FAMILY FUNCTIONING IN CHILDHOOD OBESITY AND DYSLIPIDEMIA: ANALYSIS FROM A PORTUGUESE CONTEXT

Cláudia Carmo[1], João Antunes[2], Laura Nunes[3], Cátia Martins[4], Cristina Nunes[5] and Marta Brás[6]

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Abstract

Children's eating behaviors are influenced by family behavior, producing a relationship between childhood obesity and obesity in adulthood. It is, therefore, important to identify the underlying risk factors for intervention in the context of childhood obesity and dyslipidemia consultation (CODC). This study aims to characterize overweight or obese children and their families from a sociodemographic, developmental, and axiological point of view, and to understand the family functioning of the users; to assess the relationships between the domains of family functioning and the sociodemographic, physiological, and axiological variables; and to assess the differences between the family functioning of overweight and obese children from the CODC of a University Hospital. Thirty-one families participated, with 20 children diagnosed with obesity and seven with overweight. There are significant differences between the family functioning of participants under study and the normative values (greater capacity of the first group at the level of Problem Solving and Affective Responsiveness). Also, differences between boys and girls were observed. The results highlight the need for greater awareness of all family members, not only of the child's current weight status, but also of the consequences of excess weight and benefits of weight loss.

Keywords: Childhood Obesity; Childhood Dyslipidemia; Family Functioning; Family Assessment Device.

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1 University Research Center in Psychology (CUIP), University of Algarve, Faro, Portugal. https://orcid.org/0000-0002-7301-349X - cgcarmo@ualg.pt
2 University Research Center in Psychology (CUIP), University of Algarve, Faro, Portugal. https://orcid.org/0000-0003-2746-4318 - jpantunes@ualg.pt
3 Algarve University Hospital Center, Faro, Portugal. linunes@chalgarve.min-saude.pt
4 University Research Center in Psychology (CUIP), University of Algarve, Faro, Portugal. https://orcid.org/0000-0002-1819-8516 - csmartins@ualg.pt
5 University Research Center in Psychology (CUIP), University of Algarve, Faro, Portugal. https://orcid.org/0000-0002-1009-0519 - csnunes@ualg.pt
6 University Research Center in Psychology (CUIP), University of Algarve, Faro, Portugal. https://orcid.org/0000-0001-7430-1939 - mbras@ualg.pt
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Correspondence concerning this article should be addressed to Cláudia Carmo, Department of Psychology and Educational Sciences, University of Algarve, Faro, Portugal.
Email: cgcarmo@ualg.pt

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Family Functioning in Childhood Obesity and Dyslipidemia: Analysis From a Portuguese Context

Obesity is defined as the abnormal or excessive accumulation of fat with potential health risks (World Health Organization, 2025). In 2019, an estimated 38.2 million children under the age of 5 were overweight or obese. Once considered a problem of high-income countries, overweight and obesity are now increasing in low- and middle-income countries, especially in urban settings (World Health Organization, 2023). It is expected to increase, in the European Region, during the period 2020 to 2035, with 14% of girls and 21% of boys expected to be affected by obesity by 2035 (World Obesity Federation, 2023).

In Portugal, about one in three children is overweight or obese, and more than 10% of them are indeed obese. In the south of Portugal, Algarve, data shows that it is the second region with the highest weighted prevalence, preceded only by the North, estimating that 36.3% of the population are in this condition (Lopes et al., 2017).

Childhood obesity is linked to several physical illnesses and mental disorders that tend to persist into adolescence and adulthood (Auday, 2022). For example, a review conducted by Rankin et al. (Rankin et al., 2016) found that increased BMI (Body Mass Index) in childhood was associated with higher levels of depression, anxiety, and lower levels of self-esteem and perceived quality of life, among other psychiatric conditions.

Obese children are often excluded from physical and social activities especially when competitiveness is involved, are less wanted for play and may be targets of teasing, discrimination, and victimization (Sahoo et al., 2017; Zametkin et al., 2004). This exclusion may make weight management more difficult, as these children may take refuge at home to avoid negative attitudes and comments from peers (Sahoo et al., 2015).

