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Atitudes dos pais e a alimentação de seus filhos: repercussões para o excesso de peso infantil.

Universidade Federal do Rio Grande do Sul
Porto Alegre, setembro 2008.

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SUMÁRIO

ARTIGO 1
CHILDHOOD FOOD BEHAVIOR, EDUCATION PRACTICES AND PARENTS' SOCIAL SKILLS

Fabiana Silva Costa

Marcela Perdomo Rodrigues

Rogério Friedman

Abstract

Obesity is a chronic, epidemic disease, which has become a major global health issue. Decline in physical activity, improper food habits and genetic predisposition are some of the associated factors. Obesity carries an increased risk for a number of health conditions and premature death. Childhood obesity is a particular therapeutic challenge. Parents have an important role in the treatment of childhood obesity, as they are instrumental in motivating children to change eating habits and life style. This paper reviews parental educational practices and their potential role in childhood health and disease. Furthermore, we discuss effective parents' social skills that can be useful in preventing and treating obesity.

Introduction

Obesity is a chronic disease, with an increasing prevalence that is reaching epidemic proportions. Overweight in children and adolescents is a serious public health problem. Data from NHANES - National Health and Nutrition Examination Survey (1976–1980 and 2003–2004) - estimate a 2-3 fold increase in overweight in children, and adolescents [1,2,3,4,5].

Since the nineteen-seventies, overweight in children and adolescents increased 53% in Brazil. The rise has been attributed to the economic transformations that have lead to changes in lifestyle and eating habits [6,7,8]. This nutritional transition has particular characteristics for each country; however, common elements converged to the so-called "Occidental" diet. The new eating pattern consists of a diet rich in fat, sugar and refined foods, and poor in complex carbohydrates and fibres [9].

Obesity in children and adolescents has been attributed to declines in physical activity, improper food habits and genetic predisposition. Children and adolescents have changed from moderate or intense levels of physical activity to low energy expenditure during their leisure time [3,6,10].

Children body fatness has a strong impact on physical and psychological health. It can result into several conditions, such as hyperinsulinaemia, insulin resistance, risk of cardiovascular diseases, orthopaedic complications, infertility and psychosocial consequences [11].At least one risk factor for cardiovascular disease (hypertension, dislipidemia or hyperinsulinaemia) has been observed in 60% of overweight children and adolescents, while 20% had two or more risk factors [12]. Childhood obesity is associated with an increased risk of obesity in adulthood. Children and adolescents with abdominal obesity present a great risk for the development of coronary artery disease in adult life [11, 13].

The management of childhood obesity is based on diet, exercise and education. The success rate is variable, and relapses are frequent [14]. Since the parent-child unit seems to play a role in the genesis of the problem, this paper focuses on parental attitudes, their impact on the child's health, and their management.

Parental attitudes

Parents not always consider overweight a health problem [15]. They often only become worried when a co-morbidity is identified, physical activity declines, or a physician highlights the risk [11]. Obese parents believe that obesity in their children is exclusively genetic and, therefore, not-modifiable, ignoring the possibility of behavioural changes [16].

The environmental factor is probably the major contributor to the obesity epidemic. Children's diet may be influenced by friends at school, and especially by parents, who play a role model, particularly in the early years. Obesity is related the food portion size, and its quality [17]. Parents who induce children to "cleaning the plate", as a condition for receiving desserts, can promote excess weight gain [4,18]. In contrast, many parents believe that children are unable to control food intake, and that it is their responsibility to chose and establish the food portion [10].

Food behaviour is not isolated in a child's context; it is part of a range of several behavioural aspects. Therefore, it is important to evaluate if the parent-child interaction is dysfunctional with regard to feeding education, and if this associates with other behaviours. The family has a major influence in the childhood environment; thus, the chances of getting good results when the treatment only considers the clinical picture, without taking into account the context of the child, are very small. The parents or guardians are those who have more contact with the child and, therefore, greater

environmental control. Their educational practices are crucial for the child to learn several behaviours, and, among them, food behaviour [19].

To prevent childhood obesity it is necessary to change the food habits and physical activity of children and their caregivers. Parents' involvement in the treatment of obese children predict weight loss[20, 21]. Interventions in children, especially those under 10, have a greater probability to succeed than in adults. This is considered the most favourable period for introducing prevention strategies [22, 23]. A comprehensive approach requires a thorough understanding of social, especially family-related factors.

Parents' educational practices and childhood eating behaviour

Children's food behaviour can be influenced by several factors, which can be external (family, parents' and friends' attitudes, social and cultural values, media, fast-food offer, nutrition knowledge and food habits), and internal (psychological needs and characteristics, physical image, values and personal experiences, self-esteem, and food preferences) [4, 24, 25].

Children feed themselves better when they are in a pleasant, comfortable and safe environment. It is important for the child to feel the interest of parents in the act of feeding, and to have their company during that moment [26]. When the children realize that their parents are monitoring them, their choices tend to be healthy: low in calories, fat and salt [27]. However, when they are not under the parents' monitoring, they may choose restricted foods.

A model that seems to work well is a combination of monitoring by the parents, and shared responsibility with the children: the parents offer healthy foods and make it possible for the child to chose. Parents are responsible for determining what, when and where the child eats. The children are responsible for the portion size and if they will eat or not. This attitude develops in the child the ability to regulate her/his own intake, through hunger and satiety. It is the parents' role to avoid high fat, caloric foods, and soft drinks, and to promote healthy foods (fruits and vegetables, milk and grains) [28, 29].

To insist in the consumption of certain foods and to be too restrictive can result in higher resistance. Girls whose parents restrict intake have a tendency to eating more snacks, even without hunger, when compared with girls free from food restriction. So, food restriction is usually associated with higher caloric intake and weight gain [16, 28, 30,31].

