



RESEARCH ARTICLE

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## ASSOCIATION BETWEEN BULLYING AND WEIGHT CHANGES IN ADOLESCENTS: AN INTEGRATIVE REVIEW

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### ABSTRACT

Adolescence is the transition period between childhood and adulthood where the search for identity, independence, critical judgment and sensitivity occurs. Such characteristics can contribute to greater vulnerability, so Bullying is present in adolescents' lives. Thus, one of the factors addressed in the literature to be a victim of bullying is adolescents who present unhealthy eating habits, BMI above or below normal. The consequences of bullying can negatively influence mental health, being associated with an increase in the severity and frequency of anxiety and depressive symptoms in young people, besides psychological suffering, low self-esteem and self-harm, and worsening of school results. The young victims of bullying have been shown to be less receptive to help, so in the face of this resistance, support strategies should be formulated through their colleagues or adults present in this scenario.

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### INTRODUCTION

Adolescence is considered the transition period between childhood and adulthood, marked by a complex process of biopsychosocial growth in which puberty is a hallmark of this process (BRASIL, 2007; BRASIL, 2005). In this stage, occurs the search for identity, independence, critical judgment and sensitivity, as well as the efforts of the individual to achieve the goals related to the cultural expectations of the society in which they lives. This transition period occurs slowly and gradually, where there are consequences in the process of transformation through the body, ideas and behaviors. The final product induce adolescents to define their life style, however, these characteristics may contribute to greater vulnerability (CAMERA ET AL, 2012, OLDS AND PAPALIA, 2013, BRAZIL, 2005, BEKER, 2017). It is observed in this cycle that adolescents feel pressured by

society through the publicity, magazines, television, family and friends that propose them a lean and slim body, especially in the feminine scope that is more vulnerable to the influence of the media (PÉREZ MANUEL, 2004, GONÇALVES, MARTÍNEZ, 2014). The literature reports that peers have influence on adolescents' lives and can play important roles in the growth process, being a source of support and well-being, or in other hand they may become deflection's models and sources of stress and discomfort (HARTUP & STEVENS, 1997; RUBIN, BUKOWSKY, & PARKER, 2006). In this way, bullying is very present in adolescents' lives, and is defined as intentional, repeated behavior against an individual who is incapable of defending them selves (OLWEUS, 2013). In addition, it is characterized as the abuse of physical or psychological power between peers, involving domination, arrogance, in oneself, and submission, humiliation, conformism, and feelings of grandeur, anger and fear, on the other side (Assis, 2010). Therefore, to use the term bullying there must be an imbalance of forces between the victim and the aggressor (OLWEUS, 1994). The practice of bullying

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can be done by physical contact, words, grimaces, obscene gestures or other circumstances that cause discomfort, when these practices occur in the media and social networks is called cyberbullying, a place where occurs in an electronic context (KOWALSKI, LIMBER, & AGATSTON, 2012; PATCHIN & HINDUJA, 2012). It is believed that the practice of bullying has its origins in social, economic, cultural and historical problems. It has a negative psychological impact, where individuals have their perceptions and visions of experiences and may resist reporting embarrassing or stressful experiences (SCHNAIDER *et al.*, 2012, SHAKOOR, *et al.*, 2011). The main cause to be a bullying victim, based on the perception of adolescents, was overweight, however, it has been found in the literature that bullying has also been practiced in adolescents with low weight (PUHL & LUEDICKE, 2010; LIAN *et al.* 2018). According to a survey conducted by the United Nations (UN) in 2017 with 100,000 children and young people from 18 countries, it showed that half of them suffer some form of bullying for reasons such as physical appearance, gender, sexual orientation, ethnicity or country of origin. In this same research, Brazil has a 43% similarity to other Latin American countries.

The data from the National School Health Survey (PeNSE) in 2015 asserts that the prevalence of bullying was 7.4% (UN, 2017; MALTA *et al.*, 2015). In addition to these data, the World Health Organization (WHO) reported that 14% of adolescents aged approximately 13 years reported having suffered bullying in the last two months (WHO, 2008). As was also observed in another study that 75% of school-age adolescents have experienced cyberbullying at least once in the last year. According to the UN, evidence shows that both victims and perpetrators of this kind of violence in childhood suffer in terms of personal development, education and health, with negative effects persisting in adult life. (JUVONEN & GROSS, 2008; KATZER, FETCHENHAUER, & BELSCHAK, 2009). In view of the above, it was observed that bullying is very present in adolescence and its impacts can have negative consequences in the adult life of this young person. From this, the present study aimed to identify the possible consequences of the association between bullying and weight changes in adolescents.

