Responding positively to "children who like to eat": Parents’ experiences of skills-based treatment for childhood obesity

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Abstract

This study aims to understand the challenges parents of preschoolers with obesity face. We assessed parents’ experiences of a group treatment program focused on parenting skills; the treatment program was evaluated in a randomized controlled trial in Stockholm County. After completing the program’s 10 weekly sessions, parents were invited to participate in a semi-structured interview. The interviews were audio recorded, transcribed and analyzed using thematic analysis. In total, 36 parents (67% mothers, mean age 39 years, 33% foreign background, 50% with university degree) were interviewed. Two main themes were developed: Emotional burden and Skills and strength from others. Emotional burden encompassed the parents’ experiences of raising a child with obesity. Parents spoke about the difficulties of managing their child's appetite and of seeking help and treatment, as well as their feelings about the social stigma attached to obesity. Skills and strength from others encompassed the parents’ experiences of participating in group treatment. Parents reported that they appreciated the practical behavior change techniques taught, especially those regarding food and how to make everyday life more predictable, and said the focus on parenting skills gave them the confidence to apply the techniques in everyday life. Parents also highlighted the strength of the group setting, saying it enabled them to discuss perceived challenges and learn from other parents. Our findings show that childhood obesity carries social and emotional implications for parents, and that an intervention that provides parents with skill-building and a discussion space can help in negotiating these implications. This suggests that childhood obesity intervention programs benefit from including a parent-based approach which offers training in parenting skills and support in managing socially and emotionally challenging situations.

Keywords: appetite regulation; childhood obesity; emotion regulation; feeding; family; hunger; interventions; stigma
Introduction

According to recent estimates, nearly 124 million children worldwide are classified as having obesity (Collaboration, 2017). While there is some evidence that the overall prevalence of childhood obesity is stabilizing, this is not true for the preschool age group (Skinner, Ravanbakht, Skelton, Perrin, & Armstrong, 2018). The increasing prevalence of obesity in preschoolers is concerning, as childhood obesity often tracks into adolescence and adulthood (Simmonds, Llewellyn, Owen, & Woolacott, 2015). Furthermore, as childhood obesity is related to numerous physical and psychological co-morbidities, including cardio-metabolic risk factors, decreased health-related quality of life and depression (Farpour-Lambert, et al., 2015; Sanders, Han, Baker, & Cobley, 2015), effective interventions are needed in the preschool age group. Despite mounting evidence that the treatment of obesity should start in early childhood, when dropout rates are lower and treatment is more effective compared to later in childhood (Danielsson, et al., 2012; McPherson, et al., 2017; Waters, et al., 2011), it is still unclear what treatment program components are especially helpful in supporting parents (Pont, et al., 2017).

Parent-based treatment programs that provide parenting skills training have been recommended for childhood obesity, as they target behavioral strategies in the family in addition to offering advice on eating habits and physical activity (Foster, Farragher, Parker, & Sosa, 2015; Ling, Robbins, & Wen, 2016; Loveman, et al., 2015). Programs specifically developed to strengthen parenting practices are still rare in clinical obesity treatment (Boutelle, et al., 2017; Ek, et al., 2019; Gerards, et al., 2015; Magarey, et al., 2011; Moens & Braet, 2012; Stark, et al., 2018; West, Sanders, Cleghorn, & Davies, 2010), and only two have been developed for children in the preschool age (Ek, et al., 2019; Stark, et al., 2018). The extant programs, however, have yielded promising weight status outcomes, which could
inspire wider clinical use of parenting programs to address obesity in early childhood (Ek, et al., 2019; Stark, et al., 2018). To place these outcomes into context and thereby inform the future development of similar programs, it is essential to develop a greater understanding of parents’ lived experiences of parenting young children with obesity (Haugstvedt, Graff-Iversen, Bechensteen, & Hallberg, 2011; Stewart, Chapple, Hughes, Poustie, & Reilly, 2008; Turner, Salisbury, & Shield, 2012), as related to their experiences of parent-based childhood obesity programs.

