Families' Perceptions of and Experiences Related to a Pediatric Weight Management Intervention: A Qualitative Study

Author contact information:

Nicholas L. Holt,[1] Kacey C. Neely,[1] Amanda S. Newton,[2] Camilla J. Knight,[3] Allison Rasquinha,[2] Kathryn A. Ambler[2] John C. Spence,[1]& Geoff D.C. Ball

[1]Faculty of Physical Education and Recreation, University of Alberta, W1-34 Van Vliet Centre, Edmonton, AB, Canada, T6G 2H9; (t: 780-492-7386; f: 780-492-1008)

[2]Department of Pediatrics, Faculty of Medicine and Dentistry, University of Alberta, Edmonton, AB, Canada (t: 780-248-5409; f: 888-353-1548)

[3] College of Engineering, Swansea University, Singleton Park, Swansea, United Kingdom, SA2 8PP, (t: +44 (0)1792 295514)

Corresponding author:

Dr. Nicholas Holt, Professor

Faculty of Physical Education and Recreation

Van Vliet Centre, University of Alberta

Edmonton, AB, Canada, T6E 2H9

Tel: 1-780-492-7386; E-mail: nick.holt@ualberta.ca

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INTRODUCTION

Clinical practice guidelines[1] and expert reviews[2] recommend parents play a leadership role in pediatric obesity management. Parent-based interventions have been referred to as 'Parents as Agents of Change' (PAC) approaches.[3] Clinical trials have demonstrated the value of PAC interventions in facilitating weight management and lifestyle changes in children and parents.[4-6] However, a recent review showed only 2 of 12 interventions reported differential improvements in children's weight status as a function of *greater* parental involvement in treatment.[2] The type, rather than amount, of parental involvement may be central to the effectiveness of PAC interventions.

Understanding more about parent-child relationships and who takes primary responsibility for lifestyle change may provide insights into how to best target and engage families.[2] To shed light on such issues, the current study was informed by an integrative contextual model of parenting. This model proposes that the goals parents have toward socializing their children are critical determinants of parenting behavior. Parents convey these goals through their broader parenting styles and specific parenting practices.[7]

The purpose of this study was to examine parents' and children's perceptions of and experiences related to a PAC intervention. The primary research question was: How did parents and children make lifestyle changes during the intervention? The secondary research questions were: What were parents' and children's expectations and concerns prior to starting the intervention? Upon completion, what were parents' views about the intervention strengths and limitations?

METHODS

Recruitment

Participants were recruited from families referred by local physicians to an information session for a trial to compare the effectiveness of two PAC interventions (ClinicalTrials.gov Identifier: NCT01267097).[3] Interventions were similar in duration, session length, and lifestyle goals, but differed in modality; one was based on principles of cognitive behavioral therapy (CBT) whereas the other included psycho-education (PE). Research Ethics Board approval was obtained from the University of Alberta. Parents provided written consent and children provided written assent. Families received $25 Canadian (CDN$) gift cards to a local business as tokens of appreciation at the end of each interview.

Participants

Participants were from 10 families. Six families had annual household incomes ≥60,000 CDN$. Mean age of parents and children was 41.8 years and 10.4 years (range 8-12 years), respectively. Children satisfied the criterion for obesity (BMI ≥95^{th} percentile). Two parents met the criterion for normal weight (BMI: 18.5–24.9 kg/m^2) with the remainder either overweight (n=4; BMI: 25.0–29.9 kg/m^2) or obese (n=4; BMI: ≥30.0 kg/m^2). All weight status data were based on measured height and weight.

Data Collection

Participants were interviewed pre- (10 adults, 9 children), mid- (9 adults, 8 children), and post- (8 adults) intervention. Children were not interviewed post-intervention because these interviews focused on the sessions delivered to parents only. Each participant was interviewed individually

by trained interviewers. Interviews ranged in duration from 20–25 minutes (children) and 30–35 minutes (parents). Interview guides were adapted to the phase of the study and participant (parent or child). Questions about goals, parenting styles, and strategies were based on the theoretical perspective used.[7] Other questions specific to the intervention were posed (relating to concerns, progress, lifestyle habits, intervention strengths and limitations).

Data Analysis

This study was approached from an interpretivist philosophical perspective, which assumes a subjectivist epistemology (i.e., knowledge is socially constructed) and relativist ontology (i.e., there are multiple perceptions of social reality).[8] This perspective informed the analysis in terms of focusing on participants' perceptions of certain issues and considering how they may vary between participants. Interviews were transcribed verbatim and participants assigned a numerical indicator (*e.g.*, Parent #1 = P1). Transcribed data were subjected to an inductive thematic analysis procedure[8], which enabled us to breakdown the data and identify some concepts, ideas, and patterns that have been given little attention in the literature. Three team members completed the analysis together. Transcripts were read several times to identify units of meaning in the data. Units of data (quotes) were isolated and similar quotes were grouped together as themes. Data coded within each theme were compared to ensure exclusivity.

