



Effects Of Landscape On Stress And Trauma In Sexual Trauma Rehabilitation And Care Treatment Centre, Awka, Anambra State.

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ABSTRACT

Trauma of any origin can forever alter the way individuals live their everyday lives. Relationships with people, places, and the self are compromised and may never fully heal. The landscape surrounding a sexual trauma rehab center can have a significant impact on the stress and trauma experienced by the residents. Research has shown that exposure to natural environments, such as green spaces and bodies of water, can help to reduce stress levels and promote healing. A calming landscape with natural elements, such as trees, gardens, and water features, can provide a sense of safety and comfort for those who have experienced trauma. It can also help to reduce the feelings of isolation and anxiety that can be common in rehabilitation settings. A lack of natural elements can also make it more difficult for individuals to feel connected to their surroundings and to others, which can hinder the healing process. Overall, the landscape surrounding a sexual trauma rehab center plays a crucial role in promoting recovery and reducing stress and trauma. By incorporating natural elements and creating a calming environment, rehab centers can create a space that is conducive to healing and growth. Sexual Assault Survivors exist within every niche of our communities. Still, due to culturally ingrained stigmas and the nature of the assault itself, it has been challenging to address the indefinite needs of these victims. Sexual trauma is a condition that requires a medically invisible type of care. The cures can be achieved through spacial relationships, psychological reactions to color and light, and programs that allow individuals to be part of a group. Transparency through sight lines and curved walls paired with an encompassing sense of security along the perimeter and through entry are the end goals of the architectural design. These fundamental ideas can be the building blocks of architectural design to help build a center focused on providing continual healing and rehabilitation to Sexual Assault Survivors.

Keywords: Trauma, Sexual Trauma, Sexual Trauma Rehabilitation and Care Treatment Centre, Post-Traumatic Stress Disorder

INTRODUCTION

Sexual assault is by no means a new concept, and it seems to be a crime that is currently on the decline, because a large portion of survivors do not report the assault. a significant number of sexual assault victims experience post-traumatic stress disorder (ptsd). in fact, research suggests that sexual assault is by far the most frequent cause of ptsd in women. (National centre for post-traumatic stress disorder, 2005). However, just about few years now the ridiculous act of sexual assault cases among Nigerians has been drastically rising, as several cases of sexual assault mostly among the Nigerian youths are being experienced in Nigeria. There are numerous cases of sexual assault in Nigeria, as the infamous ABSU gang rape being the most widely reported to date, despite the proliferation of social Medias, many cases go unreported (Okafor, 2013). Many more cases up till this moment have occurred in Nigeria. United

Nations statistics on incidences of rape compiled from government sources showed that more than 250,000 cases of rape or attempted rape were reported by the police annually (Alao, 2018). The report covered 65 countries including Nigeria (Alao, 2018). In consonance with the above, although there is dearth of comprehensive data in Nigeria, however, information across the states shows that rape cases are on the increase (Izzi and Obinuchi, 2016). Even though the phenomenon rape has become a universal experience, as such cases have been accounted for world wide. It is important to note that rape is a global issue as it has been reported in almost all part of the world (Izzi and Obinuchi, 2016).

The Rape, Abuse & Incest National Network (RAINN) says there are many types of sexual violence that can cause sexual abuse trauma. There are innumerable adolescent girls and adult women survivors of sexual abuse trauma and sexual assault. Since 1993, the rate of sexual assault has dropped by 63% (Fig. 1). These types of figures must always be considered in hand with the fact that a large portion of survivors do not report the assault