A challenge to weight management at all stages (including at the level of recruitment for treatment interventions) is that parents perceive childhood obesity as a very sensitive and difficult matter to discuss (Andreassen, Gron, & Roessler, 2013; Bentley, Swift, Cook, & Redsell, 2017; Pont, et al., 2017). Parents avoid using words such as overweight and obesity, and some feel it is inappropriate to talk with their child about this topic (Eli, Howell, Fisher, & Nowicka, 2014a), arguing that discussing weight status could harm their child’s self-esteem (Andreassen, et al., 2013; Eli, et al., 2014a; Haugstvedt, et al., 2011; Turner, et al., 2012). Some parents also worry that treatment for childhood obesity could potentially cause an eating disorder (Andreassen, et al., 2013). At the same time, parents of infants wish to be informed about their child’s obesity from health care professionals in order to intervene appropriately (Bentley, et al., 2017), and parents of young children appreciate such information if conveyed empathetically and non-judgmentally (Bentley, et al., 2017; Edmunds, 2005; Eli, et al., 2014a; Pont, et al., 2017; Stewart, et al., 2008). Recognizing that parents may experience particular difficulties in the context of treatment, where childhood obesity is continuously discussed and where parenting skills may be challenged, this study explores parents’ experiences of parenting a young child with obesity and of taking part in a skills-based treatment program for obesity at an early age.
The present study aims to: (i) understand challenges that parents of preschoolers diagnosed with obesity face and (ii) assess parents’ experiences of a parent-based group treatment program evaluated as a part of a randomized controlled trial, the More and Less (ML) Study, in Stockholm County, Sweden.

Methods
The ML Study evaluated a group treatment program for parents of children with obesity, aged 4-6 years, in comparison with the current standard treatment offered in Stockholm County. Sixty families completed the program; group sizes ranged from 5 to 12 families. On average, families participated in 71% of the sessions. The ML group treatment program was comprised of 10 weekly sessions, 1.5 hours per week, which provided training in positive parenting skills and limit-setting strategies. The program also included facilitated discussions on obesity-related lifestyle components (e.g., food and beverages, sedentary behavior, physical activity and stress). The children did not attend the group sessions. After the program concluded, randomly selected participants received phone-based booster sessions during the remaining nine months of the study. The booster phone calls were conducted by one of the treatment group leaders and took place every 4-6 weeks; each booster session phone call lasted about 30 minutes. The program has been described in detail elsewhere (Ek, et al., 2015; Ek, et al., 2019). The reporting of this study follows the Consolidated criteria for Reporting Qualitative research (COREQ) checklist, see Supplement 1 (Tong, Sainsbury, & Craig, 2007).

Participants
During the last session of the ML parent group, the group leaders informed all parents that they might be contacted by a researcher and asked to participate in a semi-structured interview. For the interviews to provide rich content, only parents who attended at least three sessions were selected. Participant selection was designed to ensure representation of booster and no-booster session program participants, and of fathers and mothers. Because more mothers than fathers took part in the group sessions, in families where both parents attended at least three sessions, we allowed both parents to participate in separate interviews in order to increase the number of interviewed fathers. Between three and six months after the last session of group treatment, the selected parents were contacted by phone with an invitation to take part in the interview. All invited parents agreed to participate. The interviews were scheduled for a time convenient for the interviewed parent.

**Interviews**

The interviews were conducted over the phone up to six months after the completion of the ML program. The interviewer was one of the researchers (a research assistant with a Master’s in Public Health or the principal investigator, a family therapist with a PhD in Pediatrics). Both interviewers were women, and both were experienced in communicating with parents whose children have obesity, with training and/or previous experience in conducting research interviews. Neither interviewer led the ML program in the groups her assigned interviewees attended. An interview guide with semi-structured questions was developed by the research team. The interview questions were mainly targeted at program evaluation; examples of the questions asked include: “Was there something that could have been addressed more during the program?”, “Has the program affected your sense of being a competent parent?”, “What parts and which parenting skill presented during the program have been helpful to you?”; and “What lifestyle changes has your family made during the program?” (See Supplementary table 2). Probe questions were used depending on individual answers. Following the first few
interviews, the research team met to review the interview guide and ascertain whether any
questions needed adjustment, based on the interviews; the team decided not to change the
original set of questions. Each interview lasted approximately 23 minutes (14 min – 35 min).
All interviews were audio recorded and transcribed verbatim by a research assistant, and by
KN and PN.

The interview transcripts were analyzed using thematic analysis with an inductive approach
(i.e., a data driven approach rather than a theory driven approach) (Braun & Clarke, 2006).
Following Braun and Clarke’s (2006) delineation of thematic analysis types, the thematic
analysis followed a realist approach, one which “reports experiences, meaning and the reality
of participants” (Braun & Clarke, 2006). All material was carefully read by PN, KN and AE
for an overall understanding of the interviews. PN carried out the initial coding, and KN
coded interview transcripts independently, to establish inter-coder reliability. PN and KN
discussed the codes, revised them, and then met with AE to develop themes based on the
codes. After these themes were developed, all authors discussed the themes and resolved
disagreements regarding the thematic framework. The original Swedish-language transcripts
were used in the analysis. For this manuscript, selected quotes were translated from Swedish
to English, to illustrate the themes.

Ethical considerations
The study was reviewed and approved by the regional ethical board in Stockholm (dnr:
verbal and written information about the interview study and were told that participation was
voluntary and that it would not affect their future participation in the ML Study or their
children’s treatment. Before the interviews, participants were given the opportunity to ask the researcher questions about the study. All parents provided written informed consent, which was sent by post to the research team. Participant confidentiality is maintained throughout the manuscript.

