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ORIGINAL ARTICLE

Screen time above recommendations in children and adolescents: analysis of the associated nutritional, behavioral and parental factors

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Open acess

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Abstract

Introduction: Sedentary routines characterised by multimedia games favour an increase in the prevalence of obesity in schoolchildren and their parents. Thus, identifying the factors associated with screen time during childhood and adolescence is essential for the development of public health strategies.

Objective: To analyse whether excessive time in front of screens in children and adolescents is associated with nutritional, behavioural and parental factors.

Methods: Cross-sectional study on 795 schoolchildren, of which 354 were male, aged between 7 and 17 years, and their parents (father or mother) from a municipality in southern Brazil. The screen time spent by the students was self-reported, obtained in hours, considering excessive to be ≥ 2 hours a day. The parents' nutritional profile was assessed in terms of body mass index (BMI). For the data analysis, the prevalence ratio (PR) was used and analysed using the Poisson regression, with 95% confidence intervals (CI).

Results: We found a high frequency of overweight/obese students (30.9%), with low levels of cardiorespiratory fitness (53.7%), who spend ≥ 2 hours daily on the TV, computer or video games (57.1%). Screen time was associated with the prevalence of being overweight (PR = 1.06; CI = 1.00-1.13) and obesity (PR = 1.10; CI =: 1.03-1.18) among fathers, only among adolescents.

Conclusion: Excessive screen time among adolescents was associated with the father's nutritional status. It is suggested that strategies to reduce screen time should be implemented from childhood, involving the entire family.

Keywords: child, teenager, obesity, sedentary lifestyle.

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Authors summary

Why was this study done?
The study was carried out with the objective of analysing whether the excessive time in front of the screens of children and adolescents is associated with nutritional, behavioural and parental factors.

What did the researchers do and find?
In carrying out the study, a representative sample of a municipality was analysed to investigate the nutritional, behavioural and parental factors of schoolchildren and their respective parents. Through a self-reported questionnaire by schoolchildren and parents, the schoolchildren's time spent in front of screens and the parents' nutritional profiles were obtained. We identified that adolescents with an overweight or obese father had excessive screen time, i.e. greater than or equal to two hours a day.

What do these findings mean?
The findings demonstrate a higher prevalence of adolescents with excessive screen time, that is, they spend more than two hours a day in physical inactivity, when they have a father who is overweight or obese. This means a close relationship between the behaviour of adolescents and the nutritional profile of their parents, so the involvement of the family in behavioural changes is necessary. With these results, the researchers were able to advise parents and students on the importance of having a more active and healthy lifestyle and the involvement of the family in these actions, aiming at the prevention of future injuries throughout life.

INTRODUCTION

In recent years, the level of physical activity has gradually decreased, and is thus considered one of the main modifiable risk factors for a wide range of chronic diseases. In this sense, different organisations have published recommendations on the adequate amount of physical activity for the general population, including young people of school age[1,2].

As a result of inactive lifestyles, sedentary habits are linked to screen time (in front of television, computers, video games and others) and overweight/obesity has impacted on the risk of type 2 diabetes and cardiovascular diseases, as well as a higher rate of arterial hypertension and depression3. Studies have found that most children and adolescents have a divided daily routine, between activities at school and activities at home with their parents. In the family environment, television sets are present in most families, and leisure time can be devoted to sedentary activities, leaving aside leisure activities that involve physical activity with high energy expenditure[4-6]. Parental involvement in children's physical activities can positively influence physical fitness behaviours. Statements about family life and parents' active behaviour, through family activities, are incentives to an active lifestyle that, in addition to improving health, increases interpersonal relationships[7].

In addition, these sedentary routines favour an increase in the prevalence of overweight and obesity, with rules/limits on screen time and participation in physical activities playing an important role in reducing screen time among children and adolescents[8]. Intrapersonal, interpersonal and physical factors, within the home environment, are directly linked to screen time. The economic condition and educational levels of parents, as well as the family environment, are modifiable factors that could improve children's health conditions, defining limits and boundaries in the use of technology, and encouraging healthy eating and physical activity at home and at school[9,10]. However, there are few studies assessing the sociodemographic, behavioural and nutritional factors of schoolchildren, along with parental data, in association with time in front of screens of Brazilian children and adolescents.