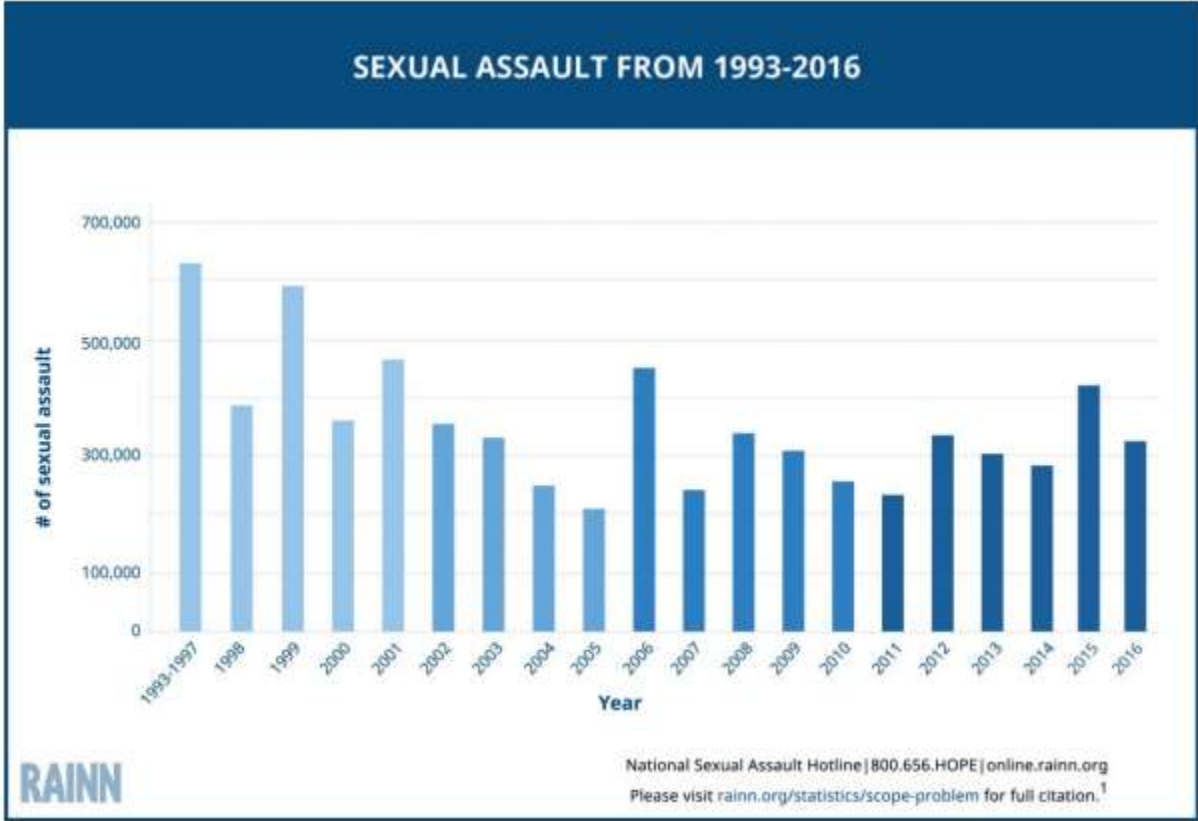


Figure 1. Graph of sexual assault rate from 1993-2016. Reprinted from RAINN Statistics, by RAINN, retrieved from <https://www.rainn.org/statistics/scope-problem>

There are no pure medical cures for a sexual assault survivor. Still, there are tools, methods, and designs that can be explored and implemented through research to help soothe and soften the unpredictable day-to-day obstacles that these survivors face