Results

Table 1 displays the descriptive characteristics of the participating parents and their children. In total, 36 parents were interviewed (including separate interviews with two parents from the same family), with 51% (18/35) of the families having received the booster sessions.

According to the thematic analysis sample-size standards defined by Guest et al. (Guest, Bunce, & Johnson, 2006), the number of 36 interviewees suggests that data saturation was reached. All invited parents who were asked to participate agreed to be interviewed. Most interviewed parents were female (67%, 24/36), of Swedish origin, and with a university degree. Parents had a mean age of 39.1 years (min-max 27.7-65.5 years) and an average Body Mass Index (BMI) of 27.9 kg/m² (min-max 19.5-41.0 kg/m²). Their children were on average 5.1 years old (SD 0.8, min-max 4.1-6.7 years); 43% (15/35) were girls and the mean BMI standard deviation score (SDS) was 3.0 (SD 0.7, min-max 1.8-4.7). Compared to families who participated in the parent group but not in the interviews, the families of the interviewed parents included a greater proportion of mothers who had a university degree (56%, 19/34) and a greater proportion of fathers who were born in Sweden (65%, 20/31).

| Table 1. Descriptive characteristics of the participating parent and child at baseline. |
|-----------------------------------------------|-----------------|
| Parent (n=36) | Mean (SD) |
| Age (years) | 39.1 (7.4) |
| BMI (kg/m²) | 27.9 (5.5) |
| Number (%) |               |

Gender
Female: 24 (67)
Male: 12 (33)
Foreign background
Yes: 12 (33)
No: 24 (67)
Weight category
Normal weight: 11 (32)
Overweight: 14 (41)
Obesity: 9 (27)
Highest school grade
Grade school: 1 (3)
High school: 16 (44)
College/University: 18 (50)
Missing: 1 (3)
Working situation
Full time: 24 (67)
Part time: 6 (17)
Not employed: 3 (8)
Student: 2 (6)
Missing: 1 (3)

Abbreviations: SD, standard deviation; BMI, Body mass index.

Foreign origin: parent and both grandparents born in a country other than Sweden or parent born in Sweden and grandparents born abroad.

Parents were classified as having normal weight, overweight or obesity according to the World Health Organization’s cut-off criteria for BMI.

Both parents of one child were interviewed separately.

Two themes were developed through the analysis: Emotional burden and Skills and strength from others, each with three sub-themes (Figure 1). Each participant quote has been labeled to indicate the interviewed parent’s gender (M for mother and F for father), the type of parent group attended (B for Booster and NB for No-Booster) and the interview number.

**Figure 1.** Themes from the thematic analysis
Theme 1: Emotional burden

The first main theme encompasses parents’ experiences of raising a child with obesity. This theme includes three subthemes: Loneliness and vulnerability, frustration and guilt and uncertainty and worry about hunger and satiety.

Loneliness and vulnerability

Parents described having no one to talk to about their child’s weight problem and no one to share their worries with. They often experienced a lack of understanding from health care professionals, as well as from relatives, friends and neighbours, who did not appreciate the efforts parents made, since these efforts did not always result in the child losing weight. Even when parents decided to seek treatment, they still experienced loneliness and vulnerability, feeling judged by health care professionals. One parent reflected on an earlier visit to a dietitian with her child (which took place before she participated in the group):

*It was a very big difference. There [in the outpatient setting] I felt very lonely and almost as if I were attacked even if that perhaps was not the case* (Code MNB27).

Another dimension of loneliness occurred within the family, when one parent was more engaged in lifestyle changes than the other parent. Highlighting this disparity in parental involvement, some parents said it was particularly important to them that both parents attended the treatment program: “*Then there is a disadvantage that it was I who was more involved so to speak, but I feel that it is my husband who needs more information*” (Code MNB6). For separated parents whose children divided their time between two homes, it was sometimes difficult to find consensus regarding food and activity.
Managing a child’s weight was not limited to the household, but also required the involvement of other important people in the child’s life, such as grandparents. However, some parents said it was difficult to receive support from grandparents. For example, one mother explained that her parents initially resisted her requests for help to manage her child’s weight:

> At first it was a bit of a roadblock, [they said] well `she is only 4... she is so pretty and all’, you know. Then we talked about it, [her weight status] that it is all about creating good habits ... It is about a long-term commitment, and everyone needs to be involved (Code MB19).

As this quote underscores, when grandparents resisted parents’ requests for involvement in managing young children’s weights, this was often because they did not perceive child overweight or obesity as problematic. Previous research has found that grandparents and parents tend to describe children’s higher weight status as indicative of cuteness, strength, or health (Eli, et al., 2014a). Thus, when parents tried to involve grandparents in child weight management, they not only had to explain the practical changes they wished to implement, but also justify their decision to implement these changes.

