

Healing for PTSD
A interior design project to help people who have PTSD healing from trauma

A Dissertation
In
Healthcare interior design

By
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Abstract

70% of people have experienced inadvertent trauma, which has triggered trauma syndrome, a common social problem. 70% of people have experienced it, but there is currently no large construction company that has made a targeted healing space for this disease. The cancer healing Magie Center inspired me a lot. It is a small-scale, diverse building designed by a group of big-name architects and designers. It has a unique interior. Each building has a lush garden and a cozy indoor environment, which brings positive therapeutic effects. From wood, rusty steel, comfortable furniture and beautiful artworks, patients can feel warmth at the end of their lives. I also want to design a smaller healing space to allow patients to restore their emotions and state in a comfortable environment, and give people positive emotional cues through spatial design, so that they can get out of the sad experience.

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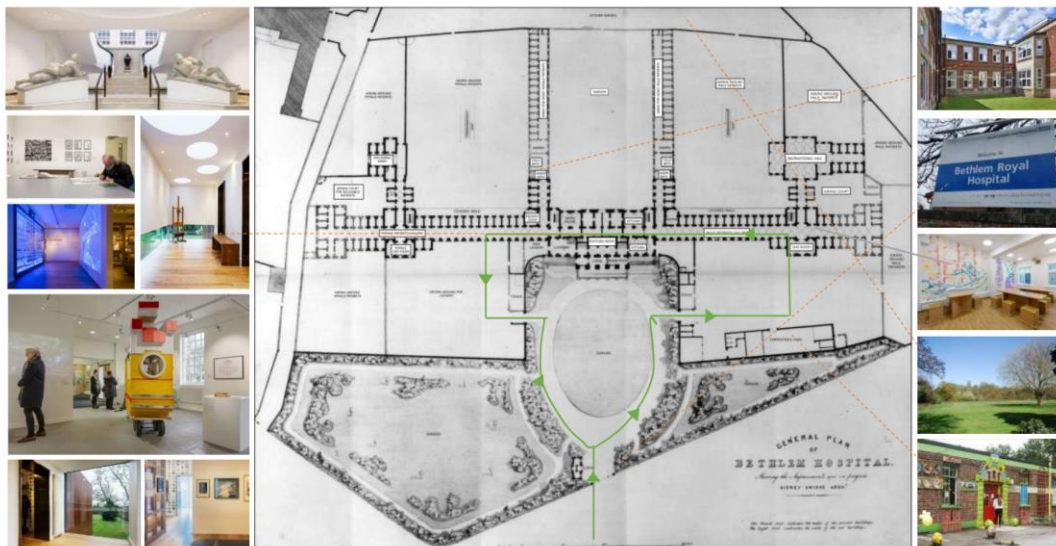
Bibliography

Methodology

Research methods selected in the paper Observation and literature research methods. The focus of the project is to create a healing space for PTSD patients to recover, with accommodation, entertainment, dining, sports and other functions. Sustainability and sensory sensitivity are also taken into account. Aims to integrate adaptability, functionality and inclusiveness. Special attention is paid to eliminating the impact of the environment on the patient's emotional fluctuations, focusing on the patient's activities in the space. The design takes into account unitization, biophilia, seasonal and weather changes, and the choice of building materials. It is exactly the same as the idea of architect Charles Jenck (founder of Maggie's Center), creating a comfortable and effective healing space for PTSD patients.

1.site

1.1 Site analysis



My research started at 14:30 on 2023.10.9. Because it is the world's first mental hospital, I wanted to visit the design of the entire hospital. It consists of a central flower bed, a museum, a gallery, 3 wards and 3 outpatient clinics, large green spaces and office areas. It is located in the southern suburbs of London. The environment is very beautiful. I feel very relaxed inside, and the staff I met are very professional and friendly. For example, when I couldn't find the way, two maintenance workers took me very carefully and walked a few hundred meters to the art studio for research. The staff of the art studio have very professional skills and reminded me not to take pictures of patients' works to protect their copyright and ideas. In such a safe and comfortable environment, it is conceivable that patients can easily heal and carry out some professional activities

such as in-depth study and understanding of the disease in the museum, garden activity healing, art creation, and treatment. So I chose a vacant house in the east of the park for design, dedicated to providing good services for ptsd patients.

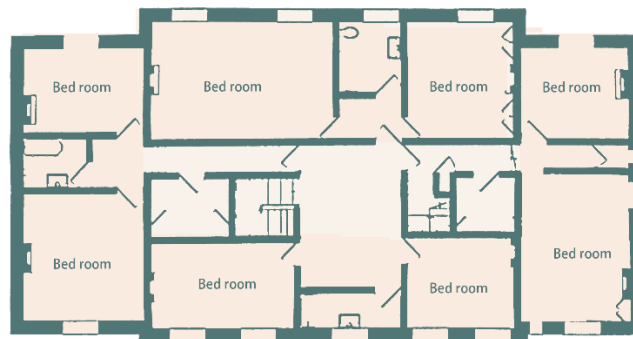
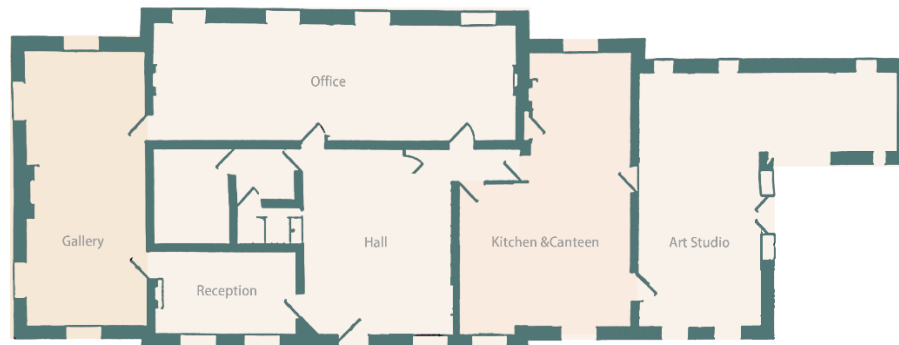
1.2 Layout design

Wakefield:



(Prince Charles' Cornish manor house with its own keep is yours for £850k | Daily Mail Online)

It is a two-story building surrounded by forests and green areas with a good view. From the existing floor plan, it can be found that there are 9 bedrooms, a kitchen, and 3 public activity areas, which can accommodate about 8 people, 6 people working, and can also meet the needs of family visits. However, patients with post-traumatic stress syndrome need designers to strictly protect privacy and design reasonable social spaces to avoid secondary injuries caused by others' interruptions, so I changed the floor plan.