The context in which food is offered is also an important factor in the learning of healthy eating. Foods with lower acceptance (e.g. vegetables) are often offered in a relatively negative context, while high-fat foods, sugar and salt are offered in a positive context (parties, celebrations, or as reward). In this setting, children tend to prefer sweets, desserts and other snacks, instead of fruit, and they also prefer roast potato, pasta with cheese, and chips rather than vegetables, as often do their parents [27, 28, 29].

The time that the child spends watching television is associated to an increase in soft drink consumption, and lower fruit and vegetable intake. The media do not stimulate the consumption of fruits and vegetables, and contribute to the maintenance of the Western lifestyle. Most of the advertising presents unhealthy and high-calorie foods [33, 34, 35].

The weight of the parents may influence their attitudes towards their children. Obese mothers tend to exercise a greater control of the children's food. The mother's BMI is associated with the body fat percentage - but not with the body weight - in girls. In boys, the maternal and paternal BMI is associated with weight, and not with the body fat percentage. This is due to a small difference in the ratio of body fat and weight in boys and girls [32, 36].

Gomide and collaborators (2005) [37] have classified the educational practice patterns into seven categories. Though divided in categories, they are not isolated behaviours. The frequency and intensity of the parents' practices determine consequences for the parent-child relationship, their education and behaviour in general.

Negative Practices:

a) Negligence: no attention is given to child's needs, failing to provide the necessary assistance. Sometimes negligence happens through lack of affection in the family interaction. Neglected children can demonstrate apathy, aggression, or feelings of insecurity and vulnerability. In eating behaviour, negligence can be seen when parents do not take responsibility for the food and nutritional education of the child, don't know about their habits and do not intervene.

b) Inconsistent punishment: the punishments are driven by the mood of the parents, not by the behaviour of the child. This practice makes the child discriminate his/her parents' humour, instead of learning about his/her actions. Taking off the dessert because the child irritated its parents, or forcing he/she to eat a particular food (that is

not part of his/her habit), because of disobedience, are examples of inconsistent punishments that do not contribute to the learning of healthy eating.

c) Negative monitoring: there is an excess of monitoring and repeated instructions, lived by the children as constant inspection. This pattern can create a hostile environment, where there is little dialogue and affection. It appears when parents control the quantity of food, saying to the child that he/she is fat and that he/she has to make efforts not to eat, and that acting like that, she/he will never be able to achieve goals. This strategy can generate guilt and anxiety in children, further impairing their ability to confront the problem.

d) Relaxed discipline: rules are not respected. Parents use threats (that are not fulfilled) when they are faced with aggressive behaviours or opposition by children. Rules are not followed. Some parents, for example, do not keep a defined time for feeding, and expose children to inadequate foods. Some only use corrections with inconsistent verbal instructions, and often give on to the child's demands (for example, allowing the intake of biscuits immediately after lunch).

e) Physical abuse: use of force, causing pain or injury, in attempting to control the child. Physical punishment is only exceptionally admissible as a contention in the face of dangerous behaviour that is not controllable otherwise. It must not hurt or cause injury. A child can develop feelings of apathy, fear, lack of interest, and even anti-social impulses when physically abused.

Positive Practices:

a) Positive Monitoring: there is dedication, attention and care, love and expression of affection. It is based on parents' support and love for the children, providing a safe environment, with no need for stressful monitoring. There is careful consideration to the schedules and quality of the diet, providing what is necessary for a healthy diet, without allowing inadequate intake out of schedule, and avoiding non-nutritious foods.

b) Moral Behaviour: transmission of values, definition of right and wrong through positive models, developing necessary characteristics for the moral behaviour - feelings of guilt, empathy, honest actions, positive beliefs about work, absence of anti-social practices, and damage repair. Developing in the child the appreciation of

the food and of the moment of the meal, and setting standards against wasting food, can collaborate to the self-regulation of intake.

Social skills and their impact on attitudes

The parental style is associated with social skills. Adequate social skills of parents tend to generate pro social behaviours, such as empathy and assertiveness, in their children. Positive educational practices, such as the use of positive reinforcement and problem-solving training, help to develop satisfactory social skills in children [37, 38].

Social skills are behaviours that compose a healthy interpersonal relationship; for example, knowing how to initiate, to maintain and to finalize a dialogue; to seek help and to refuse requests when needed; to express feelings and thoughts, both positive as negative; to live with criticism and praise; to apologize. When establishing a healthy relationship with the child, we promote an environment that is safe and adequate to the child's development [19].

When approaching children with difficulties in behaviour, acting together with parents is the most effective practice. Thus, the training of social skills for parents is a possible field of action in the search for a better treatment for children with weight problems [37, 38].

The education of children is directly influenced by the social skills of their caregivers. Among those, we can cite: a) the way each individual acts, which is related to his/her previous experience, his/her construction of self-rules; b) the way each one perceives oneself, and understands his/her own roles, and the others', influencing the relationship between parents and children; c) the appropriate expression of feelings, which is important for the establishment of a dialogue, and for the resolution of problems in a positive, effective way; d) learning with the social environment, that may contribute to the quality of relations between the family members; e) identification of the appropriate time to express feelings and ideas; f) stimulating the expression of positive feelings [39].

Deficiencies in basic parenting skills such as discipline, surveillance, positive reinforcement, problem-solving abilities, and involvement, can lead to behavioural problems in the child. As with every behaviour, children's eating behaviours need attention and education. Effective education and positive relationships between parents and children require the expression of feelings in socially appropriate ways by parents,

signalling, in the case of negative feelings, which behaviour they are criticizing. For example, if the child can not follow a rule of hours of feeding, the parents have to express their discontent in an affectionate way, providing an explanation of the consequences of not following the rule. The parents need to talk about their feelings and to propose alternatives to correct such act, without, however, using verbalizations that affect the self-esteem of the child, and that harm the parent-child relationship (e.g. "You will never succeed if you continue to act as a fat boy!" or "you are a bad child") [39, 40].

