

Biophilic Design: Creating a healthy guest experience

Ashley Carlson, Samantha Doeden, & Brittany Galbrecht Advisor: Susan Ray-Degges, Ph.D., CID MN

Department of Apparel, Design and Hospitality Management- North Dakota State University

Abstract

The purpose of this study is to gain a better understanding of how biophilia can enhance the interior environment and the most beneficial factors of biophilia which should be incorporated into design to alleviate everyday stressors.

The information gathered focused people of diverse backgrounds, and their experiences of hotel and spa atmospheres. Utilizing altered images of the same interior spaces, multiple-choice questions and a Likert scale were used to gather the data. The information gathered will better help our understanding of the interior environment that should be developed to reduce stress and assist relaxation with the assistance of biophilia.

The research showed participants prefer spaces with the presence of nature elements, versus spaces with no presence, and having the ability to control their surrounds within the interior built environment.

Methodology

Measures & Procedure

- Data for this study was collected through Qualtrics, using a quantitative research method including 13 questions taking about five minutes to complete focusing on biophilia in the indoor environment.
- The survey was available to complete starting November 15th through November 26th, 2018. Questions were broken up between hotel and inn related questions.
- Question types of questions included images based on preference of spaces with biophilic elements and spaces without, multiple choice, and a Likert scale.
- The survey was broken up into two distinct parts. The first regarding the inn and participants opinions on inn and hotel stays. The second was focused around spas and how people may or may not utilize them.

Subjects

- Participants were contacted through North Dakota State University (NDSU) and social media. Participants were of at least the age of 18 or older.
- In total 302 participants completed the survey with 81% of the participants being between the age of 18 and 24. The remaining came in as follows: 11% at 25-34, 3% at 35-44, 3% at 45-54, and 2% at 55 or older.

Discussion

Groenewegen, De Verheij, Maas, Spreeuwenberg, & Vries (2006) found that the presence of greens in the environment has a positive impact on human's health. Our findings indicate that the majority of participants preferred interior spaces that contained some sort of nature element, whether it be plants or water, compared to interior spaces that had no natural elements. This aligns with Adevi & Martensson (2013) findings on humans gravitation toward the presence of plants and animals within an area.

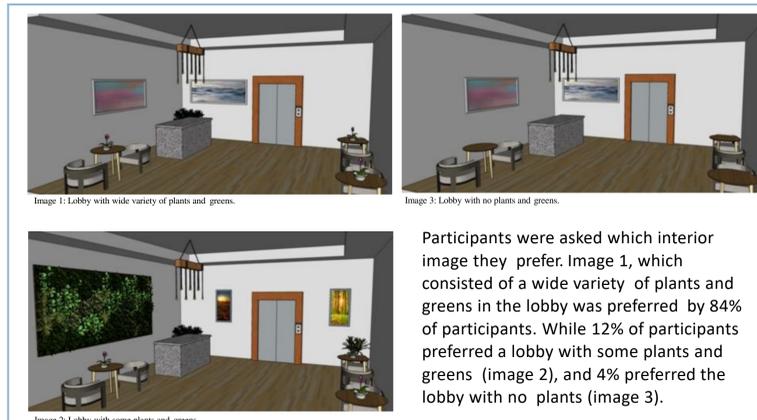
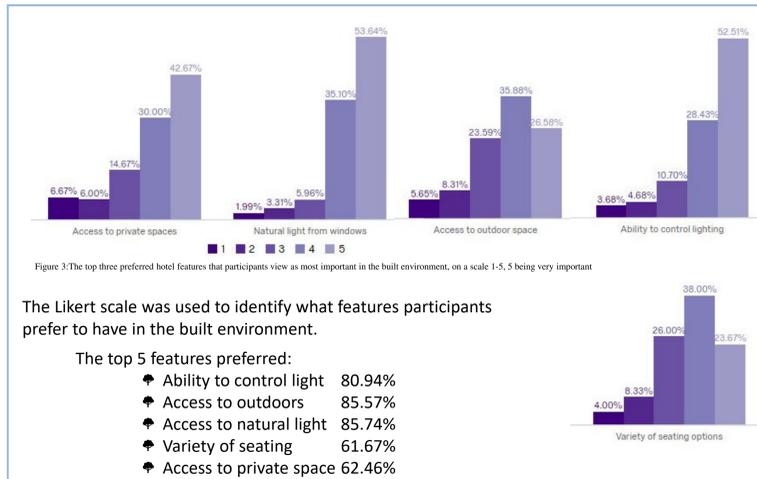
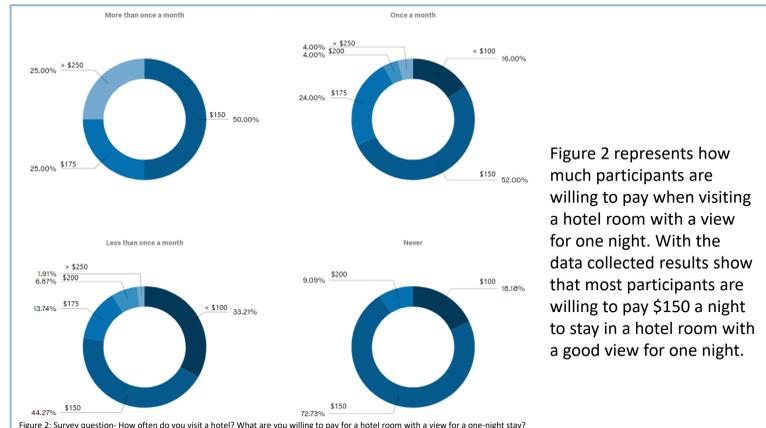
According to Evans (2003) the placement of large windows, or a lot of windows in a space provides natural lighting, which has been proven to positively affect people's moods, and lower stress levels. Results from our survey for elements that participants found most important in a space, results showed that light is very important, not only the ability to have access to natural light, but also the ability to control the lighting. This information relates back to an interview with Roxanne Mairs (2018), who discussed on it is important to allow for ample natural lighting in a space, and the ability to have access to dimming lights in a space.

Participants also look for the ability to have private or separate spaces and would pick a private space over a shared space when given the option. The research also shows that participants find it important to have the option to select from a variety of seating options in a space. These results indicate that participants like to have control over their space and have options within a space.

The results show that participants think of spas as a relaxing environment that can be beneficial and enjoyable. Results from our survey indicate that the main reason participants visit spas is to relax. According to Frumkin (2001), the presence of plants and nature elements within a space makes participants feel calmer and more relaxed. Therefore, these results show that as participants are looking for a relaxing experience while they visit spas.

Results

Inn/ Hotel



References:

Adevi, A. A., & Martensson, F. (2013). Stress rehabilitation through garden therapy: The garden as a place in the recovery from stress. *Urban Forestry & Urban Greening*, 12(2), 230-237. doi: 10.1016/j.ufug.2013.01.007

Evans, W. E. (2003). The built environment and mental health. *Journal of Urban Health*, 80 (4), 545.

Groenewegen, P, De Vries, S, Maas, J, P, & Spreeuwenberg, P, Verheij, R. A. (2006). Green space, urbanity, and health: How strong is the relation? *Journal of Epidemiology and Community Health*, 60(7), 587-592.

Mairs, R. (2018, October 3). Personal interview.

Spa