In view of this gap, the identification of factors associated with screen time can assist in the development of public health strategies, especially as it involves several risk factors related to the lifestyle of children, adolescents and adults, which are modifiable. Thus, the objective was to analyse whether excessive time in front of screens in children and adolescents is associated with nutritional, behavioural and parental factors.

METHODS

This was a cross-sectional study of a descriptive character carried out with 795 children and adolescents, 354 of whom were male, aged 7 to 17 years, as well as their respective parents (father or mother), residing in the municipality of Santa Cruz do Sul - RS. The study is an excerpt from a broader research programme entitled "Evaluation of biochemical indicators of health in schoolchildren, using infrared spectroscopy, polymorphisms, oral health and lifestyle factors: a study in Santa Cruz do Sul - Phase II", which was developed at the University of Santa Cruz do Sul (UNISC), approved by the Human Research Ethics Committee (CEP) under protocol number 2959-11.

Children and adolescents from 25 schools in Santa Cruz do Sul were invited to participate in the study; parents signed the free and informed consent form, while students over 12 years old signed the consent form themselves. Schoolchildren who had lung diseases and/or were unable to carry out any evaluation were excluded from the study. To assess the screen time of schoolchildren and their parents' sedentary habits (physical inactivity), a questionnaire adapted from Barros and Nahas[11] was used, as cited in a study by Burgos[12].

The screen time spent by the student (TV, video games and computer) was self-reported, obtained in hours. Subsequently, these data were classified into two categories: 1) little time in front of a screen (<2 hours daily) and 2) a lot of time in front of a screen (≥ 2 hours daily), as established by the American Academy of Pediatrics[13]. The socioeconomic level was assessed using the criteria of the Brazilian Association of Research Companies[14].

The nutritional profile of schoolchildren and their parents was assessed using the body mass index (BMI). For students, weight and height were evaluated using

the formula: BMI = weight/height² (kg/m²). For the classification, the cutoff points of the Centers for Disease Control and Prevention (CDC)/ National Center for Health Statistics (NCHS)[15] were used. The parents' BMI was obtained through a self-reported questionnaire, and classified according to the criteria of the World Health Organisation[16].

The students' cardiorespiratory fitness (CF) was assessed using the 9-minute running/walking test, recommended by PROESP-BR[17], performed on a previously demarcated track. The student was instructed to wear light clothing. The data were obtained in meters, i.e. the distance covered by the student. Subsequently, the data were categorised by the cut-off point established for Brazilian children and youth, according to sex and age as 1) normal and 2) low levels of CF.

For data analysis, descriptive statistics were used, through frequency and percentage, to characterise the subjects. The association between the outcome (screen time of schoolchildren) and the predictor variables (sociodemographic, nutritional factors and CF of schoolchildren; nutritional factors and physical activity of their parents) was tested, using the prevalence ratio, through the Poisson regression, with 95% confidence intervals (CI) and a significance level at $p < 0.05$. All analyses were performed using SPSS v. 20.0 (IBM, Armonk, NY, USA).

RESULTS

There was a high percentage of overweight/obese students (30.9%), with low levels of CR (53.7%) and who spent more than two hours daily in front of the TV screen, computer or video games (57.1%). In addition, it is observed that 63.3% of fathers and 51.2% of mothers were overweight; 67.7% of parents did not practice physical activity (Table 1).

Table 1: Nutritional, behavioural and parental profile of students.

Variables	n (%)
Gender	
Male	354 (44.5)
Female	441 (55.5)
Socioeconomic status	
A-B	428 (53.8)
C	343 (43.1)
D-E	24 (3.0)
School screen time	
Up to 2 hours daily	341 (42.9)
2 hours or more daily	454 (57.1)
School BMI	
Low weight/normal weight	549 (69.1)
Overweight/obesity	246 (30.9)
Father's BMI	
Normal	292 (36.7)
Overweight	360 (45.3)
Obesity	143 (18.0)
Mother's BMI	
Normal	388 (48.8)
Overweight	251 (31.6)
Obesity	156 (19.6)
Schoolchild's CF	
Normal	368 (46.3)
Low	427 (53.7)
Father's or mother's physical activity	
No	538 (67.7)
Yes	257 (32.3)

BMI: body mass index.

