

Original Article

Understanding paediatric patients' attitudes toward obesity and expectations prior to entering a weight management program

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Abstract

Objective: This qualitative study explored attitudes toward weight management and knowledge of healthy, active living among paediatric patients referred to a weight management program. The objective of this study was to determine the emotional state and attitudes of patients entering into a paediatric weight management program.

Methods: Study participants (aged 7 to 17 years old) were recruited during clinic orientation. Semistructured interviews were conducted, audiotaped and transcribed verbatim. Qualitative content analysis generated a thematic coding scheme, identifying concepts and linkages in the data. Study rigour was achieved collaboratively through an audit trail, and data triangulation.

Results: Fifteen patients (median age 11 years) consented to interviews. Three recurring themes emerged: emotions, motivation and learning. A total of nine subthemes were identified. Four key spheres of influence (family, peers, school and health care providers) affected the patient's outlook on obesity positively by providing support or negatively by adversely influencing their emotions and motivation. The level of individual motivation to engage in the weight management program varied. A positive outlook toward learning about obesity from school officials and health care providers emerged.

Conclusions: This study provided insight regarding paediatric attitudes related to entering a weight management program. The negative emotional state and sometimes fear of the program expressed should be considered by the referring physician and by clinicians in weight management programs engaging in their care.

BACKGROUND

Currently, one in every three adults globally is estimated to be overweight or obese (1). It is well known that childhood obesity is associated with adverse health effects that extend into adulthood, including type 2 diabetes, and mental health complications (2,3). In Canada, estimated rates of obesity are 25% in adults and 8.6% in children (4). The most common intervention strategy is a multimodal approach to address lifestyle behaviours including diet, physical activity, sedentary time and sleep hygiene utilizing family-based behavioural modifications

(5). Current evidence supports moderate efficacy of these programs, although generally only amongst those who remain engaged with programs long term, as attrition rates are high (6–8).

Qualitative studies are increasingly used to examine patients' perceptions and views of clinical care they receive, including identifying barriers to treatment (9). This is important as multiple studies (10–12) have shown that active patient involvement is integral to success in an obesity management program. There have been several qualitative studies conducted, primarily

focus group-based, which examined paediatric perspectives surrounding obesity management in children who were not enrolled in weight management programs, or who had previously attempted weight management (13–19). One study in particular, by Dhaliwal et al. (20) found that a primary reason for discontinuation of paediatric weight management was due to unmet expectations of care. While these studies provide important evidence regarding patient perspectives of clinical care, they are limited by the potential introduction of response bias through the use of focus groups. Furthermore, sparse literature exists regarding the perceptions of paediatric patients entering weight management programs.

This study attempted to mitigate this gap in knowledge through the examination of experiences and attitudes of children prior to entry into a weight management program. Understanding paediatric patients' attitudes at the time of referral may help referring physicians and paediatric weight management programs to meet the needs of this patient population; potentially improving patient outcomes.

METHODS

Design

Following research ethics approval and informed consent, a phenomenological, interview-based approach was used to explore paediatric patients' attitudes, and knowledge of obesity, prior to beginning treatment in a paediatric weight management program. As we were interested in perceptions of weight management prior to entering the program, interviewing patients who had not yet received treatment in the program was the most informative sampling method.

Setting and participants

Paediatric patients (aged 7 to 17 years) identified as overweight or obese by their family physician according to body mass index, were referred to the weight management clinic where they were approached for consent at program orientation. The paediatric weight management program the children were entering is in a tertiary children's hospital. The program delivers multidisciplinary, family-based behavioural modification therapy over a 2-year period. Using an interview guide, each participant was interviewed for approximately 30 min. Interview questions were developed through two small focus groups comprised of a physician, a surgeon, a researcher and a methodologist, after which the script was piloted and finalized. Each interview was audiotaped and transcribed verbatim for codebook development and analysis. Conceptual saturation was reached after 10 interviews; however, the research team conducted 5 additional interviews to ensure saturation.

Data analysis

Data were analyzed using qualitative content analysis. Two investigators independently coded each interview and a third

investigator independently reviewed all coded transcripts. The study team then collaboratively developed a codebook, which underwent data reduction, until all members reached consensus. Iterative analysis with the codebook using open, axial, and selective coding generated themes and concepts related to participants' thoughts, attitudes and knowledge of obesity. Methodological rigor was ensured throughout the study with the maintenance of an audit trail, investigator and data triangulation. Member checking was not conducted due to the potential to introduce recall bias into the study sample.

RESULTS

Although saturation was reached after 10 interviews, all 15 were analyzed. There were six male and nine female participants, ranging in age from 7 to 17 years, with a median age of 11 years.

