Participation patterns of school-aged children with and without DCD

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ABSTRACT

Participation is recognized as a key to one's health and well-being and is considered to be a vital part of the development of children and youth. The purpose of this study was to examine the participation patterns of children with and without Developmental Coordination Disorder (DCD) in their out-of-school-time (OST) activities, and to see whether there is a relationship between the children's motor abilities and their choices and participation. Methods: 50 children (5–7 years old), 25 who met diagnostic criteria of DCD and 25 without DCD, completed the Children Assessment of Participation and Enjoyment (CAPE) and were administered the Motor Assessment Battery for Children (MABC) and the Beery-Buktenica Developmental Test of Visual-Motor Integration (VMI). Results: A relationship was found between participation patterns and motor ability. Children with DCD had limited participation diversity in which they participated less frequently, and chose activities that were quieter and more socially isolated compared to children without DCD; there were no differences in their levels of enjoyment. Conclusions: The present study emphasizes the importance of looking at the children's participation from a broad perspective, and the many difficulties children with DCD experience in OST participation. Future studies might consider other factors (e.g., environment) while examining participation among children with DCD.

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1. Introduction

Participation is a person's engagement and inclusion in various activities, environments, roles and life situations. In the classification of the World Health Organization (WHO, 2001), there is a distinction between participation and activity; participation is the involvement of a person in various life situations, and activity is the person's execution of a task or activity. There are several factors that influence participation in children including their abilities and their physical and social environments (Case-Smith, 2005; Chen & Cohn, 2003; King et al., 2003; Law, 2002; Law et al., 2002). The child’s characteristics, which influence one’s participation, include, among others, skills (motor, process, and communication),...
gender, preferences, sense of control and capability, the severity of disability, as well as emotional, behavioural and social functioning (Bart, Rosenberg, Ratzon, & Jarus, 2010; Law et al., 2000; Rosenberg, Jarus, Bart, & Ratzon, 2010). Law and colleagues (2000) argue that it is important to know which of the aforementioned variables encourages or hinders participation in order to adjust the therapeutic intervention.

Studies that examined the difference between leisure patterns of school-aged children without a disability and those with a disability found that children without a disability are involved in a variety of activities outside the home such as soccer, volleyball, different clubs, swimming and music. Children with disabilities, on the other hand, are usually involved in a limited variety of activities and are more dependent on others. They participate less in social and energetic activities, with participation being more home-based and passive in nature, such as reading, or watching TV (Buttimer & Tierney, 2005; Engel-Yeger, Jarus, Anaby, & Law, 2009; Heah, Case, McGuire, & Law, 2007; Hilton, Crouch, & Israel, 2008; Imms, 2008; King et al., 2006; Law et al., 2006; Law, Petrenchik, King, & Hurley, 2007; Majnemer, 2009; Majnemer et al., 2008; Murphy & Carbone, 2008).

From these studies it is clear that there is a difference in participation between children with and without a disability. The differences found mainly pertain to the school environment, and less so to after school hours, which represent an important time for children and include diverse leisure, ADL, play and learning activities. In addition, most of the studies assessed children with severe disabilities such as Cerebral Palsy (CP) and Spina Bifida (Engel-Yeger et al., 2009; King et al., 2006; Law et al., 2006). This study focused on the participation of children with Developmental Coordination Disorder (DCD).

DCD is a prevalent yet under-recognized movement skill disorder that significantly affects everyday functioning. Characterized by marked impairment of motor coordination that significantly interferes with academic achievement and/or activities of daily living, DCD is present in 6% of children aged 5–11 years (APA, 2000). Given this prevalence, approximately 160,000 children in Canada (Statistics Canada, 2006) and over 2 million children in the U.S. (U.S. Census Bureau, 2006) aged 5–11 are likely to meet the diagnostic criteria for DCD. As such, DCD is one of the most common disorders affecting school-aged children (Wann, 2007) and likely one of the more underestimated causes of functional motor deficits in developing children (Gaines, Missiuna, Egan, & McLean, 2008; Missiuna, Gaines, & Soucie, 2006).

