RURAL RESIDENTIAL ENVIRONMENT DESIGN IN CHINA BASED ON THE CONCEPT OF HAPPINESS

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Abstract
The objective of the study is to create a model of the design of rural residential environment based on the concept of happiness and explore the ways to practice it. The analysis of the study was done by using quantitative and qualitative research designs. The data was collected by questionnaire investigation with 486 respondents and in-depth interviews with 30 interviewees. The 30 villages surveyed are widely distributed in ten counties and cities in Zhejiang Province and have good specimen significance. The finding shows that there are seven dimensions, namely residence happiness, family happiness, health happiness, social intercourse happiness, belonging happiness, employment happiness, and esthetic happiness, in the design model of rural residential environment based on happiness. Each level has its corresponding content of the residential environment. The position and role of different dimensions are different. The paper also proposes principles and methods for practicing the design model of rural residential environment based on happiness, namely villagers’ demands first, coordination of the interests of all parties, guiding and educating villagers, in-depth investigation, and scientific design.

Key words: Happiness, Design of Residential Environment, Rural area, Maslow's hierarchy of needs.

Introduction
After 70 years of development, China has made tremendous progress in areas such as economy, culture, and technology. With the improvement of China's comprehensive strength, the backwardness of rural areas is becoming increasingly evident, and problems such as economic backwardness, lack of services, population loss, and aging are also exposed. In recent years, China has been vigorously implementing the strategies of the Beautiful Countryside Construction and Rural Revitalization Strategy. In such a nationwide rural construction, paying
attention to the well-being of rural residents is of great significance to China's social stability and building a harmonious society during the transition period, and will greatly improve the lives of China’s 900 million farmers. Faced with such a huge development opportunity, many new problems need to be considered and resolved.

Due to historical reasons in China, the dual economic system between urban and rural areas has led to significant differences in income, social security, and other aspects among urban and rural residents. Existing research mainly focuses on urban residents and certain specific groups (college students, elderly people), with little research on the happiness of rural residents. Especially, research on the happiness of rural residents from the perspective of residential environment design is still blank. (Ayizuhere, Ding, Pan, Chen & Li, 2022, P589)

Aiming at the reality of rural residents' living environment design, this study conducts an in-depth discussion on the current rural residents' sense of well-being and its influencing factors. The plan addresses the following questions: What effect does a good rural living environment have on the composition of rural residents' happiness? What is its importance? Should happiness be the core principle of rural human settlement design? What is the design model of rural human settlements based on happiness? What content and dimensions does it include? What is the status and role of each content and dimension? What are the ways and methods to apply the happiness-based design mode of rural human settlements to practice? (Zhang, Li, Jian, Fu, Wang & Xu, 2022, P95)

This study takes villages and people as the research objects. 25 villages were selected in Jinhua City, Zhejiang Province, China, and they were distributed into five types for research, namely industrial villages, remote villages, villages near cities, urban villages, and traditional villages. In these villages, we selected six types of groups to conduct questionnaire surveys and interviews. The total number of questionnaire surveys was 511, and the number of interviews was 30. Through the collection and analysis of a large amount of data, measures, and methods to care about the happiness of rural residents in the design of rural living environments are proposed, hoping to help the improvement of the living environment of rural residents.

Research Objectives

From seven dimensions, this study collected data from 25 villages in Wuyi County, Yongkang City, Pujiang County, Zhuji City, Yiwu City, Dongyang City, Jiashan County, Jindong District, Wucheng District, and Lanxi City in Zhejiang Province. The total number of questionnaire surveys 511 people, 30 people were interviewed and analyze in detail. The specific research objectives are as follows:
1. To examine the functions and role of happiness in the design of residential environments in China's rural areas. 2. To determine which dimensions of rural residents' happiness are provided by the residential environment.

2. To create a design model of rural residential environment in China based on the concept of happiness.

3. To explore the ways to practice the design model of rural residential environment in China based on the concept of happiness.

