Evidence Assignment

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Occupational therapists rely on theories to guide practice. Sensory integration is a widely used theory to guide interventions and assessments to address deficits in sensory processing which can lead to difficulty engaging in meaningful occupations (Schaaf & Davies, 2010). Sensory processing differences can affect individuals into adulthood. In the 2023 study by Miller et al., “*Adolescents’ and adults’ perceptions of sensory-based interventions: A qualitative analysis”*, examines adult and adolescent perspectives of the impact of sensory based interventions on their occupational performance and quality of life. Participants included eleven adolescents and adults with sensory integration and sensory processing differences who had previously completed occupational therapy interventions. Interventions were based on the principles of Ayers Sensory Integration (ASI) and the Sensory Therapies and Research Frame of Reference (STAR). This retrospective, qualitative study utilized a semi-structured interview guide for former clients, which was included in part of a program evaluation. This study aimed to investigate the components of intervention strategies that are helpful and meaningful, positive changes that occurred after sensory interventions, and the areas of the program that need improvement. ASI & STAR frames of reference contributed to the study design as the sensory based interventions were devised using principles from both theories. ASI is based on the theory that an individual’s sensory systems interact and engage with the environment while striving for an adaptive response (Kuhaneck et al, 2023). STAR theory is based on ASI and a theory of problem solving, family priorities, engagements & relationships as noted in “The Star Treatment Approach” (2024). Limitations of this study are based in the design of the study, with the interviews being conducted over the phone with direct quotes being based on the interviewer’s notes, and the interviewer was unable to observe nonverbal communication which provides additional information about participants’ perceptions. Another limitation of the study is that all the data is based on interviews or self-report. Strengths of the study are: ASI and STAR are appropriate frames of reference to guide sensory-based interventions, this study provided valuable insights about the perceptions of adolescents and adults who have received sensory interventions, and this study has implications for replication and future research. This article has valuable information that can support my capstone topic about autistic individuals’ perceptions of the benefits of sensory integrative therapy which can guide treatment approaches and encourage client-centered care.

Sensory challenges are further examined in the 2024 article,” *The long-term impact of an* *occupational therapy intervention for children with challenges in sensory processing and integration*” considering long-term implications of occupational therapy interventions. A mixed method research design was used in the study. Participants included parents and caregivers of sixteen children with sensory challenges. The Canadian Occupational Performance Measure (COPM) and the Goal Attainment Scaling (GAS) were used to determine if changes were maintained over time. Qualitative data on parent and caregiver perceptions were obtained using open-ended questions during phone interviews. A STAR frame of reference was used to influence the design of the study regarding treatment intensity and frequency. OT interventions occurred three times per week for 1-hour sessions over the course of 6 to 7 weeks. OT interventions were based on using the STAR and ASI frames of reference. Key components from the STAR theory that influenced the study were incorporating rich sensory experiences into treatment, focusing on arousal and regulation, building relationships, educating, and coaching parents. Parents and caregivers reported improvements on every category on the rating scales indicating the sensory strategies impacted their daily activities. This study followed the participants for 6 to 12 months after treatment ended. A limitation of the study is that there is no long-term follow up to determine if results were sustained. Other limitations include a small sample size which can be difficult to generalize results, this study was completed during the COVID-19 pandemic and additional stressors could have affected the parents and caregivers’ responses, and the lack of a control group. Despite the limitations, this study provides a positive framework for understanding implications of sensory-based OT interventions. This study is helpful in developing my capstone project and reveals sensory integrative therapy as a meaningful therapy model for devising interventions for pediatric clients.

Sensory processing differences impact the daily routines and mental health of individuals with sensory processing disorder. Spielmann et al. (2023) examines the relationship of sensory processing differences and mental health of autistic adults in *The American Journal of Occupational Therapy article*, “Linking Sensory Integration and Processing with Mental Health in Autism: A Retrospective Review of Survey Data”. A nonexperimental, retrospective analysis study design was used collecting data from September 2018 through June 2019. The Grand Sensory Survey (GSS), a web-based survey, was available internationally through websites and social media accounts of the Autistic Empire and STAR Institute for Sensory Processing. The Autistic Empire is an autistic social organization built and comprised of autistic adults to establish community. The Star Institute for Sensory Processing shared the GSS on its social media platform. The survey involved questions about basic sensory perception and sensory registration. It was only available in English. The sample included 440 responses. Results of the study indicate that sensory processing disruptions and sensory sensitivity is predictive of anxiety and depression, and sensory processing differences are an important factor of mental health for autistic adults. Limitations of the article include: the study was based on self-report, potential variability of the reading level of participants, and additional survey questions may be indicated as the survey was developed by autistic adults. This article used the ASI and STAR frames of reference which both impacted the study question, design of the study, and how the results were interpreted. ASI theory places a strong emphasis on sensory processing differences and how those differences impact the individual’s environment. STAR theory revolves around principles of engagement and relationships, regulation and co-regulation, coaching and empowering families, using both top-down and bottom-up approaches as documented in “The Star Treatment Approach” (2024). This study has revealed several important elements for my capstone project such as further investigating the relationship of sensory differences and mental health, potentially using web-based or electronic surveys for my project and encourages me to consider what factors are important to autistic individuals.

In summary, Ayers Sensory Integration and the Sensory Therapies and Research Frame of Reference are commonly used together as models to guide sensory-based interventions, research questions and design. Utilizing questionnaires is a frequently used method of obtaining information in research studies about perceptions, identifying problem areas, and determining the need for future research. While the Ecological Systems theory was not described in the literature of the three studies, I feel that it could have also been an appropriate model to guide the research and design of the studies. Using an ecological systems theory approach could have changed some of the questions of the surveys to include more contextual information about how the individuals interact within their environments. However, while I feel that the ASI and STAR frame of reference were the most appropriate for the studies, I also feel that an eclectic model with various frames of reference could be more beneficial and provide more holistic results for clients.

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