

Barriers Faced Among Parents of Preschool Children in a Home-Based Physical Activity Intervention

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Abstract

As with older children, preschoolers are not meeting the physical activity (PA) guidelines. Interventions have targeted parents promoting PA in their children; however, parents may face challenges in implementing daily PA. **PURPOSE:** This study explored the perceived barriers of PA experienced by parents of children attending a local preschool who participated in an 8-week PA intervention. This study also explored the relationship between barriers and PA participation. **METHODS:** Parents in the intervention group ($n=18$) completed pre and post intervention questionnaires. For the intervention, parents attended an initial training session that demonstrated games and activities and use of provided equipment as well as attended two playdates at which they completed an additional questionnaire assessing barriers to providing PA opportunities for their children. Parents listed up to three barriers and rated that barrier upon how limiting it was. Also, reported was the frequency their child participated in PA during the past seven days, along with days of equipment use. **RESULTS:** Time, sickness and prior obligations were the most common barriers reported by parents. At the first playdate, parents ($n=12$) reported an average of 1.7 barriers but barriers and limitations were not related to days of PA or equipment use ($p>.70$). At the second playdate, parents ($n=14$) reported an average of 1.2 barriers. The number of barriers was related to the days of PA participation by the child ($r=-.047$, $p=.09$) and equipment used ($r=-.64$, $p=.02$). Perceived limitation was related to equipment used ($r=-.55$, $p=.08$) and approached significance for days of PA participation by the child ($r=-.51$, $p=.11$). **CONCLUSION:** Time, sickness and prior obligations were the most common challenges parents face when promoting PA in their children. It is suggested that the number of barriers parents face as well as the perceived limitation of those barriers may negatively relate to their children PA participation.

Introduction

- As with other age groups, only 54% of preschool aged children are meeting the physical activity (PA) recommendations (Tucker, 2008)
- The family environment might be particularly salient in preschool aged children as parental influences have been associated with physical activity levels in this age (Loprinzi & Trost, 2010)
- Home-based interventions with preschool aged children have been shown to be successful in promoting physical activity levels (O'Dwyer et al., 2012)
- Several skills that are important for promoting physical activity include coping with barriers (Miller, Horodyski, Brophy, 2012)
 - Barriers are physiological, behavioral, or psychological factors that may decrease one's PA levels
 - These can vary across different environments and situations
- Similar to individuals having to overcome these barriers for their own PA, parents may face barriers in promoting their child's PA
 - Barriers reported by parents of preschool aged children include weather, neighborhood safety, and lack of time (Lindsay et al., 2009)



Families playing at play dates

Purpose

- Explored the perceived barriers of PA experienced by parents of children attending a local preschool who participated in an 8-week PA intervention
- Explored the relationship between barriers and PA participation

Methods

Participants:

- 18 preschool families attending a Head Start participated in an intervention (parent and child)
 - Part of a larger study that included a control group with 20 families in a control group
- The ages of preschool children ranged from 3-4 years old
 - 6 boys and 12 girls in intervention group
- All families were Hispanic

Procedures:

- Active Playtime intervention:
 - Parents attended an initial training session that demonstrated games and activities and use of provided equipment (e.g., balls, hoops, bean bags)
 - Attended two play dates (week 2 and week 7) to reinforce training and provide support to each other
- Questionnaires on barriers were answered at each playdate

Measures:

- **Barriers** (Gyurcsik et al., 2009)
 - Open-ended question asked participants to "List obstacle/challenge" (list up to 3)
 - After each barrier was reported, participants rated each for: How limiting was this?
 - 1 (only slightly) to 4 (very limiting)
- **Days of PA & Equipment Use** (created for this study)
 - "During this last week, how many days did you have your child participate in physical activity?"
 - "During this last week, how many days did you use the equipment provided?"
 - 0 (never) to 7 (daily)

Analysis:

- Descriptive statistics
- Thematic analysis of obstacles and challenges reported
- Correlations performed between barriers (frequency and limitation) and days of physical activity and equipment use (alpha set at .01)

Barriers Reported by Parents at the Playdates

Barriers*	Playdate #1	Limitation	Playdate #2	Limitation
	(%) n=13	Mean (Range 1-4)	(%) n=14	Mean (Range 1-4)
Time	4(30.8%)	3	5(35.7%)	1
Sick/Hurt	4(30.8%)	1.33	6(42.9%)	3.33
Prior Obligations (work, meetings, appts, etc)	4(30.8%)	1.25	1(7.1%)	3
Other	2(15.4%)	2.5	2(14.3%)	2.67

* With the option to list multiple barriers, the percentages do not add up to a whole 100%.

Results

- Time, sickness and prior obligations were the barriers reported by parents (See Table below for details)

Playdate 1 Questionnaire (week 2)

- At the first playdate, parents ($n=12$) reported an average of 1.7 barriers
- Barriers and limitations were not related to days of PA or equipment use ($p>.70$)

Playdate 2 Questionnaire (week 7)

- At the second playdate, parents ($n=14$) reported an average of 1.2 barriers
- The number of barriers was related to the days of PA participation by the child ($r=-.047$, $p=.09$) and equipment used ($r=-.64$, $p=.02$)
- More barriers reported were associated with fewer days of PA and less use of the equipment
- Perceived limitation was related to equipment used ($r=-.55$, $p=.08$) and approached significance for days of PA participation by the child ($r=-.51$, $p=.11$)
- Perceiving barriers as more limiting was associated with less equipment use and less days of physical activity

Discussion

- Time, sickness and prior obligations were the most challenges parents face when promoting PA in their children
 - These barriers are similar time and health reported by Dwyer et al. (2008) who also included barriers such as weather and safe areas
 - With Hispanic mothers, weather, and neighborhood safety also were barriers mentioned (Linday et al., 2009)
- These findings suggest that the number of barriers faced as well as the perceived limitation of those barriers may negatively relate to their children's PA
 - Other populations have shown that barriers may impact PA participation (Gyurcsik et al., 2009)

Strengths

- Explored multiple barriers perceived using open ended questions
- Trained parents on self-regulatory skills to overcome barriers

Limitations

- Small sample size ($n=18$) limited power
- Not all parents attended all play dates
- No fathers participated, limits the ability to generalize
- Self-report assessment of physical activity could be improved using objective measure such as accelerometers

Future Directions

- Explore ways to assist families with dealing with these barriers
 - Improve teaching of self-regulatory skills
- Further explore the challenges faced by families taking part in interventions to improve adherence to interventions

