

Variables associated with family breakdown in healthy and obese/overweigh adolescents

Fatores de desagregação familiar em adolescentes eutróficos e nos portadores de sobrepeso/obesidade

Investigación de factores de desagregación familiar en adolescentes eutróficos y adolescentes con sobrepeso/obesidad

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ABSTRACT

Objective: To evaluate the presence of family breakdown factors among eutrophic and overweight/obese adolescents.

Methods: Cross-sectional study of 242 students aged between 14 and 19 years old, from a public school. Each student was weighed, measured and answered a questionnaire with closed questions addressing the presence of family breakdown factors. The adolescents were divided in two groups: eutrophic and overweight/obese. The answers of both groups were compared by Fisher's exact and Mann-Whitney tests.

Results: There was no statistically significant difference in the prevalence of the studied factors between the two groups. Comparing the number of positive answers (presence of family breakdown factors) and negative ones (absence of family breakdown factors), no difference was observed between the groups.

Conclusions: The inclusion of a control group showed that factors of family breakdown, usually identified as associated with obesity in adolescents, may also be present in eutrophic adolescents.

Key-words: obesity; child; adolescent; nuclear family; family relations.

RESUMO

Objetivo: Investigar a existência de fatores de desagregação familiar em adolescentes eutróficos e nos portadores de sobrepeso/obesidade.

Métodos: Estudo transversal de 242 alunos de uma escola pública, de 14 a 19 anos, que foram pesados, medidos e responderam a um questionário com questões fechadas, o qual investigou a presença de fatores de desagregação familiar. Em seguida, os adolescentes foram divididos em dois grupos, eutróficos e portadores de sobrepeso/obesidade, e as respostas foram confrontadas e analisadas por meio dos testes exato de Fisher e de Mann-Whitney.

Resultados: Não houve diferença significativa para a prevalência dos fatores estudados entre os dois grupos. Comparando-se o número de respostas positivas (presença do fator de desagregação familiar) e negativas (ausência do fator de desagregação familiar), não se observou diferença entre os dois grupos.

Conclusões: A análise com a inclusão de um grupo controle mostrou que fatores ligados à desagregação familiar, habitualmente apontados como associados à obesidade em adolescentes, podem estar presentes também em adolescentes eutróficos.

Palavras-chave: obesidade; criança; adolescente; núcleo familiar; relações familiares.

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RESUMEN

Objetivo: Investigar la existencia de factores de desagregación familiar entre adolescentes eutróficos y portadores de sobrepeso/obesidad.

Métodos: Estudio transversal, implicando a 242 alumnos de una escuela pública, de 14 a 19 años, que fueron pesados, medidos y contestaron a un cuestionario con cuestiones cerradas, el que investigó la presencia de factores de desagregación familiar. Enseguida, los adolescentes fueron divididos en dos grupos, eutróficos y portadores de sobrepeso/obesidad, y las respuestas fueron confrontadas y analizadas mediante las pruebas exacto de Fisher y de Mann-Whitney.

Resultados: No hubo diferencia significativa para la prevalencia de los factores estudiados entre los dos grupos cuando vistos en separado e incluso cuando las variables fueron analizadas en conjunto. Comparándose el número de respuestas positivas (presencia del factor de desagregación familiar) y negativas (ausencia del factor de desagregación familiar), no se observó diferencia entre los dos grupos.

Conclusiones: El análisis con la inclusión de un grupo control mostró que factores relacionados a la desagregación familiar, habitualmente señalados como asociados a la obesidad en adolescentes, pueden estar presentes también en adolescentes eutróficos.

Palabras clave: obesidad; niño; adolescente; núcleo familiar; relaciones familiares.

Introduction

Child obesity has become a global epidemic. In recent decades, the prevalence increased in developed countries and in urban areas of developing countries⁽¹⁾. Similarly, countries such as Australia, Brazil, Canada, Chile, Finland, France, Germany, Greece, Japan, and the United Kingdom also found significant increase of the disease in the period between the early 1970s and the late 1990s⁽¹⁾.

In Brazil, according to the 2011–2022 strategic action plan to tackle non-communicable chronic diseases by the Brazilian Ministry of Health, the prevalence of overweight in children in the age range from 5–9 years has reached 33.5%, while obesity, in this same age range, has reached 14.3%⁽²⁾. In the age range from 10–19 years, overweight was diagnosed in 20% of adolescents, and the prevalence of obesity was of 4.0% in girls and 5.9% in boys.