It has been transformed into a building with eight bedrooms, a public kitchen, an art space, an exhibition and learning space and a garden, so that everyone can have sufficient space for activities and make the space planning more reasonable.

1.3 Ideas from the part from the hospital

Mind museum-Fraser Brown MacKenna

Bethlem Royal Hosp, Monks Orchard Rd, Beckenham BR3 3BX

According to the design of the mind museum, they first used narrative design to carry out a very strict spatial division, and displayed the earliest wrong treatment history of the hospital with sculptures at the entrance, and then used light and shadow to create a relatively calm environment, so that people can carefully understand the medication during the illness process and experience the pain of illness. Large windows were set up at the connection between different theme exhibition halls, so that all the scenery outside can be projected into the room, forming a very good transitional space. Different forms of windows were installed in the exhibition space, such as the round ones on the top and the rectangular ones close to the ground, which greatly enhanced the interest while maintaining the regularity of the space, allowing visitors to relax and meditate here while appreciating the works of art.



The Museum of the Mind / Bethlem Royal Hospital / Beckenham - FBM Architects



The Museum of the Mind / Bethlem Royal Hospital / Beckenham - FBM Architects



The Museum of the Mind / Bethlem Royal Hospital / Beckenham - FBM Architects

In the exhibition space on the left, I used blinds to separate the outside world from the interior, protecting the privacy of the patients and preventing them from being frightened. However, a certain distance was maintained so that the patients could fully appreciate the beautiful natural environment when they were emotionally stable and wanted to communicate with the outside world.





2. Trauma-Informed Design Approach:

Based on Anne Marie Garcia's paper *Empathy in Architecture: Using Trauma-Informed Design to Promote Healing*, I applied trauma-informed design to the analysis and design, which is divided into five aspects: spatial layout, furniture, visual and auditory interest, light and color, art, and biophilic design.

2.1 Spital layout

2.1.1 Nha Khoa Nu Cui Viet

BHA studio

117 Nguyễn Huệ, Phú Nhuận, Thành phố Huế, Thừa Thiên Huế 530000 Vietnam

Take Nha Khoa Nu Cui Viet Dental Clinic from Vietnam, for example. The space is designed to address how clients feel when sitting, waiting, moving, healing, and interacting with different forms of services. It focuses on a relaxed atmosphere that puts people first: clients, doctors, and service staff. The central atrium and surrounding public and service spaces allow the building to be connected in multiple ways, providing greater flexibility for internal functions in operations and maintenance areas.



<https://www.archdaily.cn/cn/994449/nha-khoa-nu-cuoi-viet-ya-ke-zhen-suo-bha-studio>

2.1.2 Lobby design for PTSD patient healing centre

The transparent space design and the use of plants and the functional area for rest can be referenced in my indoor atrium design to meet the function of clear instructions, such as the plants on the right and the benches on the left as a waiting area for people to rest and wait. It is a transparent, natural and comfortable space.



A reading and leisure area is also set up at the corner of the foyer corridor. Because there is an elevator on the first floor, the stairs will only be used in emergency situations and will not cause excessive disturbance to people who are resting.

Visual and auditory interest Limit visual complexity, such as distracting wallpaper or rugs. This can increase stress and anxiety Symmetry and soft patterns can create a sense of security and grounding Minimize unnecessary and overwhelming ambient noise

2.2 Visual and auditory interest

2.2.1 the Deaf and Hard-of-Hearing Community

Frederick Law Olmsted

80 Livingston Blvd, Gaylord, MI 49735 America



https://www.archdaily.com/1011313/alfreton-park-community-special-school-curl-la-tourelle-head-architecture?ad_medium=gallery

One of the main goals of the Deaf Space System is to create safe conditions and freedom of movement for the sign language community, minimizing danger and enabling easy circulation. Wider sidewalks, paths, and corridors are essential to accommodate people who sign while walking. Abrupt inclines or sudden turns should be avoided. Deaf and hard of hearing people rely heavily on visual communication methods such as sign language, lip reading, and facial expressions. Poor lighting, glare, and shadow patterns interrupt these types of communication, causing eye fatigue and loss of concentration. Throughout the university campus, specific architectural elements such as sunshades are used to control sunlight and diffuse direct sunlight.

Deaf people have hearing defects, and PTSD patients have emotional defects. The spatial design that compensates for the defects of deaf people can be applied to PTSD patients. For example, calm colors and protective spaces, as well as designs that separate the patient's life from the lives of others can help patients recover better.

2.2.2 Color and component design for ptsd patient healing centre



The bedroom has a platform, which allows patients to sit down and read a book. The lower the height, the safer the feeling. The overall soft furnishings have a high grayscale, which protects the patient's mood. The bedroom is very hidden.



The shaker system is designed to allow patients to hang some items on the wall to organize them more neatly, because a chaotic environment can cause them to explode and worsen their condition.

2.3 Light and colour

Light and Color Ensure adequate lighting that does not buzz or flicker, and includes lighting that can be used for light sensitivity and visual impairments Avoid using dark tones of warm colors (red, orange, yellow) Use cool colors (blue, green, purple) to

create a calming effect. Lighter colored rooms are considered Spatially more usable, and therefore safer and calmer Avoid using pure white walls Provide windows and natural light whenever possible Vejle City Mental Hospital In order to fully ensure the healing effects of light on mental patients, the architects paid special attention to natural and artificial light when designing. Glass windows and atriums bring plenty of sunlight into the building. The protruding ceilings and interior glass windows help light to extend and pass through the hospital. In addition, the design of the ward also introduces 24-hour color light therapy for calming, sleep aid, and depression, while also keeping the biological clocks of staff and patients consistent.

