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Emotional Design of Interior Spaces: Exploring Challenges and Opportunities

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Abstract: At present, the integration of cultural and emotional aspects in interior designs is considered to be crucial. The combined emotional and new Chinese decorative style effects of interior spaces have not been examined adequately in previous studies. Thus, this study focuses on the role of new Chinese decorative elements in influencing emotional aspects within the context of interior design in China. To fulfil this aim, a qualitative approach was utilized. For this purpose, the data is gathered in two phases. In phase I, semi-structured interviews were utilized to collect data from 5 interior designers. In phase II, data was collected from a focus group discussion with 6 experts. Nvivo 12 software was used for conducting a thematic analysis of the collected transcripts within the context of interview strategy. However, for focus group discussion, content analysis was conducted. The findings from five interior designers showed that emotional aspects in interior designs are impacted by cultural elements. Moreover, numerous challenges in interior design can be overcome by the integration of emotional strategies. The results have shown that the emotional and cultural aspects are crucial for the development of creative interior spaces. Three levels of emotional design have been identified from focus group discussion. Visual aesthetic level comprises of novelty, color conformity, order and sequence, and richness of design. Three main functional levels are usability, comfort, and privacy. Individual level consists of culture, personalization, and fashion elements. Therefore, this study can be effective in promoting the development of creative interior spaces with a comprehensive focus on the levels of emotional design in the context of the new Chinese decorative style.

Keywords: cultural impact; emotional experience; interior design; well-being; visual aesthetic; functional use; individual life

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1. Introduction

1.1. Research Background

Interior design is not just an aesthetic practice but multidimensional form of art which serves as visual narrative in the lives of individuals. In the modern era, the interior spaces are not merely the physical structures, but they reflect the inner world of an individual. These spaces reflect people's beliefs, values, and cultures at large. In this regard, the integration of culture in interior designs reflect the value system, beliefs and traditions of a particular society or culture. It also represents individuals' sense of identity and belonging. In the contemporary society, the concept of traditional interior design has been transformed. People now prefer those interior spaces which fulfil their emotional and cognitive needs along with providing their functions [1].

As shown in Figure 1, the traditional Chinese design style is no longer sufficient to meet the requirements of contemporary interior spatial design. The use and functionality

of traditional furniture is no longer relevant in modern-day requirement as it is often handmade and expensive [2]. As the China's economy developed, new Chinese decorative style was created by integrating fashion element and own traditional pattern. This style had improved the functionality of Chinese interior design while maintaining own traditional value. This merging leads to the creation of unique and charming aesthetics which can satisfy the artistic and functional needs of end-users. Most importantly, these designs ensure that historic architectural culture is authentically preserved and developed within contemporary interior design [3]. Therefore, cultural and emotional design emerged as an advanced discipline in the field of architectural design [4].



Traditional Chinese decorative style New Chinese decorative style

Figure 1. Traditional Chinese decorative style and new Chinese decorative style. Source: Author.

Emotional design refers to any design by integrating human emotions and feelings into a particular place or product. This design can increase its attractiveness towards end-user [5]. It has also been observed that the user-centric design can increase the user's productivity by 20 to 25% [6] while the user satisfaction is enhanced by 60% [7]. Interior design of a living space has substantial impact on the individual's wellbeing, emotions and moods [8]. It also has the direct and significant impact on the mental health of an individual [9]. A well-organized interior space can foster social interaction while reducing the feelings of anxiety and being overwhelmed. Similarly, the use of furniture and ornament can also significantly influence mental health of the users [10]. This explains the role of interior designs in influencing the emotional wellbeing of the users. The combination of cultural and emotional elements can create a personalized and welcoming interior space. The primary essence of cultural and emotional design lies in its capability to evoke a sense of rootedness, memories and feelings. With the blend of different cultures, the living spaces can be enhanced beautifully with the richness of histories, traditions, and emotions.

Figure 2 presents the probabilistic model of aesthetic response to the built environment which mainly focuses on space attributes and perception, effect, cognition and effective appraisals of the observer. The integration of cultural and emotional aspect is proven to be beneficial in creating a welcoming environment. However, different challenges might be faced by the interior designers when integrating these elements in interior space design. For instance, the interior designers might face issue in integrating diversified cultures in interior designs which can impact their overall capabilities [11]. Thus, the present study has also highlighted different opportunities and challenges within the context of cultural and emotional interior designs.

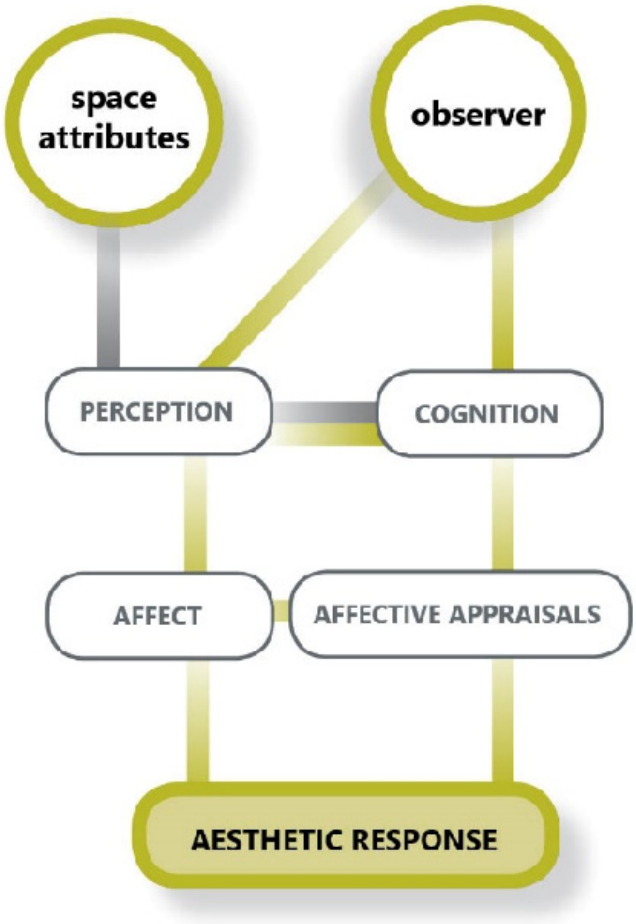


Figure 2. Probabilistic model of aesthetic response to the built environment. Source: Data from [12].