Obesity is a multifactorial disease, characterized by excess adipose tissue, involving complex interactions between

genetics, physical activity, and cultural factors. With regard to genetic factors, the literature emphasizes that all human chromosomes, except the Y chromosome, may present small defects that favor weight gain. These changes, called “genetic predisposition”, would be responsible for making individuals susceptible to excessive weight gain, once they come into contact with favorable environmental factors⁽³⁾. In the same line of reasoning, the influence of parents results in a genetic determinant. Thus, when only one of the parents is obese, the child has about 40% chance of becoming overweight; on the other hand, when both parents are obese, this figure reaches 80%⁽⁴⁾. Neurological disorders have also been considered as causes of obesity, especially those that affect the brain’s hypothalamic nuclei, where the centers of appetite and satiety are located, which may lead to uncontrolled food intake⁽³⁾.

Psychological or emotional factors can also lead children to eat more, as a compensation or defense mechanism. Without ignoring the constitutional side, it is possible to conceptualize obesity as a symptomatic expression of internal and external conflicts that feed into each other, as in a feedback mechanism⁽⁵⁾. In this context, it is known that the first connections established in the mother-child relationship are essential for the establishment of a bond and the organization of psychic functioning in children. However, besides the so-called primitive experiences during human development, others will be adding and expanding the model for future responses, e.g., interactions with the family and the social environment⁽⁶⁾. For this reason, the nuclear family is of vital importance, both in the origin and maintenance of obesity⁽⁷⁾. The clinical practice with children and adolescents often reveals an altered family environment, in which several characteristics can be identified, such as overprotection, strictness, but, predominantly, lack of conflict resolution⁽⁸⁾. Among the most common conflicts, we can mention: separation of parents, death of a loved one, person outside the family nucleus momentarily or permanently living with the family, alcoholism, drug addiction, absent parent, or one or both parents in prison.

Within this logic, it seems that the transformations of contemporary family are related with the increasing frequency of obesity⁽⁹⁾. Studies show little expression of affection as a strategy (unconsciously) adopted by the families of obese children in order to face the crisis of transformations. This can be seen, for example, by the lack of the habit of cuddling children, who are often considered guilty and

responsible for the disease⁽⁹⁾. Still on the feeding issue, it is known that the family is responsible for the development of the child's eating behavior through social learning^(8,10), which is to say that families have a key role in the initial formation of the eating habits of children, as parents are the reference standard for children⁽¹¹⁾. It is expected that strong families, with a high degree of connection between its components, can act as a protective factor to the onset of obesity. On the other hand, in families where the opposite is observed, excessive weight gain in children may be one of the consequences⁽⁷⁾.

In order to contribute to scientific knowledge on this subject, the present study investigated family breakdown factors in eutrophic and overweight/obese adolescents from a public school in a municipality in the countryside of the state of São Paulo.

Method

The present study included 242 high-school students of both sexes, aged from 14–19 years, who studied in the morning shift at the State School Professor Plínio Berardo, located in Jardinópolis, state of São Paulo. To access these volunteers, the research objectives were divulged, (collectively and in the classroom), inviting students to participate. The term of free and informed consent was presented to all students, and after all possible questions were answered, it was sent to parents or guardians for their signature. Among a total number of 326 students, 84 refused to participate or did not hand over the consent form.

In a second moment, in a laboratory room provided by the school, we applied a questionnaire with closed questions to investigate family breakdown factors commonly mentioned in the literature as potentially related to childhood obesity. The issues addressed were distributed into two groups: qualitative variables (presence in the familiar environment of cohabiting convicts, drug addicts, alcoholics, people with special needs or severe disease, recent death, unemployment, serious events, disharmony, unrest, fights, strangers that joined the family, separated parents, adoptive father or mother, or adoptive siblings); and quantitative variables (number of siblings and number of household members). For each question, there were two or more possible predetermined answers, and the student marked with an "x" the answer that best represented their opinion. To create the questionnaire and the list of responses, besides data obtained from other surveys, a previous pilot

study was held at the same institution with 20 volunteers, which allowed improving the instrument. Subsequently, in the same room, anthropometric measurements of the participants (weight and height) were measured by a team of nutritionists, who used standard techniques. The site offered adequate infrastructure to carry out the work, with an airy, clean room and all the facilities needed to accommodate an anthropometric scale and to meet the necessary aspects of privacy.