Three overarching themes (emotions, motivation and learning), and nine subthemes were identified with supporting quotes: emotions about self, motivation, knowledge, barriers, supports, peers, family dynamic, health care dynamic and learning modalities (Table 1). The subthemes that emerged from the analysis of transcripts and examples of supporting quotes are in order of prominence.

Building the model

Three overarching themes were identified during data analysis, specifically emotions, motivation and learning. Four key spheres of influence emerged in relationship to the three overarching themes, including family, peers, school and health care providers. These spheres of influence affected the patient's outlook on obesity positively (by providing support) or negatively (by creating a barrier). The spheres also influenced their emotions, motivation and ability to learn with respect to weight management (depicted as knowledge in the model). Using this structure, we developed a model to describe the relationships between themes from the perspective of the paediatric patient with obesity (Figure 1).

Emotions about self

Emotions were markedly negative overall among patients. Nearly half of the participants, ranging across all age groups and genders, expressed feelings of fear, sadness and guilt related to their weight.

Motivation

Although over half of the participants stated that they enjoyed engaging in healthy behaviour, many indicated that their ability to participate in physical activities was low. This was partially explained by the discussion surrounding lack of motivation. Many participants acknowledged this to be an important factor in relation to weight management, citing "I need motivation, and most of the time, that's one of the things that makes it a barrier for me, lack of motivation."

Table 1. Themes and concepts identified in interviews

Theme	Concepts	Quotes
Emotions About Self	Fear, depression, guilt, apathy, low self-esteem, confidence	<p>"I am scared of what will happen when I get older. Will people accept me for who I am?"</p> <p>"I hate making myself fat."</p> <p>"...Most of my other friends are skinny... sometimes I eat when I'm sad."</p> <p>"... I just got sick and tired of just being miserable at times, so I said screw it. I'm going to be happy with what I got."</p>
Motivation	Current physical activity, positive attitude to healthy lifestyle, desire for thinness, lack of self-control, lack of motivation, health-based, same capability level as peers, school-based, avoidance of bullying	<p>"So I can finally show my friends that I can actually beat them in a race."</p> <p>"I really want to think forward... because you could have a shorter life because you're overweight. It's harder to live your life."</p> <p>"I just don't want to get diseases or problems when I'm older, or then my kids getting it."</p> <p>"I need motivation... that's one of the things that makes it a barrier for me, lack of motivation."</p>
Knowledge	Knowledge of obesity causes/comorbidities, self-diagnosis, perceived behaviour control, understanding benefit, self-identified early intervention, personal commitment to program, emotional eating, lack of knowledge, medication	<p>"I think there are things that I don't know. I think there are other ways than just food."</p> <p>"I don't think it's anyone's fault. You can just come out that way."</p> <p>"I am going to manage my self-motivation, and I am the only one who is going to be able to make me do things I need to do."</p>
Barriers	Previous dieting/weight loss attempt, absent peer support, negative attitude to physical activity, apathy, lack of self control, time, aversion to vegetables, electronics, financial, absent family support, physical burden, lack of awareness of current behaviour	<p>"I go on a diet for 4 months, then I forget what to do. So I quit...I can't keep up."</p> <p>"Mostly laziness. You don't really want to eat healthy... walk a lot, exercise..."</p> <p>"There's a lot of junk food in the house. You are going to eat it sometimes, you're gonna eventually..."</p> <p>"I just really don't want to eat my vegetables."</p>
Supports	Family support, peer support, peer exercise, physical activity at school, school support	<p>"[My mother] was like, "Look, you are out exercising and losing weight. This is great. I am proud of you." And that honestly motivated me a lot more..."</p> <p>"My cousin... really helps me, because I'm having too much fun to think about it... I tend to not eat more."</p> <p>"Yeah, like I just met [him] and he's been the best friend ever and he tried... to help me out with my weight... We go out for a little run."</p>
Peers	Perceived peer reaction, bullying/teasing, anger/resentment, peer response, peer-diet impact, peer protection	<p>"They acted normal... I wanted to play with them, but they would not let me join them."</p> <p>"Sometimes when they leave me out of games... sometimes I feel like there's something wrong with me."</p> <p>"Because the time I have the most sugar is when I'm camping with my friends."</p>

