

Research and application of furniture layout and its psychological effect in hotel customization

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Abstract: As consumers paying more and more attention to the comfort of hotel rooms, the demand for customization of hotel rooms is increasing. However, according to the existing research, it is found that the customization of hotel rooms involves less in non-theme hotels, most hotels have the phenomenon of standardization, neglect of personalized service, and lack of systematic combing of design factors in hotel customization. The specific design of the hotel should pursue personalized design and pay attention to the comfort of residents at the same time, so this paper put forward detailed discussion based on the existing hotel customization model analysis and customization application in the theme hotel, according to WELL healthy housing in the comfort environment system sound environment, light environment, hot and humid environment put forward green health, people-oriented standards for basic methodology research. The study found that by changing the interior design of the room, different feelings can be brought about to meet the diverse needs of different users in the rest, work and other occasions. Through the interpretation of the psychological needs of residents, this paper summarizes the customizable space in three aspects of wall layout, lighting design and plant decoration. By changing the color matching of the interior decoration environment, the shape and color of decorations, plant space placement, customizable indoor space can be created, so that the indoor atmosphere is more targeted, lighting is more humane, plants are more variable. With customized experience, consumers can have a more personalized living experience in the hotel, a more people-oriented hotel environment can be created, while guiding the hotel industry to transform from standardization to personalized in a timely manner.

1. Introduction

With the development of China's economy and the enhancement of comprehensive strength, the hotel industry has been booming. With the increasing number of hotels, consumers are paying more and more attention to the comfort of hotel rooms. In China, more attention is paid to the design of the public space of the hotel, while ignoring the importance of the interior space design of the room. Building indoor environment has an important impact on people's stress, anxiety, emotion and cognitive ability. Compared with active behavioral intervention, these passive interventions through environmental changes do not require the active effort, regulation and effort of personnel, and can have a more efficient use efficiency and a wider range of application. Among them, the interior design of hotel rooms plays an important role in creating specific cultural connotation and core style atmosphere for the hotel. Details can better express the hotel's personality characteristics, service concept and cultural core.

Through the literature investigation and research, about the customized design of hotel rooms, Yang Liang proposed how to make the customized service achieve low cost to add Chicago digital preparation reference [1]; in 'Research and application of thematic and customized design of guest room space in Theme Hotel', Yang Ru discusses that variable lighting; structure of wall; variability of furniture, difference between front and back of materials and high-tech assistance can be used to

change part of the building structure under the condition of immobility, so as to obtain new living space [2]. Jiang Liping and Wang Wenfeng, taking "Internet plus" as the background, explored the mode of implementing customized services for China's high-star hotels relying on the resource advantages provided by big data [3]. The above studies have explored the implementation methods and feasibility of hotel customization from different directions, but the research on customization is limited to theme hotels, and the more comprehensive research on customization has not carried out a detailed and in-depth discussion. Therefore, the research focus of this paper tends to be on the customization of domestic hotel rooms, which puts forward the demand for customized service and shows the care and respect for guests' psychology. Type Style and Fonts

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2. Research Methods

This paper expounds in the form of a literature review to interior space and the psychological effect as the main direction of human nature. With the aid of Yang Jie; Yang Liang; Liu Wenhui and other research, explores the hotel implementation method and the feasibility of customization, and aims to promote the hotel resident happiness. This paper pay more attention to inner feelings and mental health of the household with people-oriented idea. The international 'WELL Building Standard' has been implemented as early as January 6, 2017. This paper also uses the WBS as the theoretical system of the study. According to the 7 health concepts of WBS 1.0, the healthy building technology system is divided into air environment system, water environment system, nutrition environment system, fitness environment system, comfortable environment system and spiritual environment system [4]. From both a practical and scientific perspective, the introduction of the WELL Healthy Building Standard provides a systematic and structured reference index for innovation in the field of architecture. [5].

This paper mainly focuses on the comfortable environment system in WBS to conduct targeted research on the furniture layout and its psychological effect in hotel customization. With green health and people-oriented as the benchmark, the psychology of residents is the main research object. Comfortable environment system standard rules put forward the requirements of sound environment, light environment, heat and humidity environment, so this paper focuses on the hotel wall layout, lighting art and plant decoration part of the specific interpretation and analysis. Building standards should not only provide solutions to meet the needs of residents, but also minimize interference with the body's circadian system, improve work rates, help residents get a good quality of sleep, and provide appropriate visual acuity as needed [4]. The indoor walls and green plants are all parts of the WBS system, aiming to create a non-interference, efficient and comfortable indoor environment, mainly meeting the requirements of acoustic comfort and thermal comfort [4].