After collection, the data (questionnaire and anthropometric measurements) were tabulated and analyzed, by dividing the students into two groups: eutrophic (Z score of body mass index between -2 and +1) and overweight/obese (Z score of body mass index greater than +1). Survey responses were confronted in order to show potential differences in the prevalence of family breakdown factors among eutrophic students and those who were overweight/obese.

We analyzed the qualitative variables with the construction of contingency tables, in which it was possible to verify the frequency distribution of each of the response variables between the two groups. Later, with Fisher's exact test, we evaluated the statistical significance of differences in this distribution. We conducted the analysis of quantitative variables by comparing the means and medians. Since the distribution was not normal, we chose to use the Mann-Whitney test. Finally, we performed cluster analysis, comparing the number of positive (presence of family breakdown) and negative (absence of family breakdown) responses between the two groups. For statistical calculation, we used the GraphPad program⁽¹²⁾.

The study was approved by the Research Ethics Committee of Universidade de Ribeirão Preto (Unaerp), under number 039/08.

Results

Tables 1 to 3 present the analysis of the quantitative and qualitative variables applied to the 242 study participants.

In Tables 1 and 2 we can observe that, for all variables, there were no statistically significant differences when comparing the group of eutrophic with the group of overweight/obese adolescents.

In the analysis of Table 3, we observed that even when the variables were analyzed together, comparing the number of positive (presence of the family breakdown factor) and negative (absence of the family breakdown factor) responses, there were no differences between the groups.

Table 1 - Prevalence of qualitative family breakdown indicators in eutrophic and overweight/obese adolescents

Parameters	Eutrophic (%)	Overweight/ Obesity (%)	p-value*
Presence of adopted siblings	1.6	1.7	1.000
Presence of adopted father/mother	0.5	0.0	1.000
Presence of divorced parents	24.7	14.2	0.141
Person living with the family	20.4	25.0	0.462
Occurrence of fights at home	13.4	16.0	0.618
Occurrence of unrest at home	20.9	26.7	0.364
Occurrence of disharmony at home	16.1	16.0	1.004
Occurrence of serious or important events in the last 10 years	35.8	35.7	1.000
Occurrence of unemployment in the family	29.5	39.2	0.191
Occurrence of death in the family in the last 10 years	27.4	33.9	0.400
Occurrence of severe disease among family members	6.9	10.7	0.396
Presence of a family member with special needs	4.3	1.7	0.688
Presence of alcoholism	11.2	12.5	0.813
Presence of drug addicts	2.6	3.5	0.664
Presence of family member in prison	12.9	16.0	0.513

*Fischer's exact test

Table 2 - Quantitative indicators of family breakdown in the groups of eutrophic and obese/overweight adolescents

Parameters	Eutrophic Mean (SD)	Overweight/obesity Mean (SD)	Eutrophic Median (SE)	Overweight/obesity Median (SE)	p-value*
Number of persons living in the household	3.8 (1.2)	3.9 (1.5)	4.0 (0.1)	4.0 (0.2)	0.862
Number of siblings	1.8 (1.0)	1.6 (1.0)	2.0 (0.1)	2.0 (0.1)	0.304

*Mann-Whitney; SD: standard deviation; SE: standard error

Table 3 - Mean of the number of positive indicators of breakdown in the groups of eutrophic and overweight/obese adolescents

Parameters	Eutrophic Mean (SD)	Overweight/Obesity Mean (SE)	p-value*
Amount of positive indicators	2.3 (1.9)	2.5 (1.9)	0.429

*Mann-Whitney; SD: standard deviation

Discussion

The origin of this study is based on the daily practice of the multidisciplinary activities performed at the Child and Adolescent Center for Health and Nutriology of Unaerp⁽¹³⁾. The researchers within this center (doctors, psychologists, nutritionists, and social workers), during weekly team meetings, observed that certain factors, especially those determinants of family breakdown, appeared with high frequency among children with overweight and obesity. We performed several reviews of the scientific literature to

clarify if there was, effectively, a higher prevalence of these factors in families of obese children, but most of the reviewed studies did not include a control group. For this reason, we chose to perform this study, whose results are here discussed.

