



RESEARCH IN A SNAP

OVERVIEW

We're keeping you updated on citations added to The Center's Knowledge Repository.

The Knowledge Repository is a collaborative effort between The Center for Health Design and our partners

Academy of
Architecture for Health
an AIA Knowledge Community



Additional key point summaries provided by



RESEARCH DESIGN
CONNECTIONS

Knowledge Repository News

Among the 29 new entries in the Knowledge Repository, several papers focus on evaluation methods used to better understand a variety of design strategies and healthcare outcomes. A study by Jafarifiroozabadi et al. and a study by Jawed et al. each utilize virtual reality; however, the application for each study is very different. While Jafarifiroozabadi et al. were interested in exploring VR as a tool to understand usability of waiting room seating, Jawed and colleagues tested VR as a non-pharmacological intervention to address delirium for patients in the ICU. See the citations listed in the "Design & Evaluation" category below for findings on a variety of other methods, including POEs, virtual response testing, and photovoice.

You may notice that there are fewer papers than usual in this edition of Research in a Snap. One possible reason for the drop off in healthcare design publications may be the impact of the COVID-19 pandemic on the feasibility of conducting research in the healthcare setting. The studies being published now were conducted during the height of the pandemic, and so we hope to see a gradual increase in research again as researchers adjust to new ways of conducting this important work in our new world.

(Papers published ahead of print "in press" will be updated as volume and page information becomes available.)

November - December 2021

COVID-19

1. Cadnum, J. L., Jencson, A. L., & Donskey, C. J. (2021). Do plexiglass barriers reduce the risk for transmission of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2)? *Infection Control & Hospital Epidemiology*. <https://doi.org/10.1017/ice.2021.383>
2. Gregory, D. D., Stichler, J. F., & Zborowsky, T. (2021). Adapting and creating healing environments: Lessons nurses have learned from the Covid-19 Pandemic. *Nurse Leader*. <https://doi.org/10.1016/j.mnl.2021.10.013>
3. Ren, C., Xi, C., Feng, Z., Nasiri, F., Cao, S.-J., & Haghghat, F. (2021). Mitigating COVID-19 infection disease transmission in indoor environment using physical barriers. *Sustainable Cities and Society*, 74, 103175. <https://doi.org/10.1016/j.scs.2021.103175>
4. Setola, N., Naldi, E., Arnetoli, M. V., Marzi, L., & Bologna, R. (2021). Hospital responses to COVID-19: Evidence from case studies to support future healthcare design research. *Facilities*. <https://doi.org/10.1108/F-03-2021-0023>



Experience

Perceived Quality of Care (Noise, Communication, Waiting, etc.)

5. DuBose, J., Davis, R. G., Campiglia, G., Wilkerson, A., & Zimring, C. (2021). Lighting the patient room of the future: Evaluating different lighting conditions from the patient perspective. *HERD: Health Environments Research & Design Journal*. <https://doi.org/10.1177/19375867211063481>

Supportive Design (Social Support, Distractions, Nature, etc.)

6. Bae, S., & Asojo, A. O. (2021). Interior environments in long-term care units from the theory of supportive design. *HERD: Health Environments Research & Design Journal*, press. <https://doi.org/10.1177/19375867211062847>
7. Bogaert, B. (2021). Moving toward person-centered care: Valuing emotions in hospital design and architecture. *HERD: Health Environments Research & Design Journal*, in press. <https://doi.org/10.1177/19375867211062101>
8. Flores-Sánchez, A. R., Gutiérrez-Cirlos, C., & Sánchez-Mendiola, M. (2021). Analysis of physical learning spaces in a university hospital: A case study. *Medical Teacher*, in press. <https://doi.org/10.1080/0142159X.2021.2006618>
9. Golvani, J., Roos, L., & Henricson, M. (2021). Operating room nurses' experiences of limited access to daylight in the workplace – a qualitative interview study. *BMC Nursing*, 20(1), 227. <https://doi.org/10.1186/s12912-021-00751-8>
10. Kevdzija, M., & Marquardt, G. (2021). Impact of distance on stroke inpatients' mobility in rehabilitation clinics: A shadowing study. *Building Research & Information*, 1–15. <https://doi.org/10.1080/09613218.2021.2001302>
11. Mihandoust, S., Joseph, A., Madathil, K. C., Rogers, H., Jafarifiroozabadi, R., Ahmadshahi, S., Holmstedt, C., & McElligott, J. (2021). Comparing sources of disruptions to telemedicine-enabled stroke care in an ambulance. *HERD: Health Environments Research & Design Journal*. <https://doi.org/10.1177/19375867211054759>
12. Obeidat, B., Younis, M. B., Al-Shloul, E., & Alzouby, A. (2021). A study of workspace design characteristics exemplified by nurses' satisfaction within three intensive care units in a university hospital. *HERD: Health Environments Research & Design Journal*. <https://doi.org/10.1177/19375867211055731>

Safety

Infection Prevention/Control

13. Lowman, W., Etheredge, H. R., Gaylard, P., & Fabian, J. (2021). The novel application and effect of an ultraviolet light decontamination strategy on the healthcare acquisition of carbapenem-resistant Enterobacterales in a hospital setting. *Journal of Hospital Infection*, in press. <https://doi.org/10.1016/j.jhin.2021.12.008>



