Evidence Based Practice Day

Temple University, Department of Rehabilitation Sciences, Recreation Therapy Program
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Yekaterina Mishin
Accelerated BS/MS in Recreation Therapy (4+1) Student
kmishin@temple.edu

Targeting Obesity in Children with Disabilities through Physical Activity

Search Terms: Physical Disability AND Obesity AND Children; Physical Disability AND Obesity in Children AND Physical Activity; Obesity and Physical Disability AND Prevention AND Children; Obesity AND Physical Disability AND Modalities AND Children.
Years: 2008-2013
Databases: Academic Search Premier, CINAHL, MEDLINE, PsycARTICLES, PsycINFO, SPORTDiscus
Number of Articles: 8

Summary of Research Findings

Obesity is an epidemic that affects 25% of children in the Western world (Dwyer, Baur, Higgs & Hardy, 2009). Its prevalence is most evident in the United States, placing the 18% of children and adolescents with disabilities at risk for debilitating heart and lung disorders as well as many other devastating diseases (Dwyer et al., 2009; Hamid, Islam & Chandraray, 2013; Murthy & Carbone, 2008). While a variety of factors can contribute to obesity including genetics (Ulrich & Hauck, 2013), dietary habits, hormonal disorders and medications (Hamid et al., 2013), this literature review focused on sedentary behavior as a contributing factor to obesity (Hamid et al., 2013) and examined how physical activity might be used to target obesity in children with disabilities.

Physical disability is a risk factor for sedentary behavior (Dwyer et al., 2009), and youth with disabilities have a 4.5 times higher rate of physical inactivity compared to their non-disabled peers (Rimmer & Rowland, 2008). However, many argue that children's increased involvement in screen-based activities has led to the high levels of sedentary behaviors in all children (Dwyer et al., 2009; Hamid et al., 2013; Rimmer & Rowland, 2009). Lack of access to safe play areas/recreation facilities, attitudinal barriers, poor parental modeling and socioeconomic and cultural barriers may further contribute to decreased physical activity (Dwyer et al., 2009; Murphy & Carbone, 2008; Rimmer & Rowland, 2009). Furthermore, although physical education is mandated in schools, children with disabilities are often exempt from participating (Murphy & Carbone, 2008), and limited opportunities exist for children with disabilities to participate in sports outside the school setting (Ryan, Katsiyannis, Cadorette, Hodge & Markham, 2014).

Therefore, professionals who are providing services to children with disabilities are advised to understand the benefits of physical activity, perform participation evaluations, identify strategies to minimize risks, recognize and reduce barriers, advocate for participation and be aware of resources (Murphy & Carbone, 2008).

Recommended physical guidelines for children with disabilities include: moderate activity in longer sessions and strenuous activity in shorter sessions with progressive intensity up to 40-65 minutes per day (Dwyer et al., 2009). Screen time should be limited to less than two hours per day (Hamid et al., 2013) and children with disabilities should be encouraged to participate in sports (Hamid et al., 2013). Early interventions strategies have been shown to be effective in preventing obesity in children with disabilities, and infants with disabilities are encouraged to participate in kicking, stepping, and therapist facilitated treadmill exercises in order to inhibit inactivity and promote early motor development and functioning (Ulrich & Hauck, 2013).

Significant improvements in muscle strength and physical fitness have been found in children following participation in programs that last 8-14 weeks and include physical activity at home, exercise classes, or sports activities (McPherson, Keith & Swift, 2013). It should be noted that high rates of satisfaction among participants have been noted in programs that include a group structure (Rimmer & Rowland, 2009).

In addition to reducing obesity through treatment and prevention initiatives, physical activity has been shown to result in a variety of other positive physical and psychological outcomes for children with disabilities (Murphy & Carbone, 2008; Thomas & Bedini, 2011). These include a slowed progression of disease, improved overall health and increased quality of life (Murphy & Carbone, 2008) as well as increased friendships, greater self-confidence and improved social acceptance (Thomas & Bedini, 2011).

