

Analysis of the Correlation Between Interior Space Design and Psychological Healing from The Perspective of Restorative Environment Theory

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Abstract: The theory of a restorative environment can be used to explore the effects of built environments on psychological recovery. Although the theory was originally developed in relation to natural environments, hospitals, offices and homes are now widely known as the main settings where stress and attention-deficit restoration takes place. Research is being carried out to determine how the design of one's living environment can help the mind relax. First, briefly present the main ideas of Attention Restoration Theory and Stress Reduction Theory, and then explain how the two together suggest that exposure to certain environmental qualities can restore tired attention and help the body recover from stress. Then, based on the above restorative qualities, this paper explores how they can be incorporated into the elements of interior design, such as space organisation, light and colour, materials, views and multisensory cues. Be aware of how to create an inner world that provides relief for anxiety by producing "soft fascination", extending the present moment, and enhancing self-relations with the environment. Finally, the paper also proposes some design ideas and practical applications for building restorative interior environments in hospitals and other places that can help people's minds recover.

Keywords: Restorative environment theory; attention restoration; stress reduction; interior design; healing environments; psychological well-being; healthcare design.

1. Introduction

Design of the interior space also relates to people's psychology. Most people are inside buildings all day long, and the qualities of the indoor environment affect how they feel, think and behave. In recent years, research by environmental psychology, architecture and healthcare design has gradually shown that good-designed indoor spaces can reduce stress, help people manage emotions and support the recovery process of illness. Conversely, a bad design will make people anxious, tired, and feel powerless in a hospital or other place they stay for a long time.

The theory of a restorative environment can also be applied to the relationship above. It started as research on the natural environment and now investigates the psychological healing effects of specific conditions in nature. Apply this view to the design of interior spaces; now, designers and scholars are not only focused on beauty but also want to learn how particular spatial, visual and sensory elements can help people relieve stress and attentional fatigue. Based on the theory of a restorative environment, this paper will investigate the relationship between interior design and mental health.

2. Theoretical Foundations of Restorative Environments

2.1. Attention restoration theory

Attention restoration theory (ART) was put forward to explain how some environments can help people recover from directed attention fatigue, which occurs when individuals are continuously focusing on high-demand tasks [1][2]. According to this theory, natural environments are relatively powerful restorers because they possess the following four characteristics: being away, soft fascination, extent and

compatibility [1]. Being away refers to a feeling of psychological or physical separation from one's life at home. Soft fascination refers to stimuli that can naturally attract people's attention without being too demanding, such as moving leaves, water ripples and gentle patterns. Extent refers to the sense of being in a reasonable environment that is suitable for investigation, and compatibility is the degree to which the characteristics of that environment meet one's needs and wishes.

Empirical studies based on ART have shown that even short-term exposure to the environment mentioned above is correlated with better performance in attention-demanding tasks, reduced mental fatigue, and a more positive mood [1, 2]. Although most of the above evidence comes from outdoor environments, some recent studies have shown that rooms with natural features, sensible arrangements and easy-to-use spaces for attention restoration may also achieve this. It offers the foundation for applying ART in the design of spaces.

2.2. Stress reduction theory

Ulrich and others put forward stress reduction theory (SRT), and in line with ART, it also studies the effects of the environment on psychophysiological stress [3-4]. SRT puts forward the hypothesis that people have been naturally inclined by evolution to respond positively to certain natural environments that indicate safety and food sources, such as plants, water and clear views. The above environments may cause a rapid drop in physiological arousal and negative emotions after stress, which is manifested as changes in heart rate, blood pressure and muscle tension [3].

Experiments and field studies show that people exposed to nature through windows experience reduced stress and a faster recovery rate after difficult work compared with those in cities or other dull areas [3,4]. SRT believes that restorative experiences are often spontaneous and brief; at this time, a

person's mood will rise and anxiety will fall. Based on the above results, the visual and spatial features of a place can be employed to help people reduce stress, and this idea is very suitable for designing indoor spaces.