Despite the importance of genetic factors, weight control is achieved through environmental changes, with parental feeding styles playing a central role in shaping childrens' eating behavior (Costa et al., 2023). Lifestyle and behaviors are common to most chronic noncommunicable diseases, which highlights the impact of these components on health (Direção-Geral de Saúde, 2015). Considering the behavioral aspect, obesity arises as a consequence of nutritional and motor changes (Kleiner et al., 2011).

Based on the role of society and the environment to explain childhood overweight and obesity, Davison and Birch (Davison & Birch, 2001), developed the Overweight Predictor Model. According to the model, each child has personal characteristics that influence his/her behavioral patterns that may put him/her at risk of developing overweight (child risk factors). These risk factors, according to the authors, are influenced by parental styles and family characteristics such as eating patterns and exercise habits (Davison & Birch, 2001).

Family factors play a central role in the development and maintenance of obesity 13, and according to Davison and Birch (Davison & Birch, 2001), it is in the family context that the child's eating behavior begins. Parents are responsible not only for the portions and type of food, but also for the emotional context of their children (Davies et al., 2007) and influence, not only their food preferences, but also the practice of exercise (Budd, & Hayman, 2008). The family environment thus has a major impact on the health and well-being of its members (Halliday et al., 2014).

The association between socioeconomic status and obesity is one that has been widely studied, and several studies have shown a negative association between these features (Gibson et

al., 2017; Huang et al., 2014). Family functioning can be affected by interactions between parents, intra-family relationships, and family experiences by external stressors such as economic and employment status (Andrade et al., 2022).

Ryan et al. (2012) state that for social, psychological, and biological development to occur, the family system needs to respond to three types of tasks: Basic Tasks; Developmental Tasks; and Hazardous Tasks. For the same authors, when families are not able to deal effectively with the problems encompassed in these tasks, there is a greater likelihood of maladaptive behaviors or significant problems arising. According to this model, families with good family functioning will be able to solve the problems that arise productively, effectively, and relatively more easily than families with lower family functioning (Ryan et al., 2012). The model is based on six dimensions of family functioning that the authors found to have the greatest impact on family problems and physical and emotional health, with each dimension contributing to understanding the complexity of the family (Ryan et al., 2012). Thus, the six dimensions are: Problem Solving; Communication; Roles; Affective Responsivity; Affective Involvement; and Behavior (Epstein et al., 1983). They allow us to understand the structure, organization and transactional patterns of the family and each one varies from the most ineffective (more favorable to the emergence of clinical situations) to the most effective (greater promoter of physical and emotional health) and it is from the assessment of these dimensions that it is possible to search for the process that originated the dysfunctional behaviors in families (Ryan et al., 2012).

Low family functioning is associated with parental obesity risk behaviors (such as being sedentary, for example), increasing the risk of children developing obesity (Li Wen et al., 2011). On the other hand, families with higher levels of family functioning and higher quality relationships between adolescents and parents, were less likely to adopt unhealthy behaviors to maintain weight; with the exception of obese boys, when comparing family functioning with relationship quality, the former variable seems to emerge as a greater determinant of weight and health-related behaviors (Haines et al., 2016).

The perceptions of the mothers of young people with obesity and compared them to the perceptions of the mothers of young people with normal weight, detecting lower levels of cohesion, less structure, and more interpersonal conflicts (Zeller et al., 2007).

A study of adolescents´ family functioning underlined that in overweight girls, their perceived family functioning is characterized by low cohesion and expressiveness (Mendelson, & White, 1995).

A systematic review (Halliday et al., 2014) found that obese and overweight children were more likely to come from low functioning families, and that changes in family function were associated with changes in the child's weight. Poor family function, along with other childhood obesity risk factors such as depression and anxiety, are upstream consequences of socioeconomic adversity (Hemmingsson, 2018).

