Research on Health Rehabilitation of Traditional Chinese Medicine Based on Computer Network Technology

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Abstract. With the development of Internet technology, all aspects such as clothing, food, housing and transportation have been affected by it, and knowledge of TCM health preservation and rehabilitation has been shared and disseminated. Relying on computer network technology, this paper conducts in-depth investigation and analysis on TCM health preservation through literature search and other modes, and aims to summarize the knowledge, content and service methods of TCM health preservation and rehabilitation, and propose ideas. The dissemination of TCM health and rehabilitation knowledge based on Internet technology presents comprehensive, scientific, and popular features, making it easier to disseminate and share for the general public.

Keywords: Chinese Medicine Health Preservation, Knowledge Service, Internet, Network Technology

1. Introduction

With the development of modern Internet technology, the traditional Chinese-Italian health-preserving and rehabilitation is also advancing with the times, and the information revolution "construction" has been carried out[1-2]. TCM health-preserving and rehabilitation is an important part of the cultural heritage of TCM. The people treated are mainly divided into healthy people, sub-healthy people, and patients with chronic diseases in a stable stage. The use of TCM health-preserving and rehabilitation is the characteristics and advantages of TCM. Exercising is a good way to strengthen the body, cultivate one's body, and prolong life. As a traditional treasure of my country, traditional Chinese medicine health and rehabilitation is inevitably affected by information technology. The integration of traditional Chinese medicine health and rehabilitation and modern information technology has made more and more people pay attention to health preservation and Chinese treasures[3-4]. At present, information technology has been widely used in traditional Chinese medicine health and rehabilitation, and its technical methods mainly involve multimedia technology, database, network technology, management information system, etc. In addition, the powerful information service and dissemination capabilities of the mobile Internet are exactly what the field of Chinese medicine health needs[5]. Keeping in good health is a health care activity carried out in accordance with the law of life development, taking measures that can maintain the body, reduce diseases, improve health, and
prolong life. With the increasing knowledge of health preservation in various media such as books, radio, TV, and the Internet, people often feel unable to grasp the large amount of knowledge about health preservation, and there is an increasing demand for personalized and customizable health service systems. Highlight "[6]."

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2. Research on TCM Health App

There have been some excellent App products in the field of TCM health preservation, including "Life", "Chinese Medicine Health Care", "Chinese Medicine Health Care Bell (Popular Version)" and so on. Here are some typical systems.

| Serial number | Name | Features |
|---------------|------|----------|
| 1             | Live | According to the results of the user's "Traditional Chinese Medicine Physique Test", personalized knowledge services are provided for the user's physique type. "Living a Life" has the characteristics of convenience and individualization, so that users can get health knowledge and health tips for themselves and their families anytime and anywhere. Based on the theory of Chinese medicine, the knowledge of health maintenance is explained to users from three aspects: exercise, diet therapy, and spiritual regulation. The function of health maintenance reminder is realized, and users are urged to engage in health maintenance activities in a timely manner to achieve the purpose of strengthening physical fitness and preventing diseases. Combining the knowledge of traditional Chinese medicine health preservation such as time health preservation with mobile technology, according to the corresponding relationship between the time (time) and the organs and meridians, it provides users with health reminder services, and provides users with practical services such as weather forecasts. Mainly focusing on green health and wellness, it integrates seven columns including healthy eating, acupuncture and massage, famous doctor's consultation, home cooking, red wine, gourmet food, etc., to update users' health and wellness knowledge in real time every day. It is similar to "Living Life", and it also provides personalized knowledge recommendations based on the results of the user's "Traditional Chinese Medicine Test". It helps users to analyze the nutritional value according to their own body quality when choosing food, not just according to their preferences. |
| 2             | Chinese Health | |
| 3             | Traditional Chinese Medicine Health Bell (Popular Version) | |
| 4             | 365 Health | |
| 5             | Physique regimen (diet therapy) system | |

The advantages of the above App include beautiful interface design, professional knowledge content, and personalized knowledge services based on personal physique. Users can find the App they want from various mobile application markets at home and abroad, download and install it. Many products will ask users to register and fill in personal health information in order to provide personalized services such as knowledge recommendations. Every time the user opens the App, the system will provide knowledge content and recommendation services according to the user's physical characteristics, or accept the user's query request through the input box and display the result. Some
Some apps also automatically generate health care recommendations based on the user's personal health information, and provide health care reminders according to solar terms and time of day, becoming an intelligent assistant for the user's health care.