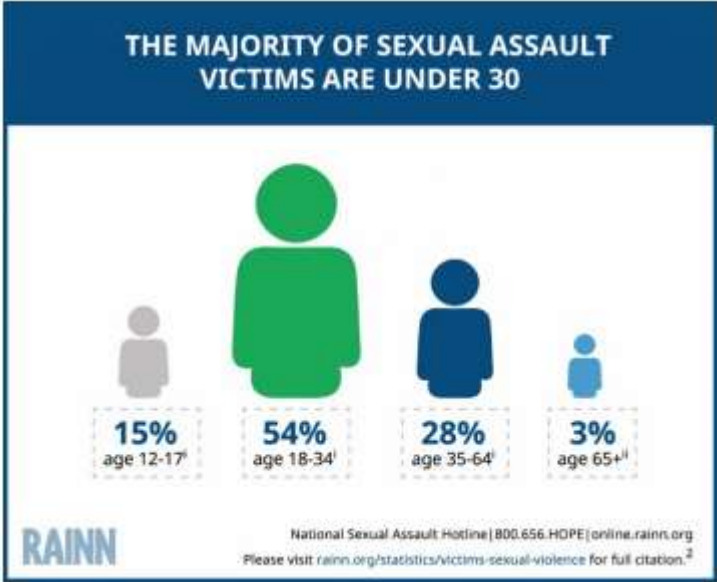


Figure 2. Graphic of sexual assault risk. Reprinted from RAINN Statistics, by RAINN, retrieved from <https://www.rainn.org/statistics/victims-sexual-violence>

Sexual violence is also known to affect victims' relationships with their family, friends, and co-workers. Studies show that 37% experience problems with friends and family, primarily due to a decreased sense of trust and no longer feeling close to them after the crime.

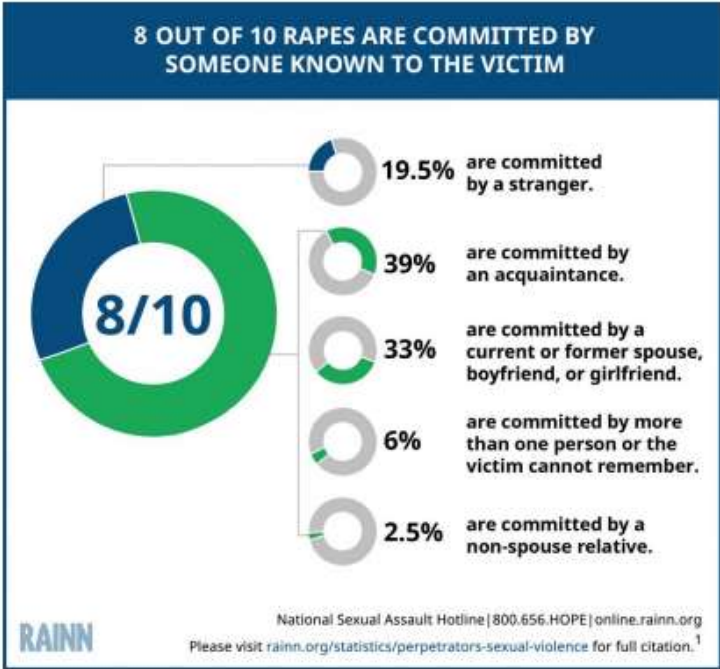


Figure 3. Graph of Perpetrators of Sexual Violence. Reprinted from RAINN Statistics, by RAINN, retrieved from <https://www.rainn.org/statistics/perpetrators-sexual-violence>

Sexual Assault Reportage in Nigeria

From February to July, 2020, Nigeria has recorded 3, 600 cases of rape only a hand few of them have been arrested and prosecuted. This increase may be attributed to COVID-19 restrictions (lockdown). Over the years, there have been incidences of rape in Nigeria, the data retrieved from Nigerian Force (NPF) indicates that rape cases in Nigeria have been on the rise. In 2015 according to National Bureau of Statistics (2019), the percentage of increase of rape increase to 63.04%, it increased again to 72.13% in 2016, but decrease to 69.33% in 2017 and 2018 respectively. Though, Ogundode, Bello and Ogunbode (2014) had argued that the percentage of sexual violence is difficult to establish because of the variation on how data source that defines it is gathered. Nonetheless, rape cases have continued to increase, Anagor (2020) exerts that the causes of rape in Nigeria is due to the high rising intake of alcohol, drug abuse, idleness, pornography exposure, psychographic disorder and bad company among youths.

