

Research on Chinese Hospital Architecture

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Keywords: Hospital, Architecture, Design, Humanistic care.

Abstract. Mainstream hospital construction has been based on copying western experience, after the reform and opening in China. Because of the soft environment of different national conditions and medical society, there are a lot of problems emerge from the construction of hospital widely. The development of hospital architecture and the characteristics of the social environment are discussed from the view of medical sociology systematically and associated with medical society. It analyzes the root cause of the contemporary problems and has realistic and theoretical significance. On the basis of theory, it is necessary to start from the research on the physical space of the hospital, establishes the introduction principle of medical sociology theory and establishes the main element framework of medical social environment in hospital.

Introduction

With the increase of complementary and alternative therapies, modern medicine begins to emphasize on the whole treatment, including psychological, physical and mental, rather than just ease symptoms. The practice of outer space is used to treat again to take the people as the concern. [1] At present, hospitals in China are undergoing a large-scale expansion, and the hospital status is greatly improved, but the importance and research degree of the external space environment is still insufficient. Therefore, this article discusses the related questions of hospital architectural design of external space environment, with people in the hospital construction of external space environment of the behavior and psychology of exploring the ways and methods to design. [2]

The demand of people in hospital buildings is the basis of the analysis of the composition of external space environment, including spatial limitation, spatial scale, planting and planting and environmental facilities. In the fourth chapter, the author studies the location, layout and spatial organization of the external space environment of the hospital, and analyzes the typical spatial pattern. This paper complements the design method of the exterior space of hospital building and puts forward corresponding design Suggestions. [3]

The Principles of Hospital Buildings

The external space of hospital buildings. With the development of pharmaceutical technology in the twentieth century, the outer space of the healing elements has gradually disappeared. With the increase of complementary and alternative therapies, modern medicine begin to emphasize to the people of the whole treatment, psychological, physical and mental, rather than just ease symptoms, the practice of outer space is used to treat again to the concern of the people. [4]

At present, the hospital in China is undergoing a large-scale expansion, and the hospital status is greatly improved, but the importance and research degree of the external space environment is still insufficient. Therefore, this article discusses the related questions of hospital architectural design of external space environment, with people in the hospital construction of external space environment of the behavior and psychology of exploring the ways and methods to design. [5]

This paper briefly elaborates the background, research status, scope, significance and research methods and writing framework of the thesis. On the based of the behavior and psychology of people in outer space, deduced the characteristics of the external space environment of hospital buildings, and

determined the design principles. It analyzes the composition of external space environment, including spatial limitation, spatial scale, afforestation and environmental facilities. [6]

The location, layout and spatial organization of the external space environment of the hospital, and the typical spatial pattern are analyzed. It complements the design method of the exterior space of hospital building and puts forward corresponding design Suggestions. It summarizes the whole thesis and evaluates the research methods of this paper, and puts forward the future research direction. [7]

Humanistic care. Hospital of the designer or manager's perception of hospital culture does not reach the designated position, also leads to cultural expression is often overlooked in the process of hospital construction, some projects for even rushed over to cultural expression. The lack of culture makes many hospital buildings not show a distinctive side, and the overall plan is very similar. [8]

Humanistic care is one of the important connotation of hospital culture, at present, the hospital construction project attaches great importance to the concept of "human nature is changed", but the hospital building designers and hospital managers, after all, not patients, they think of "humanized design" is not really want.

At the same time, the hospital building of patients and medical staff of the humanistic care embodied in the process of each link and each corners of the hospital building, how to make the process, the hardware facilities to better service for patients and medical staff, we have a lot of work to do. [9]

The Sustainable development. Modern medical technology and facilities are developing faster and faster. The application of new technologies and new facilities directly or indirectly affects the development of medical models. The design of hospital architecture should also adapt to the development of medical model and reserve the space of flexible transformation. [10] A hospital is a complex public building. The planning and design of hospital buildings should be integrated in a holistic way, and the principles of clean and decontamination shall be strictly observed from the aspects of cities, courtyards and buildings.