Children with DCD experience numerous functional difficulties related to dysfunctional motor skill coordination at home, at school, and in the community. These include difficulty with everyday activities, such as dressing or using utensils, academic activities, handwriting or physical education and leisure activities such as riding a bike or painting (Polatajko & Cantin, 2005). In addition, individuals with DCD are at higher risk for obesity (Cairney, Hay, Faught, & Hawes, 2005), and coronary vascular disease (Faught, Hay, Cairney, & Flouris, 2005). They tend to avoid social and physical activities (Cairney, Hay, Faught, Wade, et al., 2005; Chen & Cohn, 2003; Missiuna, Moll, King, King, & Law, 2006; Poulsen, Ziviani, Cuskelly, & Smith, 2007), and exhibit difficulty with social and peer relationships, lower self-worth and self-esteem, anxiety, depression, and emotional and behavioural disorders (Cairney et al., 2009; Missiuna, Moll, et al., 2006; Poulsen, Ziviani, & Cuskelly, 2007; Poulsen, Ziviani, Cuskelly, et al., 2007). Social isolation was also evident when a parent’s perspective was investigated (Missiuna, Moll, et al., 2006; Poulsen, Ziviani, & Cuskelly, 2007; Segal, Mandich, Polatajko, & Cook, 2002) where parents describe that the interaction between the child’s function (impaired motor function), the physical environment (an active, physical play), and the social world (social groups and friendship) leads to limited participation.

While participation has traditionally focused on physical activity and recreation, few recent studies are framed according to the International Classification of Functioning, Disability, and Health (ICF) (Gray, Hollingsworth, Stark, & Morgan, 2008; Hammad, Jarvis, & Colver, 2004; Hilton et al., 2008; Majnemer et al., 2008) which considers participation to encompass everyday life situations including mobility, information exchange, personal maintenance, social relationships, and school and home life (King et al., 2003; WHO, 2001). This framework is beneficial in that it takes a holistic approach to a child’s lived experiences not only through a broader definition of participation, but also through looking at personal and environmental factors that might affect participation. However, none of these studies investigated children with DCD. As there is still a lack of information about the out-of-school-time (OST) participation of school-aged children with DCD, the goal of this study is to examine the multi dimensional aspects of participation of children with and without DCD in a variety of OST activities (including ADL, play, social, and learning activities). In addition, this study tests the relationships between the children’s motor abilities, and their participation patterns in OST. We hypothesize that children with better motor abilities will also exhibit better participation patterns as there is evidence in the literature that motor skills are among the most contributing personal factors to participation in different populations (e.g. Bart et al., 2010; Rosenberg et al., 2010; Smyth & Anderson, 2000).

2. Methods

2.1. Participants

Fifty children, aged 5–7 ($M = 6.07, SD = .61$) participated in the study. Twenty-five were children who met diagnostic criteria of DCD and 25 were children without DCD matched on age, gender and socio economic status. The sample included 46 males (92%) and 4 females (8%), who were spread equally between the two groups. Children with DCD were sampled from clinical settings, thus this ratio of boys and girls might reflect referral bias as studies based on school sampling frames or samples derived from specialized populations of children at risk for developing DCD often find no significant difference in the prevalence of DCD between boys and girls (Cairney, Hay, Faught, Mandigo, & Flouris, 2005).
The DCD Questionnaire (DCDQ) completed by the parents was used to assist in assigning children to the appropriate group. Children who scored lower than 48 were identified as cases of probable DCD. The Movement Assessment Battery for Children (MABC) was administered to confirm the presence or absence of DCD according to the DSM-IV criteria (APA, 2000). Only children who obtained a score equal or below the 5th percentile were included in the study. Children without DCD were recruited from the community, and had to score above 58 on the DCDQ and above the 15th percentile in the MABC. Children with additional disabilities, such as mental disabilities, additional neurological problems, or orthopaedic problems, were excluded from the study. Ethical approval was provided by the Behavioural Research Ethics Board of Tel-Aviv University. Information about the study was provided to, and written consent was obtained from, all children and parents.

2.2. Measures

2.2.1. DCD-Q

DCD-Q (Wilson, Kaplan, Crawford, Campbell, & Dewey, 2000) which is used to identify children with motor difficulties. This questionnaire is made up of 17 questions relating to the child's gross and fine motor abilities. It is a questionnaire administered to parents inquiring about their child's motor abilities. The scores range from 17 to 85, and are categorised according to different cut-off points: 17–48 (DCD), 49–57 (suspected DCD), and 58–85 (normal range). This tool has high internal consistency (alpha = .94) and sensitivity (85%) (Wilson et al., 2009).

