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PREVENTION STRATEGIES FOR OBESITY IN CHILDREN AND ADOLESCENTS

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Abstract:
As prevention strategies for overweight and obesity in childhood and adolescence are insufficient in most countries to date and at least partially inadequate, a rethinking and revision of available guidelines and recommendations is mandatory. Research conducted using electronic databases such PubMed, to analysis the related studies to our topic. In aim to review the preventive strategies of childhood and adolescent obesity. In most developed countries there is an urgent need not only for a growing awareness of the problem of obesity in children and adolescents but also for development of new comprehensive approaches in treating this group.

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INTRODUCTION:

Obesity remains a significant public health problem given that one third of adults and 17% of youth in the United States are obese and rates do not appear to be declining. Obesity prevention interventions that target young children and their families are a public health priority. As early as the preschool age years, excess body weight and adiposity predict overweight and obesity in adolescence and adulthood. The health consequences of obesity can emerge in childhood, and childhood adiposity is associated with poor health outcomes in adulthood [1]. A recent review showed only some parallels between children's physical activity patterns and the rise in obesity [2]. There have been no discernible trends of decreasing physical activity levels or increasing television (TV) viewing (in developed countries) in children, but there is a clear pattern of reduced walking and cycling for transport and a recent increase in electronic games use, especially in boys. The intensive use of technology by the children nowadays made the children prone more to the diseases associated with obesity, as long stay in front of screens without physical activity expose them to obesity [3].

Electronic and mobile games are worldwide played by school students and have been known to cause serious health problems. The use of electronic games is prevalent in developed countries. With the increasing incidence of portable devices, the number of children shifting from playing computer games to mobile phones has increased. Most of teenagers use mobile phones to use the Internet and most of them play mobile games online [1,3].

Playing electronic games by children for a long period increases the screen viewing time of school students, which expose them to dry eye syndrome and visual fatigue and raises the risk of sedentary lifestyle and obesity [4]. Smartphone abuse can lead to neck, wrist and back pains. The Excess use nowadays of smart phones before sleeping can lead to shorting of sleep time which in turn lead to stress and depression, as due to rapid development of portable devices it become so easy to get these games to the bed. In addition, there is proved correlation between the severity of Internet addiction and development of depression especially in adolescents, but no Although there was not proved that there was relationship between development of depression and time spent using social networks [5]. Also, the use of smart phones, electronic games and the online games increases when the person is in a state of stress, such as anxiety and depression, and even lead to addiction of these electronic devices and games. the length of time spent playing video games varies with age also, Smoking and drinking are associated with video games few studies focused on interpersonal relations and social cognitive theory constructs at the time of playing computer and mobile games, especially among students. Interpersonal relations and social cognitive theory constructs (i.e., expectation, self-efficacy, and self-control) are associated with game-playing behaviour [6]. In the last decade, health education to children by using multiple interventions with technology to prevent obesity in school environments and in clinical practice. Health education strategy is used to improve the understanding of patients regarding their condition, to allow them improving their health condition. The traditional methods of providing health education to patients, such as lectures or printed pamphlets, are more beneficial than Individualized educational programs [5,6,7].

DISCUSSION:

A recent systematic review of paediatric primary care-based obesity complication prevention and also treatment determined 31 finished trials, consisting of four concentrated on preschool-age kids [8]. Just one of the 4 trials, a randomized trial of a brief post-well-child visit behavioral therapy intervention, concentrated on avoidance and discovered no treatment group distinctions in BMI at 1 year follow-up. 2 of the three treatment trials targeting preschool-age kids were successful in impacting child weight end results. Quattrin and colleagues [9] examined the effectiveness of a 6-month family-based program that included clinic-based team conferences and phone calls. Intervention team youngsters had higher BMI percentile and also z-score differences at 3 and 6 months, contrasted to kids in the educational control group. Stark as well as associates [10] examined the efficiency of a 6-month clinic-based group treatment accompanied by residence check outs. Treatment group children revealed a significantly lower BMI z-score and percentile at 6- and 12-month follow-up about contrast group youngsters. These searchings for, in addition to arise from trials concentrated on older kids, suggest that more-intensive treatments are extra effective. However, interventions that enhance well-child brows through with extra workplace gos to may position a barrier to continual participation [10] Checking out alternate techniques, such as phone-based mentoring, is called for. Phone coaching has actually been made use of as a feasible option in the context of adult weight management and as an accessory to in-person check outs in childhood years obesity interventions, [9] yet has actually not been thoroughly assessed as an alternative for paediatric primary care-- based excessive weight avoidance.

Phone training might be particularly valuable and also convenient for parents of children that might be handling day care problems and other logistical difficulties associated with family members and also work timetables [9,10].