No distinct patterns were apparent when responses from participants in the CBT and PE interventions were compared so data were combined. For mid-intervention data, families were placed into one of three inductively generated groups according to who was primarily responsible for making lifestyle changes. These groups were initially created by one researcher

and then independently verified by two other researchers. Themes arising from pre- and post-intervention data were compiled and presented in tabular form.

RESULTS

Pre-Intervention: Goals and Concerns

Pre-intervention interviews revealed goals among families **(Table 1**) included their desire to increase the amount of time spent engaged in physical activity as a family, learn to plan and eat healthier meals, reduce screen (i.e., TV and computer) time, and lose weight. Children reported weight loss as a goal. Of primary concern was whether families could initiate and maintain lifestyle changes.

Mid-Intervention: Parents' Taking Responsibility for Lifestyle Changes

In six families parents assumed the primary responsibility for making lifestyle changes. P3 said "I'm doing this, I'm committed. I'm your parent and I need to do this and you can't help yourself because you're nine." P8 tried to increase her son's fruit intake by making fresh fruit easily accessible at home. She said:

> [Child] would be hungry before bedtime, so I tried putting the washed fruit on a plate where we do his homework so he doesn't ask for a snack in the evening and it worked. He doesn't even know I did it.

The fact that her son was not involved in making this change was reflected in his interview. When he was asked "Has anything around snacks changed?" he said "No, nothing around snacks, nothing" (C8).

Parents in this group recognized the importance of role modeling behaviors. P10 said to make changes at home "it's got to be me and I have to role model… I have to get off of my butt to do it and make the changes." It was important for P10 to role model physical activity. She said:

> [Daughter] is really limited because of me… 'Cause I'm in front of the TV and, you know, I'm tired and I don't wanna get off my butt and do anything at night. So I gotta change that. So it's not her, it's changing me.

Mid-Intervention: Children Taking Responsibility for Lifestyle Changes

In two families parents expected their children to be primarily responsible for making healthy changes. With reference to serving sizes, P5 said, "We really want [daughter] to know what's best and what's moderate and, you know, when enough is enough. She needs to take that ownership." The daughter corroborated this and said "It's like my job to like not go off and buy something that's so bad for me like that's my whole days' worth meal" (C5).

Similarly P2 said "I'm really focusing on making [son] make better choices and having him make the choice, and then explaining, 'no, you can't have that because of this, you need to make a wiser choice.'" The son (C2) shared a similar view:

> I'm choosing better foods… Yeah, I used to spend all my money on bad things, but now it's just maybe for just like chicken strips and a pack of gum or a little Smarties thing… [Before PAC I would get] a hot dog, fries, a large chocolate bar, and a large pop… and a large chips.

Mid-Intervention: Parent and Child Shared Responsibility for Lifestyle Changes

Two families were identified as sharing responsibility between parents and children when making healthy changes. P4 explained, "I'm not always going to be there to say '[Daughter's name] you know, that's not a healthy choice,' so just to help me help her figure it out, I guess." P6 expressed a similar thought when she said, "sure we can organize what [son] is eating and things like that, but he needs to learn it so he's got it permanently." Her son (C6) confirmed this when he told us:

> C6: She [mother] showed me portions and healthier choices that, that still taste the same. Easy things that like could just be incorporated into everyday life… Instead of taking a snack bar, I can take an apple or a peach or mango. Instead of making a sandwich with white bread, I could use wheat bread.

Examples of shared responsibility regarding physical activity were mentioned. P6 said, "OK, example, Saturday, if I'm excited to go to the gym then [son is] excited to go… And once we're there, we have a good time." C6 also talked about doing physical activity with his dad and how they work together to reach their goals. He said his dad has "been talking to me, and then other times I'll talk to him… We kind of encourage each other 'cause if, if I start him on something, he wants to go to the point where we're done."

Post-Intervention: Parents' Perspectives

Parents provided insights about the strengths of the intervention and suggestions for improvement **(Table 2)**. Strengths included offering the intervention in a group setting, weekly discussions regarding goal-setting, and the session on food 'portion distortion.' Areas for

improvement related to engaging children while the parents attended the program sessions, adjusting the delivery and format of the program, and reducing intervention length.

