

Health Educators as Problem Solvers/Policy Advocates: Taking on Childhood Obesity

Kathy DeBarr

University of Illinois at Springfield

Abstract

In the United States many children are malnourished. We very rarely think of over-nutrition as malnutrition, but it is. Furthermore, our children are suffering because of it. No one would tell their child to go play in the street, because imminent harm and perhaps death would ensue. Yet we fail to recognize the threats posed by overweight and obesity. Not only is one's quality of life greatly diminished, but morbidity and premature mortality from Type II diabetes, hypertension, and cardiovascular disease are the consequences. Obese persons are the subject of ridicule in television programming and the motion picture industry. This negative attention contributes to the stigma and resulting psychological pain endured by adults and children alike. Health educators must actively pursue resolution of the obesity crisis, not only through education, but through policy advocacy for PE standards, recess, school vending machine policies, nutrition education, and improved nutrition within our schools. Individual intervention has not proven effective, and it is time to address the environmental forces at work.

© 2006 Californian Journal of Health Promotion. All rights reserved.

Keywords: childhood, obesity, policy advocacy, health educators

The obesity epidemic is expected to proliferate, as our youth become heavier for their age with each passing year. Most US parents however, would find the suggestion that their children suffer from malnutrition inconceivable. Yet over-nutrition also puts children at serious risk for disease and infirmity. The problem is widespread and the risks are grave.

The National Health and Nutrition Examination Survey (NHANES) 1999-2002 study reveals a 16% prevalence rate of overweight amongst youths aged 6-18, a nearly 50% increase from the 1988-1994 NHANES III study when overweight prevalence was estimated at 11% (Hedley, Ogden, Johnson, Carroll, Curtin, Flegal, 2004). According to a study published by The National Academies Press "Obesity among children and youth has more than tripled over the past four decades from about five percent in six to nineteen year olds in the 1960s to 16 percent in 1999-2002. More than nine million U.S. children and youth are obese and another 15 percent are at risk for becoming obese. The prevalence of type 2 diabetes among children

and youth-- previously known as adult-onset diabetes has more than doubled in the past decade" (Committee on Food Marketing, 2006, p. ES - 1). According to the National Survey of Children's Health conducted in 2003-2004 (Child and Adolescent Health Measurement Initiative, 2005), the prevalence of overweight among youth aged 10-17 ranges from a low of 8.5% in Utah, to a high of 22.8% in Washington DC. "Among children and adolescents, annual hospital costs related to obesity were \$127 million during 1997-1999 (in 2001 constant U.S. dollars), up from \$35 million during 1979-1981" (Centers for Disease Control and Prevention, 2005b).

Obesity frequently begins prior to conception. A study by Salsberry and Reagan, using the National Longitudinal Survey of Youth's Child-Mother file, reveals mother's pre-pregnancy weight as the strongest predictor of early childhood obesity (2005). Other risk factors for infant obesity include Black or Hispanic race, smoking, and bottle feeding (Salsberry & Reagan, 2005). A meta-analysis conducted by

Baird, Fisher, Lucas, Kleiine, Roberts & Law (2005) implicates birthweight as the primary factor in development of childhood obesity, with obese infants' relative risks for later obesity ranging "from 1.35 to 9.38" The authors conclude "Infants who are at the highest end of the distribution for weight or body mass index or who grow rapidly during infancy are at increased risk of subsequent obesity." (Baird, Fisher, Lucas, Kleijnen, Roberts & Law, 2005, p. 1). These conclusions are further supported by a cohort study using the Avon Longitudinal data set in Great Britain, which resulted in similar findings (Reilly, Armstrong, Dorosty, Emmett, Ness, Rogers, Steer, & Sherriff, 2005). Studies indicate that preschool obesity is being seen in the US and other countries, developing and industrialized alike (Andersen, 2000 & Dietz, 2001). Each of these studies provide strong support for obesity prevention beginning very early in life or prior to conception.

