ISSN: 1676-4285

OBJN Online Brazilian Journal of Nursing
ENGLISH
Federal Fluminense University
AURORA DE AFONSO COSTA NURSING SCHOOL
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Original Articles

# Participation and care of mothers concerning the obesity control of adolescents: a descriptive study

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**ABSTRACT**

**Aim:** To identify how mothers of obese adolescents perceive their participation in the care and control of obesity.

**Method:** This is a descriptive study, in which we used a qualitative approach, with 15 mothers of obese residents in Maringa, Paraná. Semi-structured interviews were conducted, recorded and submitted to content analysis.

**Results:** Mothers do not consider obesity a disease; they acknowledge the importance of their participation in the habits of their children, guiding them to a healthy diet and the practice of physical activities. However, these habits are not adopted by the whole family. Moreover, they attribute to grandmothers a portion of the blame for the obesity of the adolescents.

**Discussion:** It was observed that, even being conscious of their responsibility on the control of the obesity of their children, mothers do little to change this situation, prioritizing actions only related to food.

**Conclusion**: It is necessary to better prepare mothers so they can act more effectively to control the obesity of their children.

**Descriptors:** Obesity; Family; Adolescent Health

## INTRODUCTION

The growth of obesity is becoming an alarming public health problem, not only in adults, but also in children and adolescents. Projections based on national surveys conducted in recent decades estimate that obesity may reach, in 2025, 40% of the population in the USA, 30% in England and 20% in Brazil[1]. However, in Brazil, in some locations, values close to those predicted are already being identified in the young population. In a city of northwestern Paraná, for example, it was found that the prevalence of overweight and obesity in schoolchildren of the urban area was 20%[2], and in the northeast region 16.8%[3], indicating the existence of a new and worrying configuration of the health of young Brazilians.

Inadequate eating habits and sedentary lifestyle are identified as determining factors for the increase in body weight in adolescents[4]. The risks of cardiovascular diseases linked to, for example, excessive weight, physical inactivity and smoking of parents are directly associated with greater frequency of these same factors in children[5].

For this reason, the family unit has been pointed out as a potentiator of weight gain in children and adolescents. The analogy between parents with overweight/obesity and children with the same problem is a real fact. On the other hand, when parents adopt healthy habits, they positively influence their children, thus allowing the weight reduction of their children[6].

Thus, the importance of the entire family acquiring healthy behaviors should be emphasized and greater emphasis should be given to the role of mothers, taking into account that they are more present in the household and are generally responsible for the preparation and offerings of most of the food eaten by their teenage children in the home environment[7.8]. The manner in which mothers perceive the importance of healthy practices is a reference and influences positively or negatively the acceptance of proper eating behaviours and physical activity among adolescents[7]. A study conducted in the U.S. found that the quality of food and parental behaviour directly influenced the

formation of the habits of children. This was shown, for example, in the supply and choice of foods that are less nutritive and richer in fat and also in the search for convenience in preparation and consumption[9]. These habits expose children to higher chances of developing weight gain.

It is noteworthy that, when faced with the reality of having a child with a chronic disease such as obesity, mothers do not always realize its severity and the need for care and special attention, often resulting in the aggravation of the problem[7,9]. The process of confrontation and support/aid in the disease control is directly related to how the family, especially mothers, perceive obesity: whether they identify it or not as a disease and what they do to minimize the problem, that is, to promote weight loss[7].

Given the above, it is necessary to know how mothers perceive their influence in the development of obesity, since this issue is still little explored, but largely significant within the context of the family. Thus, we define as the aim of this study: to identify how mothers of obese adolescents perceive their participation in the care and control of obesity.

## METHOD

This is a descriptive, exploratory study, in which we used a qualitative approach held in Maringá, Paraná, with the mothers of obese adolescents enrolled in the Multi-professional Obesity Study Center (MOSC), attached to the physical education department at the State University of Maringá (SUM). These mothers waited for a vacancy to start the programme in Multi-professional treatment.

This programme has been operating since 2002 and serves about 60 teenagers of both genders, aged between ten and 18 years, living in Maringá and metropolitan area, per year. Programme duration is 16 weeks, with activities three times a week, for two hours. Individual and group activities involving the areas of physical education, nutrition and psychology are performed.

Among the 43 adolescents on the waiting list for joining the programme, 20 were randomly selected so that their mothers were invited to participate in the study, but we only included those living in Maringá with parents, who presented body mass index (BMI)>25 kg/m$^{(9)}$. Thus, informants of the study were 15 mothers.