**Literature Review**

1. Research on the Happiness of Rural Residents

Search through academic platforms such as CNKI, 1834 related academic journal papers and 398 dissertations can be found. These research results can be roughly divided into the following aspects. First, from sociological and psychological empirical studies that affect residents' happiness, such as Wang Haiying's "Meta-Analysis of Factors Influencing Chinese Farmers' Subjective Well-being", it is pointed out that education level, health status, marital status, housing conditions, and annual family income, interpersonal communication, and other key factors have significant heterogeneity on farmers' well-being. (Wang Haiying, Xia Ying, Sun Dongsheng, Zhang Lin & Wei Hao, 2021, P203) Second, research on strategies to improve the happiness of rural residents, such as "Positive Experience Design Strategies to Improve Subjective Well-being" written by Wu Chunmao, summarizes 15 positive experience design strategies to improve users' subjective well-being. (Wu Chunmao, Tian Xiaomei & He Mingfeng, 2021, P14) Third, a comparative study on the happiness of urban and rural residents. For example, Gu Chudan, Wang Fenglong, and Luo Feng's article "Research on the Differences in Happiness between Urban and Rural Residents in China and It's Influencing Factors" found that the happiness of Chinese urban residents is higher than that of rural residents in terms of living standards, living environment, and pace of life. (Gu Chudan, Wang Fenglong & Luo Feng, 2021, P179) Fourth, research on the well-being of the elderly. For example, Fang Liming found in "Social Support and the Subjective Well-being of Rural Elderly" that both formal social support and informal social support can improve the subjective well-being of the rural elderly. (Fang Liming, 2016, P54) Fifth, research on the well-being of the living environment. Yang Liu's article "Contradiction Analysis between Traditional Landscape Design Techniques and Villagers' Needs" pointed out that future rural planning and design should be oriented by villagers' needs, insist on villagers' dominant position, respect villagers' wishes, and reflect villagers' demands. (Yang Liu, 2020, P17)
2. Research on the Design of Rural Residential Environment

Search through academic platforms such as CNKI, it can be found that there are 3,465 relevant academic journal papers and 989 dissertations that can be queried. These research results are mainly discussed in the following aspects. First, research on rural planning and design, such as Liu Xiaoyu's "Strategic Research on Rural Planning with Chinese Suzhou Characteristics", puts forward five strategies including industrial development, ecological protection, cultural inheritance, multi-governance, and personnel training. (Liu Xiaoyu, 2018, P15) Second, research on the problems and countermeasures of rural environmental design. For example, Yu Shunli's article "A Study on the Strategies of Art Intervention in Rural Landscape Construction" puts forward the methods of rural landscape construction such as art introduction, art settlement, and art cooperation. (Yu Shunli, 2021, P32) Third, research on the design of rural residential space renovation. For example, Li Fang pointed out in the article "Research on Landscape Space Design of Rural Nursing Homes" that the construction of rural nursing homes should fully consider the local natural environment and the use of local materials. (Li Fang, 2018, P127) Fourth, studies on cultural integration and rural living environment design, such as Fan Ying, Zhou Bo, and Tang Liu's "The Road to Rural Cultural Revitalization in Ethnic Areas Based on Cultural Space Production", point out that cultural revitalization is the core and driving force of rural revitalization. (Fan Ying, Zhou Bo & Tang Liu, 2019, P62) Fifth, the research on rural environmental design and ecological protection, such as Zheng Hui and Tian Linxia's "Research on the Application of Rural Human Settlement Environment Design Based on "Natural Coexistence", emphasizes that the development of rural areas should pay attention to both the natural environment and the living environment. (Zheng Hui & Tian Linxia, 2020, P79) Sixth, regarding the research on the design of the rural living environment and the development of the industrial economy, Cao Yu's "Research on the Development of Rural Tourism Based on the Integration of Industry and Tourism—Taking Qingfeng Village in Jiangsu Province as an Example" proposed that through the integration of industry and tourism, Realize the sustainable development of rural tourism. (Cao Yu, 2021, P18)

Conceptual Framework

This study aims to construct a design model of rural human settlements based on the concept of happiness and explore a research study on the practice path. Details are as follows.

The conceptual framework for the study is shown in figure 1.1.
Research Methodology

The research mainly draws on Maslow's hierarchy of needs theory, adopts quantitative analysis, qualitative analysis, questionnaire survey, interview survey, statistical analysis, interdisciplinary research, literature survey and other methods, and combines the author's practical experience in the field of rural human settlement design to develop "Design Model of Chinese Rural Residential Environment Based on the concept of Happiness". And through the above research methods to verify and screen, clarify the internal relationship of the system, and then find ways and methods to practice the model. (Koltko-Rivera, M, 2006, P302)

1. Data Collection Method

Quantitative analysis of data is mainly collected through questionnaires. The questionnaire there consists of residence happiness, family happiness, health happiness, social intercourse happiness, belonging happiness, employment happiness and esthetic happiness. The questionnaire was measure on a five-point Likert scale in which respondents indicates the extent to which the items represent importance. Qualitative analysis data are mainly collected through in-
depth interviews. Interviews are transcribed, coded, and interpreted by using content analysis to analyze the data obtained from the in-depth interview. (Randel R. Rivera, R. 2022, P104)

2. Data Collection Process

Quantitative research data is mainly obtained through the author's questionnaire survey of six groups of people, including villagers, village cadres, government staff, investors, tourists, and designers. The biggest number of them are villagers and village cadres, who are the main subjects of this research. The distribution of the questions is mainly done through two ways: on the spot and on the Internet. There are much more on the spot than on the Internet, and the proportion between the two was about 10:1.