A couple of studies demonstrate that implementing family-based programmes in school environment can be efficient in promoting weight reduction. These programmes involved nutritional and behavioural counselling, incentives for physical activity and parent training. The strategies that have been employed include problem-solving, motivational intervention, and the use of technological resources (software) [41, 42].

There is still not a standard treatment for childhood obesity [43]. A retrospective, controlled clinical study of 190 overweight children compared a family-based education programme with traditional dietary approach. After a mean 2.7 year follow-up, 72.9% of the children in the programme lost weight, as compared with 42.8% in the usual approach [44].

A randomized, controlled study compared two interventions employing cognitive-behavioural therapy: mother only versus mother-child. During 16 sessions, psychoeducation (food, obesity, hunger, satiety, physical activity), social skills training, and nutritional counselling were given to subjects. Both approaches were equally effective at 6 months [45].

Social skills can be promoted by training. Social Skills Training Program is a set of techniques and interventions that promote and develop appropriate social skills, stimulate the pro-social behaviour of the child, and minimize unadapted behaviours of both parents and children. It has been used for parents of children with schizophrenia, attention deficit disorder and oppositional defiant disorder. It has also been tested in parents of overweight children, in an uncontrolled fashion. It comprises two steps: assessment and intervention. The assessment includes the identification of problem behaviour, the difficulties related to the problem behaviour, the context of family and children, the knowledge of the feelings and beliefs involved. The intervention uses an arsenal of cognitive-behavioural techniques. It provides instructions (e.g. how to deal with difficulties that the child may have) and knowledge (what is obesity, and its

consequence), feeding behaviour, the functioning of children, the need of limits for a healthy development, behavioural practice, tasks at home, cognitive restructuring, problem solving, etc [19].

The parents' training instructs them on the knowledge and strategies necessary to help promote the development of the child, and to assist he/she with changing inappropriate eating habits. Parents are trained to be agents of change in their children. A fundamental strategy is to have the child participate in the process of change, not only obeying rules, but understanding why [40, 46].

It is necessary to be attentive to the expectations of parents, which sometimes can be unrealistic. Goals and objectives of treatment, and the role of parents as reinforcers of the desired behaviour (increasing the frequency and variety of rewards, and avoiding criticism and orders to the child) should be clarified. The reinforcements are very important for children; parents should take care not to reinforce using food. One can establish a goal with the child, and also the reinforcer, which can be a walk in the park, or a football, choosing consistently the frequency, variety and value of reward [40].

The interpersonal learning of the child is directly determined by the planning and conduction of its education by the parents. The environment must be organized so as to facilitate. Foods that are high in calories and poor in nutritional value must not be within easy reach. Fruit and vegetables need to be offered often, and to be easily accessible, to increase the likelihood of their consumption.

The parents must be consistent and coherent in their conduct; it is no use telling the child that he/she should not eat chocolate every day, and do it. The model presented to the child is the most relevant to learning.

It is expected that parents establish a positive monitoring, a relationship with clear rules, and that such practices contribute to the development of healthy and positive features, such as self-esteem and the ability to solve problems [47].

Final considerations

The parents' participation throughout the process of development of the child is essential in both the prevention and treatment of obesity in children. The parents´ participation ensures better compliance with treatment, since children are influenced by

the habits of their parents (which are responsible for the purchase, supply and preparation of food).

The techniques of restriction used by parents to control feeding of children can be associated with a lower control of satiety and hunger, changes in body weight, in addition to contributing to the modelling of food preferences. In general, parents are concerned with the amount of food ingested by children, and not with the quality; thus, it is necessary to change the habits and beliefs of parents about nutrition. It is important to promote the acceptance that one's child has excess weight, the knowledge of the risks of obesity, and the introduction of healthy habits, nutrition and physical activity for the whole family group.

Health care professionals need to develop an interdisciplinary approach, which sees the child as a whole. The treatment can not be restricted to the diet. It should involve a change in the way the child functions, an improvement in the social skills of parents to deal with the needs of change, and the implementation of appropriate strategies.

References

1. National Health and Nutrition Examination Survey –NHANES. Prevalence of Overweight Among Children and Adolescents: United States, 2003–2004. CDC National Center for Health Statistics, Health E-Stat. (http://www.cdc.gov/nchs/products/pubs/pubd/hestats/overweight/overwght_child_03.htm)
2. Oliveira A, Cerqueira EMM, Souza JS, Oliveira AC. Sobrepeso e Obesidade Infantil: Influência da Fatores Biológicos e Ambientais em Feira de Santana, BA. *Arquivos Brasileiros Endocrinologia & Metabologia* 2003;47(2):144-50.
3. Oliveira CL, Mello MT, Cintra IP, Fisberg M. Obesidade e Síndrome Metabólica na infância e adolescência. *Revista de Nutrição de Campinas.* 2004;17(2):237-245.
4. Mello ED, Luft VC, Meyer F. Obesidade infantil: como podemos ser eficazes? *Jornal de Pediatria*. 2004,80(3): 341-4.
5. Centers for Disease Control and Prevention. Prevalence of Overweight and Obesity Among Children and Adolescents: United States, 2003-2004. Available at: http://www.cdc.gov/nchs/products/pubs/pubd/hestats/overweight/overwght_child_03.htm. Accessed November 30, 2007.
6. Ronque VER, Cyrino ES, Dórea VR, Júnior HS, Goldi EHG, Arruda M. Prevalência de sobrepeso e obesidade em escolares de alto nível socioeconômico em Londrina, Paraná, Brasil. *Revista de Nutrição de Campinas.* 2005;18(6):709-717.
7. Mendonça CP, Anjos LA. Aspectos das práticas alimentares e da atividade física com os determinantes do crescimento/obesidade no Brasil. *Cadernos de Saúde Pública*. 2004; 20(3):698-709.
8. Lamounier JA, Abrantes MM. Prevalência de obesidade e sobrepeso na adolescência no Brasil. *Revista de Medicina de Minas Gerais.* 2003;13(4):275-84.
9. Beech BM, Kumanyika SK, Baranowiski T, Davis M, Robinmson TN, Taylor WC, Relyea G, Zhow A., Pratt C, Owens A, Thompson NS. Parental cultural perspectives in relation to weight –related behaviors and concerns of African-American girls. *Obesity Research.* 2004;12:75-195.
10. Johnson SL, Birch LL. Parents´ and children's adiposity and eating style. *Pediatrics.* 1994;94:653-61
11. Boa-Sorte N, Neri LA, Leite MEQ, Brito SM, Meirelles AR; Luduvice FBS, Santos JP, Viveiros MR, Ribeiro-Jr HC. Maternal perception and self-perception of the nutritional status of children and adolescents from private schools. *Jornal de Pediatria*. 2007; 83 (4): p. 349-56.
12. Dehghan M, Akritar-Danesh N, Merchant AT. Childhood obesity, prevalence and prevention. *Nutrition Journal.* 2005;4(24): p.1-8.
13. Kiess W, Galler A, Reich A, Müller G, Kapellen T, Deutscher J, Raile K, Kratzsch J. Clinical aspects of obesity in childhood and adolescence. *Obesity Reviews.* 2001;2: p.29-36.