Data were collected in households, through semi-structured interviews. At first telephone contact was made with the mothers to inform them about the study and invite them to participate in it. In case of agreement, the most convenient day and time for the interviews was scheduled, considering the possibility of the teenager not being home, so that the mother would feel free to talk about it.

The interviews lasted on average 20 minutes and after consent, were recorded on an MP3 player. The instrument used during interviews was a semi-structured script, developed by the authors themselves, made up of two parts. The first contained questions regarding the characterization of mother and adolescent (socioeconomic context, anthropometric characteristics and family composition) and the second was composed of three open questions related to the object of the study: "In your opinion, what is the family influence in the case of weight loss/gain (name of the obese adolescent)?", "Do you believe you have influence on how he/she behaves in relation to daily habits?", "Tell me about it: What care do you give to promote their weight loss?".

The information obtained was organized and analyzed using the technique of thematic content analysis$^{(10)}$, developed in three stages: a) pre-analysis – at this stage the organization, transcription and separation of the empirical material was performed. Then the floating reading of the material described in order to know the set was carried out, defining the recording units relevant to the study, the context units, the clippings, the form of categorization and coding mode, recognizing the meanings expressed in them. In this process, the objectives and the initial matters of the research were reconsidered, revisited, and better explained. The apprehension of the senses of the reporting units was repeated several times in order to better identify them in the selected material; b) material exploration and processing of results - this phase aimed to achieve the

understanding of the material. Therefore, vertical, horizontal and transverse reading of the material was performed, for the classification or aggregation of data and the transformation of raw data into core text comprehension by affinity of themes/subjects. As with the classification of the empirical findings with a common sense and the confrontation with literature, the main categories were listed; c) the interpretation of the results obtained – at this stage there was the deepening of the categories outlined initially, by means of the articulation of empirical data with theoretical material, considering the research objectives, the themes that emerged from the data collection and theoretical assumptions.

The study protocol was approved by the Permanent Committee on Ethics in Human Research, State University of Maringá (Opinion 288-11). All participants signed a consent form in two copies, identified in the results with the initial "M" for mother, followed by a number indicating the order of the interviews and also some information about the teenager, such as: age, gender (M for male and F for female) and BMI (Ex: M1-17F31).

## RESULTS

Mothers participating in the study were married and were aged between 32 to 53 years. Regarding the socioeconomic context, seven of them had completed elementary education, four had completed high school, two had not completed high school and two had completed higher education. Six mothers did not work outside the home, three received an income lower than twice the minimum wage, four earned less than three times the minimum wage and eight earned more than four times the minimum wage.

### Recognizing the importance of their participation in weight gain/loss

Mothers perceive their participation as being essential in the eating habits of their teenage children; however they state they do not succeed in controlling the food eaten

by them. During the interviews, they showed they recognized the relationship between weight gain and the diet of their children.

> *I tell her a million times, but it's no use, I can't take the sweets and soda from her. She spends a lot of time away from home with her friends, so I can't control it. (M6 – 12F29)*
>
> *[...] I try not to let him drink a lot of soda, but, when I see it, he's already taken a lot of it. (M13 – 13M30)*

However, not all of them perceive obesity as a disease, just appreciating the aesthetic aspect.

> *[...] I feel sorry! Because I know she is withdrawn because she is ashamed of her body [...]. Then she hides herself from the world. We think it's beautiful for a girl to be skinny [...] I worry about her psychological condition. (M11 – 15F31)*
>
> *She chooses a garment, but nothing fits nicely on her or they don't have her size. She gets sad and I wish I could change it, because I do think being thin is easier [...] She is healthy, has no illness. She's just fat [...]. (M5 – 13F37)*
>
> *[...] It would be worse if it were a disease, wouldn't it? Then we would be more concerned; I would take her to the doctor and would oblige her to eat the right things [...]. It's better to be chubby and healthy than skinny and sick (laughs). (M7 – 13M30)*

It is observed that for mothers, the consumption of salads is the best example of healthy eating. However, there seems to be an understanding that the adoption of this type of food is only necessary for the obese adolescent.

> *What's the deal? She (the obese teenager) eats because of her age, and her mind. I try to make enough vegetables just for her; I do it often, but she is tough. (M10 – 14F31)*
>
> *[...] I try as much as I can, make enough salads, vegetables; I even make four different types of it. (M5 – 13F37)*
>
> *[...] she is the one who makes lunch, so I always ask her to make a salad for herself, to help her lose weight. I don't like it very much [...]. (M8 – 15F36)*

Other testimonies show that, despite encouraging their children to do physical activities, teenagers do it better when they have company.