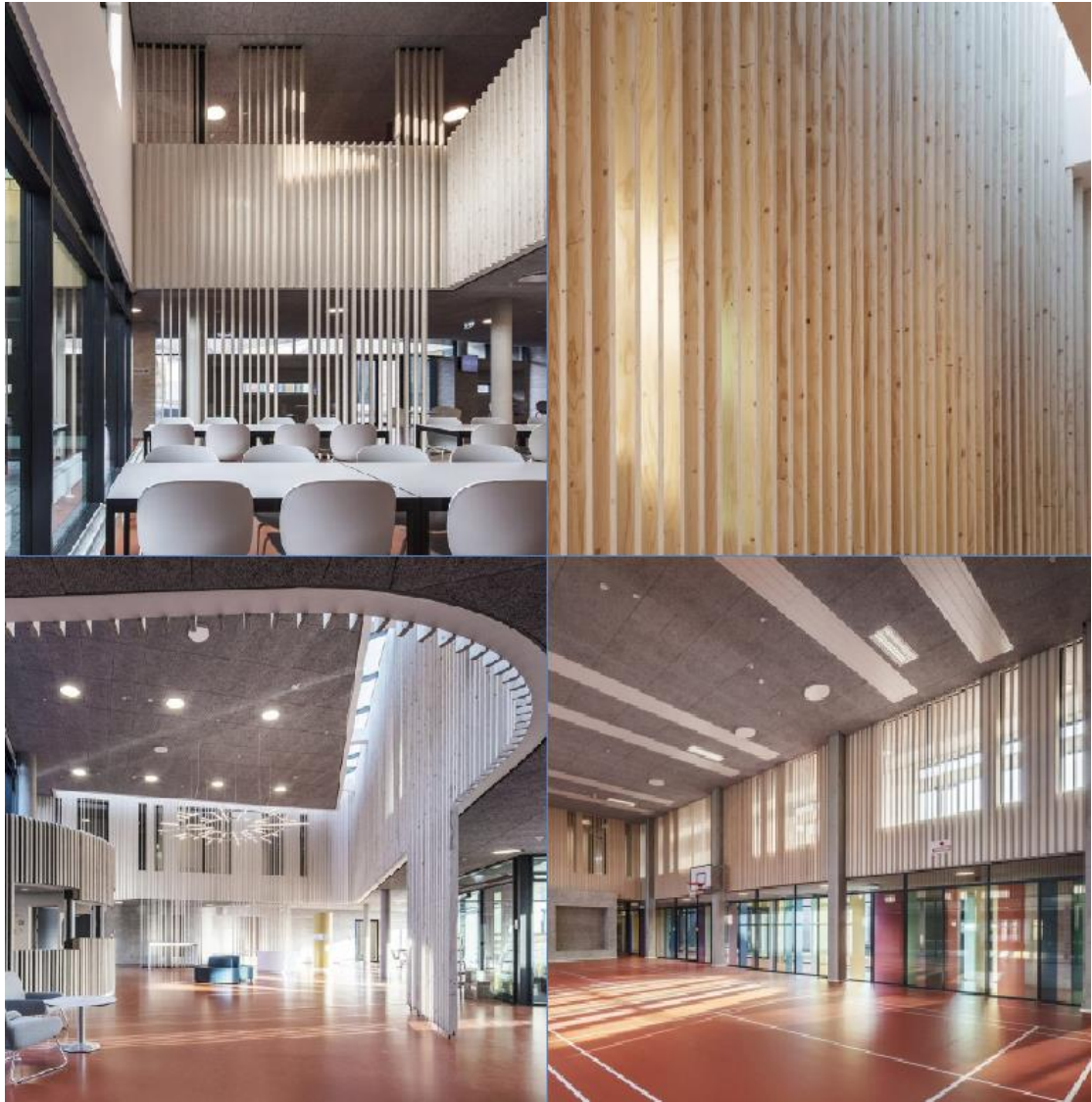
2.3.1 Vejle City Mental Hospital

Arkitema Architects

Nordbanen 5, 7100 Vejle, Denmark

Vejle Psychiatric Hospital

In order to fully ensure the healing effect of light on mental patients, the architects paid special attention to natural and artificial light in the design. Glass windows and atriums bring plenty of sunlight into the building. The protruding ceilings and indoor glass windows help the light extend and pass through the hospital. In addition, the design of the ward also introduces 24-hour color light therapy for sedation, sleep aid, and depression elimination, while also keeping the biological clocks of staff and patients in order.



<https://www.archdaily.com/901732/vejle-psychiatric-hospital-arkitema-architects>

2.3.2 Bedroom design for ptsd patient treatment centre



Warm-colored walls at the entrance

The large glazed window and doors behind the reception that bring light into the activity room are prominent examples of the biophilic pattern setting a natural tone to the interior, giving privacy for activities on offer from the public entrance



The bedroom also has warm yellow walls, allowing patients to receive warm and positive energy during rest, rather than cold and indifferent energy.

Windows of different shapes provide patients with a good view, allowing them to have plenty of natural light when they are working, and a relatively safe space for solitude when they want to be alone.

The effect is a safe sanctuary which gives privacy rather than confinement. The Bay Window are sized to offer a space to curl up and occupy.



The design of the bay window adds a reading space for patients, and the bottom is blurred glass to protect the privacy of patients but increase natural light, which draws on the design of the Glass House private clinic in Paris, France.

Maison de Verre
Pierre Charlot

31 Rue Saint-Guillaume, 75007 Paris, 法国



[How to Visit the Maison de Verre - Untapped Paris \(untappedcities.com\)](https://untappedcities.com)

It is a residence + private clinic designed and built in 1932. The facade facing the courtyard is wrapped with translucent 20cm*20cm*4cm glass bricks, hence the name Glass House. On the one hand, the translucent glass bricks bring gentle natural light to the interior, and on the other hand, they also meet the privacy needs of the doctor and his wife in their work and life.

Influence of Artworks:

"Art activities can be therapeutic in their own right because they have the potential to reduce tension, relax people, and distract people from distress," says Judith Rubin, PhD, a licensed counselor, board-certified art therapist, licensed psychologist, and faculty member at the University of Pittsburgh in Pennsylvania and the Pittsburgh Psychoanalytic Association and Institute. She adds that art can also help people process past trauma or sift through challenging emotions and feelings, and may help treat certain health conditions.

Choosing some effective art to pepper the space can create a visual distraction that reduces stress and increases comfort. Nature paintings and photography have been linked to increased mood and lower stress levels. Abstract work with harsh lines and colors should be avoided.

