HEALTH EDUCATION RESEARCH
Theory & Practice

Vol.20 no.2 2005
Pages 259–265
Advance Access publication 24 August 2004

POINT OF VIEW

Prevention of child obesity: 'First, do no harm'

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Introduction

The prevalence of child obesity has steadily increased in Western and developing countries over the last two decades, and child obesity prevention is now firmly on the agendas of nearly all major governments. We are now confronted with the challenge of what to do about the problem, and the general consensus among various academics, researchers, practitioners and administrators worldwide is that prevention needs to begin. Before governments and other agencies leap into actions that they assume to be beneficial in the battle against child obesity, we must remember to employ one of the most important principles of modern medicine and prevention science, 'First, do no harm'.

An examination of potentially unhelpful or dangerous outcomes of child obesity prevention efforts is required before prevention activities begin. There are many examples of perfectly reasonable and well-intentioned health messages being partially misconstrued or misunderstood by members of the general public, resulting in the inadvertent production of undesirable effects in the implementation of supposedly health-promoting activities. The uptake of dieting and slimming among girls and young women is one example of a health message gone wrong. The moderate and sensible government dietary guideline of the late 1970s was taken up by the target audience who required it least—young women, who adhered to the 'control your weight' message most vehemently. The exponential rise in disordered eating that followed these early messages has left health educators with the huge challenge of normalizing body image and eating behavior among a large proportion of our young population. The government message to control weight within reasonable limits was clearly exploited by cigarette advertisers who utilized the belief that cigarette smoking could be an effective slimming agent. This is an example of a health-related message going astray. What we failed to achieve as health educators, was to clarify this situation, that yes, controlling your weight is important, but not at the expense of other health behaviors. Multi-national corporations and marketers of the 1950s to 1980s clearly delivered the 'smoking is slimming message' and this well entrenched way of thinking has placed current health educators in the uneasy predicament of having to encourage quitters to believe that the benefits of quitting despite the expected risk of weight gain outweigh the perceived benefits of slimness. A huge challenge indeed! Similarly, the early 'control your weight' messages of the past, and those of today, clearly identify people who were overweight as failures, deviants or moral outcasts who needed some sort of 'treatment', most of which, when undertaken by the overweight person, resulted in further failure, defeat and humiliation, leaving us with the current prevalence of obesity of today. Is our message to overweight people and obese children any different today? Are our current preventive strategies any different or any more likely to succeed? To whom is

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 doi:10.1093/her/cyg116

child obesity prevention targeted? We must make certain that our preventive efforts are well conceived and based on a sound knowledge of prevention principles.

The first step in approaching any health education problem or planning any prevention program is to be very clear about what it is that we are trying to achieve and to have a clear definition of what we are trying to prevent. In the case of child obesity, we need to be clear from the outset that our role as health educators and prevention specialists is *not* in the diagnosis or treatment of child obesity.

Prevention versus treatment

Health professionals and health educators involved in the prevention of child obesity need to understand the difference between treatment and prevention. The treatment of child obesity should only occur in a supervised clinical setting after a thorough and appropriate clinical assessment. Prescription of weight control programs, dietary advice or other individual interventions for the obese child should remain the role of the pediatrician, general practitioner, dietitian or other clinically trained staff. Community-based professionals such as health educators, nutritionists, nurses, teachers, youth workers, sports coaches and others working with children and youth must understand the difference between child obesity treatment and prevention, and must act accordingly using appropriate referrals without confusing their clinical and community roles. Health and education professionals should also be acutely aware of the fact that a child's health status encompasses several different dimensions including physical, mental, social and spiritual health, and not merely the absence of disease. Likewise, the absence of obesity does not necessarily ensure a healthy child. Child obesity prevention should not dominate the overall picture of child health. There are many essential aspects of child health, including sound nutrition for growth, development, immunity, brain function; physical activity for health and well-being; social support; safety; immunization and accident prevention to name a few. Weight control is only one aspect of overall child health, yet it appears to be dominating the current perspective of health education and health promotion initiatives aimed at children and adolescents. In addition to defining child health within broader parameters than mere weight status, health educators must also be very careful to 'Do no harm' to any of these essential dimensions of health in their efforts to treat or prevent child obesity.

