Integrating the Prevention of Eating Disorders and Obesity: Feasible or Futile?

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The rate of obesity in adults and youth has doubled in the past 20 years; during this same period there has been an increase in the prevalence of “dysfunctional eating behaviors,” including eating disorders and unhealthy weight loss practices. Despite the fact that obesity, eating disorders, and unhealthy weight loss practices are cultivated in the same cultural context—an increasingly “toxic” environment regarding food and weight—these problems are regarded as distinct, with different origins, courses, and approaches to prevention and treatment. In this article, we present conceptual and practical reasons for adopting an integrated approach to the prevention of the spectrum of problems related to eating and weight (i.e., eating disorders, obesity, and unhealthy weight loss practices), suggest personal, socioenvironmental, and behavioral factors to be included in an integrated approach to prevention, and provide some ideas for developing an integrated program using a media literacy/advocacy approach. We conclude with a discussion of challenges to the development of interventions aimed at the broad spectrum of weight-related problems and suggestions for addressing these challenges.© 2002 American Health Foundation and Elsevier Science (USA)

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INTRODUCTION

At the threshold of the 21st century, the importance of sound nutrition to our nation’s health could not be greater. The availability of energy-dense, high-fat foods, coupled with an increase in sedentary behavior and decline in physical activity, has led to what is described as an “epidemic” of obesity and related health problem such as diabetes, heart disease, and certain cancers [1]. In the past 20 years, the rate of obesity in adults and youth has doubled; currently, one-third of U.S. adults and 11% of U.S. children and adolescents, ages 6–17, are obese [2,3]. As the nation has become fatter, there has been a parallel increase in the prevalence of “dysfunctional eating practices,” including eating disorders (i.e., anorexia nervosa, bulimia nervosa, binge eating disorder, and eating disorder not otherwise specified) and unhealthy weight loss practices (e.g., diet pills, laxatives, diuretics, self-induced vomiting, skipping meals) [4–6]. Approximately 1–3% of U.S. adolescent females meet the diagnostic criteria for an eating disorder, and approximately 10–13% of adolescent and college-age females engage in disordered eating practices [7,8]. In addition to clinical eating disorders, dieting to lose weight is common among adolescents in the United States (45% of junior/senior high school females report that they are currently trying to lose weight), and a considerable proportion of teenage girls trying to lose weight will turn to unhealthy methods such as diet pills (7%), self-induced vomiting (7%), skipping meals (45%), and eating very little food (45%) [9].

While biological factors (e.g., genetics, physiology) play a role in the development of obesity and eating disorders [10], the dramatic increase of these problems in the past 20 years suggests that environmental factors are primarily to blame. Increases in obesity and dysfunctional eating practices have occurred within the context of an environment that is becoming increasingly “toxic” relative to food and weight—an environment that exults thinness, stigmatizes fatness, encourages unregulated consumption of energy-dense foods, and promotes “quick fix” approaches to weight loss [6]. Children and adolescents may be exposed to conflicting messages regarding food- and weight-related issues from family members and from society-at-large as they are encouraged to maintain a thin body while being exposed to numerous opportunities to overeat (e.g., to “supersize” a food order at fast-food restaurants). Despite the fact that obesity, eating dis-
orders, and unhealthy weight loss practices are cultivated in the same cultural context, for the most part these problems are regarded as distinct, with different origins, courses, and approaches to prevention and treatment. In this article, we present conceptual and practical reasons for adopting an integrated approach to the prevention of the spectrum of problems related to eating and weight (i.e., eating disorders, obesity, and unhealthy weight loss practices). We focus primarily on older children and adolescents, in that most of our experience has been with older elementary-school-age children and middle/high school youth [11–18].