2.4 Art

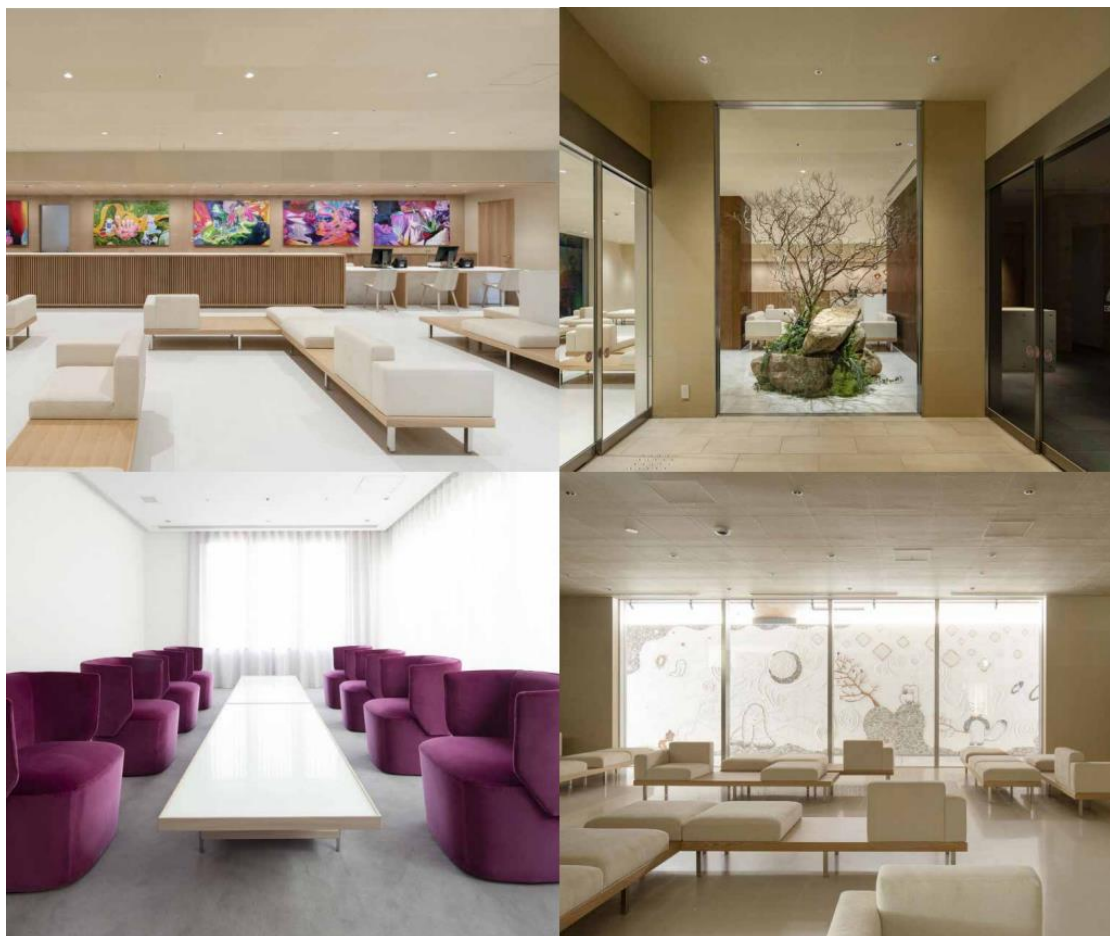
2.4.1 English painter Thomas Edwin Mostyn

British painter Thomas Edwin Mostyn His paintings are far from realism, depicting life outside the city, making people feel peaceful and relaxed, expressing the true meaning of life.

With the advent of science, the therapeutic uses of the arts diminished in importance but were still perceived intuitively to enhance healing. Florence Nightingale, in her classic book *Notes on Nursing* ([1860] 1969), describes the patient's need for beauty, even to look out a window or gaze at a vase of flowers: "People say the effect is only on the mind, It is no such thing. The effect is on the body, too. Little as we know about the way in which we are affected by form, by colour, and light, we do know this, that they have an actual physical effect. Variety of form and brilliancy of colour in the objects presented to patients are actual means of recovery"

2.4.2 the oike women's Clinic in Kyoto

the Oike Women's Clinic Hall in Kyoto, Japan, Koyori Architects
City of Kyoto, Kyoto Prefecture



For example, the Oike Women's Clinic in Kyoto, Japan Since many women often postpone regular health checks, the client hopes to create a comfortable space like a

hotel to attract women. Through the casual arrangement of sofas and artworks exhibited in various areas, the design aims to blur the "face-to-face" nature of the space and create a place to relax and rest like an art gallery. The room is decorated with handmade Japanese paper, polished floors, mud walls, copper plates and unglazed tiles. Each material adds a touch of warmth to the space like a handmade product. The waiting room and other areas also continue the atmosphere of the large space, bathing people in a calm, light and soft brightness.

So I placed natural-style paintings in the public areas of the room to make patients feel natural and relaxed, and to use artworks to bring positive psychological hints to people.

2.4.3 Art Centre Design for PTSD Patient Healing Centre



As part of the design moves to create a home environment, consideration was given to decoration and lighting that would communicate this. Specifically, furniture was chosen that was loose rather than fixed which also allows it to be rearranged by occupants. Furniture was also selected in the lounge to facilitate curling up on the sofa, which from the consultation conversations with women was an important aspect of being fully relaxed at home.



Within the living room is an entire wall covered in cork that can be used as a giant pinboard. This provides the opportunity for the women to occupy ‘their’ communal space with the artwork and the activities from their time at Hope Street. Providing space that can be filled gives choice and control but also provides a method of peer-to-peer communication for new arrivals in to the community about its culture.



There are also simple decorative paintings and sculptures in the art space, but they are by no means depressing and sad themes, keeping the space bright and positive. Just like the addition of various colored widgets in the case enriches the levels of the space and makes people have different feelings when moving through the space, the theme of the artwork will also set off the atmosphere of the entire space and give people different psychological hints.

Biophilic design research shows that environments that include vegetation, gardens, and green spaces can reduce stress, pain, increase healing rates, and promote peace, tranquility, self-esteem, and a sense of connection to the environment. Research also shows that even just appreciating natural views (whether directly through a window or viewing art), as well as indoor plants, are associated with increased positive emotions and comfort. Plants not only connect occupants to the natural world, but they can also perform important biophilic functions by improving air quality.