DISCUSSION

This study revealed issues about families' perceptions and experiences related to a PAC intervention. Parents knew the lifestyle and behavioral emphasis of the PAC interventions, so their pre-intervention comments regarding making and sustaining lifestyle changes were not unexpected.[9-11] The observation that children (but not parents) reported weight loss as a goal was notable and consistent with other research showing that parents and children have different goals for their involvement in interventions.[12] However, it is important that parents and children share goals for parenting styles and strategies to be effective.[7]

Several themes were consistent with the 'core behavior change strategies' recommended by the American Heart Association.[2] For instance, the role modelling reported across several families may help boost children's *self-efficacy skills*. Parents used *stimulus control*, such as putting washed fruit on a plate (P8) or preparing/purchasing healthy foods (P6). Other parents promoted *self-management skills* (P5). These specific strategies are effective in promoting successful weight management in families.[2]

Families were grouped according to the extent to which making changes was the primary responsibility of parents, children, or shared. Grouping families in this manner mirrored the recommendation that exploratory studies can be used to produce refined phenotypes of parent-child relationships to help better understand mediators of treatment outcomes.[2] Given that all

families in this study reported being successful, the results suggest that *consistency* between the *general parenting style* at home (reflected by who takes responsibility for lifestyle change) and *specific parenting strategies* used is important. This is consistent with the integrative contextual model of parenting that informed the study.[7]

Post-intervention, parents provided positive feedback regarding the group setting. Group-based interventions are cost-effective.[13] Practical activities were favored. Goal setting, an evidence-based behavior change strategy, was a reported strength.[2,14] The session on portion control – another key behavioral strategy[15] – was also positively received due to its practical value.

Parents recommended engaging children to improve the PAC intervention. This is consistent with some reports,[9] but contrary to others suggesting that parents should be the exclusive targets in PAC interventions. [6] The involvement of children may depend on family preferences, how families take responsibility for lifestyle changes, and clinical capacity.

Parents' commented the intervention was long. Given the high level of attrition in pediatric weight management,[16] providing interventions of different lengths could help to meet families' preferences. For instance, Internet-based options may be more feasible and accessible for some parents.[17]

Limitations of this research include the small and homogenous sample, which restricts the generalizability of the findings to similar settings/interventions. Participants were referred by local physicians, so the experiences and perceptions of families who access PAC intervention via

self-referral may be different. Finally, there may be age-related differences to consider because the parents taking responsibility group included the youngest children (8 and 9 years) while the parent and child taking responsibility groups included the eldest children (11 and 12 years).

IMPLICATIONS FOR RESEARCH AND PRACTICE

This study highlights the need to understand how families assume responsibility for making lifestyle changes within PAC interventions. Clinicians and administrators should consider families' experiences and preferences, and may wish to ensure the ways in which behavior change strategies are presented align with families' approaches to who is responsible for making changes. PAC interventions may be optimized by discussing families' pre-intervention concerns, providing different interventions that vary by duration, and providing opportunities for children to participate in age-appropriate, interactive sessions.

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Table 1. Pre-intervention Goals and Concerns

Theme	**Quotes**
Goals	
Increasing Amount of Family Physical Activity	"Get new ideas of what to do. And so we can do more as a family. Go for a bike ride, stuff like that" (C1).
Planning and Eating More Healthy Meals	"Get out of the program? How to eat more healthy, eating better foods like fruits, vegetables, grilled chicken. And you probably shouldn't eat too much of like French fries" (C8).
Reducing Screen Time	"I wanna manage it [screen time], I wanna be able to be very strict and say 'OK, boys, you can only be on it for 2 hours.'" (P2).
Losing Weight (Children Only)	"I just hope to lose some weight… I think 10 pounds. It means I can lose weight and be happy. Not saying that I'm like not happy now, I'm really happy, but I guess I'll be more happy when I lose weight" (C2).
Concerns	
Initiating and Maintaining Lifestyle Changes	"Awareness is one thing. Actually doing something about it is something totally different…we've said it in the past, 'we're gonna do this, we're gonna do this' and we never follow through" (P1)

Table 2. Post-intervention Evaluation of Program

Theme	**Quotes**
Strengths	
Group Setting	"I wasn't sure that I wanted a group setting, I was a little bit nervous and unsure. I wasn't sure what I'd get from it. I think that's probably been the most positive thing is to just, having, hearing other people and listening to other people opposed to one-on-one" (P4).
Goal Setting	"The goal setting was probably the best thing because it made you think about how to make changes, what you should change, and it was measurable so you could see if you could succeed at it or what you needed to do to make it successful" (P8).
Portion Distortion	"The portion sizes were quite interesting to see you bringing your own dishes and the measuring it out on your own dishes, so I thought that was quite interesting…" (P3).
Areas for Improvement	
Child Involvement	"She was sitting at home watching TV while we were out because what else is she going to do… like she's 11. That was in my mind when I was here" (P5).
Session Format	"I think just making it a more versatile, not having the same format all the time. I know we had some weeks that were different where we were exercising on the stairs or measuring. But the rest was pretty much sit down, learn it, and I think they could get more creative" (P8)
Length of Program	"The length. …16 weeks is a long haul. I probably would have stopped at 10 or 12 weeks" (P3).