Inadvertent suggestion of dieting and other weight loss techniques

Health and education professionals who work in the treatment and prevention of child obesity also need to be aware of the fact that their best intentions may have the potential to inadvertently do more harm than good. The unintentional creation of body image and weight concerns, dieting, disordered eating and eating disorders is a probable outcome of child obesity prevention programs that focus on the 'problem' of overweight and refer to issues of weight control. The vast majority of overweight children and adolescents know that they are fat and subsequently develop a poor body image and a fear of food (O'Dea *et al.*, 1995; Neumark-Sztainer *et al.*, 2002), as do many normal weight youth who incorrectly perceive themselves to be 'too fat' (Croll *et al.*, 2002). It is a common myth that overweight children and adolescents are unconcerned about their weight or make little effort to try to control their weight. Health education messages about overweight and weight control are likely to make young people feel worse about their bodies and themselves in general. Preventive activities must be examined for their unintended negative outcomes such as those known to result from unsupervised weight control attempts among children and adolescents including growth failure (Brook *et al.*, 1974; Davis *et al.*, 1978; Mallick, 1983; Lifshitz and Moses, 1988), height stunting (Rayner and Court, 1974; Pugliese *et al.*, 1983; Lifshitz and Moses, 1989), delayed puberty and menarche (Lev-Ran, 1974; Frisch *et al.*, 1980; Kulin *et al.*, 1982), and delayed bone age, bone length and reduced bone density (Dhuper *et al.*, 1990; Bonjour *et al.*, 1991; Ott, 1991; Theinz *et al.*, 1993).

Health education for child obesity prevention may also result in the iatrogenesis of inappropriate weight control techniques whereby the health education program generates unplanned, undesirable and health-damaging effects (Garner, 1985; O'Dea, 2000) such as starvation, vomiting, laxative abuse, diuretic and slimming pill usage, and cigarette smoking to suppress appetite and as a substitute for eating (Ikeda and Mitchell, 2001; Strauss and Mir, 2001). Obese children and their parents may misinterpret media reports about child obesity and other weight control messages as a cue for seeking 'quick fix' fad weight loss diets, diet products and weight loss regimes, all of which are unsuitable for growing children.

Avoid further stigmatization, prejudice and discrimination

Child obesity prevention programs and untested health education messages have the potential to further stigmatize fat children (Latner and Stunkard, 2003), and perpetuate the current prejudicial beliefs well documented among physicians and likely to exist among other health and education professionals, that fat people are 'weak-willed, ugly and awkward' (Young and Powell, 1985 *et al*., 2003) and 'gluttonous, lazy, bad, weak, stupid, worthless and lacking in self control' (Schwartz *et al*., 2003). Obese people are well aware that they are fat and that health care professionals are biased towards them (Maddox and Liederman, 1969; Young and Powell, 1985).

In addition to obese children of both sexes being well aware of their weight problems, they also have low self-esteem (Strauss, 2000), and are currently known to exhibit high rates of extreme dieting, disordered eating and skipping breakfast (Croll *et al*., 2002) as well as greater levels of emotional distress and lower expectations of their educational futures (Mellin *et al*., 2002). The last thing that obese children need is a reminder of their undesirable weight status.

In addition to the further stigmatization of overweight children by focusing on the dangers of obesity and other negatively focused health messages, health educators may also inadvertently discriminate against overweight children by excluding them from general participation in certain events such as school games and sports teams. This type of discrimination is known to effect overweight and obese adults who suffer discrimination in terms of employment, salary, promotion, education, marriage and healthcare (Gortmaker *et al*., 1993). Conversely, forcing unwilling participation is likely to have the undesirable outcome of making overweight children avoid physical activity.

Transference and misinformation

Health professionals may need to examine their own beliefs and attitudes towards fat people and fat children before embarking on any child obesity prevention activities, and they may need specific training in order to undertake any role in child obesity prevention. The potential for inadvertent transference of misinformation, inappropriate advice and prejudice from educator to child needs to be examined during the design of health education and health promotion strategies for the prevention of child overweight. In a recent study of the teachers most likely to be involved in school-based obesity prevention activities, we found a low level of nutrition knowledge and knowledge of weight control, a great deal of misinformation being conveyed from teacher to students, and a very high level of body dissatisfaction and self-reported eating disorders, particularly among the young women teachers (O'Dea and Abraham, 2001). One of the most concerning findings of the study was that 85% of the teachers reported recommending strict calorie-controlled diets to their overweight students, many of whom were in the middle of their adolescent growth spurt. The potential for transference of the teacher's own beliefs, attitudes and prejudice as well as the delivery of ill-informed health education messages is clearly undesirable and dangerous in the prevention of child obesity.