2.5 Biophilic Design

2.5.1 survivors of torture,

John Warland

London



Designed in collaboration with John Warland and in partnership with survivors of

torture, the Survivor's Sanctuary Garden is intended to provide a place of refuge and healing, using long-term sustainable techniques, with a meandering stream, fed by an overflowing clay pot, running through the garden and around a sunken seating area. The sound of the gurgling water permeates the garden, drawing attention away from the outside world and into the garden. Waves of willow trees weave through the garden, subtly sneaking into the space, creating small quiet coves and resting points along the stone paths. The warm, tactile willow trees shield the noise and bustle of the outside world, enveloping the person: providing refuge and tranquility.

2.5.2 Field research

On May 21, 2024, my academic support teacher and I conducted a group field research in Story Garden. We felt the healing effects of plants on the human body through touching, smelling, drawing and tasting. We also felt the different effects of different plants.





According to the literature, there are nine healing plants: Ginkgo. Turmeric. Evening primrose oil. Flax seed. Tea tree oil. Echinacea. Grapeseed extract. Lavender. I found them in the garden and prepared them for sampling.

Garden Research



I randomly picked some plants in the garden, which have different materials, colors, and flowering periods. I was thinking that the landscape may be different in different seasons, and they have different shapes and functions. For example, vines are like fabrics, and they have different shapes and functions. Taste is also very important, as it provides different experiences in terms of five senses.

The garden I designed: Because I observed that London has four distinct seasons, the weather changes have a great impact on people's activities. For example, the approximate temperatures in spring, summer, autumn and winter are 14°, 21°, 15° and 9°. In spring, people are more willing to do outdoor activities, exercise, bask in the sun, and eat some cool food.

植物的设计方面应该考虑到他们之间有没有互斥，以及和当地生态的协调性，比方动物和昆虫，视觉方面应该考虑到四季不同温度情况下的生长变化，颜色，枯

萎，开花等等。

The design of plants should take into account whether there is any mutual exclusion between them, as well as their coordination with the local ecology, such as animals and insects. The visual aspect should take into account the growth changes, color, withering, flowering, etc. under different temperature conditions in the four seasons.

Summer activity of people

6:00

Feeling tired after having nightmares



7:00

Going to work, but feeling uneasy



9:00

Trying to focus but always getting distracted



11:00

Sometimes feeling fearful



1. Endocrine system: Sweating at high temperatures can affect water and salt metabolism. It is necessary to replenish water and electrolytes in a timely manner to prevent electrolyte imbalance, leading to symptoms such as weakness, thirst, oliguria, increased pulse, and fainting.
2. Circulating system: High temperatures can increase the burden on the heart, reduce cardiac output, lower blood pressure, and may cause symptoms such as dizziness, nausea, and shock. 3. Nervous system: High temperatures may cause a decrease in brain reaction speed, attention, and reduced mobility.

The temperature is lower in winter, and people prefer to stay indoors. They occasionally do some simple sightseeing and exercise outdoors, but more often they stay still. Warm foods such as hot pot are more popular.

Winter activity of people

6:00

Feeling tired after having nightmares



7:00

Going to work, but feeling uneasy



9:00

Trying to focus but always getting distracted



11:00

Sometimes feeling fearful



Biological clock - In autumn and winter, the body receives less sunlight, the daytime is shorter, and indoor activities are frequent, which can affect mood and even lead to depression; these factors may also change the amount and time of melatonin secretion in the body, potentially interfering with the body's regulation of sleep patterns and mood.

Exercise intensity - In cold winter weather, people may reduce the time and intensity of outdoor activities, and heavy clothing can also hinder exercise, which may lead to a decrease in the secretion of substances such as serotonin, dopamine, and adrenaline in the body.

Nutrients - In winter, the body receives less sunlight, resulting in reduced vitamin D synthesis; in winter, people tend to reduce the intake of fresh vegetables, bananas and other foods, resulting in reduced intake of folic acid and tryptophan.

Scenery - In late autumn and winter, withering grass and trees, large-scale death of small animals such as insects, and cloudy or foggy skies may all affect people's mood.

Social networks - Modern people may increase their use of social networks in winter, and often observe the activities of people living in places that are very different from their own surroundings. This can easily lead people who use social networks for a long time to misunderstand other people's lives, underestimate the proportion of difficulties and pain in their lives, and feel that their lives are particularly unsuccessful, particularly painful, and particularly meaningless.



summer in sunny night



summer with good temperature noon



summer cloudy noon



winter all day



evening



night

Field research My home has an outdoor space for a sky pool, where I often stay to study. Through observation, I found that in the summer, in sunny weather, although the weather is good, almost no one uses it in the morning, and everyone is still resting. It is very busy from noon to evening when the sun is good, and there are almost no people at night. When the weather is bad, there are few people all day. Spring is second, autumn is less than spring, and winter has the lowest activity rate.

In order to ensure that people can enjoy this beautiful terrace all year round, the apartment designer designed the Orangery Winter Garden Restaurant, which introduces a lot of natural light into the interior space while taking in the beautiful outdoor scenery. I also introduced this idea into my design.





Healing environment is a concept used to describe amenities in healthcare. The aim of the healing environment is to provide non-institutional surroundings and a sense of calmness for patients, staff, and visitors. For the first time, making a healing environment by lighting was a focus of the North Hawaii Community Hospital design. The hospital was constructed in the middle of 1990 by several features that a regular hospital does not. Hallways employ skylights and large windows to furnish an open atmosphere and natural light. In order to improve the environment, effectively full-spectrum fluorescent lightings were utilized throughout the hospital. John McNeil (2001), Chief Executive Officer of North Hawaii Community Hospital, and the light in his hospital “also eliminate headaches (and seizures in extreme cases) from the flickering of artificial lighting (McNeil, 2001) Particular information on the lighting is not common since the hospital has many features that differ from a traditional hospital (McNeil, 2001 cited in Edwards and Torcellini, 2002)

2.5.3 Garden design for PTSD patient healing centre



The winter garden has shielding louver screens and some parts have glass. The screens can provide a sheltered and protected environment for patients. When they are not in good condition and want to stay in a corner, they can choose to stay behind the screen. When they want to communicate with the outside world, they can stay next to the glass with a wide field of vision, allowing them to interact and communicate with people outside.