2.2.2. Movement Assessment Battery for Children (M-ABC; Henderson & Sugden, 1992)

This tool is a well-documented, individually-administered, standardized test that provides assessment for children with motor impairment. The M-ABC is designed for children ranging from four to 12 years old. The test contains 8 subtests across 3 domains: Manual Dexterity, aiming and catching, and Balance. The test score ranges from 0 to 40, with higher scores indicating higher impairment. Children obtaining scores below the 5th percentile meet diagnostic criteria for DCD. With good reliability (minimum value of test–retest at any age is .75, and inter-rater value is .70) and concurrent validity (Henderson & Sugden, 2007), it is frequently used to identify children with DCD (Geuze, Jongmans, Schoemaker, & Smits-Engelsman, 2001).

2.2.3. Beery-Buktenica Developmental Test of Visual-Motor Integration, 5th edition (BEERY™ VMI, Beery, 2006)

This tool is a well-known, standardized performance test. It consists of 24 geometric forms which become progressively more complex, which the child is to copy. The test raw score is based on the number of correctly copied forms, up to 30 points. Raw scores can be transformed into standard scores or percentile. This tool has high inter-rater reliability (.98) and good concurrent validity (as compared to the Developmental Test of Visual Perception-2, the Wide Range Assessment of Visual Motor Abilities (WRVMA), and the original Bender–Gestalt) and construct validity (prediction of academic achievements) (Beery, 2006).

2.2.4. Children's Assessment of Participation and Enjoyment (CAPE, King et al., 2001)

Participation was assessed using the initial research version of the CAPE (King et al., 2004), a measure designed to document how children or youth participate in everyday activities outside of mandated school activities. The CAPE, designed for use with children/youth aged 5 years to 21 years, includes 49 pictures of different activities and measures participation in 14 formal activities and 35 informal activities over the past four months.

Children indicate (a) which activities they participate in and (b) how often they have participated in the activities over the past 4 months. For those activities which the child participates in, further information is obtained, including: (a) with whom they typically do the activity (e.g., parent, friend), (b) where they do the activity (e.g., home, at a friend's house), and (c) how much they enjoy doing the activity. Each activity is presented to the child/youth on a card with a drawing of the activity and a phrase (in words) describing the activity. After each section of the CAPE the child is given the opportunity to add other activities that are not included in the CAPE if needed.

Four types of scores were generated from the CAPE measure and used in this study: (1) overall participation diversity (a count of the number of activities in which the child has participated over the past 4 months – maximum of 49), (2) intensity (calculated by dividing the sum of item frequency (rated on a 7-point scale) by the total number of activities), (3) an enjoyment score (rated on a 7-point scale, with higher scores reflecting greater enjoyment), and (4) an alone score (percentage of activities performed alone). Diversity, intensity, enjoyment and alone scores are calculated for the total, informal, and formal scales. In addition, scores for five scales of activities, derived through factor analysis of participation preference data, were calculated on the recreational, active physical, social, skill-based, and self-improvement/educational scales. Reliability and validity of the CAPE was established using data from a longitudinal study involving 427 children with physical disabilities. Analyses demonstrated sufficient internal consistency, test–retest reliability, content validity, and construct validity (King et al., 2007). The CAPE utility in the Israeli context was demonstrated (Engel-Yeger & Jarus, 2008; Engel-Yeger et al., 2009; Engel-Yeger, Jarus, & Law, 2007; Jarus, Anaby, Bart, Engel-Yeger, & Law, 2010).

2.2.5. Preferences for activities of children (PAC, King et al., 2001)

This tool is used to evaluate the child’s preferred out-of-school activities based on the CAPE cards. The PAC evaluates which activities the child/youth aged 6–21 years, prefers to perform, with no relation to whether the activities are actually
performed. The child is asked to sort the cards into 3 piles: (1) prefer to do, (2) sort of prefer to do, and (3) prefer not to do. Reliability and validity of the PAC were established using data from a longitudinal study involving 427 children with physical disabilities. Analyses demonstrated sufficient internal consistency (.76 for the formal activities scale and .84 for the informal activities scale; .67–.77 for the PAC activity types), test–retest reliability, content validity, and construct validity (King et al., 2007).