Types and Objectives of Prevention:

Interventions in health promotion and prevention aim to avoid diseases and maintain health. A WHO (World Health Organization) classification distinguishes between general, selective, and targeted intervention (**Table 1**) [11]. Prevention programs can be identified as behavior-oriented (individual-based intervention) or area environment-based (context-related treatment) (**Table 1**). The latter supports the application of health-relevant decision-making; ecological variables, like residential area, can positively influence not just weight status yet also health-related actions [11]. Present avoidance approaches have focused mainly on behavior interventions, while present gaps in excessive weight prevention exist generally in the area of area-/ environment-based treatments. Previously, only a few exact interventions have actually researched the effects and impacts of the (social) atmosphere on lasting weight development [12].

Table 1: Types of prevention

Types of prevention	Target	Measures
General prevention (primary prevention)	Target group: General public Target: Counteracting the development of obesity	Creating awareness of obesity as an illness Establishing healthy surroundings (e.g. health-promoting school environments)
		Education and behavioral training in day care centers, schools and through mass media Improving physical activity opportunities in schools and communities
		Health orientation in politics (e.g. economic and agriculture policies)
		Removal of advertising in children's TV programming
		Cooperation of interest groups (e.g. food industries, health insurances, media and sport clubs)
Selective prevention (secondary prevention)	Target group: Potentially at-risk group of general public Target: Obesity prevention along with the prevention of associated comorbidities	Early identification of and discussion with at-risk individuals through pediatricians and family doctors or physicians at public health offices Routine checkups for the purpose of offering and including in family-oriented training programs
Targeted prevention (tertiary prevention)	Target group: Overweight children and adolescents with high health risks or already obese Target: Weight stabilization and improvement of comorbidities	Interdisciplinary programs and measures (see recommendations under primary and secondary prevention)
		Support through the above-mentioned measures for general obesity prevention as well as measures of general health promotion
Within the scope of the prevention offerings will be differentiated between:		
Behavior-oriented prevention	*Personalized measures:* Addressing individual behavior and habits	Education in nutrition

Types of prevention	Target	Measures
		Promotion of movement during school lessons as well as educational programs for enhancing physical activities
Community-/environment-based prevention	*Context related measures:* Facilitating health-related decision making	Provision of facilities and equipment in the school environment (e.g. playgrounds, healthy school meals and snacks)

OVERVIEW OF POPULATION-BASED STRATEGIES:

As societies develop their strategies to tackle the epidemic of obesity in children, they will be able to draw on the types of strategies, policies, and programs that have worked to control other epidemics. The usual comparison epidemic is smoking, [13] and although critics state that the comparison is unfair because food is needed for life but tobacco is not, there are many parallels in relation to the approaches taken by governments, the public, and private vested interests. The most powerful interventions for tobacco control have been taxation, legislation, and, particularly in the United States, lawsuits, and these have been supported by prominent, ongoing social marketing campaigns and support services such as Quitline. There are also many parallels with how the tobacco and food sectors have responded to the moves for public health action by denying the evidence, promoting uncertainty in the evidence, political lobbying, ‘‘buying’’ opinions of experts, public relations initiatives, such as supporting education programs, and so on. There are also common lessons from the control of epidemics other than tobacco, such as road injuries, HIV AIDS, skin cancer, and cardiovascular diseases [14]. One of the key lessons is that, in general, education dominated strategies are weak compared with policy/legislative approaches, environmental change, or fiscal instruments [15]. This is because most of the risk behaviors do not occur as a result of a knowledge deficit. Therefore, adding more knowledge is unlikely to change those behaviors unless it is backed by other strategies, especially policies targeting the environments to make healthy food and activity choices easier. Many countries have already developed national plans of action on obesity [16].

Community-/Environment-Based Prevention:

The increasing obesogenic environment is a crucial reason for the growing weight problems epidemic. A longitudinal research has actually evaluated the impact of several various environmental factors (including social variables) on the threat of youth excessive weight. This research was performed over a 4-year duration and also included a practically 500 youngsters [17]:

One of the most crucial determinants were the length of the street the youngsters resided on, accessibility of the nearby play ground by foot, frequency of busses/trains passing the street, as well as the socioeconomic condition (SES) of the neighborhood. The SES plainly revealed the greatest impact; the BMI-SDS of children residing in socioeconomically deprived neighborhoods varied 0.31 SDS factors above the reference team [17]. However, based on a huge cross-sectional study with around 3,500 adolescents, just 2% of the BMI variation could be clarified by differing attributes of the domestic setting (e.g. population density, traffic thickness, accessibility of high-energy food, variety of sporting activities and play premises) [11] According to the current information, private and/or social aspects plainly appear to have greater influence on the growth of childhood years obesity than ecological components [17] There are initial signs that condition-oriented actions are nevertheless an appealing method to weight problems avoidance in younger children. In an existing review on obesity prevention programs concentrating on the adjustment of ecological conditions, it could be revealed that these modifications can result in the enhancement of exercise or weight-related specifications [18].