Qualitative research data is mainly obtained through in-depth interviews with the above six groups. Among them, villagers and village officials are the main subjects. Due to some restrictions, especially the impact of the COVID-19 disease, some of the visitors could only be through the Internet and phone.

3. Data Analysis

Quantitative data analysis was performed using a structured questionnaire. The measurement model and structural model were descriptively analyzed using SPSS.

Qualitative data analysis was obtained through in-depth interviews. Interviews were transcribed, coded and interpreted by using content analysis to analyze data obtained from in-depth interviews.

Research Results

Objective 1: To examine the functions and role of happiness in the design of residential environment in China rural area.

The questionnaire shows that rural design pursuit of happiness has become the consensus of society. The number and proportion of respondents who agree with happiness as an essential principle of Rural Residential Environment Design were higher.

Therefore, we can conclude that happiness plays a significant role and occupies a very important position in the design of rural residential environments, and should become an important guiding principle. It has become a relatively common consensus not only among designers, but also in society.

Objective 2: To determine which dimensions in rural residents’ happiness provided by the residential environment.

In figure 2 shows the various dimensions in rural residents’ happiness provided by the residential environment.
Objective 3: To create a design model of rural residential environment in China based on the concept of happiness.

In the design model of rural residential environment in China based on the concept of happiness, the position and role of different dimensions are different. In terms of the seven dimensions, if we divide it into four levels according to importance, residence happiness and health happiness are at the first level, which is highly important; Employment happiness, family happiness, belonging happiness, and social intercourse happiness rank second in order, which is important; Esthetic happiness is in the Fourth Estate, that is, it is not very important.

Objective 4: To explore the ways to practice the design model of rural residential environment in China based on the concept of happiness.
It mainly includes the following principles:

Firstly, villagers are the main body of rural residential environment design, placing their interests and aspirations in the primary position and main goal. Secondly, coordinate and accommodate the interests and demands of other relevant parties. Achieving the interests of villagers requires the cooperation and promotion of the interests of governments, investors, and even tourists. Thirdly, it is necessary to conduct scientific analysis and appropriate guidance on the demands of villagers and other interested parties, and not unconditionally meet their demands. It is necessary to consider both the short-term and long-term interests of all parties. Fourthly, in-depth investigation. Before designing, a thorough and detailed investigation of the village should be conducted. The content of the investigation should not only include traditional content, but also go deep into the villagers' homes, asking and clarifying the interests and aspirations of the villagers. Fifthly, scientific design. Based on in-depth investigation and clarification of the interests of villagers and all parties, the design is conducted scientifically and reasonably based on the "happiness" based residential environment design model.

Discussions

1. Research Implication

From a theoretical perspective, the above research results have certain pioneering significance. According to the understanding of the author of the paper, there are not many papers, books, and research reports on the design of rural residential environments from the perspective of happiness. The paper summarizes a design model of rural residential environment corporate in China based on the concept of happiness and found the design principles and guidelines Future researchers can use this as a basis for further research on this topic, supplementing and enriching my research findings.

In terms of practice, this model has been partially proved to have high accuracy and good implementation effect in the author's long-term practice, which has important practical significance for China's rural revitalization and the improvement of rural residents' living environment.

2. Research Limitation

The limitations of this study are mainly manifested in the following three aspects: firstly, China has a vast territory, a large rural population, and a rich number of villages. The geographical location, natural resources, economic development level, cultural traditions, etc. of each place and village are different from each other. The village specimens we selected are mainly limited to the scope of Jinhua City, Zhejiang Province.
Although they have certain representativeness, they have not yet reached a sufficient level. Secondly, there are many theories about happiness in the field of psychology, and we mainly adopt Maslow's hierarchy of needs theory. There is still a lack of more application and comparison for other theories, which we hope to make up for in future research. Finally, the survey involves a large number of villages and a wide range of people. In addition, due to the impact of the epidemic, some surveys failed to go deep, and some questionnaires and interviews were forced to end in the middle of the survey, or were originally planned, but could only be suspended for objective reasons, which obviously has a certain negative impact on the quality of our questionnaires and interviews.

Suggestions

There are many research achievements on happiness in the domestic and foreign academic circles, and there are also many discussions on what is the ideal rural residential environment design. However, combining the two, studying the ideal rural residential environment design model from the perspective of happiness, and further exploring practical paths, this number is still very rare. This study is an attempt and hopefully the beginning of a new research field. Some of the results of this study have proven effective in the design and construction practices of the author and some colleagues. The German poet Holdrin said, "Man, poetically inhabits the earth." This sentence, quoted by the famous philosopher Heidegger, is well known to the world. I hope that through the efforts of designers and everyone, such a beautiful ideal of life will not only remain in poetry and books, but can only be at least partially realized in everyone's life. Design is related to beauty, but also to happiness.

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