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Analyzing Experiences with Context-Based Physical Activity Coaching (CB-PAC) in Caregivers of Children with Visual Impairments: A Pilot Study

Mary Godman, MS, Angela Labrie Blackwell, PhD, OTR, Eric Hicks, PhD, MS, OTR

BACKGROUND

Children with visual impairments (VI) are often less involved in participating in physical activity (PA), which could have serious implications for physical and emotional health^{3, 4}. Multiple studies have noted that children with VI who are active early in their lives (with caregiver support) continue healthy habits through adulthood^{4, 10, 20}.

One of the most influential components to participating in PA are caregivers, and prior literature dictates the need for their role to be addressed^{1, 4, 9, 13, 14, 20}. Caregivers face barriers to providing PA, such as lack of time, financial support, support groups, and knowledge of activities and adaptations^{1, 4, 22}.

Coaching is an evidence-based intervention that provides a supportive and encouraging environment where the learner and the coach work together to accomplish pre-determined goals²¹. Many studies focusing on coaching demonstrated positive outcomes, such as improved goal attainment, self-efficacy, and insight about their children after participating in a coaching intervention^{2, 7, 8, 11, 17}. The content of the coaching sessions varied, but the majority incorporated a family-centered approach for completing goals.

METHODS



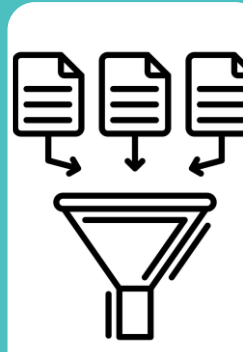
Participants

- Two caregivers of children with VI
- Mothers, age range 35 to 40 years old
- Located in eastern United States
- Education level of a Master's degree



Research Design

- Mixed Methods Design
- Joint Display



Data Collection

- Qualitative**
- Semi-structured surveys via Qualtrics^{5, 19}
 - Coaching session transcripts
 - Coaching reflection logs
- Quantitative**
- Goal Attainment Scale (GAS)¹⁶
 - Parent Perception of Physical Activity Scale (PPPAS)¹²



Data Analysis

- Qualitative**
- Tesch's Eight Step Approach⁶
 - NVivo¹⁵
- Quantitative**
- Visual analysis (PPPAS)
 - Heat map (GAS)

CB-PAC

CB-PAC consists of 5 virtual coaching sessions (45-60 minutes each).

Session 1

- Introduced to CB-PAC, GAS
- Reviewed the AccesSports Model
- Discussed goals

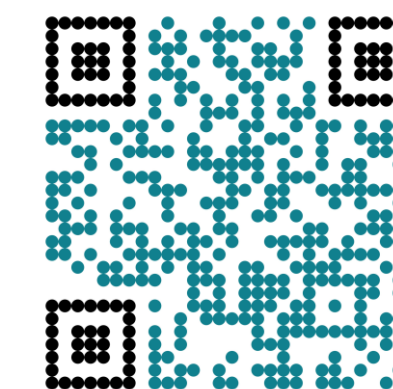
Sessions 2-4

- Reviewed and reassessed goals on the GAS
- Participated in coaching for PA implementation strategies

Session 5

- Reviewed and reassessed goals on the GAS
- Participated in coaching for PA implementation strategies

References



RESULTS

Goal Attainment Scale

- Participant 1 met 1/3 goals
- Participant 2 met 2/3 goals
- Heat maps demonstrated a positive trend for 2/3 goals

Parent Perception of Physical Activity Scale

Subscale 1 – Perception of Benefits to PA

- Minimal increase in perception
- “Running will lead to participation in other sports and activities” – Participant 2

Subscale 2 – Perception of Barriers to PA

- No change in perception
- “We’ve always been straightforward” – Participant 1

Subscale 3 – Perception of Influence on PA

- Moderate increase in perception of influence
- “You think there are limits on things, but I’m learning that there aren’t for my son” – Participant 2

Subscale	Perception of Benefits	Perception of Barriers	Perception of Influence
Participant 1	Pre: 3.68 Post: 3.75	Pre: 3.14 Post: 3.14	Pre: 3.5 Post: 4
Participant 2	Pre: 3.18 Post: 3.81	Pre: 3 Post: 3	Pre: 2.5 Post: 4

The PPPAS is 25 questions and uses a Likert scale (1 = strongly disagree to 4 = strongly agree).

THE ‘WHY’

Problem

Although there are resources available, caregivers have limited skills and training for implementing and sustaining PA for their children.

Purpose

- What are the experiences and perceptions of caregivers related to PA and the CB-PAC intervention for their children with VI?
- How does the CB-PAC intervention improve caregivers’ perception of the child’s engagement in PA?

ACCESSPORTS MODEL^{14, 18}

Components of Sports

- **Targets and Goals** – Scoring points, advance in competition, location
- **Boundaries** – Defining the playing area, orients players
- **Rules** – Keeping athletes safe, increase chance of scoring

Adaptations to Sports

- **Object Visibility** – High contrast tape, size, lighting
- **Auditory Cues** – Low frequency beeping or buzzing, bells, portable radios
- **Tactile Cues** – Cord under tape, guide wires, textured areas

DISCUSSION

- Caregivers’ personal experience and participation with PA impacts their child’s experience with participation in PA¹⁰
- Support, motivation, strategies for participation, and equipment were important areas for caregivers to understand
- There was minimal to no change between pre- and post-test perceived benefits and barriers to PA
- CB-PAC demonstrates the potential to increase participation in PA for children with VI and positively impact a caregivers’ perception of their influence on their child’s PA

Implications for OT Practice and Research

- Future application of CB-PAC should involve 1) children and 2) caregivers of diverse education levels^{10, 13}
- Sessions should range from five to 10 sessions to better establish rapport and a comfortable environment
- Reflection logs should be kept after each session to enhance the learning process involved with coaching

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This project involves human subjects; it has been approved by the USAHS IRB.