2.3. Procedure

Parents were given the DCD-Q and a demographic questionnaire which they completed before the meeting with the child. Based on the scores that were obtained in these questionnaires, it was determined whether the child was eligible for the study. Children who obtained a score of 17–48 according to the DCD-Q were included in the DCD group. Then, children who were suitable for the non-DCD group were selected, according to age (a range of a month), gender, and socioeconomic status. The participants were then assessed by a registered occupational therapist. The meeting with the child was approximately an hour to an hour and a half long, and included the administration of the CAPE, PAC, VMI and M–ABC.

2.4. Data analysis

To examine the difference between children with and without DCD in the participation diversity, intensity, the level of enjoyment of OST activities, and the percentage of activities the child performs alone, a multivariate analysis of variance was performed. To examine the difference between the two groups and those who choose to play alone compared with those who do not tend to play alone during OST activities, the children were divided into two groups according to the median. Children who played alone for more than 50% of the activities were in the group defined as children who most often played alone. Children who played with someone else for more than 50% of the activities were in a group defined as children who do not tend to play alone. A chi square test was performed, group (DCD/Comparison) × with whom (mostly alone/mostly with others). And finally, a Pearson coefficient was calculated to examine the relationship between the motor ability of the child, the child’s preferences and the participation pattern. The strength of the correlation coefficients was interpreted according to Domholdt’s (2000) classification where an $r$ value smaller than .25 indicates a weak correlation, an $r$ between .26 and .49 a low correlation, an $r$ between .5 and .69 moderate correlation and a high correlation is considered when an $r$ value is equal to or greater than .7. All statistical analyses were performed with SPSS statistical software, version 14.0 for Windows. The statistical significance was set to $p \leq .05$.

3. Results

3.1. Motor performance

Table 1 summarizes the differences between children with and without DCD in the various motor performance evaluations (DCD-Q; M-ABC and VMI-V), and confirms the expected significant differences between the groups in all measures.

3.2. Participation patterns

3.2.1. Diversity of participation

Of the five CAPE scales, in skill-based activities only 12 children with DCD and 11 children without DCD participated. In addition, in the formal subscale, 18 children with DCD and 21 children without DCD participated. In the rest of the subscales, all 50 children participated.

Multivariate analysis of variance revealed a significant general difference between the two groups in participation diversity ($F_{6,43} = 5.07$, $p = .001$).

As presented in Table 2 children with DCD participated in fewer active physical, skill-based, informal, as well as total activities of the CAPE.

<table>
<thead>
<tr>
<th>Motor performance evaluation</th>
<th>Children with DCD</th>
<th>Children without DCD</th>
<th>$t$</th>
</tr>
</thead>
<tbody>
<tr>
<td>DCD-Q</td>
<td>Mean (SD)</td>
<td>Range</td>
<td>Mean (SD)</td>
</tr>
<tr>
<td></td>
<td>45.84 (2.52)</td>
<td>39–48</td>
<td>76.68 (5.29)</td>
</tr>
<tr>
<td>M-ABC (percentile)</td>
<td>2.6 (1.84)</td>
<td>1–5</td>
<td>49.96 (26.63)</td>
</tr>
<tr>
<td>VMI-V (percentile)</td>
<td>42.32 (30.89)</td>
<td>1–97</td>
<td>81.5 (21.68)</td>
</tr>
</tbody>
</table>

*** $p \leq .001$. 

Table 1
The differences between children with and without DCD in the various motor performance evaluations (DCD-Q; M-ABC and VMI-V).
3.2.2. Intensity of participation

Children with DCD showed significantly lower intensity of participation as compared to the children without DCD in skill-based activities, in Informal activities as well as in total CAPE activities (see Table 2).

3.2.3. Enjoyment of participation

No significant differences were found between the two groups in the enjoyment measures, while, children from both groups reported high levels of enjoyment in most scales (mean above score 4, out of 5 point scale) (see Table 2).

3.2.4. Activities performed alone

Children were divided into two groups based on the percentage of activities done alone: doing most activities alone and doing most activities not alone. Greater numbers of children with DCD mostly played alone during OST activities (64%) as compared to children without DCD (36%) ($\chi^2 = 3.92, p = .046$).

3.3. Motor ability, visual perception and participation patterns

Pearson coefficients revealed few significant correlations between motor ability (as measured by the M-ABC percentile) and participation patterns. As the child’s motor performance increased, both participation diversity and intensity levels were higher, except for the skill-based and the formal scales (see Table 3). In addition, children with lower motor performance carried out more social activities alone.

