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Designing and Assessing Interior Environment for Individuals with Autism Spectrum Disorders: A Case Study of a Daycare Program Center

[2015 Proceedings](#)

Presented by: Nam-Kyu Park, Kijeong Jeon and Mina Bevan

Autism spectrum disorders (ASD) known as a neural development disorder are characterized by impaired social interaction and communication, and by restricted and repetitive behavior. Another common characteristic of individuals with ASD is the difference in perceptual sensory processing, such as sight, sound, touch, taste, and smell (NIMH, 2014). The number of people diagnosed with ASD has increased significantly in the last decade, and one in every 68 births has an ASD in the U.S (Autism Society, 2014). However, clearly defined medical treatments and therapeutic facilities are not keeping pace. One promising development for people with ASD or developmental disabilities is Multi-Sensory Environment (MSE) created to soothe and stimulate senses using lighting, colors, sounds, music, scents, and textures (Stephenson, 2002). MSE offers a passive therapeutic intervention designed to give a sense of serenity and calmness rather than using pharmaceutical drugs to affect human behavior. The MSE concept is relatively new to North America although it has been widely adopted in Europe.

On the premise that MSE passive therapy should be more widely available in the U.S., an interior designer, one of presenters of this project, designed the COVE (Community Opportunity for Vocational Experience) in Paradise, California as a daycare program center by providing a variety of sensory stations to serve for autistic clients. About seven months after its occupancy, we conducted a case study to investigate the impact of the sensory environment on autistic behaviors. To establish better understanding of the study outcomes by enhancing the reliability and validity of the research, we used multiple data collection strategies including in-depth structured interviews with 14 caregivers, architectural documentation, sensory profile assessment of 15 autistic clients, and participatory observations of the Cove and ASD clients for two months. General data for environmental conditions including room temperature, relative humidity, sound, and illumination levels were also collected.

Overall, individual results varied due to the different sensory issues among the ASD clients and each

space affects the clients differently in the Cove center. However, the findings of this study showed some reduction in stereotypical behaviors, less aggression, self-injury in the stimulus environment that featured visual, auditory, and textile equipment in the three primary spaces: main hall, computer room, and quiet room. The quiet room painted in pink/violet with bubble patterns on the walls and equipped with bubble tubes, vibro-music beanbag chairs, and sensory weighted blankets was the most favorite space of the clients with hypo-visual and hypo-tactile sensory issues. While the open space of the main hall was affecting the ASD clients in negative way, a linear arrangement of workstation in the computer room supported the autistic clients' behaviors positively. Also, the textured walls in the main hall made the clients pay more attention to the movies. Based on the results of this study, design recommendations for both individuals with ASD and caregivers for autistic clients are discussed. In this presentation, we will also share our collaborative working experience as a designer and a researcher involving in designing and assessing the effectiveness of the COVE.

References:

- Autism Society. (2014). About Autism. Retrieved from <http://www.autism-society.org/about-autism>.
- National Institute of Mental Health (NIMH). (2014). What is autism-spectrum-disorder? Retrieved from <http://www.nimh.nih.gov/health/topics/autism-spectrum-disorders-asd/index>.
- Stephenson, J. (2002). Characterization of multisensory environments: Why do teachers use them? *Journal of Applied Research in Intellectual Disabilities*, 15(1), 73-90.

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