Undesirable outcomes of unplanned approaches

Of similar potential danger in the prevention of child obesity is the dissemination of messages,

whether intentional or not, that have not been properly designed, pre-tested and evaluated. In an evaluation of two posters aimed at improving the body image of teenaged girls and young women (O'Dea, 2002), up to 30% of 15- to 18-year-old girls reported adverse effects such as reporting that the posters were not helpful to them because they made them feel more self-critical of their bodies, 35% reported not liking the posters, 69% did not want their own copy, 8% did not know what message the posters were meant to portray and another 8% perceived an incorrect or harmful message from the posters. Health education programs should, ideally, have no adverse outcomes, and this research clearly demonstrates that well meaning health education initiatives and health messages may elude the target audience and may have subsequent negative effects. Planning of child obesity prevention programs should involve the program recipients, and all health education materials should be pre-tested to clearly identify the messages perceived among the target audience, and prevent unintended and potentially harmful outcomes.

Avoidance of health services and preventive screening tests

As a consequence of weight prejudice and discrimination, overweight adults, particularly women, are less likely to visit health professionals for preventive health screening examinations such as mammograms, pap smear tests and gynecologic examinations (Fontaine *et al*., 1998; Olsen *et al*., 1994; Wee *et al*., 2004). Overweight adults are also more likely than normal weight patients to cancel medical appointments (Olsen *et al*., 1994). Overweight adults avoid health services because they do not want to be lectured about their weight and because the healthcare environment is not particularly 'fat friendly'. Health educators involved in the treatment or prevention of child obesity need to be acutely aware of the fact that focusing on children's weight in a negative or critical manner is also likely to produce a similar avoidance of health professionals, health services and preventive activities by overweight children, adolescents and their parents.

Further promoting the avoidance of physical activity

Highlighting the problem of overweight in prevention programs aimed at children and adolescents is likely to produce the adverse effect of making overweight children more sensitive about their weight and their self perceived lack of athletic ability (O'Dea and Abraham, 1999), and therefore making them less likely to participate in physical activity, physical education and sport (Shaw and Kemeny, 1989). Studies of barriers to physical activity among adolescents (Shaw and Kemeny, 1989; O'Dea, 2003) clearly identify body consciousness, lack of privacy in change rooms and physically revealing sports uniforms as major barriers, particularly among girls. Coercing unwilling, body conscious, overweight children into sport or physical activity is likely to exacerbate these problems and further reduce their participation in physical activity, serving only to fuel the rise in child obesity. Conversely, involving children in physical activities that they enjoy is likely to boost their self-esteem, social interactions and friendships (Strauss and Pollack, 2003), and promote the very important and evidence-based philosophy that fat children can be fit and healthy (Blair, 2003).

Blaming the victim

The current panic about child obesity is largely fuelled by media reports that focus on the rising prevalence of child overweight and its potential health problems. The problem-based, negatively and individually focused, victim-blaming approach is something that health educators ought to avoid, as it is likely to result in nothing more than the apportioning of more blame, guilt, shame and hopelessness on fat children and their parents. As these negative reinforcing factors have not been previously associated with any degree of long term success in the past treatment or prevention of overweight in children or adults (Garner and Wooley, 1991), an evidence-based approach to current child obesity prevention efforts would do

well to avoid them. A probable outcome of the negative 'guilt, blame, shame' individual victim-blaming approach to obesity treatment and prevention is the unfortunate adverse outcome of having overweight and obese people deliberately avoiding the problem because they do not want to be lectured about their weight, humiliated or made to feel guilty. Child obesity prevention messages must avoid this negative, problem-based approach.

Further marginalizing people of low socioeconomic status (SES)

The prevalence of overweight is greater among socially and economically disadvantaged people, and the association between lower SES and obesity is well documented (Sobal and Stunkard, 1989; Goodman, 1999). Overweight adolescents are more likely than their normal weight peers to be socially marginalized (Strauss and Pollack, 2003). As health educators, we must be careful not to further 'blame the victim' by taking a judgmental, moralistic approach and inadvertently make overweight, low SES children and their parents feel even more marginalized, disadvantaged and hopeless.