Fewer correlations were found between visual perception (as measured by the VMI) and participation patterns. Positive high correlations were found between the VMI and both diversity and intensity scores for active physical activities (see Table 3), indicating that as the child’s visual perception increased, both participation diversity and intensity in active physical activities were higher. In addition, children with lower visual perception percentiles, performed more social, self-improved, informal and total activities alone.

No significant correlations were found between VMI scores or MABC percentile and enjoyment levels in each of the CAPE scales.
3.4. Motor ability and participation preference

Preference to participate in active physical activities was positively correlated with motor ability as measured by MABC scores \( r = .3, p = .036 \). Preference to participate in formal activities was positively correlated with motor ability as measured by MABC scores \( r = .32, p = .023 \) as well as with the VMI score \( r = .35, p = .012 \).

3.5. Participation preferences and participation pattern

Very few correlations were found between the child’s preference and actual participation patterns. Of the 5 significant low correlations, 4 were between the preference score and the enjoyment scores of recreational, skill-based, informal and total activities. The higher the child’s preference to participate in those activities, the higher the enjoyment level (see Table 4).

4. Discussion

The purpose of this study was to examine the participation patterns of children with and without DCD in OST activities, and to see whether there is a relationship between children’s motor abilities and their choices and OST participation. Generally, a relationship was found between participation patterns and motor ability. Children with DCD tended to have a limited participation diversity in which they participated less frequently, and chose activities that were quieter and more socially isolated compared to children without DCD. Nonetheless, a difference was not found between children with and without DCD in their level of enjoyment of OST activities. There was also no relationship between the child’s motor abilities and his/her level of enjoyment of OST activities.

Results of this study revealed that children with DCD participated in fewer activities and with less intensity in total, and also in active physical, skill-based and informal activities, compared to children without DCD. Similarly, Cairney, Hay, Faught, Wade, et al. (2005) found that children with DCD were less physically active, perceived themselves as less capable at basic physical skills and less suited in their general physical abilities, and therefore sought inactivity rather than activity. As illustrated in Heah et al. (2007), feeling successful was important to children with physical disabilities. Findings in Heah et al. (2007) show that success was viewed only in terms of the outcome: being either extremely proficient at the activity or beating someone. As correlations were found between motor function and participation, it was most likely that children with DCD, who were often not successful in specific activities, chose not to participate in them, thus limiting their participation diversity.
Studies show that participation of children with a disability differs mainly in active physical participation (Law et al., 2004, 2000). On the other hand, the findings of this study demonstrated that children with DCD had limited participation not only in active physical activities but also in skill-based and informal activities. Factors which affected participation, such as age, culture, and the nature of the participants' disabilities may have been responsible for the differences in the results of these studies. In conclusion, it seems that the results of this study demonstrated that participation patterns of children with DCD were different from that of children without DCD. These findings further support claims in the literature that a child with DCD show significant difficulties in skills of self-care, academic tasks, leisure activities, or a combination of all these (Missiuna, Gaines, et al., 2006; Missiuna, Moll, et al., 2006; Polatjko & Cantin, 2005).

The fact that no difference was found in the level of enjoyment between children with and without DCD is interesting in itself, especially in light of the difference in the level of participation between the two groups. The relationship that was found between preference and the degree of enjoyment from the different activities shed more light on those results. According to these findings, the more the child enjoyed a particular activity, the more s/he preferred it, indicating that the child's preferences were an important factor for the selection of OST activities. In addition, no relationship was found between the motor abilities of the child and the level of enjoyment of activities in OST activities. Children with difficulties in motor skills did not necessarily enjoy their activities less, and vice versa. This finding is important, and implies that in spite of the fact that children with DCD exhibited lower participation diversity than children without DCD, they enjoyed it to the same extent. Leisure interests and preferences were major determinants of participation (King et al., 2006). The results of this current study suggests that child participation can be encouraged by taking into account their motives or preferences for meaningful participation. Meaningful experiences can promote emotional and physical well-being in children (King et al., 2006).