3. Analysis of Design Factors

3.1 Wall Layout

1) Based on the requirements of the WELL Building Standard, a high efficiency and comfort indoor environment without interference should be created, which mainly meets the requirements of acoustic comfort and thermal comfort. Compared with the indoor hard installation, indoor soft installation is practical, economical, flexible and effective. Therefore, it is of vital and indispensable importance in interior design [6]. Unless it is a minimalist selling point of the hotel, otherwise the wall of the room is absolutely not empty, empty wall will show a crude feeling.

2) The simplest point of hotel wall layout is wallpaper, wallpaper is quite popular because it's strong in decoration and relatively low in price, the texture is also changeable. Among them, the pure color wallpaper is most used. For example, Peace Hotel (Shanghai), Hilton Hotel (Beijing) are using this kind of decoration mode, including the carpet is used in pure color which create a warm tone at home.

In addition, wallpaper's special design embodies in the application of pattern. For example, China World Summit Wing (Shangri-La operation) selected the cyanosis large flowers and birds pattern wallpaper of oriental luxury style. For the control of the wall, different positioning and different regions of hotels should be different. Business hotels use light color simple wall, which don't give residents a strong psychological contrast; luxury hotels with strong design style can adopt the same wallpaper or color as the decoration style of the whole hotel, which give users more unified feedback.

3) Another method of processing metope applies cloth and leather. Cloth's degree of freedom is higher compared with wallpaper, all kinds of fabric can be on the wall and easy to clean. For example, the CHAO Home (Beijing) uses grey cotton and linen as the surface, padded with a thin layer of cotton inside. Come so, the material of whole house pledges is very unified, the atmosphere that builds also is quite convergent. Furthermore, the structural design of the building must consider the isolation of air sound and solid sound; Equipment with low noise level should be selected as far as possible to meet the acoustic environment standards of construction projects. Vibration and sound isolation measures should be considered during equipment installation [4]. The air layer in the middle of a large number of cloth fabrics can well absorb noise, so the sound insulation board wrapped in cloth to do the headboard is also a good choice, and also better meets the requirements of standards.

4) In the decoration of modern decoration style, wood panels are used frequently, cork wood is one of them. As a renewable resource, it is mainly applied to cover the surface of various materials and has achieved good results in modern architectural decoration [7]. Consumers with the purpose of the long-term living, often hope for not only comfortable internal conditions, but also the feeling of home. Therefore, if the hotel unites the wood of wall and cabinet, the cabinet can be cleverly hidden, letting the room become clean and tidy, while increasing the room storage. And the wooden wall is easy to create a traditional and composed Chinese texture, makes the hotel room interior decoration more colorful. For example, Aman Hotel in Beijing and Aman Hotel in Hangzhou are located in a quiet natural environment. In order to combine with the natural environment, the exterior decoration style of Quadrangle is adopted. The rooms are covered with traditional dark brown, which has more Chinese charm.

5) Even if the hotels use wallpaper and wooden face plate, large area still looks to be lack of change. On the metope of key area at this moment, adornment picture will be hung to break metope depressing. Decorative painting has become the finishing touch, directly strengthens the characteristics of outstanding design. For example, EDITION (Shanghai), although the whole house uses a large number of wooden decoration panel, but the small objects in the room, decorative paintings added black embellishment. So that the wood color presents a charming modern atmosphere. Such decorative paintings can obviously indicate the style of the hotel to the residents, giving a strong sense of design, and make up for the psychological vacancy caused by a large number of blank walls.

6) One of the meanings of architecture is to create space, and walls are the main interface to distinguish space. Wall is the basic factor of building form and an important means of organizing indoor and outdoor environment space. Culturally, wall is the self-protection of human body and mind, a means for human to occupy and sort out natural space, and a unique architectural aesthetic culture. Therefore, in the residential interior space, the wall becomes the key point of decoration, and the decoration of the wall plays a crucial role in the functionality and aesthetics of the interior environment [8]. In terms of residents' psychology and comfort, an outstanding application of walls can give residents a better living experience. At the same time, interior decoration materials (paint, coating, ceiling, floor, wall panel and furniture, etc.) may release VOC (volatile organic compounds), such as formaldehyde, benzene, xylene, etc. These are all volatile organic compounds at room temperature [9]. Because of that, the choice of materials should be more in accordance with the international standard that would not harm resident's health. Materials of environmental protection, recycling are better choices, such as high porosity diatom ooze wall body and natural inorganic thin pottery board, which have better adsorption ability [4].