1.2. Problem Statement

Over the years, rapid economic development and urbanization in China lead to transformation of interior space design. These designs often emphasize on aesthetic, functionality, and innovative environment. However, the current interior designs in China are largely influenced by the western culture. Traditional culture design is becoming insignificant as it is not attractive than western culture design. This situation will induce a huge loss in national culture and regional characteristics. Therefore, traditional culture is facing challenges in inheritance and development coupled with loss of vitality [3]. Therefore, it is asserted that the adoption of Western culture results in the loss of emotional disconnect and cultural identity. Cultural design elements mainly resonate with the Chinese values and heritage [13]. They also promote emotional connection with the associated interior designs. Past research has shown that the integration of emotional and cultural elements in interior designs can significantly impact the users' productivity, satisfaction and quality of life [14]. However, rapid economic development creates an abundance of element that can be incorporated into modern interior design. However, interior designer might face some obstacles on choosing a suitable element in such designs and meeting his client's need. It should be noted that every aspect of culture can provide a guideline and direction for interior design [15]. There is lack of studies conducted on integrating Chinese culture into new interior design. Hence, it is necessary to study on this topic [3].

A recent study contended that environmental conditions are important to study because they impact the human emotions, health and behavior [16]. Interior design that elevates emotional comfort and satisfaction can help improve mental health and well-being. Moreover, it has been long argued that physical environment will affect

emotions, understanding and aesthetics perceptions of interior design [17]. A recent study reported that understanding of architecture are often discussed in the literature. Yet, they rarely explore the importance of user experience and emotional aspect in interior design [18]. Another study reported that home is a very private place where an individual can find physical, emotional, and social solace [19]. It offers them a sense of ownership. However, there is a lack of research regarding consumer requirements and match between users' expectation and interior designers' aspirations. Therefore, the current research has emphasized the integration of cultural and emotional elements in interior designs to improve user satisfaction. In this regard, different opportunities and challenges have also been discussed focusing on consumer preference, preservation of cultural identity, innovation, sustainability and emotional connectivity. This study mainly aims to identify the role of cultural elements in influencing emotional aspects in interior designs within the context of China.

1.3. Research Objectives and Significance

In order to attain the aim of the study, different objectives are formulated which include (a) to explore cultural design characteristics which are embedded within interior spaces concerning the emotional design levels; (b) to study the role of interior designers in creating spaces that meet users' emotional needs while enhancing cultural characteristics; (c) to evaluate cultural design characteristics which influence the effectiveness of emotional design in interior spaces and (d) to identify different challenges and opportunities of designing interior spaces that meet emotional and cultural needs.

This study includes both theoretical as well as practical significance. For instance, this study has improved the literature regarding the significance of integration of cultural and social elements in Chinese designs. Additionally, this study has also highlighted important challenges which are faced by the interior designers in incorporating such elements within the interior designs. Moreover, the current study can also encourage the interior designers to focus on the needs and demands of the users which integrating the cultural aspects. This approach can also be effective in promoting a blend of cultural, modern and aesthetic designs in interior spaces.

Thus, this study integrates six important sections. Section 1 includes the introduction, focusing on the problem statement, rationale and objectives of the study, leading to its significance, while Section 2 presents the literature review regarding the integration of emotional and cultural aspects in interior designs. Section 3 presents the methodology of the study, focusing on research approach, sampling, data collection and analysis techniques. Finally, the results are presented in Section 4 and discussion is done in Section 5. The conclusion, implication and limitations of the study are presented in Section 6.

2. Literature Review

2.1. Theoretical Underpinning

"Maslow hierarchy of needs" present five levels of psychological needs (Refer to Figure 3) which include "physiological, safety, love, esteem, and self-actualization needs" [20]. This hierarchy mainly outlines the basic needs which include food, safety, water and other associated needs [21]. Therefore, interior deigns have also been explained by different scholars by utilizing different stages of this hierarchy. According to this theory, the needs at lower levels must be fulfilled before achieving the higher-level needs. Therefore, within the context of interior designs, the functionality is considered to be at the basic level while other cultural and aesthetic factors are considered at later stages. Thus, this study has been effective in determining the significance of integration of cultural characteristics within the context of interior designs.

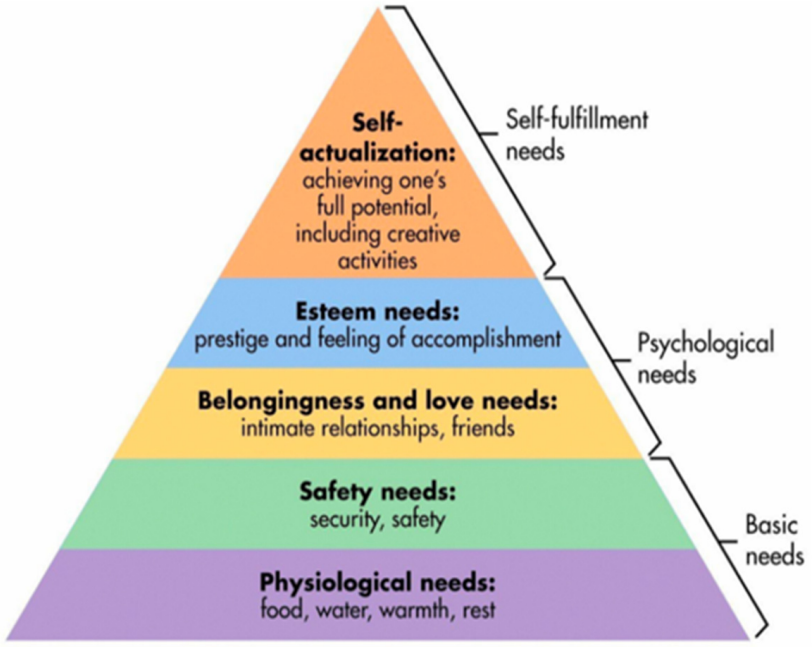


Figure 3. Maslow hierarchy of needs. Source: Data from [21].