14. American Academic of Pediatrics Nutrition Handbook, 5th edition, 2002, chapter 33, Obesity.

15. Etelson D, Brand DA, Patrick PA, Shiarali A Childhood Obesity: Do Parents Recognize this Health Risk ? *Obesity Research*. 2003; 11(11):p.1362-68.

16. Rhee EK, Delago CW, Ascott-mills T, Mehta SD, Davis RK. Factors associated with parental readness to make changes for overweight children. *Pediatrics.* 2005; 116(1): p. e94-e101.

17. Triches RM, Giugliani ERJ. Obesity, eating habits and nutritional knowledge among school children. *Revista de Saúde Pública.* 2005; 39(4): p.541-7.

18. Cullen KW, Baranowiski T, Rittenberry L, Oliveira N. Social-environmental influences on children's diets: results from focus groups with African-, Euro- and Mexican- American children and their parents. *Health Education Research*. 2000;5(15): p.581-590.

19. Caballo V. Manual de evaluación y entrenamiento de habilidades sociales. España: Siglo XXI de España Editores, S.A. 2002.

20. Gaglianone CP, taddei JAAC, Colugnati FAB, Magalhães CG, Davanço GM, Macedo L, Lopez FA. Nutrition education in public elementary schools of São Paulo, Brazil: the Reducing Risks of Illness and death in Adulthood project. *Revista de Nutrição de Campinas.* 2006; 19(3): p.309-320.

21. Germann J, Kirschenbaum D, Rich B. Child and parental self-monitoring as determinants of success in the treatment of morbid obesity in low-income minority children. *Journal of Pediatric Psychology.* 2007; 32(1): p.111-121.

22. Young –hyman D, Herman LJ, Scott DL, Schlundt DG. Care giver perception of children´s obesity –related health risk: a study of African American families. *Obesity Research*. 2000; 8: p.241-48.

23. Leão LSCS, Araújo LMB, Moraes LTLP, Assis AM. Prevalência de obesidade em escolares de Salvador, Bahia. *Arquivos Brasileiros Endocrinologia & Metabologia.* 2003; 2(47): p.151-7.

24. Lindsay AC, Sussner KM, Kim J, Gortmaker S. The role of parents in preventing childhood obesity. *Future Child*. 2006;16(1): p.169-80.

25. Wilson G, Wood K. The influence of children on parental purchases during supermarket shopping. *International Journal Consumer Study.* 2004; 28(4):329-36.

26. Satter, Ellyn. Excerpted from Child of Mine; Feeding with Love and Good Sense. Available at: **www.ellynsatter.com,** 2006

27. Ramos M, Stein LM. Desenvolvimento do comportamento alimentar infantil. *Jornal de Pediatria.* 2000; 76(3): p.S229-S237.

28. St-Onge MP, Keller KL, Heymsfield SB. Changes in childhood food consumption patterns: a cause for concern in light of increasing body weights. *American Journal Clinical Nutrition.* 2003; 78: p.1068-73.

29. Satter, Ellyn. Children, the feeding relationship and weight. *Maryland Medicine*, 2004: p.26-29.

30. Birch LL, Fisher JO. Mother's child-feeding practices influence daughters' eating and weight. *American Journal Clinical Nutrition.* 2000; (71): p.1054-61.

31. Lee Y, Mitchel DC, Smiciklas-Wright H, Birch LL. Diet quality, nutrient intake, weight status and feeding environments of girls meeting or exceeding recommendations for total dietary fat of the American academy of pediatrics. *Pediatrics.* 2001; 107(6): p.e95.

32. Faith MS, Scanlon KS, Birch LL, Francis LA, Sherry B. Parent –child feeding strategies and their relationships to child eating and weight status. *Obesity research*. 2004(12): p.1711-22.

33. Salmon J, Campbell KJ, Crawford DA. Television viewing habits associated with obesity risk factors: a survey of Melbourne schoolchildren. MJA 2006; 184:64-67.

34. Mendonça CP, Anjos LA. Aspectos das práticas alimentares e da atividade física com os determinantes do crescimento/obesidade no Brasil. Cad Saúde Pública, Rio de Janeiro 2004; 20(3):698-709.

35. Francis LA, Lee Y, birch LL. Parental weight status and girl´s television viewing, snacking and body mass indexes. Obesity Research 2003;11(3):143-151

36. Whitaker RC, Deeks CM, Baughcum AE, Specker BL. The relationship of childhood adiposity to parent body mass index and eating behavior. *Obesity Research*. 2000; 8(3): p.234-240.