CONCEPTUAL RATIONALE FOR INTEGRATION: OVERLAP BETWEEN OBESITY AND DISORDERED EATING

Cross-sectional and prospective studies indicate that it may be inaccurate to view obesity, eating disorders, and unhealthy weight loss practices as conceptually distinct. Indeed, rather than being mutually exclusive, these conditions/behaviors can co-occur, and in some cases, individuals will “cross-over” from one eating problem to another. Cross-sectional studies show that eating problems can co-occur; prospective research indicates that individuals may “cross-over” from one eating problem to another.

Regarding co-occurring eating problems, binge eating is known to be common among persons who are overweight; it is estimated that 30% of individuals who present at weight loss clinics could be diagnosed with binge eating disorder [19]. There appears to be a linear association between overweight status and binge eating; higher levels of overweight are associated with a greater propensity to engage in binge eating [20]. In addition to being at heightened risk for binge eating, individuals who are obese or who are at risk for becoming obese are more likely than nonobese individuals to use unhealthy weight loss strategies such as diet pills, self-induced vomiting, and laxatives or diuretics [9,21]. Recent cross-sectional population-based studies of youth have found that overweight adolescents are at increased risk for disordered eating behaviors. In one study, 14% of overweight girls reported vomiting, diet pill use, laxative use, and/or diuretic use over the past week compared to 7% of nonoverweight girls [9].

Prospective research has found that a personal or family history of obesity is considered a risk factor for the later development of bulimia [22]. Weight loss dieting is a known precursor to the development of an eating disorder [23], and recent research suggests that dieting may lead to obesity as well [24]. More specifically, “common diet behaviors” (e.g., dietary restraint, self-labeled dieting, exercise for weight control) have been found to increase adolescent girls’ risk for becoming obese over time [24].

The precise nature of the association among eating disorders, obesity, and unhealthy weight loss practices is not known; however, the aforementioned studies indicate that these problems should not be considered conceptually distinct. Recognizing this, a number of experts in the fields of eating disorders and obesity argue that clinical eating disorders, obesity, and unhealthy weight loss are part of a spectrum of food- and weight-related problems that are symptoms of a toxic cultural context that inhibits the development of healthy patterns of eating and physical activity and discourages a healthy respect for diverse body weights and shapes [4–6].

PRACTICAL RATIONALE FOR INTEGRATION

In addition to important conceptual reasons for integrating efforts to prevent disordered eating and obesity, there are practical reasons for doing so. One important rationale is cost; clearly, there are costs associated with the development and implementation of prevention programs within schools and communities. For example, staff training and staff time are expensive, and considerable costs are associated with the development, printing, and dissemination of educational materials; as a result, there are limits to the number of interventions that a school or community can adopt [25]. For this reason, a primary prevention program that targets a variety of problems related to eating and weight makes good sense economically and pragmatically [26].

Related to this, a second rationale for integration is that preventing eating problems is likely to be easier and more cost-effective than treating them. Childhood obesity is associated with obesity in adulthood, which is associated with a range of serious health conditions such as diabetes and cardiovascular disease [27]. The longer that the overweight persists (e.g., into teenage years), the greater the likelihood that an overweight child will become an obese adult [28]. Among adults within the United States, the estimated number of deaths attributable to obesity is approximately 300,000 per year [7]. Unfortunately, treatments for obesity in adulthood may not be very effective [29], as most participants in weight loss programs gain back all of their weight within 5 years [30]. There is some evidence to suggest that childhood obesity responds to treatment better than adult obesity does [31], providing justification for early interventions, particularly those aimed at prevention. Treatment outcomes for eating disorders are modest at best; the “most effective” interventions produce recovery in less than one-half of patients (i.e., 40–50%) [32–34]. In addition to being limited in effectiveness, treatment for eating disorders is expensive—inpatient treatment for anorexia nervosa is similar in cost to inpatient treatment for schizophrenia [35].