The design of the winter garden ensures that patients can have sufficient outdoor activities in different seasons and have a good view to relax. The glass bottom design opens up the view of the two floors, allowing more natural light to enter the art space on the first floor. At the same time, the art space can also be used for yoga training and meditation.

Use different kinds of plants to create artistic conception, and use different materials to change the structure of the entire garden. Sheltering is a sense of security and shelter, allowing people to calm down and contemplate.

设计参考了著名设计师 Mien ruys 的设计，她是一位来自阿姆斯特丹的非常伟大的园艺设计师，她的设计结合了建筑和材料的知识，她还创建了杂志 *Onze eigen tuin* 收录了许多有意义的作品，为后人留下了宝贵的设计资料。

The design is based on the work of the famous designer Mien ruys, a great garden

designer from Amsterdam. Her designs combine knowledge of architecture and materials. She also founded the magazine *Onze eigen tuin*, which collected many meaningful works and left valuable design materials for future generations.

GARDEN BENCH

The gardens provide space for individual reflection and sanctuary through secluded spaces for solitude and processing. These are spaces where women can view the comings and goings of Hope Street witnessing how others are treated and this provides the opportunity to build trust by observing other relationships. One such space is the recessed bench at the rear of the Hub and beneath the Hope Suite. Prior to the relocation of the kitchen garden this space contained garden equipment but was reutilised as a sheltered space for reflection to enjoy the gardens and prolong the appreciation through inclement weather and wetter seasons. It is wide enough that it creates an ideal location for two to sit in company without losing individual space. This bench is made of oak joists with a warm oak backing creating a soft textured enclosure.

There are also spaces within the garden to gather as a small group to enjoy the gardens in community, strengthening ties and relationships with others, including paved seating areas and a small lawn area to sit down in the landscape.

The gardens are a resource in themselves but also provide the aspect for both the shared residential flats and the rear facing Hub spaces. There are no publicly accessible spaces that have an aspect to the gardens ensuring this is a private and safe amenity space dedicated only to the women residents and their families. Neither is the garden overlooked by neighbouring properties.





2.5.4 Why is horticultural therapy effective in addressing trauma?

Survivors of traumatic events (child/adolescent/adult) feel a deep sense of helplessness, lose problem-solving skills, lose the ability to move, and lose the ability to protect loved ones. The psychological impact includes high levels of anxiety and stress, behavioral disturbance, night terrors, emotional dysregulation, difficulty connecting with surroundings, and low self-esteem, among other impacts.

Working with plants, in the garden, offers relief from that sense of helplessness because the risk of making decisions is lessened. The space surrounded by plants/vegetation has a different rhythm, it's a space free of judgement, a *safe place*; this is very important because the sense of safety allows survivors to experience it in their body without feeling overwhelmed, it is not blocked, and can continue to function daily; they regain hope, and painful memories of the trauma are unlocked. (Abby Tassel of WISE).

2.6 Furniture

2.6.1 Furniture

Consider how the arrangement of furniture affects users' feelings of safety, perceived crowding, and relationships with staff (e.g., communication or authority). Sitting face-to-face at a table can be perceived as adversarial, whereas sitting corner-to-corner, with no barriers in between, can spark conversation and trust.

- Choose furniture with soft, cozy, and "cocooning" elements, which can make users feel protected and safe
- In waiting areas or common areas, orient seating so that users are facing away from a blocking wall
- Always reference universal design principles to promote accessibility
- Designated areas that provide a sense of privacy

2.6.2 Leeds Maggie's centre

Maggie's Centre Leeds The interior of the centre explores everything that is often missed in a healing environment: natural and tactile materials, soft lighting and a variety

of spaces designed to encourage social opportunities and quiet contemplation. Window sills and shelves are designed for visitors to fill with their own belongings, creating a sense of home. The studio also designed two tables, inspired by the building's wooden fins, made of cork and engineered beech, which are located in the centre of the centre. The furniture is chosen in more sober colours, the sofa is lower in height for a safer feeling, and the chairs are all with armrests and backrests to provide more support for the body, further enhancing the patient's sense of safety. The furniture is designed with rounded corners to avoid physical injuries,



<https://www.archdaily.com/989337/what-is-a-good-interior-design>

2.6.3 Furniture Design for PTSD Healing Centre



A lazy sofa was chosen for the reading area in the corner. It is very soft and stable. The sofa is also chosen in a relatively cool color to avoid causing emotional fluctuations in patients.



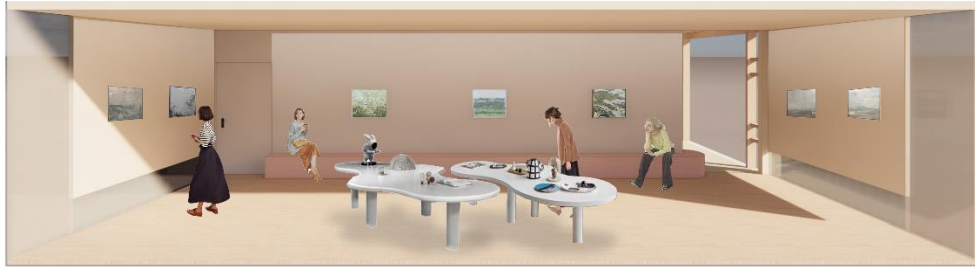
The doctors' lounge also has sofas for lying down, because they will be very tired after work and need to replenish their sleep. Such sofas can give them a good rest.

Furniture design, strength, using the right connections depending on the load and purpose, internal forces, structure, comfort and efficiency, ergonomics, healthy ways to provide comfort and support the human body, aesthetics, visually appealing design. Functionality, whether for sitting or storage, sustainability, eco-friendly materials are

the processes to create sustainable furniture.