CONCLUSION:

Current prevention strategies for childhood overweight and obesity are insufficient and so far at least partially inadequate in most countries. Community-/environment-based preventive approaches outlined above are necessary. However, they cannot counteract the obesity epidemic alone in our complex obesogenic environment. Implementation of the measures listed above requires healthy living spaces like nearby playgrounds and parks for children and adolescents, freely available drinking fountains in day-care centers and schools, binding quality standards for catering offerings in kindergartens and schools, and other measures of environment-oriented prevention.

REFERENCES:

1. Staiano AE, Abraham AA, Calvert SL. Adolescent exergame play for weight loss and psychosocial improvement: a controlled physical activity intervention. Obesity. 2013 Mar;21(3):598-601.
2. Katzmarzyk PT, Baur LA, Blair SN, et al. International conference on physical activity and obesity in children: summary statement and recommendations. Int J Pediatr Obes 2008;3(1):3–21.
3. Kuczmarski RJ. 2000 CDC growth charts for the United States; methods and development. Gunter WD, Daly K. Causal or spurious: Using propensity score matching to detangle the relationship between violent video games and violent behavior. Computers in Human Behavior. 2012 Jul 1;28(4):1348-55.
4. Gunter WD, Daly K. Causal or spurious: Using propensity score matching to detangle the relationship between violent video games and violent behavior.Computers in Human Behavior. 2012 Jul 1;28(4):1348-55.
5. Hassanzadeh-Rostami Z, Kavosi E, Nasihatkon A. Overweight and obesity among preschool children from Fars province of Iran: prevalence and associated factors. Journal of research in health sciences. 2016 Feb 17;16(1):26-30.
6. Christison A, Khan HA. Exergaming for health: a community-based pediatric weight management program using active video gaming. Clinical pediatrics. 2012 Apr;51(4):382-8.
7. Dumery B, Grounauer PA, Van Toi V. Eyestrain, Blink Rate and Dry Eye Syndromes of Video Display Terminal Users. InThe Third International Conference on the Development of Biomedical Engineering in Vietnam 2010 (pp. 270-273). Springer, Berlin, Heidelberg.
8. Seburg EM, Olson-Bullis BA, Bredeson DM, et al. . A review of primary care-based childhood obesity prevention and treatment interventions. Curr Obes Rep 2015;4:157–173.
9. Quattrin T, Roemmich JN, Paluch R, et al. . Efficacy of family-based weight control program for preschool children in primary care. Pediatrics 2012;130:660–666.
10. . Stark LJ, Spear S, Boles R, et al. . A pilot randomized controlled trial of a clinic and home-based behavioral intervention to decrease obesity in preschoolers. Obesity (Silver Spring) 2011;19:134–141.
11. Lange D, Wahrendorf M, Siegrist J, et al. Associations between neighbourhood characteristics, body mass index and health-related behaviours of adolescents in the Kiel Obesity Prevention Study: a multilevel analysis. Eur J Clin Nutr. 2011;65:711–719.
12. Plachta-Danielzik S, Kehden B, Landsberg B, et al. Attributable risks for childhood overweight: evidence for limited effectiveness of prevention. Pediatrics. 2012;130:e865–871.
13. Chopra M, Darnton-Hill I. Tobacco and obesity epidemics: not so different after all? BMJ 2004;328(7455):1558–60. 27.
14. Swinburn B. Sustaining dietary changes for preventing obesity and diabetes: lessons learned from the successes of other epidemic control programs. Asia Pac J Clin Nutr 2002;11(Suppl 3):S598–606. 28.
15. Casswell S. Population level policies on alcohol: are they still appropriate given that "alcohol is good for the heart'? Addiction 1997;92(Suppl 1):S81–90. 29.
16. National Obesity TaskForce. Healthy weight 2008-Australia's Future. Canberra (Australia): Department of Health & Ageing; 2003.
17. Singh A, Chin A, Paw M, et al. Dutch obesity intervention in teenagers: Effectiveness of a school-based program on body composition and behavior. Arch Pediatr Adolesc Med. 2009;163:309–317.
18. Bleich S, Segal J, Wu Y, et al. Systematic review of community-based childhood obesity prevention studies. Pediatrics. 2013;132:e201–210.