2.3. Restorative environments and built space

Later, ART and SRT have been used in indoor areas, such as hospitals, offices and public places [5, 6]. For example, research on restorative work environments has used a participatory design method to identify interior features that can help people recover from daily stress and attention overload, such as access to natural light and views of plants, a quiet space, reduced distractions, etc. At the same time, evidence-based healthcare design has also shown that interior features such as window views, room layout, art, colour and natural materials can affect patient outcomes and staff well-being [6].

The above studies have provided conceptual language and experimental support for the theory of restorative environments in interior design. Rather than being confined to parks and gardens, restoration can also take place in other places, and the conditions supporting restoration need only be consciously created by shaping space, materials and the whole sense of being in it.

3. Interior Space as A Restorative Environment

3.1. Spatial configuration and being away

The layout of space needs to help people feel that they are away from their stressful daily lives. Restorative interiors frequently have clearly demarcated areas that differ in atmosphere from high-activity areas; small alcoves, lounges or quiet rooms away from the main flow of people are common examples [1,5]. Such areas can be used by people to take a short break from their stressful work and feel relieved for a little while. Do not build a long, one-size-fits-all corridor; instead, create many diverse yet consistent Areas of Living at Different Stages in a Row to cater to the various needs and lives of people.

Research on healthcare and workplace interiors has shown that the clarity of wayfinding, spatial legibility and an appropriate degree of enclosure or openness also affect the restorative function of indoor space [5-6]. A noisy and crowded place is more likely to make one feel stressed, so a calm place that has some choices between socializing and being alone is better for the mind. Design a layout for the living room that has some privacy, but is still open enough to feel good about.

3.2. Light, colour, materials and soft fascination

Light, colour and other materials in a place can be relaxing to the eye. Light and well-placed artificial light can be adjusted gradually to help the body's internal clock and give life to daily life. Studies on healing environments have shown that, with access to natural light and adjustable lighting, people are in better spirits, stay in the hospital for a shorter time, and report higher satisfaction [4, 6]. Colours and materials that refer to nature, such as wood, stone and plant-inspired colours, can be associated with the outdoors and provide a sense of peace [6, 7].

Rich but not too stimulating textures, patterns and artworks

can be used to inspire soft fascination. For example, light changes the colour of the wood and subtly alters the hue of the cloth and wall mouldings in a pleasing way. High-complexity or high-contrast patterns are likely to be visually stimulating but may also be tiring. New research on the elements of interior design that can promote healing shows that users often describe a resting space as one with a cohesive colour system and a limited number of high-quality focal points, rather than an environment rich in visual stimuli [6][8].

3.3. Views, nature integration and multisensory cues

A very reliable result in studies of restorative environments is that a view of nature promotes both the health and recovery of people. Research by a famous scientist shows that patients with windows facing trees in hospitals recover better and need to be given fewer strong painkillers than those living near a wall [3]. Subsequent studies have shown that indoor spaces that are directly connected to gardens, courtyards or planted atria, as well as those with indirect connections through nature pictures and biophilic Design, are related to a reduction in stress and improved mood [4][6].

Restorative Interiors use multiple senses subtly to make people feel better. Natural sounds, such as water features and filtered outdoor noise, are generally relaxing; harsh mechanical noise and reverberation are usually regarded as stressful [4, 7]. A pleasant touch is warm natural materials; they are also pleasant to the touch and offer a sense of comfort. Designers of the multisensory restorative environments will integrate all four senses - sight, sound, touch and smell - in their work.

4. Psychological Healing Mechanisms in Interior Settings

4.1. Stress recovery and emotional regulation

Psychologically speaking, the first way the design will help people recover is to reduce stress. When exposed to a restorative environment, the stress-related physiological arousal of individuals will decline more rapidly, and they will feel more relaxed and safe [3-4]. Healthcare interior Design can reduce patients' anxiety before surgery, lessen the feeling of pain, and help them sleep better. Staff can take some short breaks in the restorative space to manage their emotional labour and avoid burnout [6, 7].