Educators face a serious challenge in preventing childhood obesity given that most parents don't recognize their own weight issues (Jeffrey, Voss, Metcalf, Alba, Wilkin, 2005), and aren't likely to be aware of their children's weight issues either according to a British study. Acknowledging the problem is the first step to addressing it. According to Jeffrey et al. (2005, p. 23) "The reasons for poor awareness might include denial, reluctance to admit a weight problem, or desensitization to excess weight because being overweight has become normal." Similarly, a US study of overweight preschool children's mothers revealed that 79% failed to identify their children as overweight (Baughcum, Chamberlin, Deeks, Powers, Whitaker, 2000)

According to the CDC (2005a), obesity puts children at risk for future diseases excerpted and included here:

- Hypertension
- Dyslipidemia
- Type 2 diabetes
- Coronary heart disease
- Stroke
- Gallbladder disease

- Osteoarthritis
- Sleep apnea and respiratory problems
- Some cancers (endometrial, breast, and colon)

Complications associated with type 2 diabetes include heart disease, stroke, blindness, diabetic neuropathy and nerve damage, foot complications, skin complications, gastroparesis, and depression (American Diabetes Association).

Children and adolescents suffer psychologically as well as physically when it comes to obesity. Obesity often results in stigma, discrimination, and poor self-esteem (Aronne, 2002). Children tend to watch a lot of television. In addition to its reinforcement of sedentary activities, television tends to either ignore or stigmatize persons who are overweight. A recent study by Greenberg, Eastin, Hofschire, Lachian, and Brownell (2003) describing television's portrayal of overweight and obese individuals revealed that while a quarter of US females are overweight, only three percent of female television characters are, and that while only five percent of women are underweight, nearly a third of the television characters are underweight. Men were treated similarly, but to a much lesser extent. Heavier persons were much more likely to be portrayed with negative characteristics reinforcing stigma, biases, and discrimination toward overweight and obese persons. The authors write "Negative stereotypes are attached to obese individuals, who are often thought to be undisciplined, dishonest, sloppy, ugly, socially unattractive, sexually unskilled, and less likely to do productive work, among other attributes." The authors further state "The result is bias and discrimination aimed at overweight persons in important areas of living, including education, employment, and medical care" (p. 1342).

Davison and Birch (2001) found evidence of stigma attaching to girls as young as five years. Their study further revealed that when parents shared their concern for their daughters' overweight with the girls, the girls evidenced negative body image, lack of confidence in physical abilities, and indicated that they believed themselves to be less intelligent than

their thin counterparts. Latner and Stunkard (2003) indicate that the stigma of obesity among children is worsening, even as the numbers of obese children continue to grow. The authors reviewed three studies conducted in the 1960's in which children were asked to examine a set of photographs of children including those with disabilities and disfigurement, and rank order the pictures in the order of how well they thought they would like the child. Latner and Stunkard (2003, p. 452, citing Richardson, Goodman, Hastorf & Dornbusch) indicated that during those studies "The obese child was reliably ranked last, even lower than children with gross physical disabilities, not only by children from different socioeconomic backgrounds, but even by children who themselves had physical disabilities." Latner and Stunkard's findings indicate that obese children continue to be ranked last in 2001, and that "their ratings were further polarized in the present study" (p. 453), indicating a strengthening of the obesity stigma over the past 40 years.

Few people take the time to go beyond the obvious causal factor of energy imbalance when addressing the issue. There are many explanations for this worsening epidemic. "Etiology of obesity includes genetic, metabolic, social, behavioral and cultural factors. Although obesity has multiple causes, an often overlooked possibility is that of obesity due to an infection" (Durandhar, 2004, 307). Durandhar, Atkinson, & Ahmed, note five viruses associated with obesity in humans: Human Adenovirus Type 36, Human Adenovirus Type 37, SMAM 1 adenovirus, borna disease virus and *chlamydia pneumoniae* (2004). The Human Adenovirus may have particular implications for children, as the authors indicate that children with adenovirus have experienced weight gain associated with inflammation. Medical scientists may one day unravel some of the more complicated mechanisms such as genetics and metabolism that are implicated in obesity.

However, this problem can not wait another 5, 10 or 20 years. We must use a multi-faceted approach to intervention. Health educators can make an important contribution now to stemming the tide of childhood obesity by

addressing the social, behavioral, cultural and environmental factors as both educators and particularly as policy advocates.

