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Doctoral Stipend 2006

Children with ADHD and Physical Activity Behaviours: What Happens When the Village Turns its Back on You

Project Summary

The three main objectives for this research project were to: (a) describe the physical activity (PA) behaviours of children with attention-deficit hyperactivity disorder (ADHD), (b) explore the feelings and attitudes that children with ADHD and their parent(s) had about PA, and (c) generate a grounded theory of PA and children with ADHD. The conclusions of this research project include: (a) differing PA planning subtypes were observed for children with ADHD, a positive finding for future self-regulation strategies in PA and sports, (b) children with ADHD and their parents have social inclusion motives for PA participation, (c) the social exclusion of children with ADHD from many daily activities, and (d) an urgent need for structured education programs and specific PA and sport programs that include children with the non-visual disability of ADHD.

Research Methods

Central Research Question: This research project explored the PA experiences of children with ADHD to answer the following question: How do children with ADHD choose to get involved in physical activity?

Data Collection: There were three main procedures with this research project. First, each child with ADHD performed the *Test of Gross Motor Development-2 (TGMD-2)* was used to assess locomotor and object control skills (Ulrich, 2000). The Movement Assessment Battery for Children-2 (Henderson et al. 2007) was used to assess balance skills and manual dexterity skills.

Second, each child recorded his/her daily PA for a two-week period on a recording sheets. These sheets documented PA that each child participated in. Each child was provided with a disposable camera to have an activity leader, friend or parent take pictures of their PA participation in various contexts. The daily recording sheets and pictures were collected by a research assistant. Approximately two weeks after all information was collected, the children were then asked place their PA photographs in a scrapbook. A research assistant interviewed each child while she or he created their PA scrapbook. Each scrapbook interview was videotaped.

Third, parents expressed their viewpoints from a current perspective. We conducted videotaped interviews with a parent(s) about their child's PA experiences. Parents may adopt an important part of children's PA involvement by assisting in the activity selection process. Parental views on their child's PA behaviours produced a substantial part of our understanding of the children's play behaviour. Child and parent data are being combined to develop a grounded theory of ADHD and PA participation. Videotaped interviews were transcribed verbatim for thematic analysis as part of a within-case analysis to learn as much as possible about each child's PA experience (Merriam, 1998).

Research Results

There were four main sets of findings which are limited in their generalizability because of the qualitative nature of the research. There are four manuscripts which emerged from this research project. First, we created a new qualitative research method in sport and exercise (Harvey, Wilkinson, Pressé, Grizenko & Joober, in press). A consecutive and concurrent scrapbook interview technique was compared with small groups of children with ADHD. The concurrent scrapbook interviewing approach was found to be a more effective interview strategy that was suggested to obtain complex, qualitative data from children with ADHD so we could hear PA stories from their own perspectives. This approach enabled (a) more vivid details and child speak, (b) an increase in depth of participant statements and meaning between and across themes, and (c) greater insight to be gained into day-to-day events and experiences which may influence PA participation.

Second, we have written a manuscript on the concurrent scrapbook interview approach with a group of 10 children with ADHD (Harvey et al., in review a). It is currently under peer-review at an international level physical education research journal. There were study findings that were similar to past research because children with ADHD: (a) demonstrated poor performance on the TGMD-2 and MABC-2 and TGMD-2 tests, (b) had pictures of friends, (c) were aware of their physical disabilities, (d) were on organized teams (i.e., cheerleading, gymnastics, etc.), (e) spoke about observational learning, and (f) viewed parent work schedule as a constraint to PA participation. There were also study findings that were different from past research because children with ADHD demonstrated: (a) performance anxiety, (b) good sporting values, (c) a superficial understanding of purpose for PA, and (d) social fragmentation.