<https://www.realstudios.co.uk/museum-of-the-mind>



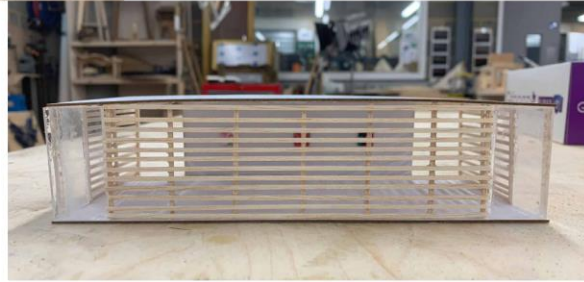
In terms of the design of the Gallery, I referred to the very rich exhibition methods of the Mind Museum, whether it was the height or the display media, electronic screens, lighting, etc., which gave me a lot of case references. I used long benches to connect the reception to the gallery, giving the meaning of hope, spread, and growth, making the space coherent and highly functional. It can accommodate many people to rest, allowing accompanying family members to accompany and observe the patients from multiple angles and spaces, and also ensuring the safety of the patients.

Exhibition design should consider the theme, scale, color, material, lighting, sound, and graphics, and derive an emotional and attractive exhibition space through matching and construction of elements such as structure, location, color and light.

3 Model making and exhibition

During the model making process, I spent a lot of time in the workshop talking with the staff, especially in the design of materials and sizes. I spent a lot of energy thinking about what effect it would have if it was built, whether it would be a gentle wood color or a firm wood color, the height of the windows, and using proportionally scaled plastic people to simulate the real feeling of standing in this space. In terms of cutting and pasting different materials, professional tools are also needed, such as lasers, long-handled knives, or knives, and glues include white latex, U glue, and drip glue, etc., which gave me new practice and thinking about the construction of real space.

3.1 Model making



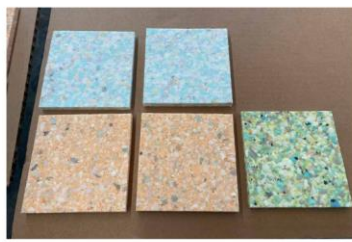
The first model was made of acrylic, cardboard and wood. The acrylic material was very heavy and there was a gap between it and the wood. The wood was too light and easily deformed during the production process.



Finally, I chose cardboard, acrylic and chevron board, which are easier to stick together, and the whole model is light and not easy to deform or become disconnected.

In the school workshop, I tried to make different materials, such as ceramics, wood, thermoplastics, wax, iron, paper, cloth, images, etc. Each category has a very strict production process, and there are many details to pay attention to. For example, the choice of ceramic soil will affect the color, the temperature of the glaze will affect the color, and there are glazes with different glosses, some have cracked effects and some have a metallic color. These have a huge impact on my practice and thinking in design. In fact, design is something that pays attention to ways and methods. We have many tools to choose from, but they must be strictly screened and integrated for a specific theme and performance effect.

3.2 exhibition



Post traumatic stress disorder retreat

AO XUE

This project has been designed for people with PTSD. I had my own experiences with this disease, which resulted in my academic work suffering, which is why I care so strongly about this theme. I plan to use architectural and material design methods to combat the various issues. I will incorporate horticulture and outdoor spaces, encouraging patients to use all of their senses to feel recovery, step by step physically.



Exhibition



An exhibition is a systematic way to display one's own ideas. The size, type and number of this exhibition are strictly controlled, allowing us to think about our own themes from different angles. The exhibition also plans detailed visiting and learning time. We have the opportunity to discuss our projects in depth with scholars from all walks of life and teachers who have taught us, gain more insights and ideas, and learn from the works of students from other majors, which may be similar themes but displayed in different media. Through exchanges and communication, we have obtained new ideas from different angles that lead to the same goal.

4 Reflection

Through one year of study in ISD, I deeply felt the importance of combining hands-on and brain-based research + design + output, because in the process of workshop practice, every detail will be carved, such as coloring, temperature, color changes, and changes in printing color when producing portfolios. These details can be reflected in the point of my research, so that my research can be done better. When the research makes more details, I can make more changes and creativity in the output, which complements each other. My previous school did not have such a systematic workshop teaching, so we stayed more on theoretical research. Regarding my topic, I started studying the relationship between mental illness and interior space design in 2022, but there is still a lot of progress from preparatory to postgraduate stage. I have made a lot of efforts from taking it for granted to provide more theories and details to support each component, and the quality and completion of the space have been greatly improved. Based on the existing knowledge, I can use the research methods I have learned in the past two years to design more themed spaces and think about feasibility, as well as what kind of rules and regulations a good community needs to operate in addition to architectural design.

After visiting the London Design Festival, I have accumulated a lot of meaningful furniture, tableware, and lamps, which made me realize that every item in the space has its own unique attributes and cultural meaning. Interior design is similar to all types of design. In order to achieve a purpose, different materials are used to display design ideas. For example, the output of fashion design is clothes, and the medium is fabric or jewelry. The medium of interior design is furniture, lamps and tableware, etc. Their materials represent the era, personality, and style. The shape shows the appearance, and the appearance conveys visual and even emotional feelings to people. Their composition constitutes the space design, so after that, I thought more deeply and carefully about the choice of objects. These choices make the space I designed more storytelling and layered. I also read atlas interior design, the world's finished interior design cases, to coordinate the relationship between objects, learn the completion of space design, and then improve my own design deficiencies.

Biography:

(1) Demet, G., Ertaş and Şatir, S. (n.d.). *Furniture as a Design Product*. [online] Available at: <http://www.adjournal.net/articles/91/917.pdf>.

(2) Yüksel E, Kiliç M. Eco-friendly approach in furniture design[C]//Proceedings of the 27th International Conference. 2015: 357-368.

(3) Doaa, I. and Attia (n.d.). Positive Energy in Interior Design and Furniture. *Design Issues International Design Journal*, [online] 2(1), p.51. Available at: https://idj.journals.ekb.eg/article_299547_4bd9c534dacc0986bee00ef3e7c35fd7.pdf [Accessed 4 Oct. 2024].

(4) E4H. (2020). *Empathy in Architecture: Using Trauma-Informed Design to Promote Healing*. [online] Available at: <https://e4harchitecture.com/empathy-in-architecture-using-trauma-informed-design-to-promote-healing/>.

(5) Merylova, I., Shekhorkina, S., Panchenko, T., Zakharov, M. and Talash, A. (2024). Methodological approaches to designing biophilic rehabilitation buildings. *E3S Web of Conferences*, [online] 534, p.01014. doi:<https://doi.org/10.1051/e3sconf/202453401014>.