A third practical reason for an integrated approach
to prevention is that, while healthy nutrition and physical activity are the foci of both eating disorder and obesity programs, distinct programs tend to provide different messages that may nullify one another and confuse participants. Body image issues are also addressed in both types of programs, with messages that are particularly contradictory. For example, many obesity prevention programs assume that it is appropriate to be unhappy about being overweight, encourage participants to monitor and restrict the amount (e.g., portion size, calories) and content (e.g., fat and cholesterol) of foods eaten, and have as a primary goal reducing one’s body weight. Most eating disorder prevention programs, on the other hand, promote self-acceptance at any size, discourage self-consciousness about food consumption, and have an overarching goal of improved body esteem with reduced unhealthy dieting practices, regardless of one’s body weight. One well-known eating disorders expert describes these conflicting messages as a “...fundamental paradox...what is diagnosed as disordered eating in thin people is what is prescribed for fat people” (Burgard, cited in Lyons, 2000, p 10) [36]. Further research is needed to explore associations between body dissatisfaction and healthy lifestyle behaviors in order to assess whether body dissatisfaction serves to inhibit or motivate healthy eating and physical activity behaviors. Heinberg et al. [37] have suggested that “some degree of body image concern is helpful, but the point at which concern becomes distress and motivation becomes preoccupation is not known” (p 227).

A fourth practical reason for an integrated approach to prevention is concern over the potential iatrogenic effects of programs that aim to prevent obesity alone or eating disorders alone. Concern has been expressed, for example, that strategies to prevent obesity (e.g., monitoring intake, and portion control) might unintentionally promote excessive weight and shape preoccupation and disordered eating habits [4,36]. Anecdotally, the first author has heard concern expressed (by the lay public and professionals in the field of health behavior modification) that eating disorder prevention strategies (e.g., size acceptance, eliminating restrictive or restrained eating) may reduce individuals’ motivation to adopt healthy nutrition and activity habits, in essence giving program participants “permission to be fat.” While concerns about the potential iatrogenic effects of programs aimed at preventing obesity or eating disorders alone have been expressed, to the best of our knowledge, supporting data are scant. Clearly research is needed to provide data to support these concerns.

**FACTORS TO BE ADDRESSED WITHIN INTEGRATED PREVENTION PROGRAMS**

To date, prevention programs for obesity and eating disorders have tended to adopt very different approaches to eating behavior (dieting vs cessation of dieting) and body weight (weight loss vs accepting one’s current weight). Despite these differences, we would argue that eating disorders, obesity, and unhealthy weight loss practices have a number of shared personal, socioenvironmental, and behavioral facets that could be addressed in an “integrated” prevention program that is grounded in social cognitive theory. Social cognitive theory [38] offers an appropriate framework for an integrated approach to prevention, since it assumes that behavioral change requires changes on both socioenvironmental and personal levels. Further, preventive interventions grounded in social cognitive theory have been successful at promoting healthy eating habits [25] and reducing unhealthy eating behaviors [44]. Below, we review personal, socioenvironmental, and behavioral factors that are associated with obesity, eating disorders, and unhealthy weight loss practices that could be included in integrated prevention programs. These factors are summarized in Fig. 1.

**Personal Factors**

A number of personal factors have been associated with the development and maintenance of disordered eating and obesity. Negative body image, weight and shape preoccupation, and overvaluation of the thin ideal of beauty are common among individuals with eating disorders [39], and internalization of the slender ideal of beauty has been identified as a risk factor for the later development of an eating disorder [40]. For obese youth, negative body image and weight concerns are likely to increase over time, both in response to environmental pressures to lose weight (e.g., teasing, pressure to diet) and in response to the internalization of social norms regarding what is/is not considered an acceptable body weight and shape [41]. An integrated prevention program could address negative body image, weight preoccupation, and internalization of the thin ideal through a number of strategies. Media literacy (teaching youth to be critical consumers of media in an effort to reduce its persuasive influence) could be used to reduce the internalization of a uniform, thin standard of beauty [16]. Cognitive–behavioral strategies [42] could be used to teach youth how to challenge the critical self-talk that may contribute to negative body image and weight and shape preoccupation that leads to dietary restraint, binge eating, and unhealthy weight loss strategies. For example, youth could discuss and practice responses to inappropriate weight-related comments made by peers and family members.