In addition, in order to determine the role of emotional elements within the context of interior designs, "Norman's emotional design theory" is taken into account. According to this theory, emotional system includes three important components which are interconnected. These levels include "visceral, behavioral, and reflective" which are collectively known as "Norman's three levels of emotions" [22]. These levels of emotion present how an individual is connected to the associated object (Refer to Figure 4). Therefore, with the persistently increasing competition in the market, the visceral designs are being promoted by different companies to attain competitive advantage [23]. This helps in attracting more customers by influencing their emotions, sentiments and perceptions [24]. These factors can also be integrated in interior designs to influence the emotional attachment of the users.

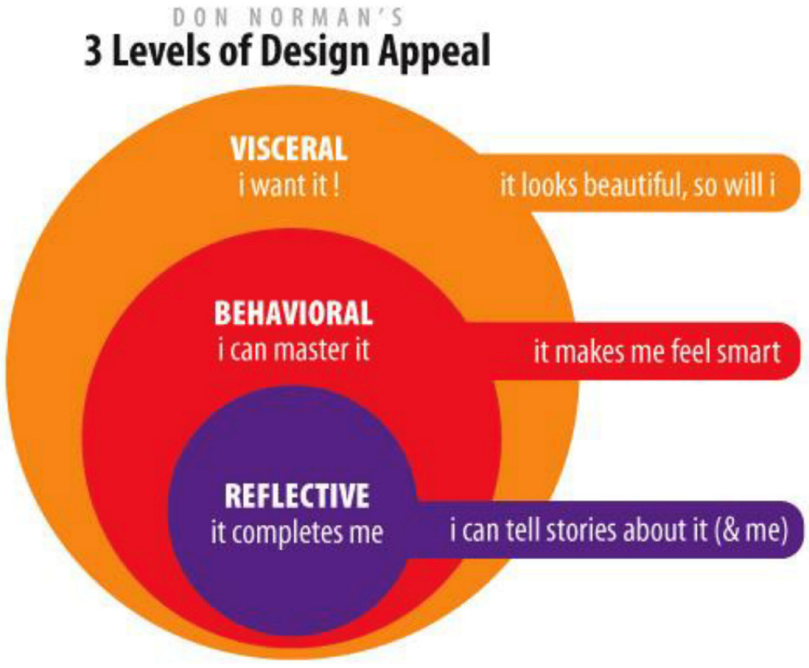


Figure 4. Don Norman's 3-levels of emotional design. Source: Data from [25].

Moreover, designing a new product to fit into society and satisfy clients involves three processes which are evaluating traditional characteristics, reframing and then recreating it. The entire procedure is known as the cultural design model [26]. Understanding and incorporating cultural designs add value to the existing designs of the products. It also helps to improve the economy by promoting the local culture to the global markets. Therefore, the ways and processes of incorporating these traditional elements into the designs are very significant and crucial for cultural products. To figure this out, one must understand the three cultural layers, cultural levels, and design features in Figure 5:

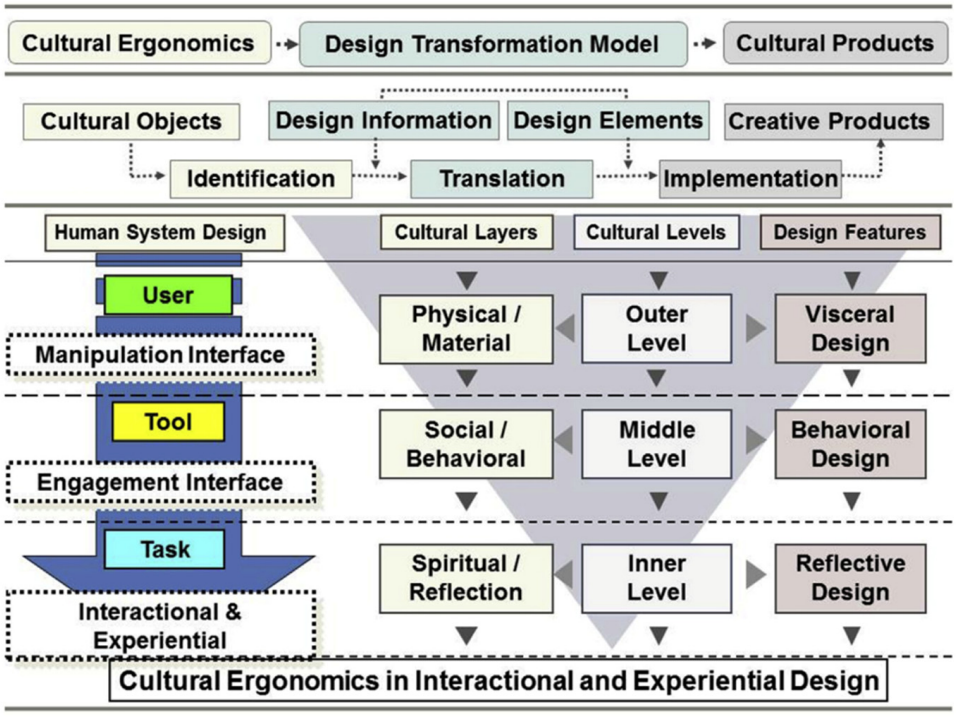


Figure 5. A framework for cultural ergonomics in product design. Source: Data from [27].

