

Spatial factors affecting indoor environmental quality of interior design in psychiatric hospitals

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▪ Abstract:

Psychiatry specialties are considered one of the important specializations in the current era in the Egyptian society due to its passage through many psychological and social pressures as a result of the economic deterioration experienced by Egypt, especially after the revolutions. One of its consequences was the effect on the psychological aspects of society, which led to the need to initiate attention to psychiatry and to rehabilitate specialized hospitals affiliated with government agencies to be able to meet the requirements for treatment in this field.

Since there is a large proportion of the world's population with mental disorders, it is up to the designers to contribute significantly to building a healthy environment, the work of interior design, and the design of external spaces that contribute to treatment. Evidence-based design may enable designers to understand the causal links between the environment and psychotherapy.

People need diversity in their visual vision. Diversity is the balance between unity and complexity. Extreme unity leads to imperfect motivation, while extreme complexity leads to over-stimulation. Excessive stimulation exposure can cause changes in respiratory rate, pulse rate and blood pressure. An increase in muscle tension. Psychological reactions of different types, and the designer is responsible for finding an appropriate balance between extremism and harmony required in interior design, Studies indicate that there are many factors that affect the satisfaction of patients and workers in the internal environments of psychiatric hospitals. These factors are integrated; the difference of one factor significantly affects the rest of the other factors and affects the users of the place, all factors affecting the quality of the internal environment should be considered, that the integration has a positive or negative impact on the other factors, are weak design affects the quality of the internal environment of the interior design? Not only negatively affect the physical health of the building occupants, but also their mental health. These factors are classified into two categories: spatial factors and environmental factors.

Location and interior factors include a small set of environmental conditions that effectively reduce stress. They include certain types of music, furniture layout, interior plants, landscape, guidance, color scheme, art objects, nature views and virtual reality interference (VR).

▪ Keywords:

(Spatial factors – indoor environmental quality - Interior design - Psychiatric hospitals).

Introduction:

Psychiatry specialties are considered one of the important specializations in the current era in the Egyptian society due to its passage of many psychological and social pressures as a result of some of the economic deterioration experienced by Egypt, especially after the revolutions. One of its consequences was the effect on the psychological aspects of society, which led to the need to initiate attention to psychiatry and to rehabilitate specialized hospitals affiliated with government agencies to be able to meet the requirements for treatment in this field.

Since there is a large proportion of the world's population with mental disorders, it is up to the designers to contribute significantly to building a healthy environment, the work of interior design, and the design of external spaces that contribute to treatment. Evidence-based design may enable designers to understand the causal links between the environment and psychotherapy.

Evidence-based design can be defined as "the process of basing decisions about the environment based on reliable research to achieve the best possible results."

As a result of field studies in some government psychiatric hospitals in Egypt, the following was evident:

- The low level of services, care and space for treatment, including interior design and design of the external space of the building compared to private hospitals in Egypt and abroad.
- It was found that the interior design has an important role in helping the patient to pass through his ordeal, complete the healing and not care about them, and does not give good opportunities to improve treatment and care services for these patients.

Research problem:

1. The internal environment of the interior design of psychiatric hospitals in Egypt is exposed to a clear deficiency that negatively affects the hospitalization process.

.2 Lack of awareness of the importance of spatial factors affecting the quality of the internal environment, such as choosing the appropriate colors, architectural design, and the presence of indoor plants in the hospitalization process of psychiatric hospitals.

Research Objective:

Shed light on the importance of spatial factors affecting the quality of the internal environment, such as choosing the appropriate colors, architectural design, the presence of indoor plants in the hospitalization process of psychiatric hospitals, and reducing the period of stay of patients in the hospital.

Research hypotheses:

Achieving the quality of the internal environment for psychiatric hospitals, leading to improving performance and improving the quality of services for these hospitals.

Research importance:

The importance of the research is due to the necessity of awareness of the role of spatial factors in the quality of the internal environment for the interior design of psychiatric hospitals and the impact of this on the success of patient treatment.

Descriptive and analytical method: through the description and analysis of spatial standards affecting the quality of the internal environment of psychiatric hospitals.

Search terms:

- **Indoor air quality:**

Indoor air quality is the condition related to the conditions surrounding buildings and structures, and their relationship to the health and comfort of building occupants.

- **IEQ (Internal Environment Quality):**

It is beyond IAQ indoor air quality to cover all aspects of the indoor environment including air quality, heat, visual comfort and acoustic comfort, and focuses on strategies and systems that lead to a healthy indoor environment for building occupants.

- **SBS:**

Sick Building Syndrome was recognized in the 1970s, with the widespread use of refrigeration, industrial heating, and electrical appliances. The term "sick building syndrome" is used when a set of common symptoms appears on a number of people who are inside a specific building or in a part of the building and these symptoms disappear when leaving the building and may not disappear as complications may reach a disease called (Building related illness) where symptoms have been durable but improving. It has been found that women suffer from it more than men and it is also present in the consistent abundance among workers in offices and closed places such as schools, libraries, museums or hospitals.

Results

- The landscape of spatial factors consists of plants and water elements.
- The orientation inside the building depends on vertical and horizontal movement lines.
- There are indications of the colors used inside the place in the walls, floors, and ceilings, and each color has an indication, use, and effect.
- Colors are used in psychotherapy in mental health hospitals.
- Proper furniture scheme: furniture specifications and arrangement considerations are among the most important spatial factors affecting the quality of the interior environment for interior design in mental health hospitals.
- Virtual reality is one of the factors that must be taken care of when making interior design for mental health hospitals because of its therapeutic effect on patients.

Recommendations:

- The General Secretariat of Mental Health at the Ministry of Health should pay attention to applying the spatial factors affecting the quality of the internal environment for interior design in the buildings of its hospitals.
- Those responsible for psychiatric hospitals in Egypt must assign the task of architectural design and interior design to specialists in doing so in order for us to

obtain a facility based on a thorough study, thus achieving a speedy recovery for psychopaths.

- Committing the General Secretariat for Mental Health to develop governmental mental hospitals with environmental standards, which greatly help in healing the mentally sick when applying them.

Examples:



Picture (1)
shows the use of plants in stairs spaces to reduce the risk of distances left under the ladder
<https://www.ambius.com>



Picture (2)
the architectural design and the division of blanks for a psychiatric hospital
www.architracker.com



Picture (3)
shows a movement corridor that leads to another part of the hospital
<https://www.allthingsflooring.com>



Picture (4)
Shows the use of a water element as an architectural composition to attract attention
<http://consulus.com>



Picture (5)
shows the ease of moving the furniture of the living room
<https://www.contractdesign.com>



Picture (6)
Shows the use of light and shadows for mural as a work of art to attract attention
<http://roomsthatrock4chemo.org>

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