Overweight impacts the health of individuals and contributes to a decrease in life expectancy, which underlines the urgency of intervention and prevention of this issue (World Health Organization, 2025). Given that the family environment plays a major role in children's behaviors, including eating habits and physical activity, it is essential to understand the family factors associated with childhood obesity (Haines et al., 2016).

Therefore, the main objectives of this study were to characterize the family and the child with obesity or overweight from a sociodemographic, developmental, and axiological point of

view, and understand the family functioning of the users of a specialized consultation. And, to assess the relationships between the domains of family functioning and the sociodemographic, physiological, and axiological variables; and the differences between the family functioning of overweight and obese children.

Method

Participants

The assessment protocol was completed by 31 families of children attending obesity services: 20 children are obese (weight percentile greater than 95) and; seven are no longer obese but are still overweight (weight percentile between 85 and 95). It was not possible to obtain weight percentile data for four children.

Of the 31 families covered, 21 of the children or youth followed in the childhood obesity and dyslipidemia consultation (CODC) were female (67.7%), and 10 were male (32.3%), aged between 4 and 17 years (n = 30; M = 12; SD = 3.37). Nine children attended elementary school (29%), the same number attended secondary school (29%), six were in secondary school (19.4%), six in secondary school (19.4%), and one attends preschool (3.2%). Most protocols were filled out by the mothers (77.4%), four by the fathers (12.9%), and the rest by grandparents or older siblings (9.7%).

The age of fathers ranged between 30 and 60 years (M = 44.17; SD = 6.51), while mothers between 30 and 51 years (M = 41.84; SD = 4.69). Regarding income, most of the participating families have annual incomes between 7000 and 20000 euros (f = 16; 53.3%) and 43.3% have below 7000 euros (f = 13) (Table 1).

TABLE 1
Sample's Demographic Characteristics

		***f*(%)**
Family Structure	Parents and siblings	18 (58.1%)
	Single-parent and siblings	9 (29%)
	Multigenerational household and siblings	3 (9.7%)
	Grandparents	1 (3.2%)
Father's Education Level	Elementary Education	7 (22.66%)
	Middle School	8 (25.8%)
	Junior High Education	7 (22.6%)
	Secondary Education	6 (19.4%)
	Bachelor	1 (3.2%)
	Master	1 (3.2%)
Mother's Education Level	Elementary Education	2 (6.5%)
	Middle School	3 (9.7%)
	Junior High Education	11 (35.5%)
	Secondary Education	6 (19.4%)
	Bachelor	8 (25.8%)

Note: f = frequency; % = percentage

Regarding the follow-up time in childhood obesity consultations, 71% of children have been followed for more than 6 months (n = 22), 16.1% between 3 and 6 months (n = 5), 3.2% for less than 3 months (n = 1), and 9.7% filled out the protocol at just the first consultation (n = 3). Regarding the nutrition consultations, 58.1% have been attending for more than one year (n = 18), 19.4% between six and 12 months (n = 6), 12.9% less than six months (n = 4), and 9.7% attended the first consultation when the protocol was filled out (n = 3).

Instruments

Questionnaire for sociodemographic, physiological and axiological characterization: The questionnaire was prepared within the CODC of a University Hospital by the Psychologist and the Nutritionist responsible for consultations in these areas and by the author of this research. This questionnaire includes questions regarding weight change, diet plan, causes of obesity, sleep patterns, among others (e.g., *As the child's responsible family member, what is the reason for the excess weight?)*

Family Assessment Device (FAD) (Epstein et al., 1983; Patrão et al., 2020): The scale assesses the individual's perception of various dimensions of the family. The original version is composed of 53 items divided into seven subscales, and the instrument showed acceptable internal consistency values for the different scales: General functioning of the family α = .92 Problem solving α = .74 (e.g., "Resolvemos a maior parte dos problemas em família"); Communication α = .75 (e.g., "É difícil falar uns com os outros sobre sentimentos delicados"); Roles α = .72 (e.g., "As tarefas da família não são distribuídas adequadamente"); Affective responsiveness α = .83 (e.g., "O afeto fica em segundo lugar na nossa família"); Affective involvement α = .78 (e.g., "Mesmo que com boas intenções intrometemo-nos demais nas vidas uns dos outros"); and Behavior control α = .72 (e.g., "Se não se cumprem as regras, não sabemos o que pode vir a acontecer") (Epstein et al., 1983). Subsequently, to increase reliability, seven items were added to the scale that do not affect the intercorrelation between them (Ryan et al., 2012).