Among the factors that were related to the screen time of the students, only the father's BMI showed a significant association. Thus, adolescents whose parents are overweight or obese have, respectively, a 6% and 10% higher prevalence of screen time equal to or greater than two hours a day (Table 2).

Table 2: Prevalence ratio for factors associated with screen time (≥ 2 hours daily) in schoolchildren.

	Screen time (≥ 2 hours daily) PR (CI 95%)	
	Child	Adolescent
Gender		
Male	1	1
Female	0.97 (0.89-1.06)	1.01 (0.96-1.06)
Socioeconomic status		
A-B	1	1
C	0.98 (0.77-1.24)	1.18 (0.99-1.40)
D-E	0.92 (0.72-1.18)	1.17 (0.98-1.40)
School BMI		
Low weight/normal weight	1	1
Overweight/obesity	1.05 (0.96-1.16)	0.95 (0.89-1.01)
Father's BMI		
Normal	1	1
Overweight	0.99 (0.90-1.10)	1.06 (1.00-1.13)
Obesity	1.03 (0.91-1.18)	1.10 (1.03-1.18)
Mother's BMI		
Normal	1	1
Overweight	1.02 (0.93-1.13)	0.99 (0.93-1.05)
Obesity	0.94 (0.83-1.06)	0.97 (0.91-1.04)
Student's CF		
Normal	1	1
Low	1.01 (0.92-1.10)	1.02 (0.97-1.08)
Father's or mother's physical activity		
Yes	1	1
No	0.98 (0.88-1.08)	0.98 (0.93-1.04)

Poisson regression considering screen time as a dependent variable. PR: prevalence ratio; CI: confidence interval; BMI: body mass index. Analysis adjusted for school network, mother's education level, mother's age and father's age.

DISCUSSION

In this study, it was found that there was a high percentage of students who spent more than two hours a day in front of a television screen, computer or video game, which points to a worrying result regarding physical inactivity, as this can directly influence body composition. In Australian schoolchildren, an increase in overweight or obesity was associated with increased screen time; however, there was no relationship with the level of physical activity, especially in boys[18]. In a sample of 1126 boys and girls in Malta, it was observed that obese children were less active and spent more time on a screen than their counterparts with normal weight. This comparison with international data indicates that screen time was longer than in North America and Australia, but less than in England[19].

In addition, this study identified that the father's BMI showed a significant association with adolescents' screen time, which is a close parental relationship of obesity and physical inactivity. This data differs from a study conducted on Canadian children, which demonstrated that screen time was positively associated with the mother's weight[20]. Another study, carried out in Belgium, showed associations between screen time and parental obesity, which was shorter in children who had parents with a normal BMI[21].

On the other hand, there was no relationship between screen time and gender and the student's BMI. In contrast, a study conducted in Australia showed that children's screen time was significantly associated with the BMI Z-score and that boys spend more time in front of screens than girls[22]. Computer/video game use was also higher among Canadian boys[23].

The prevalence of overweight and obesity in children who are conditioned to a screen time of two hours or more was high. It was noted that, when physical inactivity increases, screen time and overweight and obesity rates increase at approximately the same rate. Screen time is associated with obesity levels, which further worsens the health of schoolchildren[24].

Börnhorst *et al.*[25] showed that high exposure to screen time and being distracted during a meal can prevent a person from perceiving the body's responses regarding

satiety, taste and quantity of the food eaten. Longer sleep duration can be favourably related to healthier food choices by children. In this sense, greater exposure to screen time can lead to increased levels of obesity in schoolchildren[26].