Regarding the presence of adoptive brothers, Salim and Bicalho⁽¹⁴⁾ interviewed families and teachers to understand the cause and consequence of childhood obesity. The authors concluded that adoption (as well as the birth of a sibling, parental separation, change of city or state, loss of a loved one, change of school, absence of a parent, and financial difficulties) was a factor that, apparently, leads to excessive

weight gain. In the same study, several families mentioned not only one but two or more causes for obesity, that is, a combination of some of these factors simultaneously. While evaluating the methodology of the study conducted by Salim and Bicalho⁽¹⁴⁾ we verified that there was no comparison with a group of eutrophic children. The results of this study showed that, when evaluating the prevalence of these factors in the non-obese population, they seem to be equally present. Thus, the inclusion of a control group was fundamental. An important limitation of our data refers to the very small number of adoptive parents found, which makes statistical analysis difficult. In this respect, for a more appropriate analysis, a larger sample would be essential both in the study group and in the control.

According to Wallerstein and Kelly⁽¹⁵⁾, the physical separation of parents is one of the most disturbing factors for children, as it makes them reformulate the image they had of the parents as a unit. The perception that there is something breaking down within their own family generates concerns about what will happen to them, as the family is perceived as a source of support and protection, while divorce, in turn, is seen as a threat to that structure. Also according to Wallerstein and Kelly⁽¹⁵⁾, childhood stress maybe involved in the origin of various disorders, both physical and psychological, among which we can mention obesity. Another issue, pointed out by Viuniski⁽¹⁶⁾ and that seems to have grounds on clinical experience, is that weight loss in children from 7–13 years, participants of outpatient treatments for weight loss, is considerably greater in children of married parents than in children of divorced parents. The fact that parental separation is a stressor for children seems unquestionable. The observation that the emotional state influences the act of eating⁽¹⁷⁾ is also true, but the result of this interaction is often unpredictable, as there are individuals who eat too much and others who nearly stop eating. Therefore, it seems fair to say that parental separation alone cannot be identified as a triggering factor of overweight/obesity, at least in the present study. However, this condition can be determining for a successful treatment.

Several situations effectively promote some degree of disruption in family dynamics, which could, through the stress generated, be related to the obesity of the child living in this environment. Some of them (living with a person who is outside the family nucleus, fights, unrest, and disharmony in the home environment) were addressed in the present study, but the statistical analysis showed that they were not related to the presence of obesity in the population studied.

The literature effectively indicates that the stress factor leads the individual to eat more in order to seek relief, i.e., overeating is a compensation for stress management and anxiety. Bernardi *et al*⁽¹⁸⁾ mention that obese individuals consume more food under stress and/or adverse emotional conditions. This theory, called Psychosomatic Model of Obesity, says that obese people, especially females, eat excessively as a compensatory mechanism in situations of anxiety, depression, sadness, or anger⁽¹⁸⁾. According to De Azevedo and Spadoto⁽¹⁹⁾, “the constitution of the body is inherited, but not obesity” (p. 3). Thus, according to these authors, there is a constitutional genetic predisposition, through which excess weight tends to occur in families and certain racial groups, but environmental and family habits act by modifying the inherited tendency⁽¹⁹⁾. The authors also mention that the relative influence of the environment, compared to heredity, is variable in each obese patient, but the inevitable predominant importance of environmental and other exogenous factors, seems to be unquestionable in most cases of obesity.

This variation in the pattern of response described above may explain the relationship of the individual aspects by which individuals who apparently share similar home environments do not develop overweight/obesity in its entirety. In relation to this respect, De Oliveira *et al*⁽²⁰⁾ reported that

the child population is, from a psychological, socio-economic and cultural standpoint, dependent on the environment where they live, which is mostly composed by the family, and their attitudes are often a reflex of this environment. When unfavorable, the environment may provide conditions that lead to the development of eating disorders that, once installed, may remain if changes do not occur in this context (p. 8).

However, our data reinforce the fact that the pattern of response that causes an individual to become obese in a disharmonious environment is individual, because many young people studied share this kind of environment, without, however, having become overweight/obesity.

As for destabilizing events, such as death, serious illness, or being a person with special needs, their research occurred mainly due to the experience of the multidisciplinary team. An analysis of the life history questionnaires allowed observing that the patients often reported such occurrences in families of obese children. Pontin⁽²¹⁾, while analyzing the influence of paternal unemployment (which can be seen as a destabilizing

event for the family) in the occurrence of overweight, observed odds ratio of 1.73 (95%CI 1.16–2.58) for students whose parents had not lost their jobs. The variable duration of unemployment tended to decrease the chance of overweight among students whose parents had a longer duration of unemployment. Unemployment can be considered a controversial event. On one hand, it is a stressor, already discussed as possibly linked to obesity; on the other hand, it is a situation of restricted availability of income, hypothetically leading to a lower acquisition and consumption of food.