The internal consistency values observed for the different subscales of the FAD in the present investigation were as follows: General Family Functioning α = .78; Problem Solving α = .61; Communication α = .33; Roles α = .73; Affective Responsiveness α = .49; Affective Involvement α = .49; and Behavior Control α = .5.

Procedure

The Algarve University Hospital Center requested permission to collect data in the Pediatrics Department within the scope of the CODC consultation. The request was sent to the Center for Training, Research and Knowledge at the Hospital Center, which forwarded the request to the Service Directors, the Ethics Committee, and the Administration. Following this, the assessment protocol was completed together with one of the parents of each child. Only families whose children were referred to for consultation due to obesity were invited to participate in the research.

The data resulting from the collection procedure of this exploratory study were analyzed using SPSS 28 (Statistical Package for the Social Sciences) software according to the objectives of this research. For the analysis of sociodemographic data and physiological, axiological, and

behavioral patterns, descriptive statistics measures were used (i.e., mean, medians, standard deviation, frequencies, and percentages).

Pearson's Correlation Coefficient was used to analyze the association between the subscales of family functioning and the sociodemographic, physiological, and axiological variables of this study. Scores between .20 and .40 were considered low, between .40 and .60 moderate, between .60 and .80 high. Regarding significance, p-value was considered significant if < .05 (Field, 2013). In order to compare the family functioning of the CODC users with the average values established by the authors, we used the Student's t-test.

Mann-Whitney's U test was used to detect possible differences between boys and girls. The same procedure was applied to evaluate possible differences between overweight and obese children. In this analysis, the use of non-parametric statistics was required as the sample size was less than 30. Values were considered significative if $p < 0.05$, and size effect weas computed (Cohens' d and r).

Results

Physiological and axiological characterization

About the child's development, 84% of the children were born after 37 weeks (*f* = 21), 80% were born with an average weight (*f* = 24); 10% with an above average weight (*f* = 3); 6.5% with a low weight, and 3.2% with an exceptionally high weight (*f* = 1).

With regard to sleep, 80.6% of the participants considered that the child slept well (f = 25), 12.9% considered that they slept poorly (*f* = 4) and 6.5% considered that they slept poorly (*f* = 2).

Regarding family background, it was found that 54.8% responded negatively (*f* = 17) about the existence of diseases in the family. Considering the presence of obesity in the family, 61.3% of the participants indicated having at least one person with obesity in the family (*f* = 19).

The data show that more than half of the mothers at the time of collection (54.8%) practiced some diet (*f* = 17), that most of the mothers were willing to change their own eating habits to help their child in the weight loss process (*f* = 28; 90.3%), as well as were the fathers (*f* = 14; 45.2%).

It was observed that 54.8% of mothers (*f* = 17) and 48.4% of fathers (*f* = 15) consider that their child was obese. Table 2 shows the causes of obesity in the participating children, as identified by the adults.

TABLE 2
Perceived Causes of Obesity in Children

	***f*(%)**
Excessive food intake	14 (45.2%)
Ingestion of low-quality food	12 (38.7%)
Lack of physical exercise	15 (48.4%)
Laziness	10 (32.3%)
Physical constitution of the child	7 (22.6%)
Family resemblance to the family's constitution	4 (12.9%)
Sadness and Depression	6 (19.4%)
Surgical intervention	1 (3.2%)
Use of medication	9 (29%)

Note: f = frequency; % = percentage

Regarding the child's need to lose weight, in most cases (*f* = 26; 83.9%) someone in the family states that the child needs to lose weight. Mothers are the ones who most frequently identify that the child needs to lose weight (*f* = 19; 61.3%), followed by fathers (*f* = 13; 41.9%), children themselves (*f* = 9; 29%), maternal grandparents (*f* = 9; 29%), children's siblings (*f* = 4; 12.9%), and paternal grandparents (*f* = 1; 3.2%).