2.2. Cultural Design Characteristics in Interior Designs

Culture has a significant influence on interior designs as meaning and associations can be reflected via the display of antique in conventional spaces [28]. Researcher have proposed that cultural interior designs is an intricate practice as it goes beyond the superficial visual aspect of décor. Various cultures exhibit different aesthetic preferences when taking it into the context of interior designs. For example, the Asian cultural spaces may consider minimalistic and harmonious designs engraved with the natural materials [29]. Meanwhile, the interior design in Middle East culture may shows intricate and luxurious trends. Culture also can be reflected in interior designs through different colors [30,31]. In order to create attractive designs, the interior designers must deeply consider the customer's preferences that corresponds with his cultural backgrounds.

In addition, harmonious and unity are very important in incorporating Chinese art and crafts with modern interior designs [32].In this regard, the role of cultural characteristics in influencing emotional needs of the users within the interior design is also inevitable. It has been observed that traditional values have significant impact in mutual contrast, cultural art, unique decoration and mutual fit. Therefore, it illustrates inheritance value in modern designs. Therefore, these studies emphasize that integration of cultural characteristics in interior designs can enhance its overall value among the users. However, limited focus has been given on Chinese cultural aspects in modern interior designs. Thus, this study aims

to highlight both factor and importance. Therefore, this study provides empirical evidence in context of Chinese cultural aspects in interior designing.

2.3. Emotional Design Elements in Interior Spaces

The emotional design in interior spaces involves utilization of texture, material or lighting that stimulate the senses and desired emotional reactions of a person [4,33]. Warm or soft textures fosters the feelings of cozy and positive environment whereas, the dark colors can provoke the sense of modernity and energy. This emphasizes the role of color and texture in influencing the emotional attachment of a user to the associated interior space. Therefore, it can also foster a sense of belongingness of people towards the space. As a result, this can influence their social performance. Association of Human-Computer Interaction reported that colors can significantly drive user experiences, emotions, and perceptions based on their psychological effect. For instance, the red color in spaces can stimulate conversation and activity. Whereas blue color in spaces can create a relaxing atmosphere [34]. Therefore, colors as a key aspect of interior design are wisely selected as they can potentially stimulate emotions [35].

Another study by Obeidat [36] also aimed to study the role played by emotional interior design on the individual behavior within the therapeutic space. For this purpose, the researcher also employed interior design elements including furniture, lighting, color, and layout. It was observed that social sensory, physical, psychological and environmental stimuli in the therapeutic space results in enhancing the positive emotions of individuals. This helps in promoting positive emotional behaviors among the users. Another study stated that the level of light can trigger the spatial appreciation. It is one of the core components that must be considered at the planning stage since it is associated with triggering certain emotions and behavioral responses. The interaction between the user and the environment is inevitable [37]. A good interior space makes the users feel functional and emotional comfort. For example, curvilinear furniture can yield higher amounts of pleasant emotions such as relaxed, peaceful, and calm [38]. It affirms that emotional design elements can influence emotions among individuals. Additionally, the integration of emotional design elements helps in regulate the emotion of individuals within the space [18]. Therefore, the emotional interior designs can serve as a catalyst for the behavior and emotions of users regarding the concerned environment.

2.4. Challenges and Opportunities in Cultural and Emotional Design

In the interior spaces, the cultural and emotional designs possess various challenges that must be addressed by the designers efficiently so that meaningful environments can be created. One of the challenges is the fulfilment of users' preference and expectations. In this regard, accommodating distinct cultural backgrounds is a major challenge. The factors or design elements which are culturally significant in one culture might be opposite in another culture [39]. Therefore, designers must balance and harmonize various distinct cultural preferences in a space [40–42]. In contrast, modern aesthetics and comfort are promoted in western interior designs. Thus, designing the interior space according to users' need is a huge challenge. Additionally, the maintenance of cultural heritage through embracing unique designs elements is challenging and contemplating.

Concerning the emotional design in interior spaces, the attainment of emotional consistency in the emotional design is also challenging [4]. Therefore, interior designers must consider the potential damage that may emerge due to inappropriate cultural motifs. To address these issues an in-depth understanding of the cultural nuances along with cultural sensitivity is required. Other challenges include the preservation of cultural

heritage in interior designs, effective blending of modern and traditional characteristics within the interior designs, and maintenance of sustainability and innovation [43].

Apart from the probability of different challenges, the emotional and cultural designs can also ensure the provision of various opportunities for designers. For instance, as people are more determined to integrate cultural values in their interior designs, designers can avail this opportunity to reflect cultural elements while designing a space [44,45]. This can foster the sense of belongingness and appreciation among people. An adequately formulated emotional and cultural design is also helpful as it prominently contributes to user's experience within a designed space. However, people are more likely to respond positively to spaces or environments which aligns with their emotions and cultural values. Furthermore, designers are more likely to create spaces that reflects the practices and beliefs of different cultures. It resonates with people on a deeper and meaningful level. Within this context, emotions of a person can be affected by colors. For instance, orange or yellow can exhibit the feelings of positivity and happiness. Besides, green and blue can foster a calming and relaxed environment [46–49]. Therefore, the emotional and cultural designs ensure the provision of an opportunity for designers to create environments which are not only pleasing aesthetically but also culturally significant and emotionally enriched. Thus, this study has also focused on the opportunities and challenges within the context of emotional and cultural interior designs in China.

3. Methods

This study mainly aims to explore the role of cultural characteristics in influencing emotional needs of the users within the context of interior designs. In order to attain this aim, different exploratory objectives are formulated to study different emotional and cultural elements integrated in interior designs. Additionally, different challenges and opportunities associated with designing of cultural and emotional interior spaces have also been focused on this study. On the basis of the selected philosophy and approach, the present study has incorporated a "qualitative research design". According to Fossey et al. [50], qualitative research is a mechanism that is designed to gather non-numerical data to gain in-depth insights. Qualitative research design has enabled the researcher to gain a deeper understanding regarding experiences, contexts or phenomenon regarding the emotional and cultural designs of interior spaces.

