hypertension management. Coupled with the personalized intervention advantages of TCM health services, they can further promote the comprehensive development of primary medical services, providing a reference for establishing a management service model for hypertensive patients.

Keywords

Hypertension
Primary hospitals
Traditional Chinese medicine health services
SWOT analysis
4R theory

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1. Introduction

Hypertension is a systemic disease that is a significant risk factor for cardiovascular and cerebrovascular diseases. With the aging of the population in China and

changes in lifestyle, the incidence of chronic diseases such as cardiovascular and cerebrovascular diseases and cancer has generally shown an upward trend, and chronic diseases account for more than 80% of total deaths among

residents. According to data released by the National Health Commission in 2024, there are approximately 245 million hypertensive patients among adults in China, with a prevalence rate of 27.5%, and the number of hypertensive patients is on the rise ^[1].

Based on the strategic requirements of the “Healthy China 2030” planning outline for comprehensive prevention and treatment of chronic diseases, the focus is shifting from “disease treatment” to “health-centered” approaches, fighting the “tough battle” against diseases, and strengthening the “protective net” for health. Early screening and intervention for chronic diseases are used as entry points to further promote the advancement of prevention and treatment. As medical institutions close to home, primary hospitals should be more responsive to patients’ urgent needs and concerns, always putting patients at the center and prioritizing life safety. At the same time, traditional Chinese medicine (TCM) is a treasure of Chinese culture, and its advantages in the prevention and treatment of chronic diseases such as hypertension are becoming increasingly prominent. The TCM concept of “preventive treatment of disease” has a history of thousands of years and plays an important role in disease prevention and treatment, particularly in the prevention and treatment of hypertension ^[2]. By rationally applying the holistic concept of TCM, combined with syndrome differentiation and treatment, and through a combination of nourishment and regulation, the goal of “integration of medical treatment and prevention” can be achieved.

The management and control of hypertension are related to patients’ understanding of the disease, economic and social factors, cultural environment,

and medical resources ^[3]. This study will conduct a detailed analysis of the above issues, aiming to solidify foundations, enhance strengths, address weaknesses, and improve vulnerabilities. It aims to fully leverage the role of traditional Chinese medicine (TCM) health services in primary healthcare, thereby supporting the achievement of universal health goals.

2. Materials and methods

2.1. Academic literature

Academic literature was searched using databases such as CNKI and Wanfang Data. Key search terms included “hypertension”, “primary hospitals”, “TCM health services”, “SWOT”, and “4R theory.” Dissertations, literature reviews, and other relevant documents were retrieved and analyzed to provide theoretical and methodological support for this study.

2.2. SWOT analysis

SWOT (Strengths, Weaknesses, Opportunities, Threats) analysis, also known as situational analysis, offers a structured approach to comprehensively explore issues and facilitate the evaluation of work effectiveness. This analysis covers four dimensions: strengths, weaknesses, opportunities, and threats ^[4]. Drawing on the SWOT analysis framework, this paper provides a comprehensive overview of the development of hypertension prevention and treatment in primary hospitals (**Figure 1**).

The 4R theoretical model consists of four elements: Relationship, Reaction, Relevancy, and Rewards. Taking this as a starting point, long-term interactive relationships



Figure 1. SWOT analysis of using traditional Chinese medicine health services to prevent and treat hypertension

with patients can be established at a higher level and in a more effective way.

3. SWOT analysis of using traditional Chinese medicine health services for hypertension prevention and treatment

3.1. Strengths

3.1.1. Policy support

Firstly, the government provides multi-dimensional policy support for hypertension prevention and treatment at the grassroots level, including technical specification development, personnel training and assessment, incentive mechanism construction, and informatization management promotion. These provide standardized operating procedures and policy guidance for grassroots hospitals to carry out hypertension prevention and treatment. Secondly, the government vigorously promotes the application of traditional Chinese medicine in clinical diseases, actively utilizing its advantages of being “simple, convenient, effective, and inexpensive” as well as its characteristics of preventive care and disease transformation prevention^[5]. This facilitates the organic integration of hypertension treatment and prevention. Thirdly, there is clear guideline support and evidence-based medical evidence. The “National Guidelines for the Management of Hypertension Prevention and Treatment at the Grassroots Level 2020 Edition” states that “relevant traditional Chinese medicine preparations have accumulated a certain amount of evidence-based medical evidence, clarifying the benefits of lowering blood pressure”^[6].