Regarding the reasons for being followed in the nutrition consultation, 44.4% of the participants stated that the child is followed for being "overweight or obese" (*f* = 12), the same percentage revealed that the child is followed to "control food and weight" (*f* = 12), 7.4% reported that other diseases brought the children to the consultation (*f* = 2), and 3.7% reported that they are followed due to the use of medication (*f* = 1).

Regarding eating habits, 74.2% considered it necessary to change them (*f* = 23). We also found that 69% of adults experience "sadness", "dissatisfaction", "concern" and "pity" when they have to limit the child's feeding (*f* = 20), 20.7% feel "well" (*f* = 6), 6.9% feel "angry" (f = 2) and 3.4% feel "tired". On the other hand, 32.3% of the children react to the limitation in a depressive manner (*f* = 10), 29% react "well" (*f* = 9), 19.4% externalize negative reactions (*f* = 6), 12.9% alternate between obeying and ignoring the adult (*f* = 4), and 6.5% ignore the adult (*f* = 2).

More than half of the participants (63.3%) expressed the need to change their children's exercise habits (*f* = 19). For the group of overweight children, 71.4% said they needed to change their child's exercise habits (*f* = 5), and one did not answer this question. Regarding the children with obesity, 60% determined that it is necessary for changes to occur at this level (*f* = 12).

Most participants reported the need for psychological support for the child (*f* = 18; 58.1%) with 25.8% explaining that this support is important to "help the child deal with the psychological consequences of obesity for the child" (*f* = 8), 16.1% consider important the psychologist's help in food control and monitoring (*f* = 5); and 9.7% name psychoeducational aspects as beneficial to the weight loss process (*f* = 3).

Regarding the need for psychological support for the family, 67.7% of the participants said it was not necessary (*f* = 21).

Relationship between family functioning and sociodemographic, physiological and axiological variables

The analyses between the different subscales of the Family Assessment Device and the sociodemographic, physiological, and axiological variables are shown in Table 3. The highest correlation values stand out: The Problem Solving (PS) and General Functioning (GF) are positively associated with the mother's age as for the domains Roles (R) and General functioning (GF) are positively associated with the father´s age. The father's age appears to be associated with family rules and overall functioning.

The domains Communication (C), Affective Involvement (AI) and Behavior Control (BC) are negatively associated with the mother's and father´s education level.

TABLE 3

Correlation Between the Different FAD Subscales and Sociodemographic, Physiological, and Axiological Variables

	PS	C	R	AR	AI	BC	GF
Father's age	**.45***	**.46****	**.51****	.36	.31	.33	**.51****
Father's Educational Level	-.28	**-.47****	-.29	**-.49****	**-.44****	**-.48****	-.37*
Mother's age	**.55****	**.46****	**.40***	**.40***	.29	.29	**.52****
Mother's Educational Level	-.35	**-.51****	-.33	-.34	**-.54****	**-.54****	-.41*
Income	.09	-.30	-.07	**-.45***	-.17	-.08	-.13
Children's sex	.14	.45	.23	**.52****	.31	**.39***	**.42***
Children's age	.15	**.41***	.25	.31	.08	.11	.34
Birth-weight class	.14	.23	.28	**.42***	.20	.04	.21
Motivation	-.31	-.27	**-.39***	-.06	-.21	-.27	-.41*
Weekly physical activity	**-.45***	-.05	-.17	.08	-.19	-.13	-.24
Sleep hours	-.26	**-.36***	-.20	**-.42***	-.33	-.18	-.28
Children consider necessary to lose weight	.09	-.16	-.04	**-.39***	-.09	.04	-.11
Time in consultation	.17	.35	.15	**.41***	.33	**.39***	.35
Need for psychological support for the child	-.09	-.05	**-.44***	.04	-.37	-.16	-.30
Family history of high blood pressure	.31	**.57****	**.40***	**.40***	.26	**.50****	**.49****
Family history of diabetes	.28	.17	.17	.33	.20	**.36***	.12

Note: PS = Problem Solving; C = Communication; R = Roles; AR = Affective Responsiveness; AI = Affective Involvement; BC = Behavior Control; GF = General Functioning; *$p < .05$; ** $p < .01$

Family Functioning Analysis

Comparing the results obtained with the cut-off scores established by the authors of the scale (Epstein et al., 1983), we found that participants obtained healthy scores in all domains apart from Behavior Control.