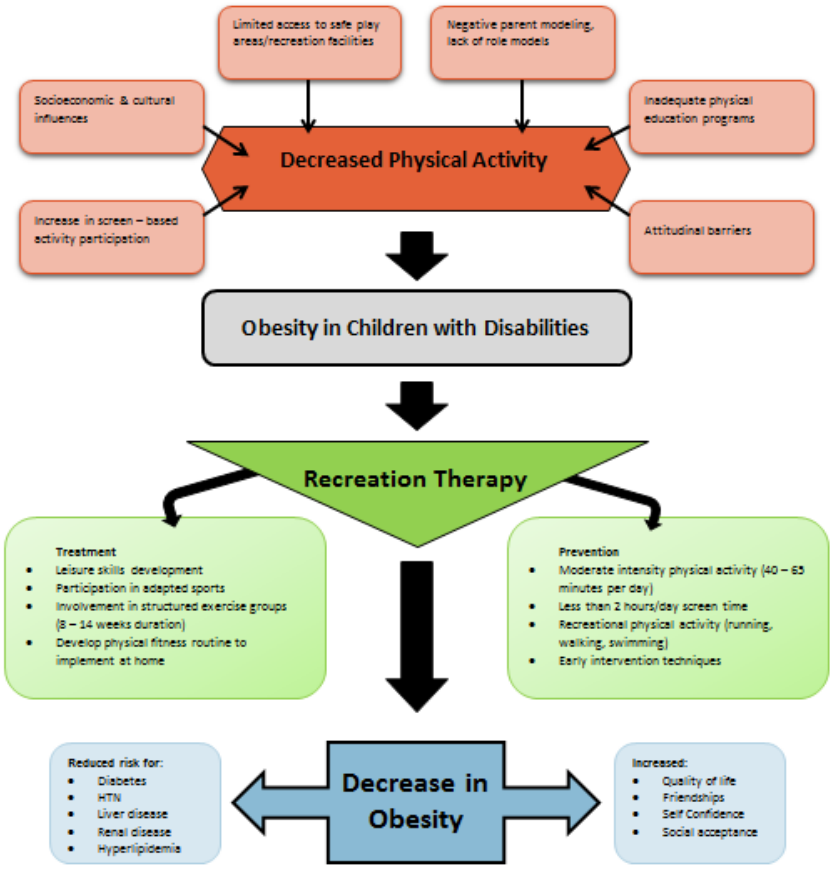
Knowledge Translation Plan

Certified Therapeutic Recreation Specialists (CTRSs) can play an important role in addressing obesity in children with disabilities by promoting physical activities with either a treatment or prevention focus. Since children with disabilities are at higher risk for sedentary behaviors, education about the importance of an active lifestyle should be considered along with the introduction of specific physical activity interventions. Given the multiple contributors to sedentary behavior, a comprehensive assessment that identifies potential barriers to participation will assist the CTRS in developing a plan for physical activity that is feasible for the child.

Although many CTRSs interact with children with disabilities in a clinical setting, professionals should be aware that physical activity introduced in a clinical setting does not always translate into community settings (Rimmer & Rowland, 2008). Therefore, CTRSs should identify increased ways to promote physical activity in early intervention (Ulrich & Hauck, 2013) and school/community settings where the clinical expertise of a CTRS could be applied to the structuring of adaptive physical activity programs (Ryan et al., 2014), as well as increase focus on community integration into physical based activities.

Additionally, CTRSs may be able to provide consultation to existing program in order to make them more accessible to children with disabilities. Given the high rates of participant satisfaction found within programs that include a group structure, CTRSs should look for ways to promote group programs.

Finally, since an increase in screen based activities has frequently been cited as a contributing factor to sedentary lifestyles, recreation therapists should be educating clients about the benefits of physical activity and encouraging variety in leisure pursuits to ensure that children with disabilities incorporate a healthy balance of sedentary activities of interest with those involving physical activity.



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