3.2 Lighting Art

1) In order to create a good light environment, the lighting environment of the residence meets the requirements of a healthy building by taking measures to meet the color rendering index requirements of the outdoor lighting environment and the glare limits of the outdoor public activity areas [4]. The lighting design in hotel rooms mainly adopts three types of lighting: basic lighting, accent lighting and decorative lighting.

2) Basic lighting is the most basic and important part, providing users with the basic visual light environment in the space, corresponding to the physiological level of people's lighting needs for safety and efficiency [10]. As people will produce different behaviors in hotel rooms, different behaviors require corresponding basic lighting to meet their needs. For example, when resting, one can choose a semi-indirect and non-intermittent space feeling with mainly warm light; while at work, people prefer relatively cooler white toned light sources, which can help protect eyesight and enhance work efficiency. By changing the color temperature and illumination of the basic lighting, it effectively provides a suitable and comfortable lighting environment for users, and achieves a humanized and controllable lighting design.

3) Type of Light Source

Type of light source	Color temperature	Space feeling	Expression of atmosphere	Presentation effects	Applicable places
Incandescent lamp, tungsten halogen lamp, warm white fluorescent lamp, high pressure sodium lamp, low pressure sodium lamp	3300k or even below	Warm and soft (warm tones)	Comfortable, warm and peaceful beauty	 www.yidouta.com	Rooms, bedrooms, wards, bars, restaurants, etc.
Cool white fluorescent lamps, metal halide lamps	3300k-5000k	Refreshing and pure (white tones)	Clear, soothing and relaxing beauty	 www.yidouta.com	Offices, classrooms, reading rooms, consultation rooms, laboratories, etc.
Daylight-colored fluorescent lamps, fluorescent high-pressure mercury lamps, metal halide lamps, xenon lamps	Over 5000k	Cold, indifferent (cold tones)	Authoritative, serious imposing beauty	 www.yidouta.com	Hot processing workshop, high illumination place, etc.

Figure 1. The study of the construction of indoor space mood by light environment design-Hou Zhenli.

Accent lighting that is in the existing basic lighting on the visual focus of the area to emphasize, through the local area of enhanced lighting and the surrounding environment to form illumination contrast [10]. Focus lighting should change according to the changes in the basic lighting to achieve the overall creation of space atmosphere; at the same time for the needs of users to carry out targeted local lighting. For example, you can choose to add different kinds and brightness of wall lamps or desk

lamps on both sides of the bed; in the work area, you can add desk lamps or floor lamps according to demand, and you can change the angle of light according to the shadows. And in the closet above the spotlights can be added for local lighting, to facilitate the selection of clothing. In the bathroom area, according to the requirements of healthy building comfort, in order to meet the requirement of physiological equivalent level illumination ≤ 50 lx at night, additional night lights are required [11]. The variability of key lighting is that users can choose more suitable lamps and lighting methods according to different behavioral needs such as rest and study.

Decorative lighting, as a way of lighting to enrich the space level, uses light to render the environment, create a specific mood and enhance the artistic atmosphere of the space [11]. Decorative lighting mainly relies on the style design of the rooms as well as cultural factors to change, and users also reflect their own value pursuits in large part through their choice of decorative lighting. For example, in the city of Lanzhou in China, people are using light to express that the monastery is a spiritual pillar for people. The bright light lit along the ridge is the lighting that illuminates the path of worship when most people in the city go to the monastery of their faith, and the hotel, where the city of Lanzhou has a distinct cultural locale, is particularly important for the decorative features of the hotel interior lighting [12]. Such selectivity greatly enhances the aesthetic interest and artistry of hotel room design, while deepening people's sense of participation and belonging.

Basic lighting, accent lighting and decorative lighting each play a role at the same time, the three also play an important role in coordinating with each other. Basic lighting can meet the basic physiological needs of people in the room, accent lighting makes people's comfort is enhanced, while decorative lighting to meet people's spiritual needs. For this reason, when adjusting and manipulating, different modes can be selected to make uniform adjustments. Such as rest mode to ensure that the interior light is a soft warm light source, and add the closet and bedside accent lighting; in the work mode, the overall lighting color temperature is cold, to strengthen the focus of the work area lighting; in the welcome mode, increase the diversity of decorative lighting. And in the residential environment, it is inevitable that indoor and outdoor lighting echo each other, such as outdoor landscape lighting of garden lights, lawn lights and other outdoor lamps and lanterns are installed to avoid the production of glare, direct glare on the human eye and residents windows, balconies and to the road vehicle drivers caused by glare [11]. The combination of synergistic cooperation and individual adjustment of the three and the echoing of the indoor-outdoor lighting system greatly ensures the adjustability and comfort of light, meeting the multiple needs of people whether physiologically or spiritually.