Frustration, guilt and lack of power

For the participating parents, childhood obesity evoked very strong feelings, as captured in this quote by a mother:

> Yes, you felt somehow powerless. My thoughts were: `what are we doing differently from others? or why does he keep gaining weight when other [children] do not?’ What are we doing that the others are not doing, so you
compare what you are doing. I do not give him more food or more sugar etc. 

(Code MB26).

Some parents said they felt like bad parents if they stayed indoors all day when it was raining, or if they went to a fast food restaurant for dinner. They expressed that they knew what to do, but they needed help to test their knowledge in real life conditions. As one mother said “... I am constantly aware of what to do in different situations. The difficult part is to actually apply them [tips]” (Code MNB30). The frustration often resulted in a tense atmosphere at home, and parents described having many conflicts over small things. This was explained by a mother who said she needed guidance in “... how to handle my feelings and how to be able to put forward to my child what is good for her and what is not good for her without me being angry...” (Code MNB27). This mother also described the intensity of these situations: “... I became so angry that I used to scream and nag [at her] and yes I got really pissed off. But now I explain [what I expect from her] from the start” (Code MNB27).

Paired with frustration was a sense of guilt about being a supposedly ‘failed’ parent who, as one participant described it, “had allowed the child to become obese” (Code FNB15). When parents tried to manage their child’s weight, they faced even greater guilt, because regulating children’s food intake and physical activity at this young age is not socially accepted. A father described this double bind:

As you say, it is social situations, there is a lot to eat, it is really hard [in social situations]. Yes, especially among other children ... you look like a bad parent
when [your child] has become fat. And when you try to do something about it then it becomes even worse somehow” (Code FNB15).

Notably, this father described his feelings of guilt as grounded in social situations where he was subject to judgment and blame. As previous research has found, the social stigma attached to obesity also extends to childhood obesity, with parents often blamed for their children’s obesity (Pierce & Wardle, 1997; Turner, et al., 2012). In the present study, we found that the guilt parents felt was not simply internalized but was relational – it was continuously triggered by social situations where they faced stigmatizing attitudes anew, such that guilt and social isolation compounded one another. Parents who themselves had obesity as a child found it even more difficult to contend with these feelings of guilt. These parents often saw themselves in challenging situations that their child had experienced, or they worried about the stigma their child might face if they did not manage to reduce their child’s weight status.

Uncertainty and worry about hunger and satiety

Some parents described feeling burdened with uncertainty when they tried to interpret whether their child was full or not. Parents felt that understanding and responding to young children’s appetites was difficult, especially when children had large appetites, a keen interest in food, and frequent food cravings. One father, for example, described his daughter’s preoccupation with food as constant:

It used to be, all the time, ‘what is for dinner?’ and when we were eating dinner .. if ‘we could have a sandwich after dinner’, .. ‘what’s for lunch tomorrow?’

(Code FNB32).
Nearly all parents said that, in addition to expressing keen interest in food, many children also said they were hungry throughout the day. To handle this omnipresent hunger, parents placed restrictions on candy, sweetened beverages, chips and other calorie dense foods, and some restricted the intake of fruits and other nutritious foods, which many children sought as snacks. For many parents, however, children’s expressions of hunger made managing their food intake particularly challenging. Parents expressed how hard it was not to serve the child another portion, even if the parents knew the child had already eaten enough. This was especially difficult late in the evening, when parents worried the child would go to bed hungry. Explaining why she served her child potentially unneeded food, one mother explained:

One of the problems we had was that she used to ask for more food, that she was not full and I felt that as a mother I could not deny her food. ... For me, the biggest problem I had was when she said, ‘Mommy I am still hungry’, I do not have the heart to deny her food. But currently I do not deny her food, just certain kinds of food (Code MNB30).

As captured in this quote, faced with children’s expressions of hunger, parents associated denial of food with denial of care, such that managing their children’s diet seemed to clash, at times, with their parental role.

**Skills and strength from others**

The second theme encompassed the parents’ experiences of participating in group treatment, with particular focus on their appreciation of learning and starting to use practical tools and
techniques that made everyday life easy, structured and predictable. This theme consisted of three subthemes: Pedagogical tools, positive parenting skills and social strategies.

**Pedagogical tools**

The participating parents said they had great interest in gaining knowledge on nutrition and appropriate feeding. In particular, they appreciated the information provided in group treatment regarding the appropriate portion sizes of various foods and meals throughout the day. Parents reported that, after participating in the program, they made different choices when grocery shopping. For example, they chose low-fat dairy products over full-fat products.