In addition to addressing attitudes that are specific to weight and shape, an integrated program should address more general factors such as self-empowerment, assertiveness, and the ability to cope with stress and regulate distressing emotions. Youth should be
encouraged to establish a sense of identity that encompasses factors outside of physical attractiveness, including personal strengths and interests, academic achievements, personality characteristics and values, and relationships with others. Since unhealthy eating (overeating, undereating, or disordered eating) may occur in response to external stress or internal distress, an integrated prevention program could assist youth in identifying healthy strategies for dealing with stressors and uncomfortable emotions (e.g., seeking social support, participation in physical activity, relaxation and coping skills). It may be helpful to discuss reasons for eating (e.g., in response to hunger, emotional distress, and boredom or in social situations), body awareness (e.g., feelings of hunger and fullness), and alternative behaviors to eating when not feeling hungry.

In addition to the aforementioned attitudes and self-perceptions, an integrated prevention program would need to provide accurate knowledge about healthy nutrition, physical activity, and pubertal development. Accurate information about healthy nutrition that includes recommended daily requirements for food groups (e.g., fruits and vegetables), consequences of excessive consumption of high-density, low-nutrient foods, and the dangers of unhealthy weight loss practices could assist in forestalling the development of all forms of unhealthy eating (i.e., excessive consumption or restriction). Information about physical activity, with an emphasis on activities that are easy, convenient, and fun, could reduce sedentary behavior and encourage the pursuit of lifelong patterns of physical activity. The focus must be on providing knowledge needed to make changes in eating and physical activity behaviors, i.e., in order to enhance behavioral capability. Education about healthy pubertal development could prepare youth for the bodily changes that they will experience as they pass from childhood to adulthood (e.g., for girls, increased body fat; for boys, changing voice). By understanding pubertal development, youth may be more willing to accept their changing bodies and, consequently, maintain healthy eating and exercise habits during this significant, potentially stressful developmental transition [43]. Greater acceptance of body changes could circumvent the initiation of weight loss dieting in young women and prevent FIG. 1. Factors that contribute to the onset of disordered eating, eating disorders, and obesity: Model for an integrated approach to prevention.
high-body-weight youth from ceasing physical activity out of shame that their bodies are developing in a manner that is abnormal and unacceptable.

According to social cognitive theory, knowledge alone is insufficient to change behavior; individuals must believe in (i.e., have self-efficacy regarding) their ability to institute behavior change. Therefore, it would be essential for a program to bolster participants’ self-efficacy to make healthy food choices and to resist unhealthy food choices and weight loss practices and to engage in healthy physical activity. This could be accomplished by giving participants plenty of examples of healthy foods and fun physical activities and providing youth with multiple opportunities to practice newly acquired skills in the domains of nutrition and physical activity.

**Socioenvironmental Factors**

Socioenvironmental factors can either promote or serve as barriers to a healthy lifestyle. Social and environmental factors to be addressed in an integrated prevention program include family norms and modeling by family members, peer norms and modeling by peers, and social support provided by family and peers. Also important is the availability of healthy foods (ones that youth perceive as tasty and convenient) within the home and school environments [44]. In addition, the influence of mass media on health is pervasive and strong and must be addressed, for increased time spent with media means that time spent in physical activity is reduced, the consumption of high-fat foods is modeled and reinforced [45], and unrealistic, unhealthy norms of physical appearance are cultivated and reinforced.