3.1.2. Unique diagnosis and treatment of traditional Chinese medicine

Firstly, hypertension treatment requires “addressing both the symptoms and the root causes, and tailoring treatment to individual patients.” Traditional Chinese medicine exerts its unique personalized treatment to cater to patients with different constitutions. Secondly, it follows the dialectical treatment principles of “following the natural rhythm” and “harmony between nature and humanity”, adapting to seasonal changes in temperature, emphasizing the holistic concept of the human body, and preventing and treating hypertension through regular diet and daily routines. The third point is that the

treatment uses Chinese herbal medicine, acupuncture, and acupoint application methods, which have good compatibility with the body and a lower probability of side effects. The fourth point is that traditional Chinese medicine emphasizes overall regulation in the prevention and treatment of hypertension. In the “2020 National Guidelines for the Management of Hypertension Prevention and Treatment at the Primary Level”, not only are interventions for hypertension recommended using traditional Chinese medicine techniques such as Chinese proprietary medicine, acupuncture, and acupoint pressing, but also the use of traditional Chinese medicine as a substitute for tea drinking, constitutional regulation, and traditional exercise methods such as Tai Chi for overall regulation of hypertensive patients, which can also benefit patients. The fifth point is that under the influence of a strong traditional cultural background, the implementation of traditional Chinese medicine interventions in primary medical institutions has unique advantages and a high degree of acceptance among patients.

3.1.3. Service continuity and initiative

Primary-level Chinese medicine hospitals have established long-term, stable service relationships with community residents and hypertensive patients. The nearby location advantage facilitates hypertension screening, monitoring, and management for community residents, enabling timely identification of hypertensive patients and proactive provision of hypertension prevention and treatment services to patients, including regular follow-up, health guidance, etc. This allows patients to continuously receive health management, significantly improving their medication compliance and lifestyle, and thus achieving the goal of effectively controlling their blood pressure^[7].

3.2. Weaknesses

3.2.1. Limited medical resources

Medical equipment, drug types, and quantities are relatively limited, making it difficult to meet the diverse treatment needs of hypertensive patients. Especially for patients who require special drugs or advanced examination equipment, timely and effective treatment cannot be provided.

3.2.2. Shortage of professionals

There is a lack of sufficient professionals specialized in hypertension prevention and treatment, such as general practitioners and cardiovascular specialists, which affects the quality and effectiveness of hypertension prevention and treatment work.

3.2.3. Insufficient standardization of traditional Chinese medicine diagnosis and treatment

Firstly, there are significant differences in dialectical classification and treatment plans for the same disease; secondly, the source of Chinese herbal medicines is complex, and their ingredients and efficacy are affected by factors such as variety, origin, and processing techniques; thirdly, there is a contradiction between personalized treatment and standardization.

3.2.4. Poor patient compliance

Firstly, patients lack trust in the service capabilities of primary hospitals and often bypass primary medical institutions to seek medical treatment in large hospitals^[8]; secondly, primary healthcare workers lack interaction with patients during diagnosis and treatment services, and it is easy to ignore patients' psychological and spiritual needs; thirdly, most patients in primary hospitals are elderly patients with chronic diseases, which further increases the difficulty of hypertension prevention and treatment.

3.3. Opportunities

3.3.1. Technological advancements

With the widespread application of technologies such as electronic health records, telemedicine, and artificial intelligence in the medical field, primary hospitals can improve the efficiency and quality of hypertension prevention and treatment through advancements in information technology.