In another study, conducted by Rand and Stunkard^(22,23) with 84 obese and 63 normal-weight patients, it was concluded that weight gain might be associated with periods of increased stress during marriage, divorce, change of job, or family death. The study reported a weight gain of 4.5kg or more in 79% of obese patients and in 9% of eutrophic patients in these situations. Seeking to understand how obesity in children relates to the loss of a loved one, Salim and Bicalho⁽¹⁴⁾, in a study with 41 subjects, interviewed families and teachers regarding the causes and consequences of childhood obesity, and concluded that the loss of a loved one was a determining factor as the cause of obesity, but our data did not support this thesis. For the presence of disease in the family, according to Góngora⁽²⁴⁾, in those families in which one member is sick, three subsystems interact: the patient and his illness, the family and its social network, and health services. Consequently, based on the systemic family theory, it is possible to describe a pathological model that seeks to explain what occurs in these subsystems when a family member has a chronic disease⁽²⁵⁾: in this case, some features would be predominant, such as lack of interindividual limits, lack of problem-solving skills, and rigid patterns of interaction. Finally, we can include obesity itself (of one or more members of the family) on the list of chronic diseases interfering with the family environment⁽²⁵⁾. All these factors could influence the development and maintenance of obesity in adolescents, but the result of this study revealed that having a family member with a serious illness could not be appointed as a triggering factor for overweight/obesity, since the difference between the prevalence in the two groups was not statistically significant.

External factors, such as alcoholism, drug addiction, and family member in prison, have been identified as linked to obesity. In this paradigm, a research conducted by Machado *et al*⁽²⁶⁾ with 322 patients and their families in the Family Health Program, sought to relate the health-disease process with the family, observing that alcohol use is a real factor of family disaggregation. Also, according to Spada^(8,10),

families who have a member with an eating disorder often present some characteristic traits, such as alcohol or drug addiction. Felitti *et al*⁽²⁷⁾, in turn, reported that, in relation to the adverse family experiences, these are quite common in obese and less frequent in non-obese subjects. In yet another study, conducted by Silva and Maia⁽²⁸⁾ with 144 obese and non-obese patients, seeking to investigate aspects of family adversity related to obesity, it was found that, in the category substance abuse, more than half the obese participants reported the occurrence of this experience in their families. In the group of non-obese participants, this situation was reported by only 18% of the sample. In this study, when the obese group was compared to the eutrophic group regarding substance abuse by a family member, there were statistically significant differences ($p < 0.001$). Silva and Maia⁽²⁸⁾ also investigated issues relating to the imprisonment of a family member, demonstrating significant differences between the groups of obese and non-obese ($p = 0.001$). These data reinforce the idea of a high comorbidity between experiences of adversity, and the presence of certain family conditions (such as violence, alcohol, or mental illness) can be factors that lead to greater individual adversity. Thus, if the literature indicates that obese individuals, in some cases, have alcoholic members in their families, it may be possible to allude that the inverse relationship may also occur, i.e., that perhaps the alcoholism of a family member triggers or maintains the scenario of overweight/obesity.

However, in the present study this association could not be demonstrated in any of the associated questions, namely: alcoholism, drug addiction, and/or family member in prison.

The data from the two groups regarding the number of people in the household were close to the results of the 2000 Population Census, which revealed that, on average, each Brazilian family had 3.5 people⁽²⁹⁾. On the other hand, our results on the issue of obesity differ from other published studies. A study conducted by Magalhães *et al*⁽³⁰⁾ in the Northeast region of Brazil found that the highest prevalences of overweight/obesity were observed in residents of homes with up to four people, compared to households with five or more people. Girls had higher risk of overweight/obesity than boys when living in households with more than five people in this region [prevalence ratio (PR): 4.43; 95%CI 2.15–9.09], which was the opposite in the Southeast (PR: 0.44; 95%CI 0.23–0.85). Therefore, the authors concluded that living in a household with four people have showed significant association with overweight/obesity in boys in the Northeast Region. A study by Bender⁽³¹⁾ conducted with 208 children of