Relationships with parents and peers are critical to how youth feel about their bodies and relate to food and physical activity. For example, teasing and critical comments about weight may lead young people to feel dissatisfied with their bodies and to engage in unhealthy weight control behaviors [46,47]. For high-body-weight children, weight-related teasing and stigmatization may lead to helplessness about making healthy food choices and to self-consciousness about engaging in physical activity. Given the importance of relationships with parents and peers, it is not surprising that parental involvement is known to be important in successfully changing children’s health behavior [25]. An integrated prevention program could involve parents by inviting them to be healthy role models for their children and by encouraging them to reinforce their children for adopting healthier lifestyle habits [48]. However, in working with parents, care should be taken in order to ensure that suggestions are realistic (e.g., in terms of financial resources and time availability) and are respectful of the parents’ role as the primary caregivers. Additional challenges arise in working with parents of adolescents due to decreased parental involvement and an increased desire for independence among teens. Parents could be targeted through trainings at the intervention site (e.g., at school); alternatively, materials could be sent home so parents could help their children complete and implement lessons and activities. Parental involvement serves the dual purpose of helping to educate parents about effective child management techniques in general and about healthy eating and physical activity, more specifically [48].

Among adolescent and college-age females, involvement with a peer group that participates in disordered eating is associated with higher levels of disordered eating at the individual level [49–51]. In an integrated prevention program, peer influence could be targeted on at least two fronts. First, an integrated program could focus on establishing norms that discourage unhealthy eating and weight-based teasing and discrimination within a social context (e.g., a school, club, or athletic team) [52,53]. An integrated program could encourage healthy eating habits (e.g., healthier food options in the cafeteria), vigorous physical activity (e.g., mandatory physical education that introduces activities that are fun, simple, and easily transferred outside of the school setting), and greater acceptance of diverse appearance (e.g., a “no-teasing” policy that includes comments made on the basis of weight and shape). In addition to changing contextual factors, youth could be taught strategies to resist peer pressure to engage in unhealthy behaviors related to eating, exercise, and appearance (e.g., binge eating, purging, use of diet pills, laxatives, or steroids).

A number of investigators have documented an association between media that promote a thin standard of beauty and negative body image and disordered eating practices [54–59]. Just as media promote unrealistic, even unhealthy ideals of appearance, they also model and reinforce unhealthy patterns of food consumption. Fast-food commercials encourage consumers to “supersize it” by offering low prices and special promotions for large portions (buy a large popcorn and refills are free!). In addition to the persuasive influence of mass media, time spent engaged with media limits the amount of time that individuals can spend in physical activity. Children ages 8 to 18, for example, spend 6 1/2 h each day using print media, television, videos and video games, radio, CDs and tapes, and computers, thereby limiting the amount of time they have available to spend in other activities outside of sleeping (cited in Robinson, 1999) [45]. An integrated approach to prevention could address media influence by educating youth about the association between media and various unhealthy behaviors (e.g., disordered eating and sedentary activity). In addition, media literacy strategies could be used to teach youth to be more
critical of media messages regarding food and nutrition, exercise, and physical attractiveness. Media advocacy and activism strategies could be used to get youth involved in working toward changing their social environment through the use of appropriate media techniques (e.g., preparing posters discouraging weight-related teasing for their school) and in taking actions toward the media (e.g., responding to negative media advertisements that promote extreme thinness).

Media contribute to and are influenced by the norms and values of the larger culture. Western societies have come to define attractiveness by a narrow standard—in terms of weight and height (tall and thin), age (young), and skin color (white). Diversity education could be used to challenge cultural values that promote a homogenous standard of appearance. Education regarding diverse cultures and persons (including, but not limited to, diverse physical features) could be included to encourage the acceptance of diverse others and to reduce teasing on the basis of being “different.” Diversity education could buffer youth from internalizing a uniform and unrealistic standard of beauty (i.e., thin, tall, white, young, with blond hair and blue eyes) and encourage youth to respect all types of physical features.