Data retrieved from The Nation, The Guardian and Daily Trust. A total of 478 rape cases were published by all three newspapers between January and September 2020 with a record spike of 130 reported cases in the month of June alone which was significant and could possibly be attributed to the COVID-19 lockdown and its associated restrictions where sexual predators were trapped with their victims. Teenage rape cases reported by the newspapers had the Nation newspaper with 41% rate of reportage, Daily trust 34% rate of reportage and The Guardian 25% rate of reportage. A total of 23 deaths resulting from rape were reported by the three newspapers. Sexual assault is pervasive in Nigeria and is likely going to worsen if no steps are taken immediately to end this scourge.

❖ Examples of sexual abuse trauma include:

Sexual harassment, Stalking, Child sexual abuse, Military sexual trauma, Intimate partner violence, Drug-facilitated sexual assault, Sexual abuse by a healthcare professional, Sexual exploitation by a service or helping professional, Harassment, or unsolicited or non-consensual sexual interactions through technology

❖ Signs & Symptoms of Sexual Abuse Trauma

When a young girl or woman starts to act out in certain ways or has specific physical symptoms, these might be warning signs that someone is sexually abusing her or that she has been sexually assaulted. If you notice these sexual abuse trauma symptoms or warning signs in a woman or adolescent girl, it may be time to reach out for professional help. Frequent nightmares, Frightened or upset by thoughts and memories, easily irritated and has angry outbursts, suddenly avoids certain people or places, seems on edge and easily startled, struggles to get a good night's sleep, develops a negative outlook on life, Feels misplaced guilt or shame, Growing sense of low self-esteem.

❖ Importance of Getting Help for Sexual Abuse Trauma

The destruction that sexual abuse trauma can inflict on a woman's or adolescent girl's life can be devastating. The stigma associated with sexual violence can make it even harder to reach out for help but supporting survivors of sexual violence is essential to ensure that young girls and women know they're not alone. The effects of sexual abuse trauma occurring due to lack of professional help can include: Development of various behavioural health concerns, sexually transmitted infections, Unplanned pregnancy, Low self-esteem, Difficulty setting boundaries, Trouble feeling safe in relationships, Self-harm, Thoughts of suicide or suicide attempts

❖ Finding the Right Sexual Abuse Trauma Treatment

Healing from sexual abuse trauma is a personal journey that looks different for each woman and adolescent girl. It is essential that you find the path to healing that aligns with your needs and recovery goals. Understanding just how important it is to identify the level of care that meets patients where they are in their recovery from sexual abuse trauma. This ensures that they truly benefit from the sexual abuse trauma treatment experience in order to build a long-lasting healing foundation.

The sexual trauma rehabilitation centre to be provided offers women and adolescent girls a safe, secure space to gain the coping skills they need to experience long-term healing, while women can benefit from the structured, trauma-informed approach of partial hospitalization program (PHP). A sexual trauma rehabilitation centre is a place designated for the health care of special cases (post traumatic patient) that are

caused from sexual trauma, or sexual abuse or assault by providing them with the needed physical and physiological treatment in one place and raising the awareness of the patient.

Aim

This research was carried out with the main aim of understanding sexual assault trauma, and effects of landscape on stress and trauma that aid and create an environment for invisible healing of sexual trauma patients. This research will use landscape as an effective un-volumetric architectural tool to reduce the effects of stress and trauma in a sexual trauma Rehabilitation and care Treatment Centre at Awka, Anambra State.

RESEARCH METHODS

This research investigated both academic and socio-psychological importance and the study of mental health architecture with the prejudice of sexual trauma in Nigeria. and it will provide a detailed literature on the study of effects of landscape on stress and trauma in the region. The disciplinary area of focus is architecture as such, content base analysis was used and looked into previous studies done in the subject matter by different authors.