3.3.2. Construction of medical consortia

Establish and improve a two-way referral system where "minor illnesses are treated in the community, major illnesses are referred to hospitals, and rehabilitation returns to the community." Measures such as homogenization of medical quality management, co-construction and sharing of medical resources, establishment of an efficient tiered diagnosis and treatment system, and implementation of a

key discipline support plan will comprehensively enhance the management level and service capabilities of primary hospitals^[9].

3.3.3. Improved health awareness of residents

With the popularization of health education, residents' health awareness has gradually increased, and the importance of hypertension prevention and treatment has also increased. They are willing to actively cooperate with primary hospitals in inspections and treatments, providing favorable conditions for primary hospitals to carry out hypertension prevention and treatment work.

3.4. Threats

3.4.1. Patient loss

Due to the relatively limited medical resources of primary hospitals, they cannot provide comprehensive medical and health services, which exacerbates patient loss and leads to a decrease in the number of hypertension patients in primary hospitals, thus affecting the continuity and stability of hypertension prevention and treatment work.

3.4.2. Market competition

With the diversified development of the medical market, primary hospitals are facing competition from private hospitals, Internet smart medical institutions, and other organizations.

3.4.3. Complex patient health conditions

Hypertension patients often have other chronic diseases such as diabetes and coronary heart disease. The complexity of individual cases and the difficulty of treatment require professional, comprehensive treatment and management, which places higher demands on the medical level and service capabilities of primary hospitals.

4. Establishing a hypertension prevention and treatment management path for primary Chinese medicine health services based on the 4R theory

4.1. Relationship: Improving patient trust

4.1.1. Providing a good medical experience

Firstly, optimize the quality of medical services, create a clean, safe, and comfortable medical environment,

provide comprehensive, caring, and meticulous medical services, and cultivate medical staff with professional qualities; secondly, simplify the medical process and provide convenient “aging-friendly” services, allowing patients to experience the medical service capabilities of primary hospitals.

4.1.2. Establishing long-term and effective interactive relationships

Firstly, based on the labeling and classification of hypertensive patients, build a personalized health management mechanism, develop a follow-up plan, and improve the dynamic update system for health records; secondly, set up convenient feedback channels, break communication barriers, promote two-way communication, and establish a closed-loop management of “patient questions—communication and improvement”; thirdly, combining the characteristics of traditional Chinese medicine, carry out regular health education on hypertension, organize community activities conducive to hypertension recovery, and bring doctors and patients closer together. Fourth, increase publicity on the construction of the medical consortium, and gradually guide patients to choose primary hospitals for treatment with confidence.

4.2. Reaction: Providing efficient medical services

4.2.1. Advancing information platform construction

Firstly, establish electronic health records for hypertension patients to share diagnostic information with superior hospitals. Secondly, introduce smart medical information systems to enable timed appointments and reduce waiting times.

4.2.2. Standardizing medical treatment processes

Firstly, standardize the diagnosis and treatment pathway for hypertension, establish and improve the standardized mechanism for traditional Chinese medicine (TCM) diagnosis and treatment of hypertension to ensure scientific and efficient treatment plans. Secondly, promote a “one-stop” service model that integrates consultation, examination, and medicine dispensing, strengthening collaboration among departments.

4.2.3. Strengthening personnel training and team building

Organize regular training on TCM classics, appropriate techniques, and other professional skills. Encourage the integration of Chinese and Western medicine practices and actively support medical staff to participate in “Western medicine learning from Chinese medicine” projects to enhance the comprehensive service capabilities of primary hospitals.

4.2.4. Promoting appropriate TCM techniques and strengthening TCM lifestyle interventions

TCM techniques such as acupuncture, tui na (Chinese massage), moxibustion patches, and acupoint application are relatively safer, more convenient, and easier to operate, and they effectively improve the clinical symptoms of hypertension. Traditional Chinese herbal teas, dietary adjustments based on constitution, and traditional exercises such as Tai Chi and Ba Duan Jin are popular and well-received by the masses, thereby improving patient compliance, and are suitable for widespread implementation in primary hospitals.