Behavioral Factors

An integrated approach to prevention would target changes in personal and socioenvironmental factors in an effort to produce behavioral changes. Distinct programs to prevent either obesity or eating disorders have clear, distinct behavioral aims. Obesity prevention programs encourage participants to monitor and limit the amount (e.g., portion size, calories) and content (e.g., fat and cholesterol) of foods eaten and have as a primary goal reducing one’s body weight. Eating disorder prevention programs encourage participants to reduce self-consciousness about eating and to prevent dieting-related practices. The behavioral targets of an integrated prevention program would need to be broadened to include unhealthy behaviors associated with obesity and eating disorders. These behaviors would include binge eating and unhealthy dieting practices such as excessive restraint and the use of diet pills, laxatives, diuretics, and self-induced vomiting. In addition to identifying and discouraging unhealthy and disordered eating practices, an integrated prevention program would promote healthy eating and physical activity practices, including regular meal patterns, reduced consumption of high-fat foods, increased consumption of whole grains, fruits, and vegetables, and increased physical activity and reduced sedentary behavior. A major goal of the program should be to find an appropriate balance between energy intake and expenditure of physical energy while taking into account one’s stage of growth and development. Guidelines for accomplishing these goals can be found in the eating and physical activity patterns targeted in the year 2010 Healthy People objectives [60] and in the corresponding food guide and physical activity pyramids.

Another behavioral outcome that might be targeted is media consumption. Adolescent obesity has been linked to increased sedentary behavior secondary to time spent engaged with various forms of media [45]. Disordered eating practices have been linked to exposure to media that promote a thin standard of beauty [61]. Reduced media consumption, therefore, might serve multiple purposes, including reduced exposure to unhealthy ideals of physical appearance, reduced sedentary behavior, and reduced exposure to advertisements that promote unhealthy food choices.

Using a Media Literacy/Advocacy Approach

A number of experts in the fields of eating disorders and obesity argue that messages from media—including a “thinning standard” of beauty and encouragement to consume energy-dense, high-fat foods—have contributed significantly to increased rates of dieting, weight preoccupation, clinical eating disorders, and obesity, particularly in girls and women [6,43,59,62]. Researchers who adopt this “sociocultural” perspective argue that teaching citizens to become critical consumers of media messages about body weight and food preferences may prevent body dissatisfaction, weight preoccupation, and preferences for high-fat food products, all of which will help to prevent the establishment of unhealthy eating practices [17]. One approach that may be useful in addressing both obesity and eating disorders within an integrated program for youth is a media literacy/advocacy approach.

Media literacy involves teaching citizens to be more critical, active consumers of the messages portrayed in media. Media literacy is a type of communications intervention that promotes adaptive behavior indirectly, by teaching individuals to evaluate media critically, thereby reducing the credibility and persuasive influence of media messages. Michael Levine discusses the five A’s of media literacy and how they may be applied to approaching the prevention of eating disorders. We propose that these five A’s might also be used in an integrated approach aimed at preventing both eating disorders and obesity. The A’s are: (1) awareness (e.g., awareness of advertising techniques used to promote larger food portions); (2) analysis (e.g., critical thinking about images in the media); (3) activism (e.g., actions taken toward the media, such as protesting advertisements in which women are portrayed as sex objects); (4) advocacy (e.g., actions taken using media, such as developing a girl-friendly magazine); and (5) access (e.g., gaining access to the media and getting messages regarding prevention out to the public) [63]. There is a precedent for using media literacy to change attitudes
and behaviors in youth; media literacy programs that target children have been used successfully to reduce intentions to use alcohol [64] and to increase critical attitudes toward violent media [65]. In addition, media literacy strategies have proven successful at reducing the desirability of looking like a fashion model [16] and at increasing self-acceptance and feelings of empowerment in adolescent girls [18]. To our knowledge, media literacy has not been applied to the domain of obesity prevention; however, an intervention to reduce children’s television viewing was successful at reducing both adiposity and the number of meals eaten in front of the television [45].

