Biophilic design to promote mental health in hospital resorts

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Abstract:

The human is exposed during his life to pressures that affect him negatively in addition to not being exposed to nature, in addition to being exposed to different levels of noise and organic pollutants that harm health. The ecosystem is one of the best design directions to reach architectural designs and spaces compatible with the nature of the users and the surrounding environment. It introduces the most design approaches with environmental and taking advantage of the integration between environmental determinants and available technological systems Which depends on flexibility in dealing with the variables of the surrounding environment, Biophilia architecture is one of the environmental architecture movements that helps return architecture and interior design to their correct environmental path. It improves the quality of the internal environment of hospital buildings. It raises the psychological state and mood of the users, making a part of nature inward, It has an aesthetic visual effect, improves concentration, emotion and mood, and reduces stress, tension, fear and anxiety. The research aims to that biophilic design and contact with plants improves human behavior and mental health. It also works to reduce the temperature and humidity control and evaporative cooling. Reducing sound levels and improving air quality to remove pollutants.

The problem of this study is that sustainable interior design is actually limited in use, This research aims at strategies and designs for interior treatments and façades in sustainable environmental design. The human being to restore the proper equilibrium of his physiological response to the environment. Through biophilic design, The research included two axes: first is the theoretical aspect, which deals with the conceptual framework for the biophilia trend and extrapolates the most important aspects. Second: the interrogative aspect of spaces constructed according to the principles of biophilic design and their analysis according to the theoretical framework. The interior designs ignore the relationship of man with nature, which influenced man in the living biological part. The component of the organs that interact with the spiritual side and overlooks his nervous system, which led to increased pressure on him.

Significance: The study came to create a healthy environment through environmentally compatible solutions and treatment of its internal spaces that promote mental health in hospital resorts.

Objective: To benefit from the biophilia trend in addressing internal spaces and architectural façades in solving problems resulting from ignoring the environmental dimension in design. Through design solutions to reach environmental sustainability and human comfort visually, healthily and psychologically and make it integrated in an environment that helps produce and stimulate work and modify human behavior and health.

Key words: Biophilic design, green façades, living walls, interior design, hospital buildings, human comfort.

Results: The need to adopt a biophilic design approach in order to create interiors that preserve human health and enhance productivity. To achieve integrated designs with the environment. The necessity to use natural materials such as wood in floors and wall cladding is important and effective in promoting the psychological and general health of the human being. Colors have a strong effect in promoting health, treating depression, stimulating perception and memory, and green must be introduced as a color for health and safety and its impact on creativity and brain response. To achieve relaxation by altering blood flow rates in the brain. Biophilic design in interior architecture remedies the deficiencies in isolating buildings from nature to create a healthy environment that promotes human health for its participation and connection with nature.

References:

7. Michael M. Davis, Stephanie Hirmer, Published 2015, Engineering, Building and Environment
8. Beyond green façades: active air-cooling vertical gardens
9. Michael M. Davis, Andrea Lorena Vallejo Espinosa, F. Ramírez, Published 2019, Environmental Science
More than just a Green Facade: The sound absorption properties of a vertical garden with and without plants

Acoustics evaluation of vertical greenery systems for building walls

A review of green systems within the indoor environment

Tatiana Armijos Moya, Andy van den Dobbelsteen, Philomena M. Bluyssen, Indoor and Built Environment Published 2019

MahdiNejad , Architecture, Training University, Tehran, Iran September 2016 - A STUDY ON THE CONCEPTS AND THEMES OF COLOR AND LIGHT IN THE EXQUISITE ISLAMIC ARCHITECTURE


Abutalebi E, The symbolic meaning of colors, Center of Islamic studies of broadcasting organization, 1993.

Jana Söderlund and Peter NewmanBiophilic architecture: a review of the rationale and outcomesn University Sustainability Policy Institute, Bentley, Australia, 10 December2015,

William Browning, Hon. AIA, 14 Patterns of Biophilic Design Improving Health & Well-Being in The Built Environmem Terrapin Bright Green LLC, 2014.


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