While some health educators feel that policy is beyond their responsibilities, the bigger issue here is problem solving. Policy is often the most effective means of solving problems, particularly when one reflects upon the policy tools that can be brought to bear... laws, services, monies, taxes, and suasion (Theodoulou & Kofinis, 2004). By taking an active role in setting the agenda we can make an impact. Kingdon (1984) indicates that agenda setting occurs when there is an important problem to be solved, there are viable solutions, and the political circumstances are right. Judging whether the political circumstances are right, requires being attuned to the pulse of the populace, their attitudes, concerns, and opinions, as well as one's ability to influence key decision makers such as those in the executive, legislative branches (Kingdon, 1984). Kingdon indicates that when the problem, viable solutions, and political circumstances converge, the window of opportunity opens. The author also warns that this opening is brief and the window can close quickly, so we must be ready when the window opens.

You may already be involved in policy development without recognizing it as such. We work every day toward substantive policy development of obesity prevention curricula and programs, and the allocative policies to support these programs. We specify procedural policies indicating how these programs will be conducted. We argue for redistribution of resources so that children can have health and physical education. We may exert ourselves toward distributive policies in which children would have equipment and safe spaces for engaging in physical fitness. We have been known to pursue regulatory policies such as requirement of helmets for safe biking. We are advocates for self-regulation, having pursued the CHES certification for our profession, and I know that we are keen in providing self-regulating skills for those whom we educate. What other policy initiatives should we pursue in order to diminish the threat of obesity?

Symbolic policy gestures are common enough. The UK has National Obesity Awareness Week. Perhaps this is something we could champion here. We might also consider lobbying within our school districts for material policy, in which those who participate in honors level physical and health education could attain higher class standing, much as some schools provide greater points for more challenging academic courses.

We must take an active role in reshaping our environment. This includes the built environment and the creation of safe recreational spaces, as well as our children's ecology. According to the Worldwatch Institute our "All you can eat economy is making the world sick," and they include the environmental destruction which attends the world's agricultural practices (2001).

Fast foods are convenient, cheap, abundant, and calorie intensive. It is often cheaper to feed a family at fast food restaurants than to prepare meals at home. Drewnowski, Darmon, & Briend (2004), conducted a study in France to determine whether a prescribed diet of fruits and vegetables was indeed more costly than a diet of sweets and fats. Their findings were unequivocal; "...prudent dietary patterns are likely to cost more" (p. 1558). It is unlikely that these findings would be reversed in a study conducted in the U.S. Fast food also gains appeal if one factors in the time and energy costs of shopping and preparing meals after a long day at work. The lure of a bargain is intensified when meals are super-sized for a nominal amount. Children are attracted by free toys, collectibles, and attractive packaging. Marketers know how to attract the public with free CDs, DVDs, videos, and discounted tickets to events and theme parks.

Fast food ploys are not limited to before and after school. Vending machines filled with non-nutritive drinks and edibles are found in most schools. Soft drink and snack food manufacturers make their way into schools in exchange for supporting extra-curricular activities that would not exist without the financial subsidy they provide. Children

everywhere are involved in candy sales, and cookie sales to raise funds for school causes.

We must recognize the threats to our children's health posed by these readily available fast foods, and non-nutritive snack items. Even fruit juice can pose a threat, as indicated by Dennison, Rockwell, and Baker (2001). The National Academy of Science's Committee on Food Marketing and the Diets of Children and Youth recently (2006, ES 6) published *Food Marketing to Children and Youth: Threat or Opportunity*. Their findings indicate that "...among many factors, food and beverage marketing influences the preferences and purchase requests of children, influences consumption at least in the short term, is a likely contributor to less healthful diets, and may contribute to negative diet related health outcomes and risks among children and youth."

There has been action at the federal level. Four substantive bills concerning childhood obesity were introduced in the 109th US Congressional Session. All are still in committee (Thomas, 2006). Because we are in the second session of this Congress if no action is taken, the bills will expire. "The federal Child Nutrition and WIC Reauthorization Act of 2004 (Public Law 108 - 265) requires each local school district participating in the National School Lunch and/or Breakfast Program to establish a local wellness policy by the beginning of the 2006-2007 school year." (National Conference of State Legislatures, 2005).