In fact, parents said they engaged in making healthy choices for their child, even if they had to compromise their own preferences. Most parents reported they appreciated visual tools provided in the program, saying these tools made decisions easier. For example, the Plate Model, showing the proportion of different food groups on a plate, allowed parents to visualize appropriate portions of pasta, meatballs and vegetables in relation to one another.

Another tool parents found helpful was the Keyhole symbol (the Swedish National Food Agency’s food label to help consumers identify healthier options), which was discussed in the program as a tool to use when buying food. Parents described how the Keyhole symbol guided them in finding foods higher in whole grains and fiber, and lower in fat, salt and sugar.

Parents said they showed the Keyhole symbol to their children when grocery shopping, asking the children to be detectives in the store and find foods with this symbol, as this father described:

> Now that [the child] chooses cornflakes for example, he reasons with himself: ‘this cereal I want, but I won’t take it, as it has no keyhole....we have promised him Saturday and Sunday he can eat [cereals] without the keyhole but all other days there should be a keyhole on them.... The funny thing is that when we eat,
he checks [the food package], “Keyhole, a weekday, good, I take it!”... so he has really learned to look for keyholes when we go to the store (Code FB21).

Previous research has found that young children are aware of the social scripts of grocery shopping with their parents, that they aim to play a helpful role in choosing and finding food, and that they express interest in healthy food choices (Gram, 2015; Gram & Gronhoj, 2016). As captured in this quote, offering the Keyhole symbol as a practical tool wove into the cooperative aspects of parents’ and children’s grocery shopping interactions, and presented children with a tangible guide to assuming a helpful role while co-shopping.

Underscoring the importance of pedagogical tools, some parents also said that the group would have benefited from more prescriptive tools. One mother stated she would have liked to know exactly how much food should be given to her child, saying that “a handout that you could give [to the preschool] and also so that you would know yourself how much a child is allowed to eat” would be useful (Code MNB6). Along similar lines, one mother said she “would have liked more details regarding cooking food, like tips and such” with “a recipe book” provided in the group setting (Code MNB17).

Positive parenting skills
A skill parents frequently said was useful, particularly when faced with a challenging parenting situation, was focusing on encouragement and motivation. In response to the open-ended question, ‘what was most helpful?’, one parent answered: “Encouragement, I think, because it opens so many doors. Everything becomes easier when you encourage.” (Code MB26). Parents of children who engaged in picky eating particularly appreciated the use of reward systems called “charts”, which were introduced in the program as a form of
encouraging children to learn new behaviors. The parents said the charts helped them focus on behavior changes and reward the children when they tried new foods. As one father described: “When we began to use the motivational charts my son started to eat vegetables. This became part of our routine and we continually used it. We have finished with the motivational charts now, but if we feel he needs it, we will begin to use it again” (Code FB3).

Diverting the child’s attention was another skill parents appreciated. For example, parents divided one portion into two smaller portions or engaged the child in dinner preparations to take the child’s mind off feelings of hunger. Parents also said that planning and preparing the child for challenging situations (such as grocery shopping or going to a party) were especially helpful techniques. Through planning, parents knew how to act, and through preparing the child, the child knew what was expected and thus had a greater chance of coping well. One mother explained:

No, I do not think we have changed much in the way we set limits. [We prepare our child more] for what is going to happen and it will be like this and that, and then you do not have to set that limit. That is a way of limit setting but from the other way around (Code MB19).

Several parents described how planning took shape in everyday contexts. For example, parents said that, before entering the grocery store, they told their children they will only shop for particular items, such as milk or vegetables, thereby preempting requests for energy-dense foods. Many parents also mentioned the importance of consistency and clear limit setting. For instance, as this father stated,
Setting limits is very difficult... but I think we have become more consistent at setting limits. We focus on the right occasions. ... `no´ means `no´ when I say `no´ and when I do not say `no´ you can do what you want to do. We have learnt to anticipate the situations that may arise and are prepared to say `no´ if needed. Before it was more like `oh´, and you were surprised and said `no´ half-heartedly, and it became something in between. Now, I think that limit setting is much more clear, when it is needed (Code FB3).

Parents also highlighted that meeting other parents in a group setting allowed them to consider different perspectives on recurring challenges. The parent groups had a good atmosphere, with open discussions and mutual feelings of respect. One father described the strength of the group setting as follows: “We could help each other, by merging ideas then you might come up with something better than what you could come up with on your own” (Code FB25). The value of meeting others in similar situations or with similar challenges was repeated throughout the interviews. Being able to open up to others and share concerns produced relief, acceptance and hope. This was well captured by a mother who explained:

To me, we all have the same problem. We need to say no a lot, no to an extra portion, no to chocolate, no to ice cream, no to... You feel you get some type of psychological support [from the group], that it is not only me [saying no], there are many parents who go through the same thing. Sometimes it wears you out, sometimes you feel mean when you need to say no all the time ... (Code MNB27).
Parents also reported how discussions in the group made it easier for them to relate to their own child’s appetite; as one mother explained:

