

Evidence Based Practice Day

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Maximizing Playground Experiences for Children with Autism Spectrum Disorder

Search Terms: Autism AND Playgrounds, Autism AND Inclusive Settings, Developmental Disorders AND Playgrounds, ASD AND Assessment, Playground AND Assessment, Playgrounds AND Design, Playgrounds AND Strategies

Years: 1999-2012

Databases: Academic OneFile, ASSIA, ERIC

Number of Articles: 11

Summary of Research:

Children with Autism Spectrum Disorder (ASD) often face challenges in social skills and have fewer peer interactions than their typically developing peers (Kasari, Rotheram-Fuller, Locke & Gulsrud, 2012). It has been noted that children with ASD are easily distinguished from their peers in playground environments due to differences in four key social behaviors: social isolation, absence of social play with peers, invasion of personal space, and socially inappropriate behavior (Ingram, Mayes, Troxell & Calhoun, 2007). It is also common for children with ASD to present with motor skills and fitness abilities different from their peers (Menaar, Smith & Lanier, 2006). Consequently, children with ASD often have difficulty traversing typical school or park playground equipment without assistance (Menaar, Smith & Lanier, 2006). Since play is an essential component of child development (Prellwitz & Skar, 2007) and playground experiences offer unique play environments that foster development and provide opportunities for peer interaction (Prellwitz & Skar, 2007), the purpose of this literature review was to identify ways to maximize playground experiences for children with ASD.

The limited literature in this area can be grouped into three main categories that have relevance to recreation therapists: assessment tools appropriate for assessing children's play and behaviors in a playground setting, playground design features that are best suited for children with ASD and specific interventions that have yielded positive outcomes for children with ASD on the playground.

Since the challenging social environment of playgrounds is frequently conducive to naturalistic observation of social functioning and peer interactions (Gibson, Hussain, Holsgrove, Adams, & Green, 2011), behavioral patterns can often be identified within naturalistic contexts (Leff & Lakin, 2005). The Playground Observation Checklist (Ingram et al., 2007) and the Manchester Inventory for Playground Observation (Gibson et al., 2011) are two assessments specifically designed for use in playground environments. However a number of other assessment tools with broader application have been used with children with ASD during playground experiences (Leff & Lakin, 2005).

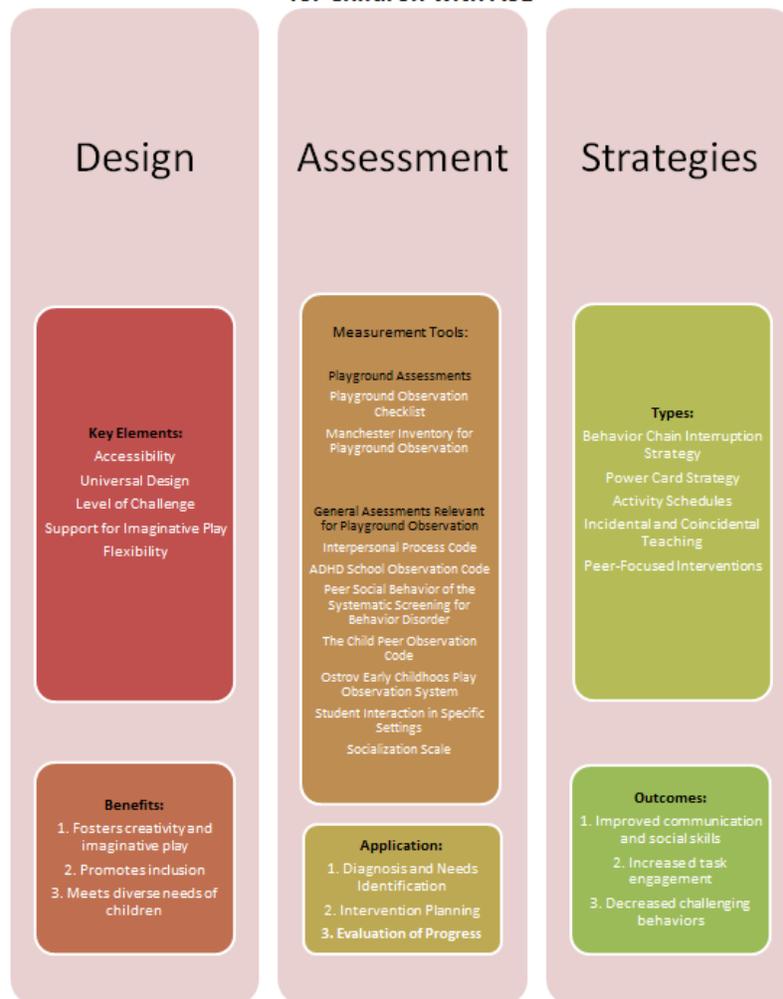
Playground designs have evolved over time, but typically fall into one of three categories: traditional, contemporary and adventure (Barbour, 1999). It is recommended that all playgrounds have spaces that allow for healthy risk taking, graduated challenges, promotion of different types of play, observation points and opportunities to manipulate the environment (Meaner, Smith & Lanier, 2006). While the American's with Disabilities Act mandates that playgrounds be accessible to children with disabilities, some argue that the guidelines emphasize physical accessibility but do not consider social and sensory aspects of the environment that may be important to children with ASD. Therefore, a five-step design process has been created for guidance in designing a playground well suited for children with ASD (Meaner, Smith & Lanier, 2006).

Strategies that can be utilized to help maximize the playground experience of children with ASD include behavior chain interruption strategy (Sigafos & Littlewood, 1999), power card strategy (Spencer, Simpson, Day & Buster, 2008), activity schedules (Machalicek, et al., 2009), incidental and coincidental teaching (Nabors et al., 2001) and peer focused interventions (Kasari et al, 2012; Nabors et al., 2001). Use of these strategies with children with ASD in playground environments has resulted in improved communication and social skills, increased task engagement and decreased challenging behaviors.

Knowledge Translation Plan:

Recreation Therapists frequently work with children with ASD, and playgrounds are a natural place for recreation therapy treatment to occur. Therefore, the considerations and tools described in Figure 1 on the next page should be used as a resource when planning interventions. Specifically, a variety of assessment tools are available to aid the Certified Therapeutic Recreation Specialist (CTRS) in recording behaviors of children with ASD on the playground. These tools can be used for diagnostic purposes, needs assessment, intervention planning and evaluation of progress. Through strategic playground design, the CTRS can help foster creativity and imaginative play, promote inclusion and meet the diverse needs of children with ASD. The CTRS might also provide valuable suggestions to organizations with existing playgrounds on design features that will enable greater participation by children with ASD. Finally, CTRSs should consider using strategies such as behavior chain interruption, power card strategy, activity schedules, incidental and coincidental teaching and peer focused interventions to improve communication, social skills and task engagement in children with ASD. These strategies may also assist in decreasing challenging behaviors.

Figure 1:
**Considerations and Tools for Maximizing Playground Experiences
 for Children with ASD**



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