37. Gomide PIC, Salvo CG, Pinheiro DPN, Sabbag GM. Correlação entre práticas educativas, depressão, estresse e habilidades sociais. *Psico-USF*. 2005; 10 (2): p.169-178.

38. White C, Verduyn C. The children and parents service (CAPS): a multi-agency early intervention initiative for young children and their families. *Child and Adolescent Mental Health.* 2006; 11 (4): p.192-7.

39. Bolsoni-silva AT, Marturano EM. Educational practices and problem behavior: an analysis from the point of view of social skills. *Estudos de Psicologia (Natal).* 2002; 7(2): p. 227-235.

40. Caminha MG, Pelisoli C. Treinamento de Pais: aspectos teóricos e clínicos. In: Caminha RM, Caminha MG. *A prática cognitiva na infância*. São Paulo: Roca, 2007.

41. American Dietetic Association. Position of the American Dietetic Association: Individual-, Family-, School-, and Community-Based Interventions for Pediatric Overweight. ADA. 2006. http://www.eatright.org/ada/files/Familynp.pdf.

42. Acosta MC, Manubay J, Levin FR. Pediatric Obesity: parallels with addiction and treatment recommendations. *Harvard Review of Psychiatry*. 2008; 16 (2): p.80-96.

43. Summerbell CD, Ashton V, Campbell KJ, Edmunds L, Kelly S, Waters E. Interventions for treating obesity in children. Cochrane Database Syst Rev 2003: CD 001872.

44. Tanas R, Marcolongo R, Pedretti S, Gilli G. A family-based education program for obesity: a three-year study. BMC Pediatrics, 2007, 7:33.

45. Munsch S, Roth B, Michael T, Meyer AH, Biedert E, Roth S, Speck V, Zumsteg U, Isler E, Margraf J. Randomized controlled comparison of two cognitive

behavioral therapies for obese children: mother versus mother-child cognitive behavioral therapy. Psychoterapy and Pschosomatics, 2008: 235-46.

46. Coutinho MTB. Apoio à família e formação parental. *Análise Psicológica.* 2004; 1(XXII): p.55-64.
47. Cia F, Pamplin RCO, Del Prette ZAP. Comunicação e participação de pais-filhos: correlação com habilidades sociais e problemas de comportamento dos filhos. *Paidéia.* 2006; 16(35): p. 395-406.

ARTIGO 2

Parents' attitudes and practices: influences to childhood body weight

Fabiana Costa

Daisy Lopes Del Pino

Rogério Friedman

Abstract

OBJECTIVE: This study aimed at studying relationships between childhood excess weight and parental attitudes.
DESIGN: A cross-sectional survey including parents or legal caregivers of 6-10 years old schoolchildren.
SUBJECTS: One-hundred and nine children (53 boys and 56 girls), aged 6-10, regularly attending private or public schools in Porto Alegre, Brazil, and one of their parents or caregivers.
MEASUREMENT: Perceptions and attitudes of the parents or legal caregivers were assessed by the Child Feeding Questionnaire (CFD). Weight and height of the children were measured using calibrated instruments. Parents self-reported their weight and height. Body mass indexes were calculated (kg/m^2). The WHO criteria for overweight and obesity were used for the responding adults. The CDC criteria for overweight and risk for overweight were used for the corresponding children.
RESULTS: Boys were more often in one of the excess weight categories than girls. The parents of children with excess weight showed higher scores for perceived child weight, concern about child weight, restriction and monitoring. In logistic regression, excess weight in children was associated with perceived child weight, restriction and male sex; pressure to eat was negatively associated with excess BMI; these were corrected for parent weight status, economic class, perceived responsibility, perceived parent weight, concern about child weight and monitoring.
CONCLUSION: In Porto Alegre, South of Brazil, some parental perceptions and attitudes are independently associated with excess body weight in children aged 6-10; being a boy increases the odd of being overweight.

Introduction

Obesity is a major contemporary health issue, because of the prevalence and impact of its medical and psychological complications. The term "obesity" is often felt as pejorative, and it is associated with social limitation and prejudice [1]. It is one of the most prevalent chronic diseases in childhood, and it can increase morbidity and cause premature mortality in adulthood [2]. The causes of obesity have not yet been sufficiently understood. We know that it occurs when the energy intake exceeds the energy

expenditure, but there are multiple etiologies for this imbalance: genetic factors, environmental factors, lifestyle preferences and culture [3].

The family environment plays a major role in children's structure. It is the primary context for providing the child's needs and, consequently, it is of great importance for the development of health related behavior [4]. Already in intrauterine life, the mother's behavior can increase the risk for metabolic abnormalities, including obesity. Breast-feeding may have a protective effect against obesity [5]. In the beginning, the baby's life depends on the parents; as the adult is responsible for the baby's first food experiences, the child will generally be influenced by the parents' preferences and selections [6].

The baby has genetic predispositions for preferring sweet over salt or vice-versa, and normally rejects new foods. The role of the caregiver is to present several times the new flavor, until it is accepted [6]. The environmental control is imputed to the parent. Offering healthy food, proposing physical activity and limiting the time of television viewing depends on the family [1, 5].

Parental obesity is associated with increased prevalence of obesity in children. A study looking at the family lifestyle and BMI of family and children showed that more than 70% of fathers and 50% of mothers were obese or overweight in middle-age, and the children's BMI was associated with the parents' BMI, independently of other contributions, like physical fitness and alcohol intake [7].

The relationship between the parents and the children can contribute to the child's coping skills. Attitudes like criticism by family and peers can co-operate to reduce physical activity and influence other behaviors [8].

The best moment to treat and prevent obesity is during childhood. Lifestyle interventions show better results in 7 to 12 year-old children as compared to adolescence and adult life [9]. If the thinking and practices of the parents are well understood, we can develop interventions and propose techniques to improve the children's education (including health education).