FINDINGS

Feelings of stress, such as the feeling of being chased, harassed and of not being able to control a situation, have therefore a direct effect on pulse, blood pressure, and so forth. Various bodily products, such as hormones that are secreted under stress, are broken down and dissipate more rapidly when one takes a walk. If one remains still, on the other hand, increasing amounts of stress hormones are accumulated, affecting the whole body negatively through deleterious effects on, e.g., blood pressure, pulse and breathing. These lingering stress hormones also make it harder to relax and sleep (Uvnäs-Moberg 1997).

Today, stress is regarded as one of the most important factors related to ill-health in modern society (Nygren et al. 2002) Stress reactions may be reduced with exercise, which rids the body of some of the fighting and wakefulness hormones. Exposure to daylight may reduce stress reactions by adjusting hormone levels, especially cortisol and melatonin (Küller & Lindsten 1992; Küller & Wetterberg 1996). Finally, research findings indicate that nature helps people to concentrate better and to recover from “directed attention fatigue” (Kaplan 1990), because nature contains a wealth of restful information that does not cause tiredness in humans (Kaplan et al. 1998). This means that the body, consciously and unconsciously, integrates a variety of information that supports either stress or recovery. good landscape planning can contribute to creating a less stressful and more restorative everyday environment for inhabitants in the center: interactions with properly landscaped open spaces could help to physically and emotionally restore survivors.

Fortunately, there is a recently rediscovered body of evidence that supports the view that nature generally, and everyday living environments in particular, can have a profound effect on health and well-being. Connecting with nature can restore cognitive attention, improve blood pressure and self-esteem. That is, it is useful in prevention of mental health conditions. Studies have shown that exposure to natural environments enhances our ability to recover from stress, illness, and injury, and provides a wide range of social, psychological, and physiological benefits. Across our towns and cities, a connection with nature has been found to be a vital, albeit often unconscious, part of being human.

In the late 1970s, the environmental psychologist Ulrich began research on the emotional and psychological effects of environmental aesthetics on individuals with a special experience in terms of psychological challenges. In 1984, his paper, “The View through a window” can be effective in restoring the patient after surgery,” posed a serious discussion about access to nature in hospitals, which was published in the journal *Science*. The outcomes data revealed that patients with the nature view had shorter hospital stays suffered fewer postsurgical complications, needed fewer doses of potent narcotic pain medication, and received more positive written comments in their medical records from staff.

Ulrich’s study, cited in thousands of publications from books to scholarly journals to newspaper and magazine articles was, and continues to be, significant for two reasons. First, it demonstrated to the medical

community using the same empirical, quantitative methods that they used and respected that the physical environment, and specifically views of nature, had a measurable positive effect on patient health. Second, it established a business case for providing access to nature. All of the improved health outcomes for patients' duration of hospital stays, amount of pain medication, degree of strain on nursing staff, and level of patient satisfaction translated directly to potential cost savings.

Physical settings can play a role in coping with stress; in particular, experimental research has found strong evidence between exposure to natural environments and recovery from physiological stress and mental fatigue, giving support to both "stress recovery theory" and "attention restoration theory". In fact, exposure to natural environments protects people against the impact of environmental stressors and offer physiological, emotional, and attention restoration more so than urban environments. Natural places that allow the renewal of personal adaptive resources to meet the demands of everyday life are called "restorative environments." Natural environments elicit greater calming responses than urban environments, and in relation to their vision there is a general reduction of physiological symptoms of stress. Exposure to natural scenes mediates the negative effects of stress reducing the negative mood state and above all enhancing positive emotions. Moreover, one can recover the decrease of cognitive performance associated with stress, especially reflected in attention tasks, through the salutary effect of viewing nature. Giving the many benefits of contact with nature, plans for urban environments should attend to restrictiveness.

Past research demonstrates that naturalistic settings may offer benefits in terms of stress reduction and improved mental states within corrections environments.