In a survey conducted in Washington, with a sample of 91,642 children, it was found that 20.8% of children aged 6 to 11 years and 26.1% of adolescents aged 12 to 17 years had excessive screen time, with the older age showed a significant relationship with obesity. Excessive screen time was considerably relevant when the TV was located in the bedroom and, consequently, was related to increased obesity[27]. Additionally, a study performed in China reported that children spending ≤ 2 hours/day on screen time were less likely to develop overweight or obesity, compared to > 3 hours/day; therefore, screen time is independently associated with childhood obesity[28]. In Minnesota, 674 students were evaluated; of these, 53% of boys and 42.5% of girls showed a relationship between obesity and excessive screen time[29]. Similarly, in England, it was observed that an increase in body adiposity and insulin resistance was closely related to the screen time in adolescents[30]. In Belém (PA, Brazil), it was found that screen time is an important factor related to eating habits and obesity in school-aged children[31].

Thus, in Brazil, studies have identified an increase in physical inactivity and overweight in schoolchildren. In the south, it was observed that girls aged 13 to 18 years old have a higher prevalence of physical inactivity and sedentary behaviour more than two hours/day[4]. In the northeast, Pitanga *et al*.[32] observed that screen time greater than two hours a day on the weekend was significantly associated with excess weight in female adolescents.

In addition, the present study identified low levels of CF in schoolchildren. While sedentary behaviour in front of the screen may be one of the factors that lead to an increased risk of cardiometabolic diseases, time outdoors is associated with improved CF[33,34]. In Colombia, it was found that children who watched two hours or less a day of television and who met the physical activity guidelines showed better levels of CF[35]. Gonçalves and Silva[36], in a study on 879 adolescents, found that 87.5% were insufficiently active and spent more than two hours/day in front of the screen, had excess body adiposity and a higher prevalence of low levels of CF.

Munaro *et al.*[37] collected data on the lifestyle of 1,163 students, and found that 1/3 of them presented sedentary behaviour and screen time greater than two hours/day. In Canada, it has been observed that health promotion initiatives in schools are determining factors for lifestyle behaviour and school performance[38]. Thus, public health strategies should address interventions to reduce a sedentary lifestyle and aim for a healthy lifestyle, such as encouraging leisure time aimed at physical activity and guidelines for adequate nutrition, combating the high rate of overweight and obesity in schoolchildren[39].

It can be considered as a limiting factor of this study that the schoolchildren's screen time, as well as the parents' physical activity and nutritional status data, were assessed through a self-reported questionnaire, and may not be in accordance with the reality in which they actually live. However, the study provides relevant data, since studies with a representative sample of children and adolescents from a municipality are scarce, seeking to identify the factors associated with excessive time in front of screens in childhood and adolescence. In addition, few studies have assessed parental aspects, another strength of this study. No relationship was found between screen time and sociodemographic and nutritional factors, the CF of children and adolescents, or with their parents' physical activity.

Thus, it is concluded that adolescents with an overweight/obese father have a higher prevalence of screen time, which is equal to or greater than two hours a day. These findings point to a close relationship between adolescents' physical inactivity and overweight and obesity in their parents. The need to involve the family in changing behaviours towards a more active and healthy lifestyle is suggested, and it is recommended that public health strategies be developed to prevent future problems throughout the lives of these young people.

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Abbreviations

BMI: body mass index; CR: cardiorespiratory fitness; TV: television.

REFERENCES

1. Cigarroa I, Sarqui C, Zapata-lamana R. Efectos del sedentarismo y obesidad en el desarrollo psicomotor en niños y niñas: una revisión de la actualidad latinoamericana. Universidad y Salud. 2016; 18(1): 156-169. DOI: https://doi.org/10.22267/rus.161801.27
2. Abreu M, Neves I, Silva J, Santos O. Promoting physical activity through video games based on self-behavioral models. Biomed Biopharm Res. 2014; 11(1): 33-44.
3. Pinho MGM, Adami F, Benedet J, Vasconcelos FAG. Association between screen time and dietary patterns and overweight/obesity among adolescents. Rev Nutri. 2017; 30(3): 377-389. DOI: http://dx.doi.org/10.1590/1678-98652017000300010