Understanding how the parents perceive the child's feeding, and how they educate their children may help in establishing both treatment and prevention strategies. In this study, we intend to explore associations between the parents' attitudes, the parents' BMI and the child's weight condition.

Method

Subjects

We are currently conducting a survey that includes around 2300 schoolchildren between the ages 6 and 10 in the city of Porto Alegre, Brazil. These children are weighed and measured as part of the protocol. Out of this sample, we selected a group of 109 children, whose parents (or legal caregivers) were invited to take part in the current study. The survey was responded by one adult per household. All participants gave informed consent. The study was approved by the local Ethics Committee.

Measures

Questionnaire

To register the parents' attitudes and behavior, we chose to use the Child Feeding Questionnaire – CFQ [10], a self-report instrument. It groups parental beliefs, attitudes and practices into seven factors: perceived responsibility (e.g.: "When your child is at home, how often are you responsible for feeding her?"), perceived parent weight (e.g.: "How was your own weight in your childhood-5 to 10 years old?"), perceived child weight (e.g.: "How was your child during the first year of life?"), concern about child weight (e.g.: "How concerned are you about your child eating too much when you are not around her?"), restriction (e.g.: "I have to be sure that my child does not eat too many sweets."), pressure to eat (e.g.: "My child should always eat all of the food on her plate.") and monitoring (e.g.: "How much do you keep track of the sweets that your child eats?"). We translated the CFQ to Portuguese, back-translated it to English to ensure correctness, and had it checked by a panel of 3 experts before putting it to use. The internal consistency was high (Cronbach's Alpha=0,789).

Weight Parameters

Children were measured and weighed in light indoor clothes, without shoes, using a calibrated anthropometric scale. Body mass index (BMI, Kg/m^2) was calculated as weight (in Kg) divided by height (in m), squared. To classify the children, we used the criteria of The Centers for Disease Control and Prevention, which define overweight as at or above the 95^{th} percentile of BMI for age, and risk for overweight as between the 85^{th} percentile and 95^{th} percentile for BMI for age [11].

For the parents, we employed BMI categories as recommended by the World Health Organization [12]. The respondents' height and weight were self-reported [13, 14].

Economic Class Parameters

We used the Brazil Economic Classification Criterion [15], a standardized measure which is based on the family's purchasing power, and on parents' schooling. Points are given to each of several criteria, and the respondents are classified into categories A1, A2, B1, B2, C, D and E. This method does not classify social class, but economic class. Due to the sample size, sub-classes 1 and 2 were grouped together (in both A and B).

Statistical analysis

Data analyses were performed using SPSS® version 13.0(SPSS Inc, Chicago, United States). Data are presented as mean ± standard deviation unless otherwise stated. A p value of 0.05 was chosen.

Results

One-hundred and nine children were examined, and one parent or caregiver was interviewed for each child. All the respondents lived with the child, and the mother was the respondent in 85.3% of the cases.

The children were six to ten years old, with a mean age of 8.2 years, and 51.4% were girls; 33.9% of the children were in one of the CDC's excess weight categories; 32.7% of the parents had a BMI > 24.9 Kg/m^2.

Boys were more often in an excess weight category than girls (24.5% of girls vs. 46.2% of boys, chi-square, P=0.025).

In this sample, families were from economic classes A (31.3%), B (45.5%) and C (23.2%). Classes D and E were not represented.

Comparing parents of children with healthy weight and parents of children with excess weight (Table 1)

When the responses of parents of children with healthy weight were compared with the responses of parents of children at risk for overweight or overweight, no significant differences were found in: perceived responsibility, perceived parent weight, pressure to eat and monitoring. Perceived child weight, concern about child weight, restriction, and monitoring scored higher in parents of children in both categories of excess weight.

Comparing parents with healthy weight and parents with excess weight (Table 2)

When the parents' responses were analyzed according to their own weight (BMI< 25 Kg/m^2 vs. BMI ≥ 25 Kg/m^2), perceived parent weight, concern about child weight and restriction were all statistically higher in the parents with excess weight.
Perceived responsibility, perceived child weight, pressure to eat and monitoring did not differ between these two groups.

Comparing classes A, B and C (Table 3)

When comparing economic classes A, B and C, there were differences between A and C in relation to concern about child weight. In this sample, class C is more concerned with the weight of the child. Class B scored intermediately, but this was not significant.
No differences were found in the other factors.

Logistic Regression with the child's weight status as the dependent variable (Table 4)

The logistic regression indicated that some variables were independently associated with excess weight of children: perceived child weight, restriction, and male sex. Pressure to eat was negatively associated with the outcome. Other variables were entered in the model, but were excluded: parent weight status (normal vs. excess weight), economic class (A, B or C), perceived responsibility, perceived parent weight, concern about child weight and monitoring.

Discussion

In this sample of parents / caregivers of South Brazilian school-age children (6-10 years old), a pattern of attitude can be identified when the child is at risk for, or is already overweight: the parents are more concerned and tend to be more restrictive and to monitor their child more intensively.
The parental perception of the weight of the child is different when the child has excess body weight. This perception is unaffected by the parent's own weight. When the parents are themselves overweight, they show higher perceived parent weight, concern about child weight and restriction.
Our results are in agreement with other studies that found associations between the practice of restriction and childhood obesity [16, 17, 18]. In this cross-sectional study, we can not determine causality, but other studies found a relationship between restriction

and weight, and suggested that restriction may precede child weight gain [19]. Restricting access to some foods may promote the child's attention to these foods, and the child may eat that particular food, when left unattended, even if not hungry [5].