The transmission area and the non-communicable areas are isolated from each other. Prevent cross infection in the hospital. In general hospital, it is mainly composed of four parts: medical treatment including door emergency, medical skill, hospitalization, medical logistics, administrative office and life service. A comprehensive hospital for teaching and research functions. [11] The functional composition should include teaching facilities and research houses. There are varying degrees of connection between the functional parts. The planning and design should be based on the terrain, road and construction situation around the site, and the relationship between the components should be taken together to arrange the location properly. [12]

The Problems Associated with Hospital Design

Because our country medical treatment building rise late, relative to some developed countries, has a gap in many ways, and as the relationship between the Chinese and international become more closely, so many designers will link with foreign designers so prone to friction in design, when faced with the new design method of some foreign, when this kind of design scheme and the current situation of our country and mild when we will be adopted, when some of the design plan and the actual situation of our country is different, we will not be able to use them. [13]

In actual design process of hospital, hospital and the hospital to provide detailed information to the design of the unit, when it's necessary to personally involved in the actual design process, and the director is the leader of the hospital, so for the entire design process will play a guiding role, not only should coordinate the relationship between the hospital and design and construction units, but also to design a comprehensive control, avoid some of the waste, so as to save money for hospital, and you can use to save money to help patients better, these aspects is also very important. [14]

Although there are a lot of design units are organized to hospital as the target of the team, but because of many designers have never work in a hospital, so as the target to carry on the design in the

hospital will inevitably appear shortage of experience, and the design for the design of hospital buildings should have standards and design specifications do not understand. [15]

Conclusions

In the new era, Chinese hospitals are undergoing major changes. Medical services are shifting from supply to business. Medical patterns shift from biomedical to biological, psychological and social medicine. The technological revolution has brought the industrial society into the information society, the hospital intelligently and the medical information network that covers the whole world, the time and space boundary and the original pattern of medical treatment greatly.

These changes will have a strong impact on the value concept, functional structure and spatial form of modern hospital. Under the driving of this environment, the creation of efficient and humanized hospital buildings, the transformation of traditional hospitals to the management of the center to the patients as the center becomes the hospital building design trend. The designer which only has the patient's psychological and social needs fully reflected in the space environment of the hospital, can truly make the person first.

References

- [1] Kathleen R. Farrar. *Medicine The Hospital. A Social and Architectural History*. By John D. Thompson and Grace Goldin. New Haven and London: Yale University Press, 1975.
- [2] Cherry S H, Dolger H, Rosenfield R E, Kochwa S. Amniotic fluid urea nitrogen, uric acid, and creatinine in diabetic pregnancies. *Bulletin of the New York Academy of Medicine*. 1969
- [3] NHS Estates. *Developing an Estate Strategy*. 2005
- [4] Van Den Bergae. Health impacts of healing environments: A review of evidence for benefits of nature, daylight, fresh air, and quiet in healthcare settings. *Foundation 200 years*. 2005
- [5] CABE. *Creating Successful Masterplans: A Guide for Client*. <http://www.cabe.org.uk/masterplans>. 2003
- [6] Wu Lien-Teh. *The Autobiography of a Modern Chinese Physician*. *Journal of Women s Health*. 1959
- [7] Kwang Ree Cho, Ho Young Hwang, Jun-Sung Kim, Dong Seop Jeong, Ki-Bong Kim. Comparison of Right Internal Thoracic Artery and Right Gastroepiploic Artery Y Grafts Anastomosed to the Left Internal Thoracic Artery. *The Annals of Thoracic Surgery*. 2010
- [8] Loong Chun-Keung, Wei Jie, Tang Chuanxiang. The future of neutron scattering in China: Meeting increasing demand with new facilities?. *Journal of Physics: Conference Series;International Conference on Neutron Scattering 2009*. 2010
- [9] Ken Baynes, Brian Langslow, Courtenay C. Wade. *Evaluating New Hospital Buildings*. 1969
- [10] Xiaoli Tian. Michelle Renshaw, *Accommodating the Chinese: the American Hospital in China, 1880–1920, East Asia: History, Politics, Sociology, Culture series*, New York and London, Routledge. *Medical History*. 2009
- [11] Ulrich R S. View through a window may influence recovery from surgery. *Science*. 1984
- [12] Adalberto Tenreiro. *Building in China: Henry K. Murphy's "Adaptive Architecture," 1914-1935*. By Jeffrey W. Cody. Hong Kong: The Chinese University Press. 2001.

- [13] Sean Stanwick. Site Lines - Thunder Bay Regional Health Sciences Centre. Architectural design: A.D. 2004
- [14] Berry Leonard L, Parker Derek, Coile Russell C. The business case for better buildings. Frontiers of health services management. 2004
- [15] Solomon Nancy B. Environmentally-friendly building strategies slowly make their way into medical facilities. Architectural Record. 2004