3.1. Selection of the Participants

For this purpose, two samples are selected (one for interview strategy and one for focus group discussion (FGD)). Unlike quantitative research, it is difficult to determine the data's validation and reliability due to the its qualitative nature. Qualitative research is likely to be influenced by research bias [51]. In order to select an appropriate sample size, snowball sampling can be used to recruit interior designers. The snowball technique is chosen in relation to the following concerns: (i) the samples involve the hard-to-reach population subgroup; (ii) the samples are interior designers and experts who have criteria. Using this sampling technique, the participants of this study are recruited using referrals. Therefore, it would be also beneficial and easier to establish rapport and trust with them. It can collect more honest and accurate data. Interior designers or informants who had contacted can use their social network to look for potential participant of this study. Five processes were used to recruit participants: i. Draft a participation program (likely to be subject to change, but indicative). ii. Approach acquaintances and ask for contacts of future subjects. iii. Get their contact information and ask them to participate through email. iv. Continue the snowballing with contacts to gain more recruitment subjects if

necessary. v. Ensure a diversity of contacts by widening the profile of persons involved in the snowballing exercise.

The interior designer who has 5–10 years of working experience in the field of interior design along with a professional background was selected. They are the suitable candidate to convey their idea and opinion since they have more than 5 years working experience in this profession. They can find the best solutions in accordance with the preferences and expectation of end-users. They can find the best solutions in accordance with the preferences and concepts of end-users and give assistance to both end-users and companies for goal setting. Since our interviewees had 10 years of extensive experience, we anticipated that they would have a deep understanding of this field and could provide nuanced insights. When the data saturation is achieved, further data collection is unnecessary since no new information is appearing [52].

However, for FGD, a sample of six professional interior designers with a PhD degree were considered for determining the emotional elements in interior spaces. Experts were selected based on their expertise in the domains of emotional design, interior design, and cultural design. 6 experts are sufficient to carry out an effective FGD in the provided time. If the number of experts is too large, there is no guarantee that each expert will be able to fully express their opinions at the given time. If the time is too long, it will affect the enthusiasm of the expert to answer the question. In addition, considering that the experts came from different regions, FGD were held in the form of an online meetings.

3.2. Data Collection

For this study, data was collected in two phases. In phase I, interviews were conducted with interior designers. The semi-structured interview was conducted at Tengchuan Design Company, Decheng District, Dezhou City, Shandong Province. Nine interview questions were created in this study. This step to design an interview guide was to incorporate key topics such as emotional design, cultural design, and interior design. Norman's emotional design theory [53], cultural design model [54], and situation awareness theory [55] were used to design the guide. The information was abstracted and re-categorized to identify interview questions based on the research objective. All open-ended interview questions were drawn from the above literature review. The interview questions should be open-ended, neutral, worded clearly, and interconnected with each other [56]. This research worded the research question to prompt the participants to answer as completely and honestly as possible.

In phase II, FGD was conducted with experts. For this purpose, interview questions and FGD questions were developed based on past literature. They were focusing on the emotional and cultural aspects in interior designs [18], [57]. Before conducting interview and FGD, the aim and objectives of the study were presented to the participants and their queries were answered. At the same time, the consent of the participants was also taken to ensure that their willingness to participate and anonymity. All the interviews with interior designers were recorded. Later on, recordings were carefully listened and transcribed to get full information about data. Before FGD was conducted, questions were given to the participant so that they could read and prepare their idea or answer. The whole discussion was moderated by researcher who ensured that discussion stay on the topic and key objectives. Participants were encouraged to share their thoughts about emotional and cultural aspects of interior design. The whole session was recorded which later on transcribed for data analysis.

3.3. Data Analysis

The transcriptions obtained from interview strategy were edited and stored for data analysis. In this study, thematic analysis was conducted by using Nvivo 12 software. Thematic analysis was chosen because it is suitable for deep interpretation of small-scale data and is relatively flexible for exploratory research. In addition, this study aimed to identify the main themes or topics in the text, rather than the details, semantics, and emotions of the text. So, thematic analysis was chosen for semi-structured interview content analysis. Javadi and Zarea [58] indicate that thematic analysis is most suitable and widely implemented in qualitative studies. Therefore, the researcher has closely examined the data to formulate the themes along with the ideas, patterns or topics related to cultural and emotional designs. However, for FGD, content analysis was conducted.

4. Results

Important themes were identified and presented in Figure 6. The themes presented below also correspond with the objectives and research questions of the study.

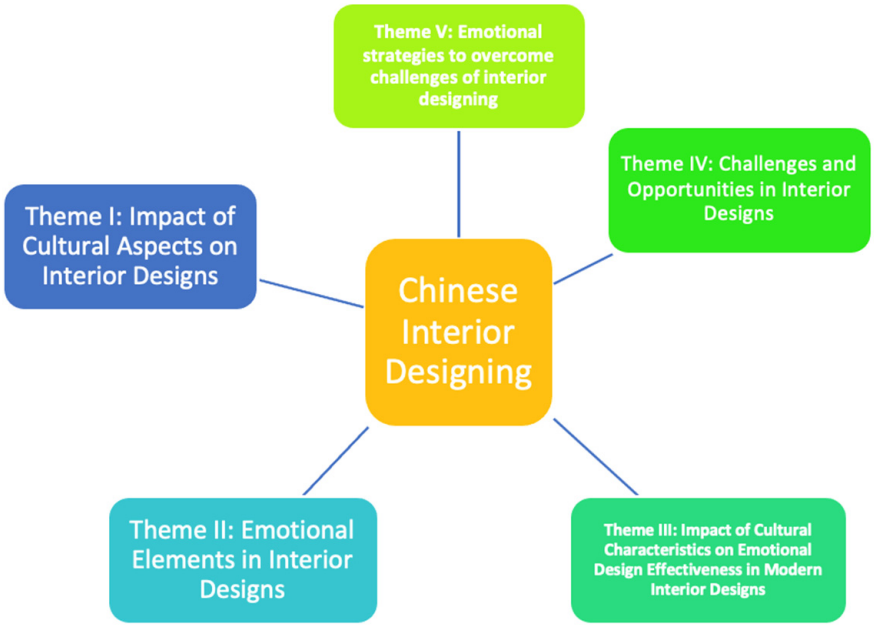


Figure 6. Identified Themes. Source: Author.