3.3 Plant Decoration

Plant decoration is an extremely important part of hotel interior design. What appropriate plant adornment can bring a person is not only the comfort on physiology, but also the edification on psychology and spirit. Wang Zhipeng et al. conducted correlation analysis between green visual rate and residents' mental health during the epidemic period and found that the higher the green visual rate outside the window and the longer the green visual time every day, the better the residents' mental health level [13]. In the hotel room design, mainly divided into plant type of variability and plant style variability.

Plants in the hotel room environment have many decoration ways due to different occasions. No matter what kind of plant decoration it is, choosing different types of plant decoration according to the existing hotel room space and furniture layout is necessary. In the residential space, the key decoration is often arranged on the desk, tea table or long narrow table in the form of small bottles of flowers or bonsais. It is best not to occupy the use area of the indoor ground, while avoiding affecting the transparency of the indoor sight [14]. If the user chooses a more spacious hotel room, the choice of plant decoration can be relatively tall tropical plants, such as *Monstera deliciosa*, tung tree, etc. At the same time, climbing plants can be placed on the wall as background. If the user chooses a relatively narrow room type, tall plants and too many hanging plants may not be a good choice, small leaves, low plants are better for decoration. When decorating a narrow room, "dot" layout, namely the decoration in place small potted flower, miniascape or flower arranging the ornament, strengthening the arrangement is a good decision [15], while decorating a spacious room, the emergence of a few

tall plants can soften the area which has a large number of rigid elements, while breaking big space at the same time, using the disjunctive effect of plant to be able to create a few small Spaces, making whole room full of fresh scenery. When eating in a restaurant, for example, dividing the table with plants is a good idea. Users can choose different sizes and different types of plant decoration according to the room type and the furniture in the guest room when they customize the plant decoration. Such selectivity makes plant configuration and indoor environment photograph coordination and brings a person the sense of harmony.

Plant's forms, colors etc. often have different artistic beauty with great ornamental value. Indoor greening plants should be selected according to the tone and style of indoor environment, so that plants and indoor environment complement each other and reflect each other [14]. Users can choose suitable plant decoration according to different room styles and colors. If the rooms are decorated with traditional Chinese furniture, the hotel can choose traditional plants in Chinese style, such as Chinese flower arrangement or simple bonsai tree stump. The color can be the relatively calm dark green. If the guest room style is based on modern style, the hotel can choose small potted plants with bright colors, or ivy, hanging basket and other vines, or seasonal flower materials such as crabapple. In hotel interior design, in addition to meeting the effect of the environment, it is also very important to beautify the environment. Plant landscape is a great help to enhance the indoor environment, and shows vitality and natural beauty depending on its own ecological attributes [16]. Guest room is a relatively private space, and a place to show personal style as well. Therefore, it is of great importance to create an environment with plant decoration, suitable plant style and unified guest room for people's rest quality. Such variability makes the overall design of the guest room more unified and gives the user a harmonious and comfortable psychological feeling.

4. Conclusion

With the development of society and the improvement of life quality, more common customized and personalized space services in modern life, high-quality space services tailored to consumers are getting more popular. This paper based on the existing research, makes research and analysis of the hotel room interior design customization. Then makes a conclusion that in the wall layout, lighting design and plant decoration three aspects, the room design variability and psychological effect brought to users. Through the variability of indoor walls, lighting and decorations, the color collocation of indoor environment, the form and color of decorations, a changeable indoor space can be created. This kind of space can be freely matched and changed according to preferences and mood, so that people can enjoy customized space.

The blind spot of this paper is that there is no in-depth study on the specific customization mode and feasibility of hotel room customization, and the price range and crowd positioning of customization still need to be discussed. As hotel customization is not only an issue that needs to be considered in interior design, but also in terms of hotel service and operation mode. In future research, question on how to classify hotel room space customization according to different audience groups and hotel types, and how to apply customization to hotel design in a more systematic way should be paid more attention to.

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