> *She does nothing; she just sits there, writing. Sometimes I go out with her, but she only goes out with me, otherwise she doesn't go anywhere. (M6 - 12F29)*
>
> *[...] Walking, exercises, she only does those things if we're together, or else she doesn't like it and doesn't do it. She says she will only do it if we go with her (laughs). She is very shy. (M2 - 17F31)*
>
> *[...] he is even getting into doing some physical activity, but he is still a bit lazy. I'm doing it and tell him to do it too. Then, only when I do it, he goes along. (M12 – 12M31).*

Another aspect to be highlighted is the existence of logistical and financial difficulties acting as barriers in the adoption of healthy practices.

> *Some time ago she decided she was going to take care of herself. She started volleyball, gymnastics, but then she stopped. And I didn't have much time to drive her and pick her up, so it was complicated. (M11 – 15F31).*
>
> *[...] He needs to do swimming, but I can't afford it or drive him and pick him up. I work all day long and he cannot go alone. (M12 - 12M31).*

**Perceiving the influence of grandmothers in weight gain**

Some mothers made reference to the fact that their children, when small, and even nowadays, remain under the care of grandparents so they can work, and in these cases, attribute to them the same bad eating habits of their children.

> *[...] When she was a child I worked and her grandmother looked after her, and she was not afraid of sweetening things, so they got a little chubby while they grew up. (Laughs) (M1 – 17F31).*

Moreover, mothers also realize that grandmothers are more permissive in several respects, including those related to dietary habits.

> *[...] My parents were the ones who helped me raise my daughter. My mother has diabetes, so you know how it is. My mother (the grandmother of the teenager) spoils her [...]. The only place she (the obese teenager) goes to is her grandmother's. When she asks I let her go there, but then, at her grandma's house, she finds the sweets she likes. And if there are no sweets, her grandmother gives her some money and she buys them. And then, while she doesn't finish it, she doesn't stop eating. (M2 - 16F34)*

> *If we don't have the food they like here at home, they run to their grandmother, then they have two houses. There their Grandma gives them what they like. (M1 - 17F31)*

**Highlighting the feeding contrast between siblings**

Mothers recognize that the fact that siblings have different body profile makes it difficult for the obese adolescent to have a diet favourable to weight loss. In such cases, the existence of "forbidden" or different foods at home may jeopardize the effort of the adolescent in avoiding these foods.

> *My other son is the opposite, he doesn't eat. So I need to buy different things for him. As they stay home in the afternoon, when I arrive at night she always says: Mom, I ate Lucas's cookies. (M2 - 16F34)*

> *[...] I buy different things for her, many fruits and all that stuff, but then she complains and gets angry. She always wants to eat her sister's things. (M8 - 15F36)*

In addition, mothers experience a paradox of having a prohibitive attitude toward the overweight child and a permissive one to those who do not present this problem.

> *If we give him something (brother of the teenager) and don't give her, then she says: Wow! You just give it to him? Then she has that sense of difference. (M10 - 14F31)*

They also reveal that eating habits and, consequently, obesity are present from early childhood.

> *I talk to him, but it's annoying, isn't it? The younger brother is thin, the 11 (years) too and the older is skinny like a stick. So it's hard! [...] since he was born he was plumper than the others. Then, the food was always a bit different. He'd always eat more. (M9 - 14M43)*

> *[...] is hard to talk to a child: - You eat this and the other something else, it sucks, doesn't it? She (the obese teenager), since she was small she suckled too fast; she would always seem anxious. Now my other son is totally skinny, then it is natural that I let him eat more. (M5 - 13F36)*

**DISCUSSION**

The eating habits of adolescents are reflections of the values learned in family. It is necessary, therefore, that parents are aware of this, since the way they perceive and the value they give to their participation in the eating habits of the whole family are crucial in maintaining a healthy weight or in avoiding weight gain[11]. The family as a whole has the responsibility and capability to provide adequate food for its members. However, the mothers, as primarily responsible for the choice and preparation of food, are the prime agents of this care, especially in cases in which their children are overweight or obese.

It is evident in the reports that mothers want to control their children's diets, guiding them on the need to reduce or even eliminate the intake of soft drinks and unhealthy food. However, adolescents maintain a routine of classes and trips that makes it difficult to control the diet and supply of food considered healthy.

It is also evident in the statements that there is some self-deception when the mothers claim to try not to let the children consume the wrong foods. It is believed that, unconsciously, the mothers seek to exempt themselves from blame for obesity, when they state that, despite their guidance and advice, teens have a bad diet, resulting in obesity.

The quality of the food habits should always be of concern in the family, since it is in this context that we learn to eat and enjoy certain foods. Those that are always offered and consumed by the family are more naturally accepted by the child, unlike what happens when they are offered sporadically. It is worth noting that it is in childhood that food preferences are introduced and can become a habit or not, which can be preserved for a lifetime[11].