Table 1. Continued

Theme	Concepts	Quotes
Family	Decision maker-both parents, role modelling, decision maker-mom, child-family diet discrepancy, decision maker- self, suggestions for help- family engagement	<p>“You have to eat vegetables, vegetables, vegetables” then you turn around and give my brothers chips, popcorn, candy, and it's like okay, you guys can go out and have as much as you want.”</p> <p>“You just need that little bit of motivation from your family...”</p> <p>“Family makes you do what they want to do... you have to eat different meals, so it's better to do it as a family.”</p> <p>“They don't eat my healthy food... When they eat chocolate in front of me, that doesn't help.”</p>
Health care Dynamic	Program expectations, unwillingness to be in program, engagement at clinic, clinical comorbidities, hope of clinic success	<p>“I went to the doctor's... she told us that I'm sick, but I can't feel that I'm sick, but I am because of my weight.”</p> <p>“To help solve my problem, I would like a manual (i.e. specific times to eat, exercise). Not general, but rather specific and laid-out. Otherwise I will quit because I cannot understand it.”</p> <p>“I want to do it, but I think it's useless.”</p> <p>“I am hopeful... there must be some sort of success, right? ...maybe I'll be one of the successful people here.”</p>
Learning Modalities	Health care, school, internet, self-motivated learning, parental use of television	<p>“The doctors tell me, and mostly help me. This hospital helped me a lot.”</p> <p>“I learned a bit through gym class.. There was never discussion about health, weight management ...”</p>

The most verbalized motivators for weight loss were the desire for thinness and peer acceptance (i.e., desire to *'fit in'*) although their desire to avoid future negative health outcomes was identified as well.

Knowledge/insight

Every participant demonstrated a basic understanding of what constituted healthy lifestyle behaviours. They focussed particularly on unhealthy eating habits and lack of exercise. Some participants further displayed knowledge of the long-term health effects of obesity, and a few recognized the importance of self-motivation to achieve healthier behaviours. There was little mention of sleep hygiene or screen time as potential contributing factors to obesity or adverse health outcomes.

Barriers

The majority of the respondents reported previous unsuccessful dieting attempts and many barriers to successful weight management. The most prevalent barrier stated by participants was lack of emotional peer support: “*My friends don't really talk about it... I may not be like them, but probably they just don't want to say it to me*”. Personal barriers to successful weight loss that

were identified included negative attitudes toward physical activity, lack of self-control regarding eating habits and an aversion to vegetables. Though less prominent, familial factors such as lack of time, financial constraints and absent family support were also described as barriers.

Supports

Peers and family were the most influential support systems for interviewees, both behaviourally and emotionally. Participants associated family more with behavioural support through the reinforcement of healthy behaviours. Conversely, peers appeared to be more emotionally supportive through providing encouragement and reducing feelings of isolation.

Peers

The most pervasive concept in peers was perceived social isolation. Over half of the interviewees felt like they *'did not fit in'* with their peers and *'were not normal'* as a result of their weight. As well as feeling isolated, children often reported being bullied because of their weight. This was juxtaposed by two children reporting that they have used peers as protection against bullying.

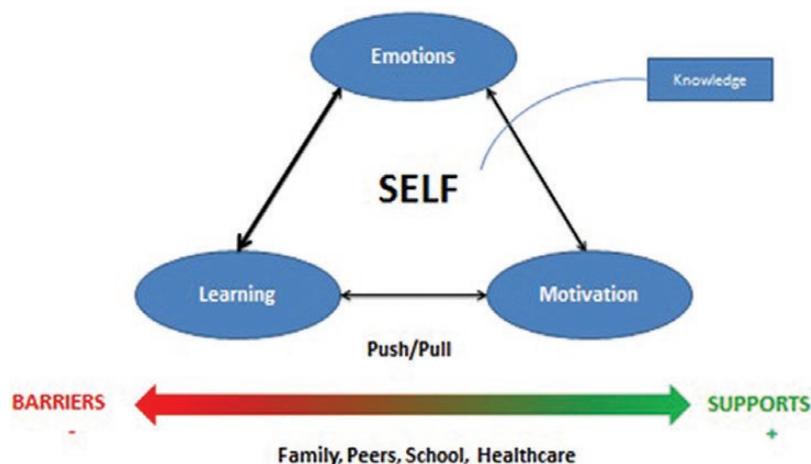


Figure 1. Conceptual model to describe the relationships between themes, from the perspective of the paediatric patient with obesity.

Family

Mothers were the primary decision-makers for food-related choices. This had either a positive or negative effect on participants through role modelling. Role modelling, defined as parents exemplifying lifestyle behaviours for their children, could induce positive change through healthy decisions or reaffirm negative habits such as unhealthy dietary choices.

A prominent cause of frustration was discrepancy in dietary choices between family members. For example, the parent would enforce food restrictions on the child that the rest of the family were exempt from. Rather than enforcing diet discrepancy, children suggested that consistent healthy dietary choices for the entire family would positively impact their attempted lifestyle change.