The core advantage of the TCM Health App lies in its convenience: anyone can access the TCM health preservation knowledge he cares about anytime and anywhere as long as he accesses a widely covered network through a certain mobile terminal. The mobile Internet connects the App with the knowledge base in the cloud, and packs the extensive and profound knowledge system of traditional Chinese medicine into the pocket, reflecting the advantages of huge amount of knowledge and real-time updates. App realizes precise knowledge search, enabling users to instantly find the content they care about in massive amounts of information, which is a capability that traditional media such as books, radio, and television do not possess.

### 3. Computer network technology application

The Internet is a product of the information technology era in the 21st century. With the rapid development of network information technology, the Internet has become an important tool for spreading information and improving efficiency. From shopping, travel, communication, information, business model to medical treatment model, our way of life has been greatly changed. The Internet has increasingly become the first medium that profoundly affects people's lifestyles. Many developed countries in the world have taken this model of medical and health informatization as an important strategic direction for future development. Information technology provides a new way for the effective implementation of TCM health preservation and rehabilitation.

When introducing diet and health care, teachers can use network technology to provide information such as courseware, materials and websites for professors from well-known universities across the country to explain diet and health care from different angles. Students are divided into several groups for independent discussion and exchanges, so that students can be Not only can we grasp the main points of health preservation in different seasons of spring, summer, autumn and winter, but also understand how to maintain health in different physiques, so as to absorb the largest amount of information in the shortest time, so that students have a thorough understanding of the knowledge to be mastered and a deep impression. The teaching process reduces the teaching burden and improves learning efficiency. In addition, you can also recommend some authoritative websites of TCM health preservation and rehabilitation to students, so that students can independently understand the cutting-edge trends of TCM health preservation and rehabilitation, so that students can achieve a more comprehensive, objective, scientific and more specific understanding of TCM health preservation and rehabilitation through the Internet.

With the help of the network, information technology and database management technology, the realization of health education for the population in the Du district, technical training of community doctors, and the popularization and informationization of TCM health and rehabilitation can greatly increase the penetration rate of TCM health and rehabilitation and reduce the work of medical staff. Through the establishment of a TCM health maintenance system based on an information collaboration platform, and make full use of the efficiency and convenience of network technology to solve the problems of the low penetration rate of TCM health rehabilitation and poor intervention effects in the past, explore the information and networkization of the popularization of TCM health rehabilitation. And research. It is expected to make useful explorations for the new model of TCM health and rehabilitation in the information age, and to provide decision-making basis and data support for the state and government departments.

For medical students, clinical internship is a necessary stage. During the internship, students are usually guided by doctors with certain experience, and they are intuitive and easy to accept in learning. However, for a medical student, within a limited time, there are still some problems to be familiar with the clinical diagnosis and treatment methods of various departments, and to treat various patients individually. In this way, when entering the work post after graduation, if you encounter the need to
deal with patients alone, especially difficult and critically ill patients, you may feel inadequate. Multimedia simulation technology is a means to make people's senses and thinking enter the simulation loop. It uses different media forms to describe model information of different natures, establishes a multimedia simulation model that reflects the internal motion law and external manifestation of the system, and runs on a multimedia computer to produce a qualitative and quantitative system dynamic evolution process, thereby obtaining information about Perceptual and rational understanding of the system. Introducing multimedia technology into clinical practice, using the simulation capabilities of multimedia computers to simulate a real clinical environment, and comprehensively stimulate the learners’ senses through visual, auditory, tactile and other means, as shown in formula (1). Shows that the learners can deal with various patients individually in a sense of reality, such as disease diagnosis, prescriptions, rescue of critically ill patients, operations, etc. This is very important for the acquisition and maintenance of clinical knowledge and the accumulation of experience.

\[
B = \sum_{i=1}^{n} c_i = \begin{pmatrix} c_{11} & \cdots & c_{1n} \\ c_{n1} & \cdots & c_{nn} \end{pmatrix}
\]  

Among them, B is the result of diagnosis, and c is the result of consultation in each department.