Obesity as a 'sick role'

As effective health educators, we also need to be aware of promoting child obesity as a 'sick role' that needs 'medical treatment'. Sound nutrition and physical activity are essential components for overall child health as they convey many wide ranging benefits for growth, development, brain development and cognition, immunity, and disease prevention—not just child obesity prevention. All children need good nutrition and physical activity, not just obese children.

The medicalization of child obesity will do little to reduce it, as the failure of dietary treatments for overweight have already demonstrated many times (Garner and Wooley, 1991). The prescription of drug treatments for obese children is increasing, lending further credibility to the myth that obesity can be 'cured' with a quick fix drug treatment. At least one professional organization of which the author is aware has suggested that participants and groups involved in child obesity prevention should disclose all special interests such as financial affiliations with pharmaceutical companies or the weight loss industry (Berg, 2000; Society for Nutrition Education, 2002). It is of serious concern that the child obesity debate and preventive activities among children could be influenced by those aiming to make profits out of child obesity treatment or prevention.

The need for a new paradigm

A different paradigm to the individual, dieting, weight loss approach for the treatment and prevention of obesity in adults has been proposed (Robison *et al*., 1995; Society for Nutrition Education, 2002) with a central focus on redefining success away from the current focus on weight loss, towards promoting a healthy lifestyle, long-term amelioration of medical problems and improved quality of life. Other signs of 'success' in helping overweight adults is the short-term change in health behaviors such as decreased reliance on medications, increased physical activity and healthy eating, and improved psychological functioning. The 'health at any size' movement has been successful in helping health professionals and overweight people focus on health improvement rather than weight status. This sort of broad focus, which recognizes the importance of all of the physical, psychological, social and spiritual dimensions of child health in child obesity prevention is more likely to produce positive rather than negative outcomes. Certainly, these aims, as well as improved self-esteem are important goals to strive for among obese children and adolescents (Strauss, 2000), and this may have the additional desired impact of helping obese children and adolescents become more willing to undertake physical activity. Dealing with larger environmental issues such as bullying and teasing are also likely to impact on the barriers to physical activity that have been identified by youth (Shaw and Kemeny, 1989;

Gracey *et al*., 1996; O'Dea, 2003), and may also result in motivating and enabling healthy behaviors.

Use of sound health education theory

Finally, we urgently need a positive health education approach grounded in sound health education theory in order to properly plan, design, implement and evaluate the most appropriate, relevant and effective child obesity prevention strategies. Much is currently known about the factors that motivate healthy eating and physical activity among children and adolescents (O'Dea, 2003), and, similarly, much is known about the barriers to healthy behaviors (Gracey *et al*., 1996; Neumark-Sztainer *et al*., 1999). Ecological, environmental and holistic approaches have been successfully employed in eating disorder prevention and body image improvement programs (Piran, 1998; O'Dea and Maloney, 2001), and child obesity prevention experts would benefit from adopting some of these large systems approaches to prevention. Families who live in 'obesogenic environments' such as those living in isolated or poorly serviced neighborhoods may not have easy access to healthy food and they may feel that their children are unable to safely engage in physical activity in their local environment. A socioecologic, environmental model for increasing physical activity therefore suggests that focusing on changing the physical environment, urban planning and transportation is likely to produce the greatest benefits in obesity prevention (Powell *et al*., 2002). Barriers to physical activity in local environments need to be addressed including ways of making environments less 'obesogenic', ways of inadvertently encouraging incidental exercise and ways of providing safe, enjoyable and inexpensive physical activity opportunities, and healthy food choices for children.

Child obesity prevention is an important contemporary health education topic that is not going to subside for a very long time. The aim of this Point of View is not to provide all of the answers for child obesity prevention, but rather to question our current health education approaches, and to investigate the possibility that some of our most well-meaning preventive intentions may be potentially hazardous and more likely to be harmful than beneficial to the overweight child. As health education experts, we are obliged to approach the issue of child obesity prevention with a broad perspective and a thorough preventive focus, and we initially need to ensure that our preventive efforts must be certain to do no harm.

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Received on May 24, 2004; accepted on July 12, 2004