*Yes, it was a lot of fun and extremely rewarding to meet parents who were in the same situation. I felt that most of them did not have children who ate a lot of candy, but rather children who liked to eat [food], and that was the main issue, and that was a relief in a way. It was not like ‘we all drink soda and eat candy, but we actually just like food´…” (Code MB19).*

Societal misperceptions about what children with obesity eat and drink – and the blaming of parents due to these misperceptions – are a common frustration expressed by parents of children with obesity (Eli, Howell, Fisher, & Nowicka, 2016). In the group setting, however, parents were able to speak about their experiences and identify with one another, without worrying that their child’s weight status would be “read” as a sign of unhealthy feeding. Thus, as conveyed in this quote, group discussions had the added value of destigmatizing and validating the experience of parenting a young child with obesity, a finding which was also observed in another study of parents’ experiences of a childhood obesity intervention (Edmunds, Rennie, King, & Mayhew, 2014).

Most parents felt that the social support they received in the group setting left them with a calmer state of mind even after the program had ended. Parents reported that, through this calmer state of mind and through practicing the parenting techniques they were taught, their patience with their children and the atmosphere at home improved considerably.

*Social strategies (towards others)*
Parents said that social situations – for example, events and gatherings that involved meeting with other parents, other children, or family members and relatives – posed challenges to managing their children’s eating. A key challenge in social situations was coping with the availability of energy-dense foods:

*The most challenging thing has been the social context (...) (pause).... There is so much candy and ice cream around other kids that do not have problems with their weight and trying to have him not eat so much [is hard] (...) Trying to avoid these situations has been the hardest.... For instance, when other kids come over, you should not offer baked goods. Or when he goes to a friend’s house to play and they are pressing the parents [for unhealthy food], they have no issues with it [weight], but then he gets ice cream and cookies. My partner thinks that it is hard to tell other parents that they cannot serve him candy or ice cream. Then word spreads that he is overweight, that has been the most difficult thing (Code FNB15).*

In social situations, parents struggled not only with limiting their children’s intake of energy-dense foods, but also with how to communicate about limit-setting with other parents or adult relatives, a finding which has been observed in previous research (Eli, et al., 2016). This difficulty was compounded by the social stigma attached to the child’s weight status. Notably, FNB15 concluded the quote by saying that “the most difficult thing” is when “word spreads that [the child] is overweight”, linking her attempts at limit-setting in social situations with an increase in gossip – and, by implication, stigma – directed at her child. Accordingly, positive communication was highlighted by parents as a key skill they gained through the parent program – a skill that allowed them to navigate challenging social situations both effectively and diplomatically:
What I have thought of more, or what [the group leader] mentioned, it was to talk in a more encouraging and positive way (...) I have thought of it when talking with other people such as our mothers, that you can start by praising and telling [them] what you think is good and that you appreciate that you get help and such instead of directly telling them what they do that you do not like…” (Code MNB17)

In addition, parents said that meeting other parents of children with obesity provided them with a new frame of reference when navigating social situations, such as visits to relatives or birthday parties their child attended. Group discussions inspired parents to talk with family members and with the parents of their children’s friends, and thereby receive their support when navigating food-centric social situations. Parents also felt empowered to have repeated conversations with relatives and friends, as needed, to make sure they would comply with their limit-setting priorities: “... you need to remind them that even though it is Saturday you do not need a really large bag of candy. Kids will be just as happy with a small bag as with a large bag” (Code MNB22).

For some parents, the preschool setting posed difficulties in managing their child’s eating. These parents said they appreciated hearing from other parents that it was possible to communicate with teachers about regulating their child’s eating at preschool, and that teachers would cooperate; as explained by this mother:

I feel much more empowered to go to the preschool and talk about it [child’s weight]. I know that many parents go directly [to the preschool] and talk about it. Before, I had no thoughts to go to the preschool to talk about regulating what
my child eats there. So it is positive that now I can go and talk to them about it. (Code MNB6).

According to the interviewed parents, then, the parent group helped in navigating social situations both through the program’s skills-based curriculum and through facilitating a space for discussion, advice, and sharing among parents.

Discussion

In this study we interviewed parents of preschoolers with obesity who participated in a parent-based group treatment program for childhood obesity. Two main themes were identified: (i) Emotional burden and (ii) Skills and Strength from others. Participants expressed how parenting a child with obesity evoked feelings of loneliness, guilt, and frustration, and how, at times, they felt unable to cope with these feelings. However, they also said that participating in the parent group program offered useful parenting strategies and practical tools that allowed them to manage the emotional and social difficulties they faced. The group setting provided a safe and positive environment in which parents did not feel judged when raising issues and concerns regarding their child’s weight status. According to the participants, the program helped to reduce guilt and thus empower parents to support their child to eat healthfully and reach a healthy weight.