In this sample, pressure to eat is associated with a lower probability of being in the excess weight category. The literature is very poor with respect to this factor. Pressure to eat has been cross-sectionally associated with a higher intake of fruit and vegetables and lower fat intake by children [20]. Experimental and retrospective studies have linked pressure to eat with negative feelings and rejection of certain foods by children [21, 22], but no studies have prospectively examined the relation of pressure to eat with body weight. Parent control of the child's diet is associated with higher intake of both healthy and unhealthy foods [23]. We cannot entirely rule out a possibility that the parents of children with normal and low-normal weight put more pressure to eat on their children, thus driving the association. One could speculate that, in a country recently emerged from underdevelopment, a subjective perception by the parents that a child is "thin" (i.e., "malnourished"), might lead to pressure to eat, and this, in turn, would bring into the multivariate model an association between pressure to eat and normal/low body mass. This association remains to be explained.

The parents' eating style, their food preferences and choices function like a model to the children. The parent eating style, associated with the child feeding practice, forms the child eating behavior. The child food preferences are influenced by the parents' food selection patterns. Finally, the child's eating pattern and weight status influence each other [6]. Family choices can facilitate or inhibit the child's consumption of foods through the availability of food in the home [24].

Another important parent behavior relates to the meal size and time spent with the child during meals. Until the age of 3, intake is not determined by the parents' offering; the child can self-regulate. But around 5 years of age, giving big portions influences the meal size option by the child and the self-regulation is lost [6].

The parents' behavior towards their children is probably not the only factor that is relevant to child development in the family environment, because there are other important people that can influence the child, and other stimuli too [6].

In bivariate analysis, we observed that concern about the child weight is greater in economic class C. This association is not maintained in the multivariate analysis. Economic class has been proposed to affect the risk for obesity through some specific aspects, like married status, living conditions, parental education. Our data suggest that

the parental attitude factors operate independently of economic class, and this happens throughout the distribution from class A to class C. Classes D and E were not represented in our sample, probably because the poorest children are less likely to be regular school attenders. This of course brings a bias to our evaluation of the effect of economic class, and limits our conclusions to classes A to C.

This study has some limitations. The sample was by convenience and the questionnaire was answered by just one parent, usually the mother. In urban South Brazil, the mother is still the main responsible for feeding and educating the children at home. The father is less often present when the children eat [25, 26]. Therefore, we believe that having mostly mothers answering the survey does not negatively affect the results and may actually bring more confidence to the findings. As the study is cross-sectional, we can not determine causality.

In our sample, being a boy was more often associated with having excess body mass. This is in agreement with other studies that found a higher prevalence of excess body weight in boys as compared with girls [27, 28]. Epidemiological studies suggest that overweight and obesity may be decreasing in girls [29]. Genetic studies have not disclosed a different genetic pattern towards obesity in boys and girls, although males tend to spend more energy [30]. The sampling of this study was not designed to evaluate the prevalence or distribution of overweight in children, and we therefore can only speculate on the association between gender and overweight in the children.

Conclusion

In Porto Alegre, a major city of South Brazil, parental perceptions and attitudes are independently associated with excess body weight in children age 6-10, and being a boy increases the odds of being overweight.

References

1. Dietz WH, Robinson T. Overweight children and adolescents. The New England Journal of Medicine 2005; 352 (20): 2100-9.
2. Baur LA. Childhood obesity: practically invisible. International Journal of Obesity 2005; 29 (4): 353-5.
3. Dehghan M, Akhtar-Danesh N, Merchant AT. Childhood obesity, prevalence and prevention. Nutritional Journal 2005; 4 (1): 24.
4. Wake M, Nichols JM, Hardy P, Smith K. Preschooler obesity and parenting styles of mothers and fathers: Australian National Population Study. Pediatrics 2008; 120: e1520-27.
5. Lindsay AC, Sussner KM, Kim J, Gortmaker S. The role of parents in preventing childhood obesity. The future of children 2006; 16 (1): 169-186.
6. Birch LL, Davison KK. Family environmental factors influencing the developing behavioral controls of food intake and childhood overweight. Pediatric Clinics of North America 2001; 48 (4): 893-907.
7. Burke V, Beilin LJ, Dunbar D. Family lifestyle and parental body mass index as predictors of body mass index in Australian children: a longitudinal study. International Journal of Obesity 2001; 25: 147-157.
8. Flodmark C. The happy obese child. International journal of Obesity 2005; 29: S31-3.
9. Wilfley DE, Stein RI, Saelens BE, Mockus DS, Matt GE, Hayden-Wade HA, Welch RR, Schechtman KB, Thompson PA, Epstein LH. Efficacy of maintenance treatment approaches for childhood overweight. Journal American Medical Association 2007; 298 (14): 1661-73.
10. Birch LL, Fischer JO, Grimm-Thomas K, Markey CN, Sawyer R, Johnson SL. Confirmatory factor analysis of the Child Feeding Questionnaire: a measure of parental attitudes, beliefs and practices about child feeding and obesity proneness. Appetite 2001; 36: 201-10.
11. Kuczmarski RJ, Ogden CL, Grummer-Strawn LM, et al. CDC growth charts: United States. Adv Data 2000(314): 1-27.
12. WHO. Obesity: preventing and managing the global epidemic. Report of a WHO Consultation. WHO Technical Report Series 894. Geneva: World Health Organization, 2000.
13. Fonseca MJM, Faerstein E, Chor D, Lopes CS. Validade de peso e estatura informados e índice de massa corporal: estudo pró-saúde. Revista de Saúde Pública 2004; 38(3): 392-8.
14. Peixoto MRG, Benício MH, Jardim PCVB. Validity of self-reported weight and height: the Goiânia study, Brazil. Revista de Saúde Pública 2006;40(6): 1-8.
15. ANEP - Associação Nacional de Empresas de Pesquisa - www.anep.org.br – Dados com base no Levantamento Sócio Econômico – 2000 – IBOPE.
16. Fisher JO, Birch LL. Parents' restrictive feeding practices are associated with young girls' negative self-evaluation of eating. Journal American Diet Association 2000; 100 (11): 1341-6.
17. Faith MS, Scanlon KS, Birch LL, Francis LA, Sherry B. Parent-child feeding strategies and their relationships to child eating and weight status. Obesity Research 2004; 12 (11): 1711-22.
18. Fischer JO, Birch LL. Eating in the absence of hunger and overweight in girls from 5 to 7 y of age. American Journal Clinical Nutrition 2002, 76 (1): 226-31.