The visible landscape is believed to affect human beings in many ways, including aesthetic appreciation and health and well-being. The landscape surrounding a sexual trauma rehab center can have a significant impact on the stress and trauma experienced by the residents. Research has shown that exposure to natural environments, such as green spaces and bodies of water, can help to reduce stress levels and promote healing. A calming landscape with natural elements, such as trees, gardens, and water features, can provide a sense of safety and comfort for those who have experienced trauma. It can also help to reduce the feelings of isolation and anxiety that can be common in rehabilitation settings. A lack of natural elements can also make it more difficult for individuals to feel connected to their surroundings and to others, which can hinder the healing process. Overall, the landscape surrounding a sexual trauma rehab center plays a crucial role in promoting recovery and reducing stress and trauma. By incorporating natural elements and creating a calming environment, rehab centers

CONCLUSION

Landscape is the art of designing, planning and management of land, arrangement of natural and man-made elements, through application of cultural and scientific knowledge with concern for resources conservation so that the resultant environment can serve a useful, healthy and enjoyable purpose. It deals with the beautification and management of the environment by the organization of spaces with adequate cognizance of the basic principles of design. Landscaping is an integral part of our culture and plays an essential role in the quality of our environment, economic wellbeing of the people, as well as their physical and psychological health. Smith believes that it is a way of maintaining and enhancing the quality of human life by protecting the health of the biosphere and husbanding the key resources of the air, water, land and minerals.

Landscape has different major roles it plays in the environment to which it is incorporated. It helps balance the atmospheric condition and gives a healthy environment etc. the effects of landscape on stress and trauma are about integrating the principles landscape architecture into design with the goal of creating physical spaces that promote safety, well-being and healing. This requires realizing how the physical environment affects identity, worth and dignity, and how it promotes empowerment. It requires recognizing that the physical environment has an impact on attitude, mood and behaviour because there is a strong link between our physiological state, our emotional state and the physical environment. It also means that intentionally designing and maintaining healing environments leads to empowerment and resists retraumatizing those who have already experienced so much trauma. This includes reducing and

removing known adverse stimuli and environmental stresses, actively engaging individuals in a dynamic, multisensory environment, supporting self-reliance, providing and promoting connection to the natural world, separating individuals from others who may be in distress, reinforcing a sense of personal identity and promoting the opportunity for choice while balancing program needs and the safety and comfort of the majority. Factors to consider include understanding how the physical environment promotes a sense of safety, calmness and productivity. To incorporate trauma-informed design into new and existing spaces, consider these general guidelines;

- Think about spatial layout: Spaces with clear sightlines and few barriers create a sense of safety and calmness.
- Create visual interest with detail but not overcrowding. An appropriate quantity of objects, symmetry and regularity in their arrangement alleviates stress and promotes well-being.
- Avoid deeply hued warm colours that may arouse negative emotions. Cool colours have a calming effect.
- Natural light makes rooms appear less crowded, and lower levels of illumination mitigate perceived crowding and the resulting stress and discomfort.
- Plants perform an important biophilic function by connecting occupants to the natural world, which has been found to reduce stress and pain, and to improve mood.

Landscape And Microclimate Control

Control of microclimate within the centre can be achieved with the use of soft and hard landscape elements. Soft landscaping describes plant materials such as new lawn created by seeding or turfing, planted borders, shrubbery and trees while the hard landscaping elements are “all wide range of hard materials like bricks, gravel, rocks or stone, concrete, timber and other elements including simple structure, steps, paving, garden furniture, wall and fences used by designers to develop landscape design” Trees in landscape serve the purpose of creating shades, aesthetics as well as improving air quality and representing buffers between pedestrians and traffic. The use of trees and shrubs is highly significant in the provision of shades and control of relative humidity and air movement. They contribute more in the attainment of thermal comfort than any other elements. Tree leaves are arranged to catch as much of the sun ray as possible, thus providing the best possible shade which is far superior to that provided by the roof or wall. Most of the plants and shrubs found on the rehabilitation centre site are native to the local environment. Tree and shrubs, no doubt, add beauty and values to buildings and the totality of the environment. They help modify the microclimate around buildings and outdoor living environment. In landscaping, however, correct plants selection, proper timing of plants and plantings techniques are vital to achieving success in creating a scenic environment. Essentially, the selection of plants should be based on the functional roles they will play in the overall landscape.

