

Exploring the Design Preferences of Neurodivergent Populations for Quiet Spaces

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Abstract

Quiet spaces warrant scrupulous design consideration as they offer a sensitive restorative environment to the experience of sensory overload. Currently there is a lack of guidance on how to design inclusive quiet spaces and ambiguity regarding the factors which influence design preferences. Neurodivergent populations provide valuable perspectives on how to design for sensory needs, especially considering their susceptibility to sensory overload.

An online survey was administered globally to neurodivergent populations to elicit their design preferences for quiet spaces, and semi-structured interviews were conducted to enrich the study with professional perspectives. 312 survey responses and six interviews were analyzed to draw inferences.

There was consensus on sound and lighting as the most important design considerations for quiet spaces, on education as the most critical place to implement them, and on nature as a favorable guiding principle in their design. However, there was a diversity of perspectives, often contradictory, regarding most design preferences. Many of these preferences are correlated with the frequency at which the person experiences sensory overload and thus people's sensory profile may be an underlying mechanism which guides design preferences.

In light of these findings it is recommended to design quiet spaces as neutral environments for the most sensitive users, with optional stimulating design features for the least sensitive, while ensuring that the experience of one does not compromise the experience of the other. Moreover, variety, flexibility and control emerged as critical themes for facilitating inclusive design and empowering users by providing them with autonomy over their environment. Given the positive association between the frequency in which sensory overload is experienced and the person's desire for quiet spaces, it is advisable to consider additional populations which may be susceptible to sensory overload in future research on quiet spaces.

Keywords: Neurodiversity, sensory overload, sensory processing, quiet spaces, design preferences.