As for the differences between the normative values of the subscales and the results of the present investigation, according to Table 4, we obtained significant differences in the following domains: Problem Solving, Affective Responsiveness, Affective Involvement, and Behavior Control.

TABLE 4

Differences between scores on the different subscales of the Family Assessment Device and normative values

Subscales	Sample		NMV	*d*	*t*	*p*
	M	SD				
PS	1.72	.33	1.91	.51	-3.25	.003**
C	2.02	.29	2.09	.25	-1.40	.172
R	2.27	.39	2.16	.28	1.58	.126
AR	1.93	.40	2.08	.35	-2.04	.050*
AI	2.17	.40	2.00	.40	2.36	.025*
BC	2.13	.36	1.94	.46	2.83	.008**
GF	1.81	.35	1.84	.08	-.42	.676

Note: *M* = Mean; SD = Standard Deviation; *d* = Cohen's *d*; *t* = Student's *t*-test; NMV = Normative Mean Values; PS = Problem Solving; C = Communication; R = Roles; AR = Affective Responsiveness; AI = Affective Involvement; BC = Behavior Control; GF = General Functioning. * $p < .05$; ** $p < .01$.

When analyzing the results of the different subscales of family functioning, according to the Weight category (Overweight/Obesity), no significant differences were found (Table 5).

TABLE 5

Differences between the mean values of the dimensions of the Family Assessment Device between overweight children (n = 7) and obese children (n = 10)

	Overweight			Obesity			*U test*		
	M	Mdn	SD	M	Mdn	SD	r	U	p
PS	1.62	1.67	.43	1.71	1.83	.34	-.14	57.5	.476
C	1.98	2.00	.21	2.01	2.11	.33	-.15	56.5	.450
R	2.19	2.18	.46	2.28	2.27	.41	-.05	65.5	.803
AR	1.93	2.00	.35	1.95	2.00	.46	-.07	64.0	.732
AI	2.29	2.00	.55	2.08	2.08	.36	-.13	58.0	.502
BC	2.13	2.11	.39	2.10	2.22	.38	-.01	69.0	.956
GF	1.69	1.75	.32	1.83	1.87	.39	-.21	50.0	.266

Note: *M* = Mean; Mdn = Median; *SD* = Standard Deviation; *U* = Mann-Whitney test for two independent samples; *r* = Cohen's *r*; PS = Problem Solving; C = Communication; R = Roles; AR = Affective Responsiveness; AI = Affective Involvement; BC = Behavior Control; GF = General Functioning.

Discussion

Obesity is one of the most prominent health problems today given its high prevalence (Filipe et al., 2016; Rito et al., 2016), its severe impact on the health of individuals, and its association with physical and mental disorders (Auday, 2022), leading to several costs for the National Health System (Direção Geral da Saúde, 2016).

In childhood, this disease is one of the most stigmatizing and least accepted (Schwimmer et al., 2003) and can cause damage in several dimensions. Minors who suffer from obesity are more

likely to remain obese adults due to the metabolic syndrome produced in childhood (Auday, 2022), and in adulthood the obesity is associated with several diseases such as type 2 diabetes, hypertension, dyslipidemia, heart disease, some types of cancer, among others, and is associated with premature death (Department of Health and Children, 2005).

Although there is weak evidence for adverse effects of diet and exercise-based interventions, this might be due to underreporting or publication bias (Summerbell et al., 2005). Despite this, in cases where such effects were present, they varied according to the patient's demographic variables, such as age group (Summerbell et al., 2005), highlighting the need to understand the population being intervened on.