Health care dynamic

Prior to treatment in the weight management program, the expectations of what would happen in the clinic were primarily negative, with half of the interviewees either fearful or averse to the clinic process. However, a few participants expressed hopefulness and excitement at the prospect of clinic success, stating *"maybe I'll be one of the successful people here."*

Expectations for the weight management clinic were largely centred on expert guidelines for food consumption and exercise. Other than a single participant who had expressed interest in learning strategies for weight management, it was made explicitly clear that these participants did not want generalized suggestions.

Learning modalities

The health care environment was the most commonly cited source of information regarding weight management. Specifically, physicians were mentioned as the most prominent knowledge resource. School, in particular physical education, was interestingly framed as both a negative and positive arena for learning. Equal numbers of participants cited it as either a

beneficial source of knowledge or lacking in healthy behaviour education. Regardless of access to these sources of knowledge, many families also chose to engage in independent learning through use of the internet.

DISCUSSION

The objective of this study was to understand the attitudes and knowledge of children with obesity prior to entry into a weight management program. Three specific overarching themes emerged: emotion, motivation and learning. It is important to incorporate these themes and consider their potential influences either as facilitators or barriers to engagement in behaviour change.

Despite the prevalence of childhood obesity in Canada, it is clear that the paediatric patients interviewed struggle with the stigma of obesity, and expressed that they 'want to fit in'. The majority of patients interviewed carried a heavy burden of poor self-image, social isolation and sadness before starting treatment. These findings are consistent with prior studies, which reported a lower quality of life, and an association of mental health problems with childhood obesity (21–23). These findings reinforce the need for these aspects to be addressed with children and youth engaging in paediatric weight management programs. It also highlights, on a broader scale, the need for community engagement and understanding of the influence of weight stigma.

When examining the second most prevalent theme, motivation, some children recognized they lacked self-motivation for behaviour change. Personal insight and gaining buy-in for treatment is both challenging and paramount for success (24). The desire to fit in and keep up with peers was the most verbalized motivating factor to engage in a weight management program. This is consistent with the International Classification of Functioning, Disability and Health in Children and Youth

(ICF-CY) (25). This framework includes body function and structure, activity and participation as key components of health, and highlights the influence of contextual factors such as the environment and personal factors (e.g., age). Incorporating this framework into weight management programs may improve engagement and reduce attrition.

It was interesting to note that some participants expressed a clear desire to avoid negative health consequences of obesity but had not set specific goals. Entering the weight management program, participants expressed a desire for very specific instructions, not generalized guidance for eating and activity. In contrast, current practice guidelines recommend implementation of behaviour modification strategies (26,27). These focus on patient engagement in goal setting, and gradual behaviour change as opposed to receiving a 'prescription' from health care professionals. The emotional state of patients, and disparity between their expectations and what clinicians actually provide may contribute to the high attrition rates early in treatment programs, which approach 50% (6). Health care professionals referring patients to weight management programs should be aware of the potentially negative emotional state linked to entering weight management. Furthermore, they should explicitly address expectations of program engagement; as we saw, what patients want from programs (specific instructions) and how programs are designed, (gradual behaviour change) are extremely different. Awareness of this disparity will allow referring clinicians to address the importance of realistic expectations during early encounters with this patient population.

Patients expressed a need to feel supported and many cited lack of emotional support as a barrier to successful weight management. The majority of participants indicated they enjoy physical activity, yet actual engagement was low. Peer led mentoring programs have shown potential in assisting with childhood obesity management and improving physical activity (28). There is opportunity for weight management programs to create safe environments where children with obesity can develop physical literacy skills as they strive to fit in with peers. As demonstrated in our model (Figure 1), the relationships with peers, friends, health care and school are complex and intertwined. Relationships with the same individuals can be both positive and negative, either by contributing to a sense of support, or creating a barrier to successfully engaging in behavioural change. Peers in our study appear to be a greater source of emotional support by providing encouragement, and reducing feelings of isolation. Unfortunately, social isolation and bullying are common amongst overweight adolescents (29). Peer support has been previously found to correlate positively with increasing physical activity (30).

The results of this study highlight the importance of supportive patient relationships, and diversity of necessary social supports. This study reaffirms the complexity of obesogenic influences, necessitating a biopsychosocial model of care. Knowledge

exchange between paediatric patients with obesity and their care providers, focusing on treatment expectations for weight management programs should be encouraged prior to active engagement in the program. This would allow the referring physician to be aware of and potentially address any patient concerns prior to engagement in the weight management program. Furthermore, these discussions may help better tailor weight management programs to meet the needs of paediatric patients with obesity, which would potentially improve patient outcomes, while simultaneously reducing program attrition rates.

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Conflicts of interest

KB reports grants from Evicel Study; Ethicon and grants from Moxipedia Study; Bayer Pharmaceuticals, outside the submitted work. KM reports research funds from Astra Zeneca to conduct an industry-sponsored study outside the submitted work.

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