## MATERIALS AND METHODS

It is an integrative review, a method that provides the synthesis of knowledge and the incorporation of the applicability of results of significant studies (SOUZA *et al.*, 2010). The following steps were taken to construct this review: Identification of the theme and selection of the research question, establishment of descriptors and inclusion and exclusion criteria (Botelho, 2011). In the first step was asked the guiding question is: according to weight changes, i.e. underweight or overweight / obese adolescents, are they being bullied?

The consultations were done in the Virtual Health Library (VHL) and Pubmed (Public Medline or Publisher Medline) libraries. Found in the Medical Literature Analysis and Online Recovery System database (Medline). The search strategy was performed in each platform from July to September 2018, using the following descriptors: Teenager OR adolescent AND body mass index AND bullying. Inclusion criteria for the selection were those published between the years of 2013 and 2018. Those who did not meet the described criteria or those

that did not respond to the guiding question were excluded. Subsequently, the titles were read and the selection was made for the reading of the abstracts, followed by a rigorous and careful reading of the selected articles. The selected studies were categorized and a resume of the articles was prepared. The collected data were interpreted, analyzed and discussed. In the last step was done the exposure and description of the collected and analyzed content.

## RESULTS

From the descriptors used, a sample of 71 and 75 articles in the BVS and PubMed, respectively, were found, where two duplicate articles were found. After applying the filters and reading the titles, 13 articles were pre-selected for reading the abstracts, being excluded 06 because they did not respond to the conducting question. Therefore, 7 articles were read in full to conduct the discussion. The descriptors, according to inclusion criteria, searched in Portuguese, Spanish and English, verified that most of the articles found and selected were published in English. After a thorough reading of the articles the results were organized (Table 1) for the analysis and comparison of the data of the publications examined. The information selected in its composition were: author / year, age, sample, instruments, dependent and independent variables, and confidence interval.

## DISCUSSION

It was observed that most articles associated bullying with overweight and only Lian's article addressed the significant association of bullying with underweight adolescents when purchased with their normal weight pairs. One of the factors addressed in the articles to be a victim of bullying is adolescents who present unhealthy eating habits, above normal BMI, younger students or that have some kind of disability and are female, however some authors have reported that the gender was not a predictive factor or did not present this type of association to be a victim of bullying (LIAN *et al.*, 2018; LEE *et al.*, 2018; WARKENTIN *et al.*, 2016; LIU *et al.*, 2016; ANNERBÄCK *et al.*, 2014, STENSLAND *et al.*, 2014, KING *et al.*, 2013). Regarding the average age, some authors report that the average found is approximately 12 years of age. It was observed that male and obese youngsters were more likely to be victims and also aggressors, especially with the average age of 7 to 13 years (LEE *et al.*, 2018; LIU *et al.*, 2016). Higher observed frequency of school bullying was in elementary school, declining in high school, where the hypotheses were raised that this decline is related to the reduction of opportunities for intimidation by older students (LIAN *et al.*, 2018; WARKENTIN *et al.*, 2016, ANNERBÄCK *et al.*, 2014). In relation to cyberbullying, it was only addressed by an author, reporting that the same damage caused by traditional bullying occurs, for the aggressors the great advantage is the anonymity, which causes that the victims do not know the practitioners of the aggressions and can't protect themselves of the attacks (LEE *et al.*, 2018). The biggest victims of cyberbullying are children and adolescents, with girls being most susceptible to bullying. According to Aboujaoude, traditional bullying is an aggravating factor for the development of cyberbullying, a big difference between the two forms is that those involved with cyberbullying do not have limits of time or space to attack their victims and can update several platforms for this purpose. (G. BREWER, J. KERSLAKE, 2016; ABOUJAOUDE *et al.* 2015).