Care across the Lifespan

Therapeutic Environments: Behavioral/Mental Health

14. Pragati, S., Shanthi Priya, R., Rajagopal, P., & Pradeepa, C. (2021). Effects of built environment on healing the mental health of the people—literature review. *Frontiers in Engineering and Built Environment*, in press. <https://doi.org/10.1108/FEBE-09-2021-0043>
15. Sugiyama, T., Carver, A., Sugiyama, M., Lorenzon, A., & Davison, T. E. (2021). Views of greenery and psychological well-being in residential aged care facilities: Longitudinal associations. *HERD: Health Environments Research & Design Journal*. <https://doi.org/10.1177/19375867211059757>

Pediatric

16. McLaughlan, R., & Willis, J. (2021). Atmospheric inclusiveness: Creating a coherent and relatable sense of place for a children's hospital. *The Journal of Architecture*. <https://doi.org/10.1080/13602365.2021.1993964>
17. Qi, Y., Yan, Y., Lau, S. S., & Tao, Y. (2021). Evidence-based design for waiting space environment of pediatric clinics—Three hospitals in Shenzhen as case studies. *International Journal of Environmental Research and Public Health*, 18(22). <https://doi.org/10.3390/ijerph182211804>

Labor & Delivery

18. Simmons, C., Allison, C., Kee, J., & Ballas, D. (2021). Assessing preparedness of labor and delivery personnel in transferring to a new unit. *HERD: Health Environments Research & Design Journal*. <https://doi.org/10.1177/19375867211056075>

Elders/Aging

19. Frie, B., Graham, C., Hynes, A., Dusek, S., Heinen, L., Mehelich, M., & Campbell, K. (2021). Environmental toolkit to promote quality sleep in long-term care: A quality improvement initiative. *Journal of Long-Term Care*, 339–347. <https://doi.org/10.31389/jltc.60>
20. Wang, X., Shi, R., & Niu, F. (2021). Optimization of furniture configuration for residential living room spaces in quality elderly care communities in Macao. *Frontiers of Architectural Research*, in press. <https://doi.org/10.1016/j.foar.2021.11.002>

Cognitive Impairment & Dementia

21. Lorusso, L., Bosch, S., Park, N.-K., Shorr, R., Conroy, M., Ahrentzen, S., & Freytes, M. (2021). Investigating the feasibility of multisensory environments to improve the assisted bathing experience for veterans with dementia: A clinical trial. *HERD: Health Environments Research & Design Journal*, in press. <https://doi.org/10.1177/19375867211053861>



Building Systems & Technology

22. Clough, I. (2021). Building back smarter—part one: The case for more modular facilities in the NHS. *British Journal of Healthcare Management*, 27(9), in press. <https://doi.org/10.12968/bjhc.2021.0104>
23. Speck, I., Rottmayer, V., Wiebe, K., Aschendorff, A., Thurow, J., Frings, L., Meyer, P. T., Wesarg, T., & Arndt, S. (2021). PET/CT background noise and its effect on speech recognition. *Scientific Reports*, 11(1). <https://doi.org/10.1038/s41598-021-01686-5>

Design & Evaluation (e.g., Process, Methods, Simulation Modeling)

24. Cai, H., & Spreckelmeyer, K. (2021). The continuous learning cycle: A multi-phase post-occupancy evaluation (POE) of decentralized nursing unit design. *HERD: Health Environments Research & Design Journal*. <https://doi.org/10.1177/19375867211051657>
25. Jafarifiroozabadi, R., Joshi, R., Joseph, A., & Wingler, D. (2021). Perceived usability of seating in an outpatient waiting area: A combined approach utilizing virtual reality and actual seating prototypes. *HERD: Health Environments Research & Design Journal*, in press. <https://doi.org/10.1177/19375867211062268>
26. Jawed, Y. T., Golovyan, D., Lopez, D., Khan, S. H., Wang, S., Freund, C., Imran, S., Hameed, U. B., Smith, J. P., Kok, L., & Khan, B. A. (2021). Feasibility of a virtual reality intervention in the intensive care unit. *Heart & Lung*, 50(6), 748–753. <https://doi.org/10.1016/j.hrtlng.2021.05.007>
27. Jouppila, T. (2021). Staff participation in design with multiple tools: Impact on design and POE results. *HERD: Health Environments Research & Design Journal*. <https://doi.org/10.1177/19375867211060734>
28. Kalantari, S., Tripathi, V., Kan, J., Rounds, J. D., Mostafavi, A., Snell, R., & Cruz-Garza, J. G. (2022). Evaluating the impacts of color, graphics, and architectural features on wayfinding in healthcare settings using EEG data and virtual response testing. *Journal of Environmental Psychology*, 79, 101744. <https://doi.org/10.1016/j.jenvp.2021.101744>
29. Kile, M. (2021). Uncovering social issues through photovoice: A comprehensive methodology. *HERD: Health Environments Research & Design Journal*. <https://doi.org/10.1177/19375867211055101>