4. Grecaa JPA, Silva DAS, Loch MR. Atividade física e tempo de tela em jovens de uma cidade de médio porte do Sul do Brasil. Revista Paul Pediatr. 2016; 4(3): 316-322. DOI: http://dx.doi.org/10.1016/j.rppede.2016.01.001
5. Hardman CM, Barros MGV, Lopes AS, Lima RA, Bezerra J, Nahas MV. Effectiveness of a school-based intervention regarding screen time in high school students. Rev Bras Cineantropom Desempenho Hum 2014; 16(sup.1): 25-35. DOI: http://dx.doi.org/10.5007/1980-0037.2014v16s1p25
6. Vasconcellos MB, Anjos LA, Vasconcellos MTL. Estado nutricional e tempo de tela de escolares da Rede Pública de Ensino Fundamental de Niterói, Rio de Janeiro, Brasil. Cad Saúde Pública. 2013; 29(4): 713-722. DOI: http://dx.doi.org/10.1590/S0102-311X2013000400009
7. O'Connor TM, Cerin E, Hughes SO, Robles J, Thompson D, Baranowski T, et al. What Hispanic parents do to encourage and discourage 3-5 year old children to be active: a qualitative study using nominal group technique. Int J Behav Nutr Phys Act. 2013; 10(93): 1-9. DOI: https://doi.org/10.1186/1479-5868-10-93
8. Tandon PS, Zhou C, Sallis JF, Cain KL, Frank LD, Saelens BE. Home environment relationships with children's physical activity, sedentary time, and screen time by socioeconomic status. Int J Behav Nutr Phys Act. 2012; 9(88): 1-9. DOI: https://doi.org/10.1186/1479-5868-9-88
9. Jaime PC, Prado RR, Malta DC. Influência familiar no consumo de bebidas açucaradas em crianças menores de dois anos. Rev Saúde Pública. 2017; 1(supl13s): 1-10. DOI: http://dx.doi.org/10.1590/s1518-8787.2017051000038
10. Rosen LD, Lim AF, Felt J, Carrier LM, Cheever NA, Lara-Ruiz JM. et al. Media and technology use predicts ill-being among children, preteens and teenagers independent of the negative health impacts of exercise and eating habits. Comput Human Behav. 2014; 35(10): 364-375. DOI: https://doi.org/10.1016/j.chb.2014.01.036
11. Barros MVG, Nahas MV. Medidas da atividade física: teoria e aplicação em diversos grupos populacionais. Londrina: Midiograf, 2003.
12. Burgos MS. Saúde dos escolares - Fase III. Avaliação de indicadores bioquímicos, genéticos, hematológicos, imunológicos, posturais, somatomotores, saúde bucal, fatores de risco às doenças cardiovasculares e estilo de vida de escolares: estudo em Santa Cruz do Sul-RS. Santa Cruz do Sul: UNISC, 2014.
13. American Academy of Pediatrics (AAP). Children, adolescents, and television. Pediatrics. 2001; 107(2) 423–426. DOI: http://dx.doi.org/10.1542/peds.107.2.423
14. Associação Brasileira de Empresas de Pesquisa (ABEP). Critério de classificação econômica Brasil. 2016. [cited 2018 Oct16] Available from: http://www.abep.org/criterio-brasil
15. Oliveira GJ, Barbiero SM, Cesa CC, Pellanda LC. Comparação das curvas NCHS, CDC e OMS em crianças com risco cardiovascular. Rev. Assoc. Med. Bras. 2013; 59(4): 375-380. DOI: http://dx.doi.org/10.1016/j.ramb.2013.02.001
16. Organização Mundial De Saúde (OMS). Growth reference data for 5 -19 years. [cited 2018 Oct16] Available from: http://www.scielo.br/scielo.php?pid=S0021-75572008000700013&script=sci_arttext
17. Projeto Esporte Brasil (PROESP-BR). Manual. 2016. [cited 2018 Oct16] Available from: <http:www.proesp.ufrgs.br>
18. Maher C, Olds TS, Eisenmann JC, Dollman J. Screen time is more strongly associated than physical activity with overweight and obesity in 9- to 16-year-old Australians. Acta Paediatrica. 2012; 101(11): 1170-1174. DOI: http://dx.doi.org/10.1111/j.1651-2227.2012.02804.x
19. Decelis A, Jago R, Fox KR. Physical activity, screen time and obesity status in a nationally representative sample of Maltese youth with international comparisons. BMC Public Health. 2014; 14(664): 1-11. DOI: https://doi.org/10.1186/1471-2458-14-664
20. LeBlancEmail AG, Broyles ST, Chaput JP, Leduc G, Boyer C, Borghese MM, et al. Correlates of objectively measured sedentary time and self-reported screen time in Canadian children. Int J Behav Nutr Phys Act. 2015; 12(38): 1-12. DOI: https://doi.org/10.1186/s12966-015-0197-1
21. Lepeleere S, Bourdeaudhuij I, Cardon G, Verloigne M. Do specific parenting practices and related parental self-efficacy associate with physical activity and screen time among primary schoolchildren? A cross-sectional study in Belgium. BMJ open. 2015; 5: 1-10. DOI: http://dx.doi.org/10.1136/bmjopen-2014-007209
22. Lloyd AB, Lubans DR, Plotnikoff RC, Collins CE, Morgan PJ. Maternal and paternal parenting practices and their influence on children's adiposity, screen-time, diet and physical activity. Appetite. 2014; 79: 149–157. DOI: http://dx.doi.org/10.1016/j.appet.2014.04.010