19. Clark HR, Goyder E, Bissell P, Blank L, Peters J. How do parents' chil-feeding behaviours influence child weight? Implications for childhood obesity policy. Journal of Public Health 2007; 29: 132-141.
20. Bourcier E, Bowen D J, Meischke H, Moinpour C. Evaluation of strategies used by family food preparers to influence healthy eating. Appetite 2003; 41 (3): 265-72.
21. Galloway AT, Fiorito LM, Francis LA, Birch LL. 'Finish your soup': counterproductive effects of pressuring children to eat on intake and affect. Appetite 2006;46(3):318-23.
22. Batsell WR, Jr., Brown AS, Ansfield ME, Paschall GY. "You will eat all of that!": a retrospective analysis of forced consumption episodes. Appetite 2002;38(3):211-9.
23. Brows R, Ogden J. Children's eating attitudes and behavior: a study os the modeling and control theories of parental influence. Health Education Research 2004; 19(3): 261-271.
24. Cullen KW, Baranowski T, Rittenberry L, Cosart C, Owens E, Hebert D, Moor C. Socioenvironmental influences on children's fruit, juice and vegetable comsumption as reported by parents: reability and validity of measures. Public Health Nutrition 2000; 3 (3): 345-356.
25. Birch LL, Fisher JO. Mother's child-feeding practices influence daughters' eating and weight. *American Journal Clinical Nutrition.* 2000; (71): p.1054-61.
26. Azevedo KR, Arrais AR. O mito da mãe exclusiva e seu impacto na depressão pós-parto. Psicologia Reflexão Crítica 2006; 19 (2): 269-276.
27. Balakrishnan R, Webster P, Sinclair D. Trends in overweight and obesity among 5–7-year-old White and South Asian children born between 1991 and 1999. Journal of Public Health Advance Access 2008; 3: 1–6.
28. Hui L L, Schooling C M, Leung S S L, Mak K H, Ho L M, Lam T H, Leung G M. Birth weight, infant growth, and childhood Body Mass Index: Hong Kong's Children of 1997 Birth Cohort. Archives Pediatrics Adolesc Med. 2008; 162(3): 212-218.
29. Sjöberg A, Lissner L, Albertsson-Wikland K, Mårild S. Recent anthropometric trends among Swedish school children: evidence for decreasing prevalence of overweight in girls. Acta Paediatrica 2008; 97(1):118-23.
30. Sweeting H. Gendered dimensions of obesity in childhood and adolescence. Nutrition Journal 2008; 7:1.

TABLES

Table 1: Comparing the factors between parents of children with healthy weight and parents of children with excess weight (t-test)

Factor	Parents of children with health weight (n=68) Mean ± SD	Parents of children with excess weight (n=37) Mean ± SD	P
Perceived responsibility	12.18 ± 2.14	12 ± 1.91	0.676
Perceived parent weight	11.06 ±2.64	11.32 ± 2.19	0.604
Perceived child weight	12.46 ± 2.64	14.76 ± 2.25	0.001*
Concern about child weight	6.85 ± 3.27	9.92 ± 3.56	0.001*
Restriction	20.72 ± 5.98	25.38 ± 5.09	0.001*
Pressure to eat	11.69 ± 3.43	10.95 ± 3.17	0.278
Monitoring	5.57 ± 2.55	7.08 ± 2.88	0.007*

Table 2:Comparing the factors between parents with healthy weight and parents with excess weight (BMI > 24.9 kg/m^2) (t-test)

Factor	Parents with health weight (n=68) Mean ± SD	Parents with excess weight (n=36) Mean ± SD	P
Perceived responsibility	12.10 ± 2.12	12.03 ± 1.98	0.861
Perceived parent weight	10.41 ± 2.27	12.42 ± 2.42	0.001*
Perceived child weight	13.25 ± 2.63	13.14 ± 2.91	0.844
Concern about child weight	7.22 ± 3.46	9.25 ± 3.58	0.006*
Restriction	21.46 ± 5.92	24.31 ± 6.09	0.023*
Pressure to eat	11.26 ± 3.55	12.08 ± 2.8	0.233
Monitoring	5.93 ± 2.69	6.63 ± 2.82	0.21

Table 3: Comparing the factors between class A, B and C (n=109) (ANOVA)

Factor	A	B	C	P
	Mean ± SD	Mean ± SD	Mean ± SD	
Perceived responsibility	11.55±2.11	12.44±1.98	11.95±1.98	0.166
Perceived parent weight	11.25±2.65	10.84±2.28	11.35±2.75	0.668
Perceived child weight	12.35±2.95	13.89±2.39	13.35±3.07	0.061
Concern about child weight	6.51±2.51	8.18±3.9	9.39±3.96	0.013*
Restriction	21.51±6.03	23.11±5.9	22.61±6.51	0.532
Pressure to eat	10.45±3.31	12.02±3.03	11.82±3.88	0.117
Monitoring	5.22±2.26	6.51±3.05	6.91±2.78	0.51

* The mean difference is significant at the 0.05 level between Classes A and C.

Table 4 - Logistic regression with the child's weight status (excess weight) as the dependent variable. Multivariate odds ratios are given (n=109)

	OR	P
Perceived child weight	2.103	< 0.001
Restriction	1.364	< 0.001
Pressure to eat	0.709	0.010
Sex (male)	5.091	0.017

Variables that were excluded from the model: Parent's weight status (normal vs excess weight), economic class (A, B or C), perceived responsibility, perceived parent weight, concern about child's weight, monitoring

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