A key finding was that parents of children with obesity struggle with feelings of loneliness, frustration and stigmatization. Parents often reported they did not have friends or relatives in whom they could confide about the challenges they faced, and some even expressed feelings of loneliness within their own nuclear family. This aligns with previous research that explored the impact of weight stigma expressed in families (Eli, Howell, Fisher, & Nowicka, 2014b).
Parents also said they felt loneliness and frustration when extended family members did not recognize the child needed their support. In the UK, Edmunds et al conducted a study similar to ours, concluding that providing parents with strategies to manage other people’s attitudes and behaviors is an overlooked area in childhood obesity interventions (Edmunds, 2005). For the parents in our study, sharing strategies on how to seek effective support from friends, relatives and teachers was a particular highlight of the group program.

In our study, parents also expressed loneliness in relation to obesity treatment, for example, if a spouse was unwilling or unable to participate in the treatment program. This needs to be taken seriously, because changes in the home environment require involvement from both parents (Patterson, Mockford, & Stewart-Brown, 2005), and lack of family support often underlies treatment discontinuation (Dhaliwal, et al., 2017). When both parents participate in childhood obesity interventions, this helps parents work as a team and create social networks that support lifestyle changes. Thus, clinics should facilitate participation in treatment by offering more scheduling options and appointments closer to the family’s home, incorporating interactive alternatives, shortening programs if needed, and adjusting treatment content to match families’ needs (Dhaliwal, et al., 2017; Perez, et al., 2018; Tremblay, et al., 2016).

Although group treatment schedules are less flexible than individual treatment schedules, in the ML program, we provided childcare during the treatment sessions to facilitate attendance. Furthermore, parents who were unable to attend certain sessions received written information about what had been discussed in these sessions. As a result of the interview findings, we adjusted the program to match parents’ needs and increased the group size to ensure better discussions.
The frustration parents articulated was linked to uncertainty about how to manage their children’s obesity. Parents felt they were socially judged as ‘bad parents’ because their child was obese, but also because they tried to manage their child’s eating. A Danish study identified this dilemma – between caring for children’s physical health and caring for their emotional health – as a reason parents avoid seeking treatment (Andreassen, et al., 2013). Interestingly, a Swedish study found that pediatric nurses thought parents of preschoolers with obesity were more likely to seek treatment due to the child’s appearance and risk of being bullied, than due to concern for physical health (Isma, Bramhagen, Ahlstrom, Ostman, & Dykes, 2012). An earlier study, where parents of children aged 4 to 15 years were interviewed about their experiences of seeking treatment for their child’s overweight or obesity, found that many parents thought the advice offered by health care professionals was no better than the advice provided in general public health recommendations (Edmunds, 2005). This suggests that parents’ uncertainty about addressing their children’s obesity is grounded not only in concerns about social and emotional wellbeing, but also in concerns about the ability of health care providers to provide effective interventions.

Some of the interviewed parents felt particularly vulnerable vis-à-vis social and medical discourses about childhood obesity because they remembered being in these situations as a child with obesity themselves. A similar finding was reported in the Grandparents Study, where both parents and grandparents related their childhood recognition of their own body weights to negative experiences or feelings; many stated that as they became more cognizant of their body weight, this negatively affected their self-esteem, leading to lifelong body image problems (Eli, et al., 2014b). While studies stress the importance of including key people around the child to provide support (McPherson, et al., 2017), weight stigma is a challenge that health care professionals need to consider when recommending that parents include
teachers and relatives in discussions about the child’s obesity (Pont, et al., 2017; Puhl & Suh, 2015). Moreover, while initiating treatment early increases the child’s chances of a healthy weight, the attitudes of some health care professionals to childhood obesity make it difficult for parents to seek treatment. Thus, health care professionals need training in how to approach the parents of a child with obesity, how to listen to their concerns with respect and understanding, and how to communicate in a non-judgmental way.

The interviewed parents said their experiences of participating in group treatment were positive. Parents said that the group setting allowed them to share experiences and ideas openly and without risk of being judged, as everyone participating faced similar issues and shared an understanding of the difficulties that parents of children with obesity face. This is consistent with previous studies reporting that a group setting empowers parents, strengthens feelings of belonging, reinforces hope, and makes it easier for parents to discuss the challenging emotional and social aspects of childhood obesity (Andreassen, et al., 2013; Edmunds, et al., 2014; McPherson, et al., 2017; Nowicka, Savoye, & Fisher, 2011; Yalom, 1995). Parent-based group treatment programs also have the advantage of providing parents with skills without placing the burden of treatment participation on the child.