4.1. Theme I: Impact of Cultural Aspects on Interior Designs

Cultural aspects exert significant impact on interior designs in view of all the participants. They emphasize that the significant cultural aspect of Chinese interior designing is sense of harmony and balance. The use of cultural factors like design symmetries, color scheme and cultural symbols are often incorporated in interior designs. Participant 2 highlights this aspect as:

"Cultural factors have a huge impact on the design of interior spaces in China. For instance, the use of traditional elements such as calligraphy and artwork are very common in interior spaces in China. This is a way of expressing Chinese culture and heritage, and of celebrating the country's history and traditions".

The participants further elaborate that the traditional elements of Chinese culture are commonly used in interior designs. They act as a significant medium to express Chinese culture.

4.2. Theme II: Emotional Elements in Interior Designs

The participants believe that relaxation and comfort interior design plays an important role in influencing the emotional wellbeing of the users. All of the respondents believe that emotional design refers to emotional response that can vary from person to person. Participant 3 states that:

"Emotional design takes into account the user's emotions and needs and uses them to create something that will evoke a positive emotional response".

Accordingly, participants viewed that emotional design primarily focuses on experiences of users and tends to get an emotional response from users. This emphasizes the integration of important emotional aspects to develop a sense of belongingness for the users.

4.3. Theme III: Impact of Cultural Characteristics on Emotional Design Effectiveness in Modern Interior Designs

There are some cultural elements that are incorporated in modern Chinese interior design. These elements include harmony and unity, color symmetry, and use of natural elements like flowers and plants. The participants believe that utilization of cultural symbol in modern interior designing can enhance emotional experiences. Participant 2 indicate it as:

"Chinese New decorative style is a design style that combines traditional Chinese elements with modern design elements to create designs that are both aesthetically pleasing and meaningful. Some of the elements that overlap in emotional design and Chinese New decorative style are color and symbolism".

The respondents further elaborate that color scheme plays a significant role in emotional and modern interior designing as they are used to create a desired emotional experience. Moreover, it is also highlighted that modern and emotional interior designs are overdepending on Chinese traditional elements to formulate association between user and style.

4.4. Theme IV: Challenges and Opportunities in Interior Designs

The integration of emotional and cultural elements provides various opportunities for the interior designers to create innovative and modern designs. However, different challenges are also faced by the interior designers in implementing these elements. The respondents highlighted that it is very challenging to create a functional, aesthetic and cultural interior space using new Chinese decorative style. It is also highlighted that the formulation of a cohesive look with appropriate use of colors, textures and materials is a notable challenge. Some of the respondents highlight that integration of traditional and modern style is a significant challenge as traditional style focuses more on emotional designs while modern style focuses on use of technology, lightning and air conditioning to formulate a comfortable living space. Participant 1 highlights it as:

"Making a cohesive design that is both visually beautiful and practical is one of the main problems when using the New Chinese Decorative Style or any other style when designing an interior space. To get a cohesive look and feel, the colors, textures, and materials must be carefully picked".

Other challenges which are faced by the interior designs include the preservation of cultural heritage within the modern interior designs. Other issues include ineffective implementation of emotional aspects in interior designs.

4.5. Theme V: Emotional Strategies to Overcome Challenges in Interior Designs

Emotional design strategies can help to overcome the noted challenges in interior designing. For instance, the appropriate use of colors, textures and modern furniture can

enhance users' emotional and functional comfort. Moreover, use of plants that enhance aesthetic pleasure can also be utilized. Emotional design strategies can be used to formulate a sense of comfort, peace, security and belongingness of users which not only enhance their pleasurable experience but also improved emotional experience. Participant 5 highlights it as:

"Emotional design can be used to formulate a sense of comfort, peace, security and belongingness. This design can enhance user pleasurable and emotional experience".

The respondents further elaborates that a living space can be made more beautiful by using aesthetic and emotional elements like use of natural components. The Chinese ornamental elements with use of color and textures can help to design a space which enhance the imagination of users and empowers their emotional experience.

The results from thematic analysis and their responses are presented in following Table 1:

FGD was conducted to have a detailed understanding of the significance of integration of emotional aspects in interior designs. Therefore, question asked by participants in FGD indicates the significance of emotional aspects in Chinese interior design. The participants highlighted that since an individual spend most of his time at home, the interior space must contain the elements of aesthetic pleasure and emotional attachment. They further bring forth that the most important elements of interior designing are space planning, location of windows and doors, and color patterns.

The respondents further shared their thoughts on contemporary Chinese style interior design. Most of participants stated that contemporary Chinese interior design is a fusion of historical and cultural aspects. The main aspect in modern Chinese interior designing is the artistry, balance and space optimization. The participants also shared their feelings about importance of emotional designs in Chinese interior designing. They indicated that emotional design exerts a long-lasting impression on inhabitants. Thus, color patterns, placement of furniture, and lighting has significant impact on the individuals. One of the participants states it as:

"The sensation of safety and happiness will be significantly influenced by how you furnish the house, color the walls, and organize your possessions".

The participants further talk about the association between aesthetic pleasure and emotional experience. Most of them stated that functionality and simplicity are factors that link aesthetic elements with emotion. Every aspect in an environment plays significant role to evoke emotions and stimulate pleasure. So, it should be keenly considered by the designers. The colors of the wall, lighting in the room, and pattern of furniture plays a significant role in enhancing emotional well-being of the inhabitants. In view of a participant,

"A high level of emotional fulfillment in the design is achieved by integrating all the different needs of the user. As already highlighted, aesthetic and functional characteristics are both vital in an interior space".

Subsequently, a functional and efficient interior space is where individuals can live easily and comfortably. Thus, the focus on enhancement of emotional and pleasurable experience should be part of every efficient interior design. The use of color conformity, spacing, lighting, harmony and symmetry should be considered to evoke a significant pleasurable and emotional experience. A participant shares his view as:

"Emotional design strategy allows the product design to have value and meaning for Chinese youngsters. We cannot deny that there are emotional human needs in all spheres, including interior design".