**Table 1. Characterization of the studies addressing the association between Bullying and weight changes**

Author / Year	Age	Sample	Instrument	Dependent variable	Independent variable	OR (IC 95%)
LIAN et.al / 2018	11-15 years	213.593	OlweusBully/VictimQuestionnaire (HBSC)	Bullying victimization	Perceivedweight status Perceivedbody-image Gender	OR underweight = 1.10, $p = 0.002$ ; OR overweight = 1.40, $p < 0.0001$ ; OR obese = 1.91, $p < 0.0001$ OR too thin = 1.42, $p < 0.0001$ ; OR a little bit fat = 1.54, $p < 0.0001$ ; OR too fat = 3.30, $p < 0.0001$ 1.81 (1.63–2.01, $p < 0.0001$ ) (♂) 2.09 (1.67–2.61, $p < 0.0001$ ) (♀)
LEE et.al/ 2018	12 years	10.160	The Health Behavior in School-AgedChildren (HBSC)	Physicaldistress AndPsychologicaldistress	Underweight Overweight Obese	Physical x Psychologicaldistress = -0.17(0.15) 0.23(0.25) 27(0.08); 0.38(0.13) $p < 0,01$ 0.56(0.09); 0.67(0.14) $p < 0,01$
WARKENTIN et.al/ 2016	14 years	20.277	Health Behaviour in School-AgedChildrenStudy (HBSC).	Weight-related teasing	Normal weight Overweight Obese	14,539; 72.5% 3,829; 18.6% IC=1.95, 2.62 1,909; 8.9% IC=3.73, 5.01 $p < 0.0001$
LIU et.al/ 2016	7-18 years	10.587	OlweusBully/VictimQuestionnaire	Body Mass Index And	Victim Bully Bully-victim	1.73 (1.16–2.59) $p < 0,01$ (♀+ obesity) 1.98 (1.35–2.90) $p < 0,001$ (♂+ 7-12 years) 1.67 (1.05–2.64) $p < 0,05$ (♂+obesity)
ANNERBÄCK et.al/ 2014	13-15 years	5.248	Populationbasedstudy	Bullying	Gender Age Bodymass index	362 (17.5) $p < 0,001$ (♀) younger students 18.2% ; $p < 0.001$ 111 (18,8) $p < 0,001$ Overweightorobese
STENSLAND et al/ 2014	12-20 years	10.464	The studyis comprised of a schoolbased, self-report, general healthquestionnaire	Interpersonalviolenceandoverweight	Gender Age Bodymass index	36 (6) Over-weight ; 12 (7) Obese(♀) 26 (4) Over-weight ; 7 (3) Obese(♂) 16.0 (1.7) 16.1(1.7) $p < 0.001$ (♀) 15.8 (1.7) 15.9(1.7) $p < 0.347$ (♂) 0.95 (0.34, 1.57) $p < 0,001$ (♀) -0.13 (-0.77, 0.51) $p < 0,002$ (♂)
KING et.al/ 2013	14-18 years	361	On-line via self-reportsurveys	Eating- andweight-relatedbehaviors	Healthyweightcontrol Unhealthyweightcontrol Bingeeating	0.289 (0.051, 0.528) $p < 0,05$ 0.400 (0.164, 0.636) $p < 0,001$ 3.575 (2.022, 6.326) $p < 0,001$

It has been seen that young people who are obese tend to have low self-esteem and body dissatisfaction, being found an increase of provocations in the group of adolescents with overweight and obesity, as consequence the weight-related

provocations can negatively influence the mental health, being associated with an increase in severity and frequency of anxiety and depressive symptoms in young people, in addition to psychological distress and low self-esteem, self-harm as

well as victimization may exacerbate the effect of obesity (WARKENTIN et al., 2016; LEE et al., 2018; ANNERBÄCK et al., 2014). It was also observed that young people who experienced more frequent bullying by peers tended to have worse results at school. Above all, girls who are overweight and who suffer from bullying can develop disorders such as anorexia, suicidal thoughts and depression (LIAN et al., 2018). Another important fact is that more than half of the sample reported in the study of King who suffered bullying were shown to be less receptive to help (KING et al., 2013). Faced with this resistance of young people to receiving assistance from other people, support strategies should be formulated through their colleagues or adults present in this scenario, through the breakdown of body stereotypes proposed by the media and society, thus leaving our youth free to accept their bodies. In this way, the perpetration of this act of violence is avoided as well as the external observation without interventions, giving this young man a feeling of protection and acceptance.

## Conclusion

From the data obtained through this integrative review, it was possible to identify that the presence of any change in weight, be it underweight or overweight / obesity, there is a risk of young people suffering from school bullying thus generating negative health consequences, such as psychological suffering, self-harm or even physical aggression on the part of their peers. It should be emphasized that bullying is present in the real world and in the virtual world through cyberbullying and the harmful consequences to the health of these young people is the same. And it is in it that the perpetrators are covered and continue to carry out this practice. Thus, it is observed the importance of being carried out new studies that address these themes so that public policies are adopted for these young people.

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