

## Evidence Based Practice Day

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### Using Snoezelen Rooms to Address Maladaptive Behavior in Children with Developmental Disabilities

**Search terms:** Sensory AND Pediatrics AND Aggression; Snoezelen OR Multi-sensory Rooms AND Children with Developmental Disabilities AND Decreasing Aggression; Multi-sensory Environment AND Aggression.

**Years:** 2004-2014

**Databases:** Academic Search Premier, CINAHL, ERIC, Medline, PsycArticles, Psychology and Behavioral Sciences Collection, PsycINFO and SPORTDiscus

**Number of articles:** 8

#### Summary of Research Findings:

Maladaptive behaviors are often exhibited in children with developmental disabilities and can present challenges by creating barriers to positive interactions with others. Maladaptive behaviors include aggressive behaviors such as biting or pushing another individual, agitated behaviors such as crying, spitting and/or screaming (Collier & Truman, 2008; Kaplan et al., 2006) and stereotyped behaviors such as hand flapping, body rocking and picking (Hill et al., 2012). Snoezelen rooms, a type of multi-sensory environment, are one possible treatment option to address these behaviors in this population.

This review of the literature included eight articles focused on the use of Snoezelen rooms to address maladaptive behaviors in children with developmental disabilities. Across these articles, individuals receiving treatment had a variety of developmental disabilities, but the two most common diagnoses were autism (Hill et al., 2012; Hogg et al., 2001; Kaplan et al., 2006) and intellectual disabilities (Chan et al., 2005; Hill et al., 2012; Hogg et al., 2001; Kaplan et al., 2006; Lotan & Gold, 2009). Most of the articles reviewed involved children 18 years of age and younger; however some articles simply presented overall guidelines for providing therapy using Snoezelen rooms.

The primary purposes of the interventions described were to relax and calm individuals while also providing an enjoyable experience (Carter & Stephenson, 2012). The length and frequency of sessions varied but ranged from two to five times per week with each session typically lasting 20 – 30 minutes. Outcomes were tracked over a total of four to 54 sessions (Lotan & Gold, 2009). Individual treatment sessions (Collier & Truman, 2008; Hogg et al., 2012; Lotan & Gold), were most commonly used, although group sessions were also mentioned. The role of the caregiver was identified as a critical variable (Chan et al., 2005; Collier & Truman, 2008; Hill et al., 2012; Hogg et al., 2012) and a non-directive and enabling approach of the caregiver was viewed as essential (Patterson, 2004).

Although each Snoezelen room is somewhat unique in design, equipment frequently used in treatment includes sound equipment, bubble tubes or columns, color wheel spotlights or projectors, fiber optic lights, tactile objects, mirror balls and control switches. Additionally, light colored walls are more common than white walls (Carter & Stephenson, 2012).

Results indicate that maladaptive behaviors decreased in severity and frequency after exposure to Snoezelen room interventions. Specifically, reduced anxiety (Carter & Stephenson), reduced stereotyped behaviors (Hill et al., 2012) and reduced maladaptive behavior (Carter & Stephenson, 2012; Kaplan et al., 2006; Patterson, 2004) were documented. However, increased relaxation (Chan et al., 2005) and increased positive emotions (Chan et al., 2005) were also noted.

Although these results are promising, it should be noted that several other research studies have produced inconsistent evidence on Snoezelen rooms' effectiveness in addressing maladaptive behavior. Some of these discrepancies are most likely due to the great variations in Snoezelen rooms in terms of design and use as well as methodological flaws and small sample sizes in many of the studies. There is also some disagreement about the generalization of behavior change outside Snoezelen rooms (Carter & Stephenson, 2012; Hogg et al., 2001).

#### Knowledge Translation Plan

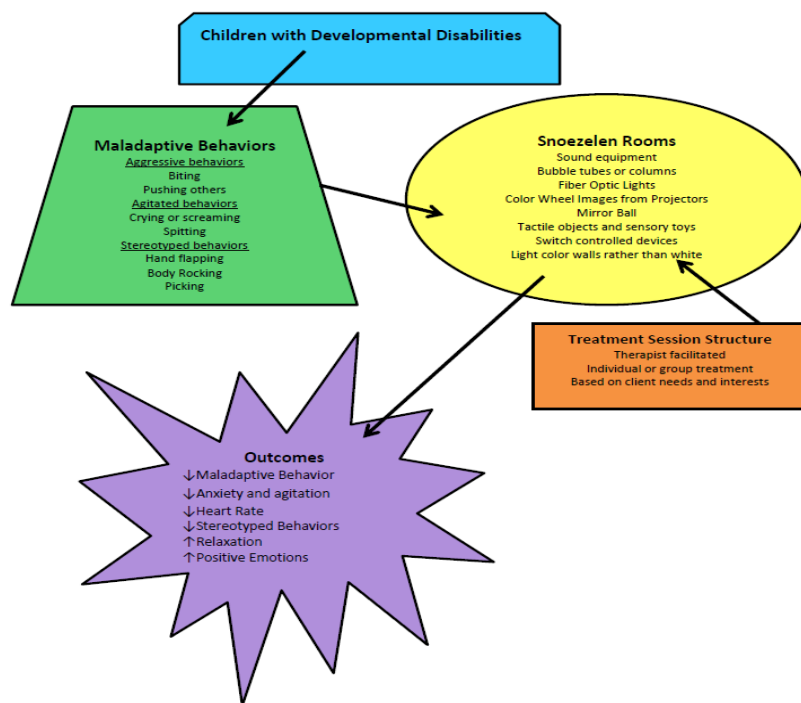
Snoezelen rooms are one possible intervention Certified Therapeutic Recreation Specialists (CTRSs) can utilize to address maladaptive behaviors in children with developmental disabilities, particularly those with autism and/or intellectual disabilities. CTRSs should first assess a client's interest in this type of intervention, keeping in mind that although many individuals often find Snoezelen rooms an enjoyable leisure experience, some individuals do not enjoy (or respond well) to this type of intervention (Patterson, 2004). Clients should also be appropriately matched to the specific type of Snoezelen equipment/supplies (e.g. bubble tubes vs fiber optic lights) that match their interests and responses (Kaplan et al., 2006).

The role of the therapist during the intervention is very important, and therapists should encourage, support and reinforce positive behaviors while creating a relaxing and secure atmosphere for the client (Patterson, 2004). The individual needs and goals of the client should be used to determine length and frequency of treatment provided, and it is important to

note that positive outcomes have been shown following interventions that vary in length from a few sessions to extended long-term intervention.

Although many therapists have found Snoezelen rooms to be helpful in managing maladaptive behaviors, results have been mixed. The cost for constructing a Snoezelen room is also high with average cost estimated at \$24,000 (Carter & Stephenson, 2012). Therefore, it is recognized that not all therapists and clients will have access to this type of intervention. If cost is prohibitive to the development of a Snoezelen room, CTRSs should explore other types of activity therapy and consider the incorporation of specific Snoezelen room elements (e.g. fiber optic lights only) into those activities.

Therapists who have access to Snoezelen rooms should strongly consider implementing research studies to clearly define the specific Snoezelen elements that lead to positive outcomes for children with developmental disabilities presenting with maladaptive behaviors.



## References

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