(6) Google Books. (2024). *Exhibition Design*. [online] Available at: https://books.google.co.uk/books?hl=zh-CN&lr=&id=CaIHMBYjdpoC&oi=fnd&pg=PA6&dq=exhibition+design&ots=RMVr0X_T_w&sig=VwxnjKXGAcppoVkqk1BcUoK19Bc#v=onepage&q=exhibition%20design&f=false [Accessed 20 Oct. 2024].

(7) Huntsman, D.D. and Bulaj, G. (2022). Healthy Dwelling: Design of Biophilic Interior Environments Fostering Self-Care Practices for People Living with Migraines, Chronic Pain, and Depression. *International Journal of Environmental Research and Public Health*, [online] 19(4), p.2248. doi:<https://doi.org/10.3390/ijerph19042248>.

(8) SADLER, H.D. (2021). *DISASTER'S WAKE: THE ROLE OF ARCHITECTURE IN TRAUMA RECOVERY*. [online] [OhioLink.edu](https://etd.ohiolink.edu/acprod/odb_etd/etd/r/1501/10?clear=10&p10_accession_num=ucin1082909131). Available at: https://etd.ohiolink.edu/acprod/odb_etd/etd/r/1501/10?clear=10&p10_accession_num=ucin1082909131 [Accessed 4 Oct. 2024].

(9) SADLER, H.D. (2021). *DISASTER'S WAKE: THE ROLE OF ARCHITECTURE IN TRAUMA RECOVERY*. [online] Ohiolink.edu. Available at: https://etd.ohiolink.edu/acprod/odb_etd/etd/r/1501/10?clear=10&p10_accession_num=ucin1082909131.

(10) Umanitoba.ca. (2024). *DSpace*. [online] Available at: <https://mspace.lib.umanitoba.ca/bitstreams/1fbec1b2-54b3-4938-b17c-751d6b4dd533/download> [Accessed 5 Oct. 2024].

(11) Ismaeil, E.M.H. and Sobaih, A.E.E. (2022). Enhancing Healing Environment and Sustainable Finishing Materials in Healthcare Buildings. *Buildings*, 12(10), p.1676. doi:<https://doi.org/10.3390/buildings12101676>.

(12) Park, S.-K. and Moon, J.-M. (2011). A Study on the Space Design Research Tendencies for the Healing Environment - Focused on the Theses of Architecture and Interior Design Institutes -. *Korean Institute of Interior Design Journal*, [online] 20(4), pp.21–28. Available at: <https://koreascience.kr/article/JAKO201130662199196.page>.

(13) Park, S.-K. and Moon, J.-M. (2011). A Study on the Space Design Research Tendencies for the Healing Environment - Focused on the Theses of Architecture and Interior Design Institutes -. *Korean Institute of Interior Design Journal*, [online] 20(4), pp.21–28. Available at: <https://koreascience.kr/article/JAKO201130662199196.page>.

(14) Parthasarathy, D.P. (2021). *Phenomena of light, color and material exerted in architectural setting promotes healing*. [online] Ohiolink.edu. Available at: https://etd.ohiolink.edu/acprod/odb_etd/etd/r/1501/10?clear=10&p10_accession_num=ucin1260540905 [Accessed 5 Oct. 2024].

(15) Hesham, E., Barmelgy and El-Barmelgy, H. (2013). Healing Gardens' Design Healing Gardens' Design (Offering a practical framework for designing of private healing gardens). *International Journal of Education and Research*, [online] 1(6). Available at: <https://ijern.com/journal/June-2013/43.pdf>.

(16) Sayuti N A A, Bonollo E, Montana-Hoyos C. Emotional Responses, Perceptions, and Preferences toward Furniture Design[J]. *The International Journal of Designed Objects*, 2021, 15(2): 1.

(17) Khanade, K., Rodriguez-Paras, C., Sasangohar, F. and Lawley, S. (2018). Investigating Architectural and Space Design Considerations for Post-Traumatic Stress Disorder (PTSD) Patients. *Proceedings of the Human Factors and Ergonomics Society Annual Meeting*, [online] 62(1), pp.1722–1726. doi:<https://doi.org/10.1177/1541931218621390>.

(18) ZNANSTVENO STRU^NI^ASOPIS ZA PITANJA DRVNE TEHNOLOGIJE • ZAGREB • VOLUMEN 60 • BROJ 1 SCIENTIFIC AND PROFESSIONAL JOURNAL OF WOOD TECHNOLOGY • ZAGREB • VOLUME 60 • NUMBER 1 UDK 630*8+674. (n.d.). Available at: https://www.dravnaindustrija.com/site/assets/files/1545/2009-1_drv_ind_vol_60_1.pdf#page=16.

(19) King, J. (1998). Twentieth-Century Furniture as Precedent: Creating a Dialogue Between History and Design in Furniture Design Studio. *Journal of Interior Design*, 24(2), pp.33–45. doi:<https://doi.org/10.1111/j.1939-1668.1998.tb00327.x>.

(20) ELİBOL, G.C., DÜNDAR TÜRKKAN, V. and BEZCİ, İ. (2021). Biologically Inspired Design: A Case Study on Furniture Design Experiences of Interior Architecture Students. *Gazi Üniversitesi Fen Bilimleri Dergisi Part C: Tasarım ve Teknoloji*. doi:<https://doi.org/10.29109/gujsc.1005015>.

- (21) Jstor.org. (2024). *Principles and Evolution of Furniture Making-II. Tools and Methods on JSTOR*. [online] Available at: <https://www.jstor.org/stable/858940> [Accessed 5 Oct. 2024].
- (22) Mário, B., Duarte, J., Pinto, Bruno, C., Barros, M., Duarte, J. and Chaparro, B. (n.d.). *Thonet Chair Design Grammar : A Step towards the Mass Customization of Furniture*. [online] Available at: https://papers.cumincad.org/data/works/att/cf2011_p170.content.pdf [Accessed 5 Oct. 2024].
- (23) Kamali, N.J. and Abbas, M.Y. (2012). Healing Environment: Enhancing Nurses' Performance through Proper Lighting Design. *Procedia - Social and Behavioral Sciences*, 35, pp.205–212. doi:<https://doi.org/10.1016/j.sbspro.2012.02.080>.
- (24) Ulrich R, Gilpin L. Healing arts[J]. *Nursing*, 1999, 4(3): 128-133.