The need for man to live and work in a good quality, functionally efficient and an aesthetic environment calls for landscape design and planning. Open spaces need to be well planned, managed, organized and maintained. Professionals in landscape planning and other related disciplines (Horticulturists, landscape planners and so on) should be employed in the Planning and Horticulture unit to handle issues of landscape design and planning of the centre. Plant materials of different kinds (colour) should be adopted in landscaping of the centre in order to improve the aesthetic value.

- **Green Spaces**

Having well maintained green spaces are vital when it comes to trauma centres. No matter what age the survivors are, they all appreciate having open spaces. These spaces provide opportunities for relaxation, physical fitness and a place to connect with others. In addition to that, green spaces provide vegetation that help with carbon levels ensuring that the survivors are breathing cleaner air. Another perk of green spaces is noise reduction.

Trees of different species should be introduced at car parks, strategic and organized open spaces to control global warming by maintaining the amount of carbon (IV) oxide in the atmosphere and also serve as wind breakers. The introduction of ever-green lawn around buildings or structure on the rehab centre would give aesthetic look to the centre and also help in preventing soil erosion which is a major problem

confronting some areas of the campus. All these will improve the landscape quality as the enter ultimately achieves a sustainable healing environment.

Open And Organic Space

Certain indoor and outdoor design elements such as sharp corners, narrow pathways, blind spots, etc. increase anxiety and leads to triggers while soothing features (e.g., Open spaces, situational awareness providing features such as lack of clutter or open floor plans) can relax high-quality maintenance, landscaping, and social spaces existing in flexible environments are key in the design. Interior spaces need to be well lit and humanistic values need to be encouraged through colours and graphics, with the aid of art displays to create positive social engagement. A general theme started to become apparent in the responses. Curvature, colour, light, and nature all emerged as themes of comfort. Lighting is a key and powerful tool that is multi-faceted when considering the design of a centre aimed at healing Trauma. Daylighting, or passive lighting, has a measurable influence on physical health by increasing vitamin D and serotonin levels. Both of these have not just an effect upon the mood of an individual but also the physical functionality of human systems. The mental impact of simply experiencing daylight is also thought to influence activity level and the desire to achieve goals heavily. As a supplement to daylighting, transparency and visibility are vital. The design should not induce the feeling of being trapped or hindered by avoiding narrow corridors and tight corner. Visibility into and out of spaces with the facility should be maintained as much as possible. Providing glass doors and glass walls are another key demand. Since hyper-awareness can often occur as a constant symptom, making the ability to be aware of your surroundings easier would help to alleviate the anxiety not seeing what might be around the corner. Stimulating outdoor type environments, though more public rather than private, became a strong design point. It was mutually felt by many of the subjects that natural spaces helped to encourage social interaction instead of isolation. There has been a substantial amount of research regarding nature being a tool for healing. Landscape Architect, Julie Moir Messervy, specializes in creating these types of spaces. Stemming from her time in Japan, she claims that nature is a critical element in contemplation and the ability to reflect. A therapeutic garden achieves this through invitation rather than by demand, allowing the user to decide upon the method of their interaction. Combining light and nature brings about the topic of colour. Colour can function as a processing cue for the environments a user inhabits. Red and orange can induce agitation and easily excited nature, green is the most balancing of colours, blue can encourage relaxation and creativity, yellow encourages action, and purple often represents spirituality. By creating a network of colour, it can be used as an organizational tool of space, encouraging or defining activity designation throughout the programming.

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