To acknowledge a healthy diet and the foods that make it up is crucial for mothers, because it is from this concept that they can guide and, at the same time, offer quality food for their children. What is called healthy eating may have several meanings depending on the region of the country, culture and period. However, in general, healthy food is always made up of three basic types of food: carbohydrates (grains, bread, pasta, tubers and roots); fruits and vegetables; and foods rich in protein (meat, eggs, fish,

whole grains, etc.)[12]. In contrast, a bad diet consists of foods high in simple carbohydrates, lipids and sugars. There is, therefore, a clear gap between what is pleasant to eat and what needs to be eaten[13].

This dichotomy between what is pleasurable and what needs to be consumed, associated with the absence of food considered healthy in the eating routine of the family, makes the teenager and even family members perceive the act of eating healthy food as an act of sacrifice and exclusion of pleasurable foods, obviously making it difficult in practice, and causing the teenagers to search for attractive food, usually with high caloric value.

The fact that obesity is not seen as a chronic disease also hinders the adoption of more specific care. When perceived only as an aesthetic aspect, its consequences, such as the risk for various health problems, in addition to other chronic diseases, end up being undervalued[3].

Another aspect that draws attention in the statements is the difference that mothers make in the feeding of obese adolescents. Thus, foods considered more attractive and which are rich in sugars and carbohydrates are allowed only for some, and at the same time it is demanded that the obese adolescents exclude them from their eating routine. This practice is certainly not the most advisable. It is necessary that the whole family adopts healthy habits and they do not have as a goal only the weight loss of one of its members, but to be a strategy to prevent the deterioration and/or onset of chronic diseases in the family.

It is also evidenced that mothers recognize their responsibility in relation to family feeding. They often report their wish to control the feeding of their children. They guide, for instance, on the exclusion or reduction of the intake of soft drinks and sweets. However, the routine of teenagers out of their house, or even the mother herself, in the labor market and also responsible for household chores, makes it difficult and sometimes prevents them from monitoring the type of food consumed by their children more closely.

Another aspect that draws attention is the fact that some mothers (M5, M8 and M10) associate weight loss with eating salads, but they themselves do not have the habit of

consuming vegetables. According M8 and M10, the salad is prepared almost exclusively for the obese adolescents. This probably constituted itself as one of the greatest difficulties for the adhesion of obese adolescents to healthy eating habits, since the family influence may be a determining factor in the eating behaviour of children[14,15].

It is a fact that the consumption of fruits and vegetables has declined more and more among adolescents; however, this fact alone does not justify excessive weight. Other factors have been pointed out as responsible, such as for example, the decline in food quality. This is usually due to lack of time of family members for the preparation of healthy and tasty food and at the same time, high consumption of processed products, the habit of eating out and the absence of the family at mealtime[16].

Besides the eating habits, parental behaviour in relation to physical activity also influences the behaviour of children, thus impacting on their body weight. Despite the encouragement of mothers for the adolescents to perform some physical activity, they realize that they adopt these practices better when accompanied by them. A study conducted with adolescents in Minas Gerais showed that the lack of family support and the financial conditions are considered important barriers for the practice of physical activity among them[17].

Family members identify that adolescents with excess weight need physical activity regularly and in such cases, parents need not only to recommend, but also to encourage and accompany adolescents in these activities. This is because physical inactivity among young obese may be due, for example, to shame and shyness. No doubt, in this life stage, these behaviours tend to discourage physical activity, or make it unpleasant[5].

When the practice of physical activity is part of the routine of the parents, the children find it easier to also adhere to it, so that considerably more active parents have children with higher levels of physical activity[6]. For example, the children of obese parents have two to three times higher risk of having obesity in adulthood compared to children of non-obese parents[18].

Thus, it is noted that the active participation of parents, during the practice of physical activity of children, should be encouraged and guided by health professionals. This combined practice should be strongly valued, as, in addition to generating positive reinforcement to teenagers in the process of weight loss, it also favours well-being and greater family interaction.

We may also comprehend, from the reports, that mothers also recognize the influence of other family members, especially grandmothers, in the eating habits of children and sometimes attribute to them part of the responsibility for excessive weight gain. In fact, the grandmothers in general have a more lenient and permissive relationship with adolescents, compared to their daughters and daughters in law[19]. This is reflected in the supply of enjoyable food and is better accepted by children as a way of providing care and love. This fact often promotes eating freedoms that predispose grandchildren to weight gain[18].