both sexes, from public and private schools, showed that most overweight/obese patients has only one sibling (47.9%) or is an only child (32.4%). The conclusion was that the number of siblings correlates to nutritional status ($p=0.01$). Guedes *et al*⁽³²⁾ found a higher chance of obesity in children with two or three siblings (OR 1.74; 95%CI 1.21–2.49). Guimarães *et al*⁽³³⁾ found a higher prevalence of overweight among students who had only one sibling, with adjusted odds ratio of 1.94, when compared to those who had three or more siblings. The authors argue that maternal overprotection and greater availability of food are suggested as possible mechanisms for the increased prevalence of obesity in only children. Another possible explanation, according to these authors, was that the greater the number of siblings the more the child will play, and therefore, more physical activity will be performed. However, our study found no statistically significant difference regarding the number of people living with the child, when comparing the two groups.

In the cluster evaluation, we considered the data together. Thus, for each subject, we added the number of responses that indicated presence of the family breakdown factor and we quantified the number of possible factors that each individual had. A study conducted by Silva and Maia⁽²⁸⁾, with 144 obese and non-obese patients, found that only 12% of obese participants did not report any type of adversity in childhood, i.e., 88% reported at least one experience of adversity. About 47% of these participants reported five or more experiences of adversity during childhood. The authors showed that there was difference between groups in the variable total adversity ($p<0.001$), being more common in the obese group. In view of the elements that make up each category of adversity, the authors found that 88% of obese subjects and 69% of non-obese patients reported at least one such experience, which would reinforce the idea that obesity is very common in individuals with experiences of adversity. They also observed that 68% of obese participants reported at least four experiences of adversity throughout childhood. In the present study, the result of the differences between the means and medians of the sets of adversity responses was not statistically significant.

This work shows many conflicting results with those in the scientific literature. A reasonable explanation for this difference seems to have a relevant relationship with the fact that we chose to include a control group. None of the studies cited in this article included a control group to certify the obtained data. It is a fact that several factors chosen for

the study are present in overweight/obese children, but are equally present in eutrophic children and could not, therefore, be indicated as factors of causality or maintenance of obesity. There are, however, limitations of the study that should be highlighted. One of the main limitations was the distribution of self-report questionnaires. Despite the care with previous guidelines, there is always the possibility that the respondents have not understood the questions and, therefore, responded based on erroneous or misleading understanding. Another limiting factor is that, despite having been instructed to do so, some young people do not understand “family” as members cohabiting a home, extending their responses to events, such as, for instance death of godparents. Thus, being a semi-structured questionnaire, it is not possible to determine whether the response was based on the relevance of the fact in the child’s life or in his understanding of family as the macro group to which he belongs.

Another important aspect relates to the method chosen to collect data. A Portuguese study⁽²⁸⁾, for instance, sought to associate the existence of family adversities with overweight/obesity and found statistically significant results for violence, alcohol, mental illness, substance abuse, prison, among others. A possible explanation for such significant results is the study design, which was retrospective descriptive, i.e., it assessed the effect of a previous cause. Thus, the adversities mentioned by the study participants had occurred in childhood, consequently leading to obesity in adulthood. Our study, on the other hand, used a cross-sectional design, i.e., cause and effect were investigated at the same moment. Thus, it is not possible to determine whether the factors of family breakdown measured in the two groups, eutrophic and overweight/obesity, will be responsible for causing or maintaining future obesity in these young people. We should also add as a limitation fact the use of a convenience sample (no sample size calculation), and the fact that the study was conducted in a specific location, which limits the universal extrapolation of results.

The interface between organic and psychological problems often presents this type of difficulty in the analysis. We can mention, for instance, the work of Luiz *et al*, published in 2010, which showed a higher prevalence of depression in obese children, but could not determine whether there is a relationship of cause or consequence between the events⁽³⁴⁾. The individual pattern of response cannot be overlooked, since, as previously mentioned, there are individuals who eat excessively in the face of frustrations and stress, while

others, for the same reasons, simply stop eating. The genetic issue, which became widespread and is today perceived as extremely important in the genesis and maintenance of overweight/obesity, cannot be ruled out either⁽³⁵⁾. Finally, we may conclude that this study, which evaluated overweight and

obese adolescents, comparing them to eutrophic controls, found no differences regarding the presence of family breakdown factors, showing that the occurrence of these events, when investigated, is possibly common among adolescents, regardless of their nutritional status.

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