The input collected in FGD is very helpful in identifying the determinants of end-users' emotional needs. These data are essential for interior designer to develop a pleasurable

interior space. For this purpose, different cultural and emotional characteristics were discussed in the context of interior space design as shown in Figure 7. It has been observed that visual needs, functional needs, and individual needs largely influence the emotional needs of individuals. The experts proposed that usability, privacy, and comfort must be prioritized while planning an effective and comfortable interior space. In addition to functional needs, experts also emphasized visual aesthetic needs to develop a pleasurable interior design. In this regard, the main indicators included novelty, color conformity, order and sequence, and richness of design. They also emphasized the individual needs which include cultural identity, personalization, and fashion elements.

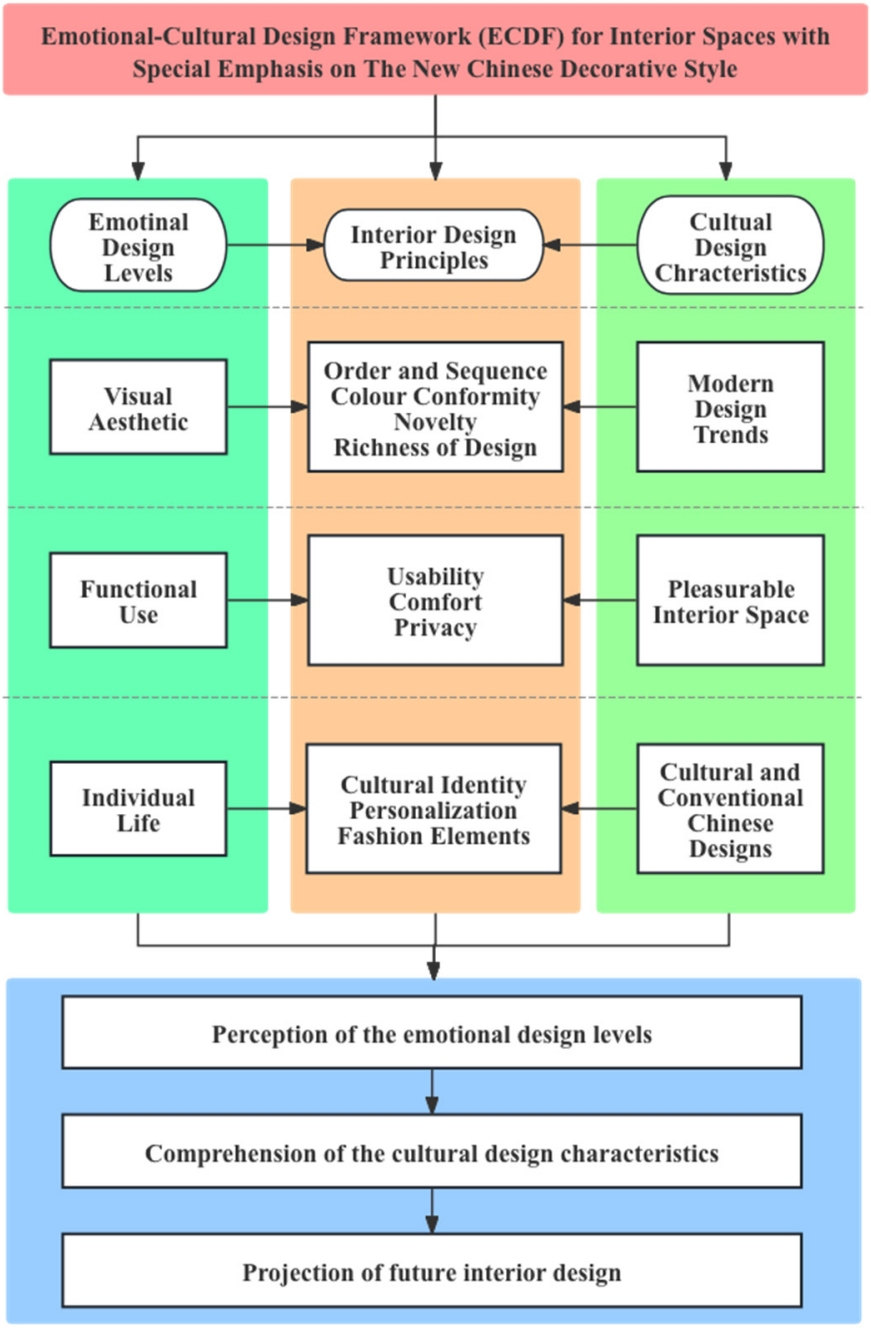


Figure 7. Emotional-Cultural Design Framework for Interior Space. Source: Author.

Table 1. Findings from thematic analysis.

Statement	No. of Participants and Percentage of Agreed Responses (n = 5) (%)
Emotions in interior design are interlinked however they refer to different cultural concepts.	5 (100%)
In Chinese interior design, harmony and balance is significantly impacted by cultural aspects.	4 (80%)
Numerous aspects like color scheme, sense of harmony and use of natural elements are linked with emotional experience.	3 (60%)
A cohesive look with appropriate use of elements and integration of conventional and modern designs is notable challenge in Chinese interior designing.	5 (100%)
Emotional strategies like appropriate use of color, texture and furniture items can assist to overcome challenges of interior designs.	4 (80%)

5. Discussion

This study mainly focuses on determining the role of new Chinese decorative elements in impacting emotional needs within the context of China interior designs. The findings obtained from this study showed that the incorporation of cultural and emotional aspects in interior designs has become crucial. An enjoyable interior design is both easy to use and really delightful [59]. On the other hand, emotional design was more concerned with user experiences and tends to elicit an emotional reaction from users. Additionally, the participants of this study also emphasized the integration of cultural aspects in interior designs as China is rich in cultural heritage. Therefore, a study by Lu [29] depicted that China's interior design had a significant cultural influence. For instance, traditional Chinese design elements like calligraphy and artwork are frequently used in interior spaces. Furthermore, according to Zheng et al. [60], color and symbolism are a couple of the characteristics that emotional design and Chinese aesthetic style share. All these findings are similar to the findings of this study. Besides, creating an aesthetically pleasing and functional interior design is one of the primary issues encountered when employing the new Chinese decorative style or any other style [61].