It might also be important to situate these findings within a developmental context. Given the young age of the children who participated in this study, it is possible that the difference in enjoyment will be more pronounced as the children grow and experience increased difficulties as they encounter activities that increase in complexity. Young children are less aware of their level of performance, they do not compare themselves to their peers, thus are less frustrated with gaps in performance (Harter & Pike, 1984). In addition, based on the developmental skill-learning gap hypothesis (Wall, 2004) at early ages, skill deficits may be less noticeable as the movement demands of play are low. With age, however, skill demands increase, as will the gap between children with and without difficulties. The result is a negative feedback loop in which low participation hinders skill development, which in turn increases avoidance from active play. Cairney, Hay, Veldhuizen, Missiuna, and Faught (2010) who followed up children on five occasions over 3 years found that DCD was associated with a persistent activity deficit in children. Its effect on participation appeared to be particularly serious among females but may diminish with time among males. Our sample included mostly boys. Further study is needed to test all participation measures longitudinally among both boys and girls to better understand the effect of DCD on participation and skill development.

It was found that children with DCD mostly played alone, compared to children without DCD, who mostly played with friends. These findings are strongly supported in the literature on participation in children with a disability. A number of studies showed that children with a disability were more isolated (Bar-Haim & Bart, 2006; Cairney, Hay, Faught, & Hawes, 2005; Cairney, Hay, Faught, Mandigo et al., 2005; Cairney, Hay, Faught, Wade, et al., 2005; Chen & Cohn, 2003; Engel-Yeger et al., 2009; Missiuna, Moll, et al., 2006; Smyth & Anderson, 2000), participated in more activities that were passive involved the parents which entailed dependability, and were related to quiet entertainment and self-care, with less participation in social involvement, or out-of-the-house activity (Engel-Yeger et al., 2009). It seems that group interventions in the clinical setting with other children with disabilities may not be inherently meaningful. One might focus on acquiring social skills in the natural environment, where activities are found to be more meaningful, for example at the playground or in teams. In these situations, emphasis on teaching social skills, providing feedback and supporting the development of relationships will assist the child to capitalize on the social aspects of an activity. It is also important to remember that children's play opportunities at this age are significantly constrained by their parents/caregivers. Parents' feelings and thoughts have a direct, as well as indirect, effect on the social development of their children (Rubin & Stewart, 1996). Parents also affect their children by using strategies to promote competent social behaviours as well as activities to modify or eliminate unacceptable behaviours. It is possible that parents of children with DCD are encouraging non-social play to protect their children from ridicule and embarrassment. Future studies should consider the role of parents in determining participation options, especially in very young children.

### 4.1. Future directions and clinical implications

The present study emphasizes the importance of looking at children's participation from a broad perspective, and the many difficulties children with DCD experience in OST participation. A child with DCD experiences difficulties all through the day. While the child often receives professional help when at school, after school the child and family are left to deal with barriers to participation on their own. It is advisable to include the entire social environment in the evaluation of and involvement in the child's OST participation. Parents, teachers, and the environment in general have a major influence on the child's participation in OST activities (Law et al., 2006). One factor was examined in this study – the influence of disability and child's ability. However, environmental factors such as policies, culture, family characteristics, and socio economic status also influence participation. In future studies, additional factors that may influence participation should be examined.
Finally, in light of the findings of this study, and considering the increase in intervention methods for children with DCD, it is important to examine the influence intervention has on participation patterns of children with DCD.

It is important to note the diversity in motor skills that children with DCD exhibit, both in variation of difficulty and in severity. Future studies are encouraged to further investigate how the different skills and severity might affect participation.

4.2. Conclusions

In summary, this study examined children with a mild motor disability. It was found that even a mild motor disability had significant influence on participation in OST activities as it appeared that children with DCD tended to have less diverse and more isolated participation patterns. It was also found that the lower the motor ability of the child (according to the M-ABC), the lower the participation diversity and intensity in most of the scales. It seems that the severity of developmental difficulties affects children’s participation patterns.

The planning of individual interventions or the creation of new public policy could benefit from the concepts identified above. In both circumstances the ultimate goal of the therapist, or systems representative, is to create and meet goals that benefit the child with a disability. What better way to approach client-centered practice than to include the subjective experiences of the child when attempting to facilitate participation in a population? Children within this study were able to identify enjoyable activities. Continuing to place the unique perspectives of children with disabilities at the forefront, and developing a greater understanding of constraints and facilitators to meaningful participation will further contribute to best clinical practice.

References