Third, we have written a manuscript on 15 parent interviews of children with ADHD (Harvey et al., in review b). It is currently under peer-review at an international level physical activity research journal. This study is also original research that describes retrospective and current parent perspectives about their views of their children's PA experiences. The study findings demonstrate that the parents were: (a) intricately involved in the daily PA of their children, (b) aware of the movement problems of their children, (c) convinced that their children seldom organized PA, (d) unaware of their children's perceived ability to plan PA, (e) suggesting that school teachers were perceived as not aware of the implications of ADHD, (e) stating that the purpose of getting involved in PA was secondary to the activity itself (i.e., socialization, improved discipline Vs. playing hockey or practicing karate), and (f) aware of the social fragmentation issues raised by the children with ADHD.

Fourth, we are finalizing the grounded theory on ADHD and PA by collecting more interview data until the end of December, 2011 (currently sample is 23 pairs of participants). Our studies have indicated that social isolation is the major theme which emerged in our grounded theory. The essence of the PA stories emerging is a picture where children with ADHD may be excluded from school, the local community recreation center, sporting opportunities, physical education class, with social challenges surrounding some significant others (i.e., parents, teachers, coaches, peers, etc.) and substantial environmental barriers experienced (i.e., lack of transportation, limited amounts of time, etc.).

Policy Implications

The relevance of this research to enhanced sport participation in Canada is related to education programs and specific interventions focused on the inclusion of all people in sport participation at the national, provincial, and community levels. Quite frankly, at first, the study results were a bit surprising as perceptions about the involvement of many significant others (i.e., parents, teachers, etc.) seemed to reveal a multitude of reasons for sport participation. Upon reflection, the study results are not so surprising. Parents and people with

disabilities are susceptible to mass messages that our education and health systems as well as sport organizations send out (i.e., sports and PA build character, develop discipline, build health, etc.). However, the children and their parents fall between enormous cracks created by society and government (i.e., overlap between ministries of sport, health, and education). I predict this unfortunate relationship will continue in the future as our research funding and capacity to develop greater knowledge and intervention bases in this area will dry up, given the recent decision by SSHRC to be seemingly void of any sport research related to persons with disabilities as it may be deemed as health-related research (even in the context of the Sport Participation Research Initiative). Clearly, the concept of self-determination and people who are not elite athletes may well continue to be disregarded. For example, based on our current research findings, our scholarly group submitted a proposal to develop better understandings of self-determination and autonomy-supportive networks in sport participation for persons with mental health problems (MHP). We deemed sport participation as a tremendous vehicle to further our understanding of self-determination from an adult with MHP perspective by being encouraged to choose to become actively involved in their communities. We believed sport could be an answer for many people with MHP to improve their conceptualization of social functioning. In fact, at least 6 million Canadians per year experience MHP which may be positively impacted by community sport participation but this research was deemed ineligible by SSHRC and not even available for review by Sport Canada and the current initiative.

Next Steps

1. Are children with ADHD excluded from PA participation because they are being discriminated against?
 2. How do children with poor movement skills gain access to PA and sport programs with no major supporting infrastructure?
 3. How is the health and welfare of children with ADHD being compromised due to exclusionary PA and sport practices in schools and local communities? National and provincial funding opportunities?
 4. Do the social isolation issues, related to a lack of PA and sport participation, lead children with ADHD to become involved in undesirable groups or to withdraw into their homes to become further isolated and predisposed to deeper mental health problems?
 5. How will positive and cost-efficient PA programs be developed to lead to better outcome measures so children with ADHD have a better chance at becoming involved in their communities and successful, self-determining citizens?
 6. How may university and national coaching programs develop sufficient expertise for physical education teachers and coaches to include persons with non-visual disabilities in their programs?
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Key Stakeholders and Benefits

- Sport Canada
- Physical and Health Education – Canada
- Active Living Alliance
- National and Provincial Learning Disabilities Associations
- Provincial Ministries of Education and Health
- Sport Canada - Long Term Athlete Development (LTAD) program
- Children with Attention Deficit Disorders (CHADD)