The participants of this study also believed that the integration of effective emotional aspects is also crucial to add a sense of belongingness for the users. Past research also highlighted that fostering a positive emotional connection between the space and its users is very crucial. Thus, emotional design techniques play a crucial role in overcoming the obstacles encountered during the implementation of pleasant interior design [62]. It has also been observed that the aesthetic enjoyment and emotional connection should be given priority in Chinese interior design [63]. This is because the integration of emotional and aesthetic elements with interior space has become more crucial. Moreover, the combination of cultural and historical components in modern Chinese interior design had been characterized as stressing creativity, balance, and sophisticated spatial usage. Moreover, the emotional design is characterized by different colors selection, furniture arrangement, and lighting. It is considered to be crucial for leaving a long-lasting imprint on residents' wellbeing and encouraging feelings of security and joy [64]. Furthermore, previous research has also emphasized the link between aesthetic enjoyment and emotional experience. They also mentioned that interior design should incorporate simplicity, coherence, symmetry, and usefulness to arouse good feelings [65].

The findings revealed the possibilities of combining emotional and cultural designs in interior spaces. This combination highlighted the traditions, values, and aesthetics of a

particular culture. It can nurture an emotional connection and a sense of belonging. The impact is significant when the designs are aligned with the three emotional design levels, namely visceral, behavioural and reflective. These combinations allow interior designers to create spaces that resonate deeply with users while honouring their cultural identities. The participants believed that the new Chinese decorative style made it possible for them to integrate culture as part of their designs. More users are becoming aware of the importance of preserving their cultural heritage. The concept of new Chinese decorative style is able to create a well-balanced interior that enhances aesthetic shapes and patterns with cultural components. It can provide contemporary interior aesthetics with a particular oriental touch. In short, although traditional Chinese designs and motifs are distinctive, more users find the concept appealing for their emotional and pleasurable elements. Lastly, when cultural design is embedded within the framework of emotional design, it is able to create visually appealing, functional comfort, and cultural deeply meaningful interior space. By integrating cultural characteristics thoughtfully, designers can create spaces that honour traditions, meet practical needs, and foster lasting emotional connections.

6. Conclusions

This study is significant in developing key insights into the cultural and emotional design of interior spaces. Additionally, this study has highlighted opportunities and challenges regarding interior design. It is concluded that the cultural as well as emotional layout of interior environments is a dynamic and diverse field that brings opportunities and problems for interior designers. This research study has highlighted that interior designers need to recognize and appreciate cultural variety within interior designs. This helps in creating a feeling of belonging. Moreover, this research has shown that the emotional layout of interior settings has a significant influence on inhabitants' behavior and general well-being. Designers need to pay attention to the details of interior design since it results in emotional responses of individuals. Designers build spaces that induce desirable emotional reactions, such as serenity, creativity, and productivity, by carefully balancing aspects like lighting, scheme of colors, arrangement, along with materials. Although integration of cultural and emotional factors within interior designs is found to be effective in attracting creating an attractive living environment for the associated individuals, different challenges are also faced in this regard which include preservation of cultural heritage, implementation of important emotional aspects and other related issues. Therefore, important emotional strategy can be used for overcoming such issues and also for better emotional attachment to the places.

6.1. Research Implications

The current literature has benefited from this study's substantial contributions in a number of critical aspects regarding the cultural as well as emotional layout of interior environments. It has also provided understanding regarding the complex connection between emotions, culture and built environment. This study has broadened the focus of studies regarding interior design beyond practicality and aesthetics by examining the interplay of culture as well as emotion. This study has also been effective in broadening the concept of "Maslow hierarchy of needs" within the context of interior designs. Moreover, the practical difficulties and opportunities involved in interior designs regarding the integration of cultural and emotional aspects have also been discussed in this study. This study has given architects and designers a thorough foundation for developing interiors that connect with users' emotional demands. Designers may target certain populations with their designs by understanding how cultural context affects emotional reactions. This allows them to create environments that are not only functional but also elicit feelings of ease

along with belonging. Additionally, this study can also encourage the interior designers to focus on the integration of traditional aspects within modern interior designs in order to attain positive outcomes. Moreover, this study can also lead to the development and implementation of important policies regarding interior designs, incorporating emotional and cultural aspects. The interior designers may integrate cultural symbols, artwork, or design within their home to better reflect about the culture.

6.2. Limitations and Suggestions

This study integrates a few limitations. For instance, in this study, qualitative approach was used for determining the integration of emotional and cultural aspects within the context of interior designs in China. The challenge in incorporating multiple cultural groups into the research restricted the universality of the results and risked overlooking subtle emotional reactions. Moreover, emotions are subjective and challenging to quantify objectively, which can lead to difficulties in measuring and comparing emotional responses across different design interventions. Moreover, most studies focused on immediate emotional reactions. Therefore, the extent to which emotional and cultural design affect long-term well-being and conduct remains unknown. Furthermore, this study was cross-sectional in nature. At the same time, limited focus has been given on other aspects within the context of interior designs. In order to overcome these limitations, future research can focus on utilizing mixed method approach for determining the role of emotional and cultural aspects within the context of interior designs. Additionally, longitudinal study can also be conducted in the future in this regard. Moreover, it is advised that future studies should consider direct impact of specific elements in in interior design such as color, spatial layout and textures on brain activity and emotional well-being. Future studies can also consider developing a comprehensive framework that helps to understand emotional responses to interior spaces across cultures. Also, a cultural comparison of neighboring countries may be considered by future research studies.

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