Spaces for emotional regulation often reduce the amount of stimulating stimuli that people are exposed to. Quiet Areas, which offer choices to reduce noise and poor light by adjusting seat arrangements, as well as comforting environments such as familiar art and natural views, can all be designated as peaceful Spaces for people. A feeling of agency is relatively rare for patients who have lost their usual independence in a hospital. In combination with support from society, some sick people and those with busy lives can reduce their daily stress in this way.

4.2. Attention restoration and cognitive functioning

The second is a loss of depleted attention resources. Soft fascination and chances for effortless engagement with the environment can help directed attention rest, thus boosting concentration, memory and decision-making [1-2]. Restorative Interior Design in the Workplace has shown the

ability to improve focus, reduce mental fatigue, and increase job satisfaction [5]. Restorative Spaces can help with cognitive functions in both healthcare and education during periods of high stress, such as rehabilitation exercise or intense study.

Design of a Stimulus Load for Interior Environments that Supports Attention Restoration. Spaces that are too bare may not be interesting enough and thus lead to boredom; conversely, an excessively stimulating environment can also cause attention fatigue. Restorative environment theory proposes that an ideal range of stimuli for creating a restorative environment includes coherent, softly appealing sensory information such as diffused natural light and visual landscapes.

4.3. Meaning, identity and sense of coherence

The purposes of psychological healing include stress reduction and increased concentration; at the same time, we need to have a reason for living and be able to accept the bad past. The Interior Environment can also convey these values of dignity, respect and hope in the process. Research on conflict and social movements shows that emotional frames and symbols help people understand their own identity and struggle [9]. Design elements that recognise cultural differences, personal histories and hopes for the future in a healing space can inspire people to feel connected and hopeful.

Interiors for patients and their families should not be cold and institutional; instead, they can be warm, comforting, and open to reduce feelings of loneliness. To improve the quality of life for its employees, the company has built a relaxation area and a community garden; thus, the employees are more likely to feel a sense of belonging at the company and be more motivated [6-7]. Thus, the restorative function of the Design can be applied to alleviate stress and improve the mental health of users over an extended period.

5. Design Strategies and Implications

To apply the theory of a restorative environment in practice, all-round design strategies should cover spatial planning, material selection, operating policies, etc. One way is to identify and prioritise the areas in the facility that require psychological care more urgently, such as patient rooms, family waiting areas, staff rest areas or student study rooms. These areas can be viewed as restorative cores in larger buildings, and with better access to natural light and nature views, reduced noise, etc., flexible furnishing options are available [5, 6].

Another way is to introduce the idea of biophilic design gradually. Integrate some actual plants here where possible, and use nature's own materials and colours in the Design. Studies on people in healthcare and office settings show that adding some plants to indoor areas, opening up views of nature from the window, or placing pictures of nature at home can reduce stress and improve health [3-6]. At the same time, the technical system will not interfere with the restorative function but will help to support it.

The third is that the users are not present. Involving users in participatory design can help them feel more comfortable at home and improve their sense of well-being through restorative spaces [5,8]. Involve patients, staff, students or residents in the decision-making process for colours, art, furniture and spatial layout to enhance their satisfaction and

sense of belonging. Finally, evaluation should be included in the Design Project, and both subjective feedback and objective indicators will be used to determine whether the space has functioned as a place of recovery over time.

6. Conclusion

According to the theory of a restorative environment, the Design of indoor spaces can also help people relax. Through the arrangement of space and creation of a sensory atmosphere and retreat area, designers can help people recover from stress and attention fatigue more quickly, feel safer and more supported, and make sense of difficult experiences better.

Based on the above analysis, it can be proposed that, by using the principles of attention restoration and stress reduction in the design of interior spaces, more humane hospitals, offices, schools, and homes can be created. To realise the above potential, cooperation is needed among designers, psychologists, healthcare professionals and users of the built environment, and this collaboration must be based on evidence. Design interior spaces to serve as places of recuperation and work with patients' emotions to help them recover better from illness.

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