23. Herman KM, Sabiston CM, Mathieu ME, Tremblay A, Paradisf G. Correlates of sedentary behaviour in 8- to 10-year-old children at elevated risk for obesity. Appl Physiol Nutr Metab. 2015; 40(1): 10-19. DOI: http://dx.doi.org/10.1139/apnm-2014-0039
24. Appelhans BM, Fitzpatrick SL, Li H, Cail V, Waring ME, Schneider KL, et al. The home environment and childhood obesity in low-income households: indirect effects via sleep duration and screen time. BMC Public Health. 2014; 14(1160): 1-9. DOI: http://dx.doi.org/10.1186/1471-2458-14-1160
25. Börnhorst C, Wijnhoven TMA, Kunešová M, Yngve A, Rito AI, Lissner L, et al. WHO european childhood obesity surveillance initiative: associations between sleep duration, screen time and food consumption frequencies. BMC Public Health, 2015; 15(442): 1-11. DOI: https://doi.org/10.1186/s12889-015-1793-3
26. Lane A, Harrison M, Murphy N. Screen Time Increases Risk of Overweight and Obesity. J Phys Act Health. 2014; 11(15): 985-991. DOI: http://dx.doi.org/10.1123/jpah.2012-0182
27. Wethington H, Pan L, Sherry B. The association of screen time, television in the bedroom, and obesity among school-aged youth: 2007 National Survey of Children's Health. J Sch Health. 2013; 83(8): 573-581. DOI: http://doi.org/10.1111/josh.12067
28. Li L, Shen T, Wen LM, Wu M, He P, Wang Y, Qu W, et al. Lifestyle factors associated with childhood obesity: a cross-sectional study in Shanghai, China. BMC Research Notes. 2015; 8(6): 1-8. DOI: https://doi.org/10.1186/s13104-014-0958-y
29. Laurson KR, Lee JA, Gentile DA, Walsh DA, Eisenmann JC. Concurrent associations between physical activity, screen time, and sleep duration with childhood obesity. ISRN obesity. 2014; 2014: 1-6. DOI: http://dx.doi.org/10.1155/2014/204540
30. Nightingale CM, Rudnicka AR, Donin AS, Sattar N, Cook DG, Whincup PH, et al. Screen time is associated with adiposity and insulin resistance in children. Arch Dis Child. 2017; 102(7): 612-616. DOI: http://dx.doi.org/10.1136/archdischild-2016-312016
31. Silva ADC, Castro AJO, Pereira APN, Souza AAR, Amorim PRA, Reis RC. Hábitos alimentares e sedentarismo em crianças e adolescentes com obesidade na admissão do programa de obesidade do Hospital Universitário Bettina Ferro de Souza. Rev Bras Obesidade, Nutrição e Emagrecimento. 2017; 11(61): 39-46.
32. Pitanga FGP, Alves CFA, Pamponet ML, Medina MG. Screen time as discriminator for overweight, obesity and abdominal obesity in adolescents. Rev Bras Cineantropom Desempenho Hum. 2016; 18(5): 539-547. DOI: 10.5007/1980-0037.2016v18n5p539
33. Helajärvi H, Pahkala K, Heinonen OJ, Juonala M, Oikonen M, Tammelin T. et al. Television viewing and fatty liver in early midlife. The Cardiovascular Risk in Young Finns Study. Annals of medicine. 2015; 47(6): 519-526. DOI: https://doi.org/10.3109/07853890.2015.1077989
34. Schaefer L, Plotnikoff RC, Majumdar SR, Mollard R, Woo M, Sadman R, et al. Outdoor time is associated with physical activity, sedentary time, and cardiorespiratory fitness in youth. J Pediatr. 2014; 165(3): 516-521. DOI: https://doi.org/10.1016/j.jpeds.2014.05.029
35. Prieto-Benavides DH; Correa-Bautista JE, Ramirez-Velez R. Physical activity levels, physical fitness and scree time among children and adolescents from Bogota, Colombia. Nutr hosp. 2014; 32(05): 2184-2192. DOI: https://doi.org/10.3305/nh.2015.32.5.9576
36. Gonçalves ECA, Silva DASS. Prevalência e fatores associados a baixos níveis de aptidão aeróbia em adolescentes. Rev Paul Pediatr. 2016; 34(2): 141-147. DOI: https://doi.org/10.1016/j.rppede.2015.06.025
37. Munaro HLD, Silva DAS, Lopes AS. Prevalence of excessive screen time and associated factors in school of a northeast city. J Hum Growth Dev. 2016; 26(3): 360-367. DOI: https://doi.org/10.7322/jhgd.122821
38. Faught EL, Ekwaru JP, Gleddie D, Storey KE, Asbridge M, Veugelers PJ. The combined impact of diet, physicalactivity, sleep and screen time on academic achievement: a prospective study of elementary school students in Nova Scotia, Canada. Int J Behav Nutr Phys Act. 2017; 14(29): 1-13. DOI: https://doi.org/10.1186/s12966-017-0476-0
39. Bernardi L, Novello A. Análise da influência da televisão sobre os níveis de obesidade em adolescentes: uma revisão sistemática. Rev Bras Obesidade, Nutrição e Emagrecimento. 2017; 11(64): 199-210.

