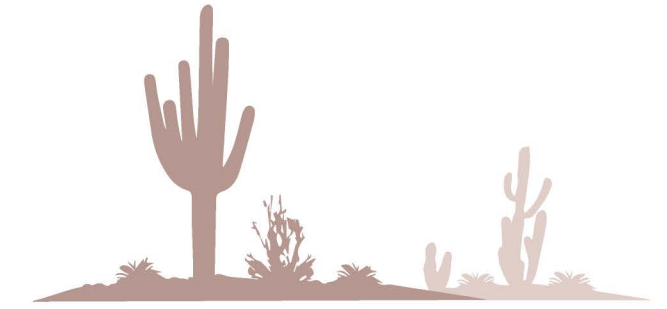


Biophilic Design in Women Health Facilities



ABSTRACT

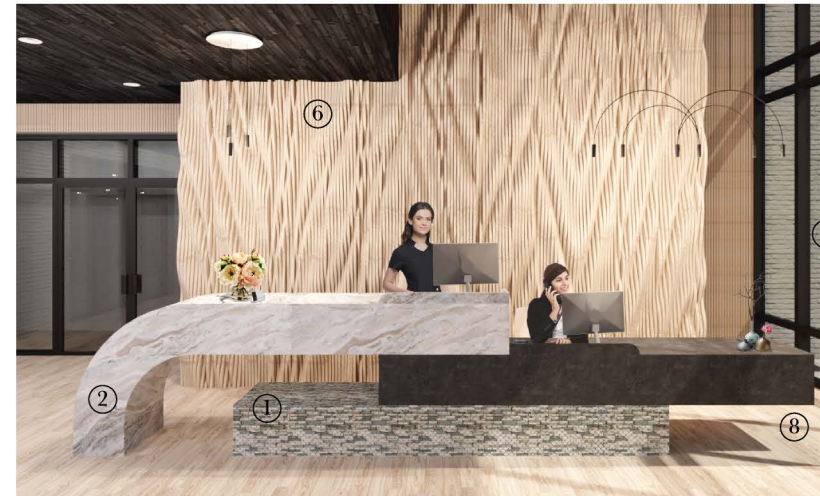
In Margaret Robertson's book, *Sustainability Principles and Practice-Routledge*, 2017, biophilia is described as "the genetically encoded emotional need of humans to affiliate with nature and with other living organisms, evolved as an adaptive mechanism to protect people from hazards and to help them access resources such as food, water, and shelter." This expresses that biophilia is the innate desire within human beings to have a positive connection to nature. It was a trait developed through years of evolution to keep us safe and now it is said that it can be used in design to reduce stress, expedite healing, and enhance creativity and clarity of thought. This research examines the benefits of biophilic design principles and focuses on how nature can be simulated in an indoor area to produce a more inviting, delightful space to visit and have positive impacts on the users of the space. In this project the research is applied to the Saguaro Desert OB/GYN Center as obstetrical and gynecological centers can be particularly dull and uninviting. At times appointments can be invasive and stressful, making these centers a critical space to be more calming and natural. By applying this research to the center, the benefits of biophilic design will be uncovered as well as the extent to which biophilic design can fulfill the human need to be connected with nature.

BIOPHILIA IN HEALTHCARE

"It is believed that nature possesses the ability to make the human body feel more at ease in a particular setting, which in turn can improve our stress levels, reduce the amount of pain felt after an instance such as surgery & it also has the power to distract & soothe the mind & body." A study held in a hospital utilized recovering patients from abdominal surgery in two identical rooms with differing views (one a brick wall & the other a beautiful view to the outdoors) in order to determine if nature can improve healing. "Results showed that patients with the window view out to nature felt significantly less pain after surgery and required less medication than those with the view of the building, implying a faster healing rate."

RESOURCES

14 Patterns of Biophilic Design: Improving Health & Well-Being in the Built Environment by William Browning, Catherine Ryan, & Joseph Clancy
Sustainability Principles and Practice-Routledge by Margaret Robertson
Enhancing Human Health and Recovery Through Biophilic Design by Matthew T. Blair



BIOPHILIC DESIGN PRINCIPLES

14 Patterns of Biophilic Design:

- | | |
|--------------------------------------|------------------------------------|
| 1. Visual Connection with Nature | 8. Biomorphic Forms & Patterns |
| 2. Non-Visual Connection with Nature | 9. Material Connection with Nature |
| 3. Non-Rhythmic Sensory Stimuli | 10. Complexity & Order |
| 4. Thermal & Airflow Variability | 11. Prospect |
| 5. Presence of Water | 12. Refuge |
| 6. Dynamic & Diffuse Light | 13. Mystery |
| 7. Connection with Natural Systems | 14. Risk / Peril |

Biophilic Design Patterns at Saguaro Desert:

- ① Visual Connection with Nature:** River stones in the reception desk fulfill the naturally occurring portion of this pattern; Landscape paintings in each of the treatment rooms fulfill the simulated visual connection with nature
- ② Non-visual Connection with Nature:** Music with fractal properties is played throughout the center; Use of natural stone (Fantasy Brown granite) in the reception desk
- ③ Non-Rhythmic Sensory Stimuli:** Billowy furniture in the waiting room, such as the Tufty Sofa by Burke Décor and the Palazzo Leather Swivel Chair by Bernhardt
- ④ Thermal and Airflow Variability & Dynamic and Diffuse Light:** Maximized daylighting of the spaces
- ⑤ Presence of Water:** Presence of a metal and glass fountain that separates the reception area from the waiting area
- ⑥ Connection with Natural Systems & Biomorphic Forms and Details:** Wood slat wall behind the reception desk that mimics the curving rock formations in Arizona's canyons.
- ⑦ Material Connection with Nature:** Various wood tones and natural stone in the interior materials and finishes
- ⑧ Risk and Peril:** The design of the reception desk with its appearance of defying gravity, giving the space a thrilling and exciting atmosphere