Most policy impacting school children takes place within the states and at the local school board level. According to Winterfield (2005), "44 states require health education, recent legislation in 17 states aims to prevent childhood obesity by requiring nutrition in school health curriculums" (p. 32) and at least that many states "enacted legislation to improve the quality of school foods" (p. 33). The Colorado legislature called "... on local school boards to adopt food policies that include healthy meals, nutritious items in vending machines and for fundraisers, nutrition content information on school menus provided to students and parents, access to fresh

fruits and vegetables... nutrition education and daily physical activity (Winterfield, 2005, p. 32).

The National Conference of State Legislators indicates that PE requirements vary greatly throughout the United States. Colorado and South Dakota have no state requirements for PE. Alaska, Hawaii, and Nevada require only some PE to graduate. Another six states require PE at some point in a child's education but it isn't required in High School. Sixteen states require PE with duration standards in elementary and middle school, and only some high school PE to graduate. Twenty one states require some PE at elementary and middle school but without duration standards, and require some PE in High school to graduate. Only New York requires PE for K-12 and imposes duration and frequency standards (National Conference on State Legislatures, 2006).

A variety of policy options for dealing with childhood obesity were contemplated among state legislatures this past year (National Conference on State Legislatures, 2006). These included legislation targeting childhood obesity policy through additional requirements for school nutritional standards, nutrition education, body mass index legislation, physical activity, recess or physical education, and nutrition labeling on school menus. Illinois and California enacted diabetes screening requirements in 2003.

- Seventeen of thirty-nine states enacted legislation dealing with "school food and beverage nutrition"
- BMI legislation was enacted in three states
- Three states enacted diabetes screening and management legislation.
- Four states enacted legislation regarding nutrition labeling for school menus.
- Kentucky forbids serving of deep fried foods effective 2006-2007 school year.
- Nutrition education legislation was enacted in eight states
- Physical Activity/ Physical Education legislation was enacted in 21 states.

Now is the time for health educators to take action. We know that "Attempts to decrease obesity that focus primarily on changing individual's behavior have been infective" (Blumenthal, Hendi, Marsilo, 2002, p. 2178). Koplan, Liverman, and Kraak (2005) wrote, "The increased number of obese children throughout the U.S. during the past 25 years has led policymakers to rank it as one of the most critical public health threats of the 21st-century." The National Academy of Sciences Committee on Prevention of Obesity in Children and Youth indicate that success will require the involvement of federal government, state and local authorities, industry and media, healthcare professionals, state and local education policy makers, parents and families. We must act now or rue the lost window of opportunity.

References

- American Diabetes Association. Type 2 diabetes complications. Retrieved January 20, 2006, from <http://www.diabetes.org/type-2-diabetes/complications.jsp>
- Andersen, R.E. (2000). The spread of the childhood obesity epidemic. *CMAJ*, 163(11), 1461-1462.
- Aronn, Louis, J. (2002). *Obesity Research*, 10 (Suppl. 2).
- Baird, J., Fisher, D., Lucas, P., Kleijnen, J., Roberts, H., & Law, C. (2005). Being big or growing fast: Systematic review of size and growth in infancy and later obesity. *British Medical Journal*, 331, originally published online 14 October 2005.
- Baughcum, A. E., Chamberlin, L. A., Deeks, C. M., Powers, S. W., & Whitaker, R. C. (2000). Maternal perceptions of overweight preschool children. *Pediatrics*, 106(6), 1380-1386.
- Blumenthal, S. J., Hendi, J. M., & Marsilo, L. (2002). A public health approach to decreasing obesity. *Journal of the American Medical Association*, 288(17), 2178.
- Centers for Disease Control and Prevention. (2005a). Overweight and obesity home. Retrieved January 21, 2006, from <http://www.cdc.gov/nccdphp/dnpa/obesity/>