4.3. Relevancy: Meeting the medical service needs of hypertensive patients

4.3.1. Deeply explore the actual needs of patients

Medical staff should change their diagnosis and treatment approach, shifting from passive reception to proactive engagement. Based on the three-tier prevention program for hypertension, establish a standardized operational guide for Chinese medicine medical services that meets the needs of hypertensive patients throughout their entire treatment cycle.

4.3.2. Actively promote diversified Chinese medicine diagnosis and treatment

Strengthen education and publicity to intervene in the lifestyles of hypertensive patients as early as possible. In the pre-hypertensive stage, focus on “preventive measures before illness occurs” by adjusting dietary structure based on individual constitutional characteristics, fully utilizing the concept of “medicine and food sharing the same origin.” In the early stages of hypertension, adopt a systematic treatment plan that includes “preventing progression after illness occurs and treating before it

peaks”, supplemented with exercise recommendations and emotional counseling. In the stage of hypertension accompanied by cardiovascular disease, apply “preventing decline after change and protecting target organs” through syndrome differentiation and treatment, prioritizing based on symptoms.

4.3.3. Promote contracted services with family doctors

This can achieve continuous health management, significantly improving treatment compliance and patients’ self-management abilities.

4.4. Rewards: Development guarantees for grassroots hospitals’ innovation while staying true to their original mission

4.4.1. Increase investment in grassroots hospitals

To improve the medical service system of grassroots hospitals, it is necessary to make three-dimensional investments in medical and health resources, including human resources, equipment, and funding. Certain preferential policies should be given to encourage more medical resources to flow to grassroots hospitals, thereby

strengthening the foundation of grassroots services.

4.4.2. Encourage the development of traditional Chinese medicine services tailored to hypertensive patients

Develop new business models such as “traditional Chinese medicine +”, and actively explore integrated models like “traditional Chinese medicine + health management”, “traditional Chinese medicine + food”, and “traditional Chinese medicine + rehabilitation.” These efforts will meet the personalized treatment needs of the masses and achieve the goals of “seeing Chinese medicine, trusting Chinese medicine, and making good use of Chinese medicine”, thereby enhancing patients’ satisfaction with grassroots hospitals (Table 1).

5. Conclusion

In summary, as visually demonstrated in Table 1, the issues raised through the SWOT analysis are addressed by the overlapping elements of the 4R theoretical model. This study employs SWOT analysis to examine the

Table 1. Establishes a hypertension prevention and management path for primary Chinese medicine health services based on the 4R theory

Dimension	Core concept	Specific measures	Problems addressed
Relationship	Enhancing patient trust	- Providing positive healthcare experiences - Establishing long-term interactive relationships	- Patient attrition - Low patient trust - Poor patient compliance
Reaction	Delivering Efficient medical services	- Developing information platforms - Standardizing diagnosis/treatment protocols - Enhancing staff training & team building - Promoting appropriate TCM techniques	- Issues with two-way referrals - Lack of TCM practice standardization - Limited medical resources - Patient attrition - Market competition
Relevancy	Meeting hypertension patients’ needs	- Identifying patients’ actual needs - Implementing diversified TCM therapies - Advancing family physician contract services	- Poor compliance - Patient attrition - Market competition - Complex patient conditions - Poor compliance
Rewards	Sustainable development of primary hospitals	- Increasing investment in primary hospitals - Encouraging specialized TCM services for hypertension	- Limited resources - Staff shortages - Market competition - Complex patient conditions

problems faced by primary hospitals in the comprehensive prevention and treatment of hypertension, including inadequate medical resources, insufficient patient awareness, and inadequate implementation of prevention and treatment measures. To address these issues, the 4R theoretical model suggests that primary hospitals should

strengthen medical resource construction, improve patient trust, and enhance the implementation mechanism of prevention and treatment measures to improve the quality and effectiveness of comprehensive hypertension prevention and treatment efforts.

Disclosure statement

The author declares no conflict of interest.

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