The parents in our study reported that their children liked food and enjoyed eating. Some parents also described their child as preoccupied with food, for example, wanting to eat constantly and always asking for a second portion. Eating in absence of hunger (EAH) or eating palatable foods beyond satiety may be one possible cause of obesity in children as young as 3 years of age (Boots, Tiggemann, & Corsini, 2018; Fisher & Birch, 1999; Lansigan, Emond, & Gilbert-Diamond, 2015). EAH is a multifaceted phenomenon, and
appetitive traits are thought to have both individual and familial characteristics (Fildes, et al., 2014). Individual characteristics associated with EAH include the child’s weight status, age, eating style, and genotype, whereas familial characteristics associated with EAH include maternal feeding practices, dietary disinhibition, and maternal restriction on palatable foods (Lansigan, et al., 2015). Indeed, a recent study by Corsini et al. found a positive association between restriction of snack foods and EAH in toddlers; however, this association was moderated by access to snack foods in the home environment, and only observed when access was high (Corsini, Kettler, Danthiir, & Wilson, 2018). Most parents in our study had restrictions regarding candy and other energy-dense foods before participating in the ML program. However, the parents appreciated receiving further support in estimating the appropriate portion sizes of energy-dense food. Furthermore, parents appreciated the tips provided in the program, for example, if snacks and sweets are not in the home they will be consumed less often. This made parents even more observant about foods they had at home and allowed them to decrease conflicts about food. To date, there is no standardized treatment for EAH; however, the use of behavioral training in order to increase self-efficacy to manage food cravings may decrease EAH in children with overweight or obesity (Lansigan, et al., 2015). Many of the techniques taught in the ML program, such as diverting the child’s attention from food or offering vegetables when the child was hungry, were cited by parents as especially helpful in managing cravings and hunger and reducing EAH.

Parents also said that, after the ML program, they were better able to regulate their emotional reactions and handle problematic situations with their child, creating a calmer home environment. A study by Bekelman et al. found that caregivers of American children aged 3-6 years tried to create daily routines in accordance with cultural ideals, as well as social and economic resources (Bekelman, et al., 2018). However, a lack of time, busy work schedules,
and obstacles in handling their child’s eating prevented parents from meeting their ideal daily routines (Bekelman, et al., 2018). Parents in the ML study mentioned similar challenges to daily routines. This is important because parental stress has been linked to a higher risk for childhood obesity (Wilson & Sato, 2014). The ML group leaders were specially trained to focus on positive parenting and to support parents in their efforts to reduce stress levels using techniques such as noticing positive behaviors, preventing or handling power-struggles, and effective limit setting. These techniques helped parents feel more in control and follow their planned daily routines.

Strengths and limitations

The main strength of this study is its large sample of parents of preschoolers with obesity. Additionally, the sample was heterogeneous, including participants from diverse sociodemographic backgrounds. A particular strength of the study is that while the interview questions were targeted at program evaluation, the responses they elicited also captured lived experiences of parenting a child with obesity, as all parents used examples from their everyday life when reflecting on the program content. A limitation of the study was its reliance on parents who had completed the ML program sessions, as it is possible that the parents who chose to discontinue had different experiences. However, reasons for discontinuing the program were most often family and work related, rather than directly related to content of the program (Ek, et al., 2019). The short duration of some of the interviews may also be seen as a limitation. However, while some interviews were below our median length of 23 minutes, all interviews provided sufficient detail about experiences of group treatment and experiences of parenting a child with obesity, and saturation was reached. Finally, it is possible that the experiences of parents who participated in the ML program and in this interview study are not representative of the experiences of parents of preschoolers.
with obesity more broadly; of note, participants of higher education levels were over-represented in our interview sample. Further research should focus on the experiences of parents who dropped out of the ML program, as their experiences might represent harder to reach populations.

Conclusions

Childrenhood obesity carries social and emotional implications for parents that are difficult to overcome without support. This is especially true for families where handling a child’s large appetite is a constant challenge. Parents who participated in the ML parent program described how the program helped them respond positively to their children, manage their family’s daily routines with fewer conflicts regarding food, and regulate their children’s eating through encouraging and motivating them. Notably, parents also said the ML parent program empowered them to communicate about their children’s dietary needs with relatives, friends, and teachers, such that the program’s influence extended beyond the home to encompass other settings where children eat and develop attitudes to food. Based on these results, we suggest that training in parenting skills and support in managing socially and emotionally challenging situations should be offered in childhood obesity intervention programs.

Conflict of interest statement

The authors declare no conflicts of interest.

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Authors' contributions

PN conceived the idea of this study in collaboration with AE. KN drafted the paper together with CDN, AE, KE, PS and PN. All authors made substantial contributions to conception and design, data collection and to interpretation of the data. All authors contributed to reviewing and approving the final manuscript.
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