Post-Occupancy Evaluation of Evidence-Based Design in a Louisiana Healthcare Facility

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Using evidence-based design in women's healthcare facilities contributes to the betterment of user's comfort and the promotion of overall wellbeing. Different design aspects affect women's emotional and physical states (Jiang et al., 2022). One of the most effective means of healing architecture is thoughtful use of daylight because biophilic design has been proven to promote healing(Simosen et al., 2022). By studying successful projects and applying tactics to future projects, designers can create effective spaces that cater to the real needs of staff and patients (Obeidat et al., 2022). Utilizing connections with contacts who work on the fourth and sixth floors of a women's hospital in New Orleans will allow the researcher to analyze the effectiveness of evidence-based design in practice. The researcher hypothesizes that the results will be positive, but areas of improvement are likely to be identified. Using post occupancy survey data from a third-party medical practice survey organization, the researcher reviewed patient satisfaction data to determine what areas of the hospital design could be improved for future design. Future implications of these results include the possibility of increased importance of executing evidence-based design and the continuation of learning how to provide the most efficient design. The success or failure of evidence-based design on this project can inform future research.

Design for healthcare settings continues to evolve as new research is conducted, and new information comes to light. Evidence-based healthcare practices emerged in 1996 and the practice was introduced by Kirk Hamilton at the Center for Health Design (CHD) board meeting in 2003. Evidence-based design can most simply be defined as: the process of designing and building a physical environment based on scientific research to achieve the best possible outcome (Peavey and Wyst, 2017). It is most often used in healthcare design practices and the Evidence-Based Design Accreditation and Certification (EDAC) has become widely recognized.

Research is always being conducted, so it is crucial for designers to stay knowledgeable on current research findings in order to create the best possible design solutions for clients. Thoughtful design can meet the practical needs and promote healing and wellness. Due to the ever-changing medical field, designers must create adaptable and flexible environments that allow for growth and change as research evolves (Leavitt and Trent-Adams, 2020).

This task was taken on ten years ago in a health system in New Orleans, Louisiana. The health center was designed using evidence-based practices to create a built environment that met the communities' real needs. The hospital supports women's health in varying ways, including an alternate birthing center and a neonatal intensive care unit. One decade later the hospital is still supporting this urban community.

Fig. 1. Labor, Delivery, and Recovery Room
Image courtesy of the Louisiana Health System and partnered architecture firm.

The purpose of this research is to utilize a literature review and a review of floor plans and presentation views to understand how effective the applied evidence-based design is and to learn how the design could be more

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successful in the future. Fairly early for its time, this Louisiana health system employed the use of evidence-based design, only ten years after the concept was introduced in 2003 at the CHD board meeting. Evidence-Based Design applications found on the Labor and Delivery 6th Floor includes, but are not limited to: daylight in all patient rooms, alternate birthing options within each delivery room, centralized nursing station, serene color palettes, and thoughtful overall design for patients, family members, and staff.

The research was conducted remotely involving both a literature review and review of floor plans and presentation views. The literature review portion focused largely on the current state of the American healthcare system and how these disparities directly affect women and the design of women's birthing facilities (Anderlini, 2018). For example, it has been found that chronic illnesses are more prevalent in women than men (Boersma et al., 2018). The review of floor plans and presentation views studied the use of evidence-based design concepts read about in the literature review.

Since research is continually being conducted and new technology emerging in the healthcare space, there are always updates that can be made. However, as far as healthcare design is concerned, this Louisiana healthcare system is very advanced and designed for maximum flexibility. There is much to be learned from the forward thinking and flexible design of this health system. Post-occupancy reviews are of utmost importance because they allow designers to learn from precedents and understand what aspects of a design are most successful.

Statement of Research Advisor

Claire's research examines an academic foundation to conduct a post-occupancy evaluation of an interior design project based on the principles of evidence-based design. While post-occupancy evaluations are common within the field of interior design, few reflect back on the evidence-based design goals of the project as their starting point. In that, this novel approach may allow for reformation of the post-occupancy evaluation method.

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References

[1] Anderlini, D., The United States Health Care System is sick: From Adam Smith to overspecialization. Cureus, Retrieved February 18, 2023, from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6067811/ (2018, May 31). Scholarly Journal

[2] Boersma, P., Black, L. I., & Ward, B. W., Prevalence of multiple chronic conditions among US adults, 2018. Centers for Disease Control and Prevention. Retrieved February 21, 2023, from https://www.cdc.gov/pcd/issues/2020/20_0130.htm
(2020, September 17). Scholarly Journal

[3] Jiang, S., Allison, D., & Duchowski, A. T., Hospital greenspaces and the impacts on wayfinding and spatial experience: An explorative experiment through immersive virtual environment (Ive) techniques. HERD: Health Environments Research & Design Journal, 15(3), 206–228. https://doi.org/10.1177/19375867211067539 (2022). Scholarly Journal

[4] Leavitt, N., & Trent-Adams, S., Transforming America's 'sick care' system. Harvard T.H. Chan School of Public Health. Retrieved February 18, 2023, from https://www.hsph.harvard.edu/news/multimedia-article/sylvia-trent-adams-nursing-public-health/ (2020, May 14). Scholarly Journal

[5] Obeidat, B., Younis, M. B., & Al-Shlool, E., Investigations into the impact of nursing unit layout on Critical Care Nurses. Heliyon, 8(2). https://doi.org/10.1016/j.heliyon.2022.e08929 (2022). Scholarly Journal

[6] Peavey, E., & Wyst, K. B., Evidence-based design and research-informed design: What's the ... SAGE journals. Retrieved February 18, 2023, from http://sage.cnpereading.com/paragraph/article/?doi=10.1177/1937586717697683 (2017, March 28). Scholarly Journal

[7] Simonsen, T., Sturge, J., & Duff, C., Healing architecture in healthcare: A scoping review. HERD: Health Environments Research & Design Journal, 15(3), 315–328. https://doi.org/10.1177/19375867211072513 (2022). Scholarly Journal

Authors Biography

Claire Sisson is a senior-year undergraduate student pursuing a B.S. degree in Interior Design at Auburn University. She has played key research roles in healthcare design and evidence-based design research.

Prof. Taneshia W. Albert is an enthusiastic, award-winning educator and design practitioner. Her scholarship focuses on cultural identity, inclusion, trauma, and digital literacy. Her design career is focused in design for healthcare environments, corporate interiors, and higher education spaces with a background in Medical Equipment Planning and Facilities Design and Construction.