Resumo

Introdução: As rotinas sedentárias caracterizadas pelos jogos multimídias favorecem o aumento da prevalência do excesso de peso em escolares e seus pais.

Objetivo: Analisar se o tempo excessivo em frente às telas de crianças e adolescentes está associado com fatores nutricionais, comportamentais e parentais.

Método: Estudo transversal com participação de 795 escolares, 354 do sexo masculino, com idade entre 7 a 17 anos, e seus pais (pai ou mãe), de um município do sul do Brasil. O tempo de tela dispendido pelo escolar foi autorreferido, obtido em horas, considerando como excessivo ≥ duas horas diárias. O perfil nutricional dos pais foi avaliado pelo índice de massa corporal (IMC). Para a análise dos dados, foi utilizada razão de prevalência (RP), analisada pela regressão de Poisson, e os intervalos de confiança (IC) para 95%.

Resultados: Foi encontrada elevada frequência de escolares com sobrepeso/obesidade (30,9%), com baixos níveis de aptidão cardiorrespiratória (53,7%) e que dispendem ≥ duas horas diárias na TV, computador ou videogame (57,1%). O tempo de tela esteve associado com a presença de sobrepeso (RP: 1,06; IC: 1,00-1,13) e obesidade (RP: 1,10; IC: 1,03-1,18) do pai, somente entre os adolescentes.

Conclusão: O tempo excessivo em frente às telas em adolescentes associou-se com o estado nutricional do pai. Sugere-se que estratégias para redução do tempo de tela devem ser estimuladas desde cedo, envolvendo toda a família do escolar.

Palavras-chave: criança, adolescente, obesidade, estilo de vida sedentário.