- Centers for Disease Control and Prevention. (2005b). Preventing obesity and chronic diseases through good nutrition and physical activity. Retrieved January 31, 2006 from, <http://www.cdc.gov/nccdphp/publications/factsheets/Prevention/obesity.htm>
- Child and Adolescent Health Measurement Initiative. (2005). National survey of children's health. Retrieved January 20, 2006 from, <http://nschdata.org/anonymous/dataquery/DataQuery.aspx?control=5>
- Committee on Food Marketing. (2006). Food marketing to children and youth: Threat or opportunity? Washington DC: The National Academies Press
- Davison, K. K., & Birch, L. L. (2001). Weight status, parent reaction, and self-concept in five year old girls. *Pediatrics*, 107(1), 46-53.
- Dennison, B. A., Rockwell, H. L. Baker, S. L. (1997). Excess fruit juice consumption by preschool-aged children is associated with short stature and obesity. *Pediatrics*, 99(1).
- Dietz, W. H. (2001). The obesity epidemic in young children. *British Medical Journal*, 322, 313-314.
- Dhurandhar, N. V. (2004). Contribution of pathogens in human obesity. *Drug News Perspectives*, 17(5), 307-13.
- Dhurandhar, N. V., Atkinson, R. L., & Ahmed, A. (2004). Obesity of infectious origin. *Growth Genetics and Hormones*. Retrieved January 30, 2006, from <http://www.gghjournal.com/volume20/3/pdf/obesity-review.pdf>
- Drewnoski, A., Darmon, N., & Briend, A. (2004). Replacing fats and sweets with vegetables and fruits: A question of costs. *American Journal of Public Health*, 94(9), 1555-1559.
- Greenberg, B. S., Eastin, M., Hofschire, L., Lachian, K., & Brownell, K. D. (2003). Portrayals of overweight and obese individuals on commercial television. *American Journal of Public Health*, 93(8), 1342-1348.
- Hedley, A. A., Ogden, C. L., Johnson, C. L., Carroll, M. D., Curtin, L. R., Flegal, K. M. (2004). Overweight and obesity among US children, adolescents, and adults, 1999-2002. *Journal of the American Medical Association*, 291, 2847-50.
- Jeffrey, A. N., Voss, L. D., Metcalf, B. S., Alba, S., & Wilkin, T. J. (2005). Parents' awareness of overweight in themselves and their children: Cross sectional study within a cohort. *British Medical Journal*, 330, 23-24.
- Kingdon, J. W. (1984). *Agendas, alternatives, and public policies*. NY: Harper Collins.
- Latner, J. D., & Stunkard, A. J. (2003). Getting worse: The stigmatization of obese children. *Obesity Research*, 11(3), 452-456.
- National Conference of State Legislatures. (2006). Childhood obesity – 2005 update and overview of policy options. Retrieved January 26, 2006, from <http://www.ncsl.org/programs/health/childhoodobesity-2005.htm>
- Reilly, J. J., Armstrong, J., Dorosty, A. R., Emmett, P. M., Ness, A., Rogers, I., Steer, C. & Sherriff, A. (2005). Early life risk factors for obesity in childhood: cohort study. *British Medical Journal*, 330, 1357. Retrieved January 20, 2006, from <http://bmj.bmjournals.com/cgi/content/full/330/7504/1357>
- Salsberry, P. J., & Reagan, P. B. (2005). Dynamics of early childhood overweight. *Pediatrics*, 116, 1329-1338.
- Theodoulou, S. Z., & Kofinis, C. (2004). *The art of the game: Understanding American public policy making*. Belmont, CA: Thomson.
- Thomas Library of Congress. (2006). Retrieved January 20, 2006, from <http://thomas.loc.gov/>
- Wintefield, A. (2005). What's for lunch? When's recess? *State Legislatures*, 32-33.
- Worldwatch Institute. (2001). All you can eat economy is making the world sick. Retrieved January 19, 2006, from <http://www.worldwatch.org/alerts/010524.html>

Author Information

Kathy DeBarr PhD, MS
Associate Professor
Public Health Department, PAC 384
University of Illinois at Springfield
One University Plaza
Springfield, Illinois 62703-5407
E-Mail: debarr@uis.edu