Distance education is an electronic education method that transmits educational materials through communication networks. The implementation of long-distance education on health and rehabilitation of Chinese medicine will facilitate the learning of in-service personnel, help the advancement and improvement of doctors' skills in remote areas, and lay the foundation for providing educational services to countries and people who love Chinese medicine around the world. In distance education, intelligent hypermedia network teaching is a promising teaching method. Intelligent hypermedia network teaching can realize the most effective organization and management of teaching information, and truly teach students in accordance with their aptitude. The so-called intelligent hypermedia is an intelligent knowledge processing system formed by combining artificial intelligence technology and hypermedia information organization and management methods. Intelligent hypermedia network is an advanced technology that organizes and manages information non-linearly in accordance with the human brain’s associative thinking mode, and has broad application prospects in distance education.

The hospital information system includes three aspects: medical information, medical technology information and hospital management system. The three aspects of information integrate text, images, audio and video. The use of multimedia network technology can process hospital information in a natural and intuitive form and apply it to various aspects, specifically involving medical education and training and medical information query applications. Multimedia network system has natural and intuitive characteristics and advantages. Using multimedia system as a means of medical education and training is one of the important applications of multimedia network technology in medicine. Using the multimedia network system can accept and exchange different teaching methods and teaching information from all over the world on a larger scale.

4. Existing problems and research ideas
There have been many TCM health-preserving apps on the mobile Internet, but these products are of mixed quality, and the knowledge of TCM health-preserving provided by them varies greatly, which makes people confused. Through the investigation and analysis of Chinese medicine information, it is found that people basically have a trust attitude towards information obtained through traditional media such as books, radio, and television, but their trust in information obtained through the Internet is relatively low. The reason is that the traditional Chinese medicine knowledge resources on the Internet lack the inheritance of cultural origin, the source of the resources lacks professionalism and authority; the lack of systematic classification, the level of expression is not reasonable, or the language and writing are not standardized; they are mostly dependent. The existence of other types of websites, or commercial nature, undermines the public welfare and credibility of traditional Chinese
medicine.

The health knowledge service lacks the trust of users because its content itself lacks systemicity and scientificity. In order to ensure the credibility of knowledge, it is necessary for authoritative health experts to systematically sort out health knowledge and contribute the professional knowledge and data resources accumulated over the years. In recent years, great progress has been made in the construction of informatization in the field of Chinese medicine, and a large number of terminology systems, literature libraries and databases have been built. Scholars also digitally process the ancient Chinese medicine books that involve health preservation knowledge, and make full use of the ancient Chinese medicine health preservation knowledge under the premise of effectively protecting the ancient Chinese medicine health books. After years of hard work, the TCM scientific research community has accumulated a large number of data resources, which contain rich knowledge of TCM health preservation. However, related resources are relatively scattered and have not yet been effectively integrated, forming the so-called "data island" phenomenon; this leads to low resource utilization and weak comprehensive service capabilities, and there is still a gap between the people's health needs.

![Figure 1. Process of creating TCM health knowledge service.](image)

In order to improve the overall level of TCM health knowledge services, it is necessary to establish a comprehensive TCM health knowledge base, as shown in Figure 1, to provide unified support for numerous TCM health apps. As the inheritor and innovator of TCM knowledge, the scientific research community of TCM will play a leading role in the construction of this common knowledge base. A platform for co-construction and sharing of knowledge bases can be established on the Internet, encourage TCM health experts to register and use them, participate in the construction of the knowledge base through project cooperation, volunteers and other modes, help improve or contribute to the content of the knowledge base, and form a knowledge sharing centered on health preservation Virtual team.

5. Conclusions

In recent years, with the continuous development of mobile Internet technology and the acceleration of software and hardware updates, the public-oriented TCM health rehabilitation and rehabilitation has no longer become a professional problem, but a medical scenario where patients, doctors, and network experts help each other. At the same time, it is authoritative and effective. The TCM health APP has gradually become a popular target among the public.

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