It is interesting to note that in the testimonies, mothers somehow transfer part of the responsibility for the obesity of children to grandmothers, when acknowledging that their homes are a refuge where children have access to the most appreciated foods and consume them without limitation, that is, without guilt or fear of reprisals.

Grandmothers, in general, are seen by grandchildren as those who help, who fulfil their desires to play, take care of them (generically), give them love and food (goodies) and gifts[19]. Grandmothers, therefore, seek through food supply to establish a closer relationship with their grandchildren. This relationship often causes conflicts between teens and parents, since parents are contrary to the attitudes of grandmothers, believing that they aggravate the existing obesity, further hindering weight loss.

However, it is important to emphasize that it is the desire to please and win over children that causes grandmothers to act this way. Thus, it becomes a problem only in cases where they are responsible for daily care, because if it is occasional, they will probably not represent a high risk. Anyway, health professionals need to include grandmothers, especially those who are responsible for the daily care of grandchildren, in the care plan

for children and adolescents. A good strategy would be to create spaces that enable them to exchange experiences among themselves and also recipes of nutritious food that can be produced in a more attractive way to children and adolescents.

In the statements, it is evident that there is a paradox experienced by mothers as a result of the differentiation they make in the types of food offered to children, allowing certain foods to be consumed only by the siblings who are not obese. The constant comparison between siblings, where one is skinnier and the other plumper, triggers in the adolescent the sense of competition, in which the one who is slimmer gets the "different" food. In addition to this, there is also a feeling of punishment: for being fat, they lose the right to eat like the others, having to restrict their options.

The obese adolescent, therefore, at least in terms of food, is treated as a member who is different from the other family members. This singular treatment may prevent him from his prospects of improvement, leading him not to choose healthier foods even if these are available. For the teenager who is facing the problem of obesity, the confrontation generated between what he needs to eat and the foods that he finds pleasure in eating ultimately generates internal conflicts: while he feels the responsibility to resolve the problem alone, he has neither the autonomy nor enough discernment for this. Then an environment of confrontation between his knowledge and practices is created and it ultimately generates negative feelings[17].

The feeling of difference established between family members, especially siblings, undoubtedly should be appointed as a potentiating agent for food control, and, consequently, for weight loss. The search for a healthy and balanced diet should be a joint effort of the family; after all, good eating habits not only help weight loss, but also provide a better quality of life[20].

Thus, it is the role of the entire family to provide an equal diet environment, allowing the young obese not to feel excluded and to feel part of the family and share the same family habits, favouring the interaction of the adolescent with the family environment and also a better adherence to healthy practices.

## CONCLUSION

The results show that the perception that mothers have of obesity directly influences how they deal with it, reflecting the type of food offered to their children and the establishment or not of healthy eating habits for the whole family. It was observed that obesity is not always seen as a disease worthy of special care, showing, therefore, in some cases, the need for guidance to mothers about the importance of their influence on the eating habits of their children.

In relation to the care of obese children, all mothers reported that they guide and advise them on the types of food that can be consumed or not. However, these foods are not always part of the routine diet of the whole family. This fact, in addition to interfering in the relationship between family members, hampers the acceptance of certain foods by adolescents, as they perceive them as punishment for being obese.

The care offered is almost always related to the stimulus for the consumption of foods considered healthy for practice of physical activity. However, little has been depicted in relation to the adoption of healthy lifestyles by other family members, since the intake of healthy foods and the joint practice of physical activities were mentioned by only a few mothers. This fact allows us to infer that in cases in which these practices are not adopted by other family members, there will be a negative influence of the family on the habits of adolescents who will feel alone and demotivated to seek improvements in their behaviour.

In this perspective of care, we may observe the importance that the family plays in shaping healthy habits for adolescents as it may act as a network of support and encouragement for behaviour change and, hence, weight loss. Therefore, it is extremely important to include the family, especially mothers, in the assistance to be provided to the obese adolescents.

The issue is, to enable them to act more effectively in care, they need to understand the genesis of obesity as a disease, its current and future implications and possible strategies

to control it, in which case the health professionals, especially nurses, should guide them accordingly.

Lastly, despite the fact that important aspects about the performance and participation of mothers in the care related to controlling obesity of their teenage children have been acquired, the fact that the data has been collected on a single occasion constitutes a limitation, as it characterizes a punctual and specific vision of the phenomenon studied. Thus, it is recommended that further studies are conducted, seeking to better understand the relationships within the family environment and how these can affect/influence the obesity problem. This will support the development of health promotion activities that focus on stimulating behaviours that are beneficial for the whole family.

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**Received: 25/09/2012**
**Approved: 08/04/2013**