In this context, this study sought to characterize families and children with obesity or overweight from a sociodemographic, developmental and axiological perspective and to understand the family functioning of users of a specialist clinic. It also sought to assess the relationships between the domains of family functioning and sociodemographic, physiological and axiological variables, and to investigate the existence of differences between the family functioning of overweight and obese children.

The children in the sample under study live with their parents, with an annual income below the national average and fathers with occupations that fall mainly into the category of skilled workers in industry, construction and craftsmen, and mothers with occupations in the group of workers in personal services, protection and security and salesmen, which is consistent with previous literature (Hemmingsson, 2018).

As for the developmental data of these children, it's important to highlight their shorter breastfeeding time, considering the recommendations of the World Health Organization (World Health Organization, 2025). With regard to background, it should be noted that these children have at least one relative (grandparents or parents) with obesity in their family.

For most respondents, the children's eating habits and exercise practices need to be changed, and mothers are the most willing to change their own eating habits to help children in the weight loss process. This seems to be consistent with conclusions from previous studies (Davies et al., 2007).

The analysis of the relationship between the domains of family functioning and sociodemographic, physiological, and axiological variables results in a high number of associations. The Problem Solving (PS) and General Functioning (GF) are positively associated with the mother's age; as for the domains Roles (R) and General functioning (GF) are positively associated with the father´s age. This seems to indicate that the mother's age is related to problem-solving ability and overall family functioning. The father's age, on the other hand, appears to be associated with family rules and overall functioning. No support for this indicator could be found in the literature; however, the mother appears to be a supportive figure in problem-solving, while the father appears to be a figure who sets rules.

The domains Communication (C), Affective Involvement (AI) and Behavior Control (BC) are negatively associated with the mother's and father´s education level. It should be noted that higher values in a domain indicate greater dysfunctionality. This seems to indicate that parents' educational level may be a factor in better family functioning in terms of communication, emotional involvement and behavior control. These data corroborate the conclusions of other studies in this field (e.g., Gibson et al., 2017; Huang et al., 2014).

Compared to the normative values of the FAD (Ryan et al., 2012), families showed higher capacity in Problem Solving and Affective Responsiveness and lower functioning values in the Affective Involvement and Behavior Control dimensions. They also showed unhealthy levels in the dimension of functioning Behavior Control, and problems in this domain may have generated dysfunctional behaviors that preceded obesity, or on the other hand, the low scores in this domain may have resulted from the problem of obesity in the family, since family functioning may be influenced, for example, by family circumstances and other stressors (Andrade et al., 2022).

Conclusions

This study provided a profile of a sample of users of the specialist clinic (CODC) from a sociodemographic, physiological and axiological perspective, as well as in terms of family functioning. The results highlight the importance of developing interventions that promote the regulation of family behavioural patterns (e.g., establishing rules, assertiveness training) and reinforce parental involvement in the child's weight loss process, particularly through the adoption of healthier eating habits and physical activity. It was also found that a high proportion of parents of overweight or obese children consider weight loss for their children to be unnecessary, highlighting the need for greater family awareness regarding the child's weight status, its consequences and the benefits of weight reduction.

Overall, significant associations were identified between family functioning and sociodemographic, physiological and axiological variables, reinforcing the importance of a systemic approach to understanding childhood obesity. This study stands out for integrating multiple dimensions of analysis, moving beyond strictly biomedical perspectives and highlighting the role of the family context in health behaviours.

Limitations include the cross-sectional nature of the study, which precludes inferring causality; the limited generalisability of the results due to the clinical sample; potential bias associated with self-report instruments; and possible limitations in statistical power.

Future research should employ longitudinal designs, more representative samples and mixed methodologies, whilst also integrating contextual variables, particularly school-related and sociocultural factors.

In practical terms, the importance of integrating the assessment of family functioning into clinical intervention and of developing family-centred programmes that promote parenting skills and healthy lifestyles is emphasised.

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