There are numerous reasons to develop an integrated prevention program with a core emphasis on media and media literacy. First, many studies have found that media, along with parents, schools, and churches, play a role in teaching youth how to think, look, and act [66,67]. Second, media literacy strategies have shown promise in changing health-relevant attitudes [16,18,64,65]. Third, media play a prominent and ongoing role in the lives of individuals who live in Western society, as reported by Roberts and colleagues, in a 1999 Kaiser Family Foundation Report. They found that children ages 8 to 18 spend 6 1/2 h each day using print media, television, videos and video games, radio, CDs and tapes, and computers. Children of this age have easy access to media; 99% have televisions at home, and 65% have televisions in their bedrooms [67]. It is estimated that, through various forms of media, Americans are exposed to approximately 3,000 advertisements daily [68].

A fourth reason for utilizing a media literacy approach is that media are a form of entertainment, something that people of all ages enjoy and are motivated to learn from and about. Youth may be more inclined to learn about health and nutrition if these topics are presented within the context of contemporary media, including how media messages are created and produced and how they are designed very carefully to influence consumers’ behavior.

A fifth reason to adopt a media literacy approach is that teaching youth to be critical consumers of an external authority (i.e., media) is developmentally appropriate for the “rebelliousness” of adolescence. During adolescence, youth are discovering who they are and what they value; at this time, youth may resist being told what to do (e.g., how to eat). In contrast to a curriculum that directly emphasizes “right” and “wrong” lifestyle choices (e.g., healthy foods and unhealthy foods), youth may be more receptive to a curriculum that promotes healthy behavior indirectly. Encouraging youth to challenge media messages that urge youth to look and behave in potentially unhealthy ways capitalizes on a developmental characteristic.

A final reason for emphasizing media is that media literacy strategies can easily be integrated into the curriculum for a variety of courses. For example, media literacy could be integrated into courses in health and wellness (e.g., media messages regarding food and activity), the humanities and social sciences (e.g., media depictions of ideal beauty and gender roles across time and place; prejudice against fat persons), and the natural sciences (e.g., media depictions of diet products that promote “quick fix solutions” to lose weight, gain weight, or gain muscle mass).

While we have presented a justification for using a media literacy/advocacy approach for integrating obesity and eating disorder prevention, we recognize that this type of approach has limitations. A media literacy approach may not be the best approach for discussing deeper issues (e.g., family interactions, sexual abuse, and personality issues) with relevance for both eating disorders and obesity. Furthermore, although there is some evidence that prevention programs that utilize media literacy/advocacy approaches may impact weight-related attitudes and behaviors [11,16], the impact has tended to be modest. More studies are needed that utilize more intensive intervention strategies, stronger evaluation designs, and longer follow-up periods. Other strategies that focus on health-related issues (e.g., nutrition, physical activity, mental health) or on general life skills (e.g., assertiveness training, decision-making, coping strategies) may also be appropriate for integrated interventions aimed at the prevention of both eating disorders and obesity. Clearly, we must be thinking about how these public health concerns can be addressed by utilizing media literacy/advocacy or other types of approaches.

**CHALLENGES TO AN INTEGRATED APPROACH TO PREVENTION**

In this article we have presented conceptual and practical reasons for adopting an integrated approach to the primary prevention of the spectrum of problems related to eating and weight. We would be remiss, however, if we fail to acknowledge potential obstacles and barriers to developing an integrated approach to prevention. Therefore, in this final section we anticipate practical, philosophical, and economic challenges to developing an integrated approach to the prevention of eating disorders and obesity.

**Differences between Obesity and Eating Disorders**

While there are similarities between obesity and eating disorders, there also are practical, objective differences between these problems. Eating disorders (i.e., anorexia nervosa, bulimia nervosa, and binge eating disorder) are diagnosable psychiatric conditions with corresponding physical features and consequences (e.g., weight loss, amenorrhea, side effects secondary to
starvation, binge eating, compensatory behaviors). Obesity is a medical condition defined through anthropometric measurement (i.e., height and weight) and may not be accompanied by psychological disturbance or distress (e.g., body dissatisfaction). Furthermore, while eating disorders are very gendered with much higher prevalences among females than males, the prevalence of obesity is similar among female and male children and adolescents [3,69].

We would argue that objective differences between eating-related problems are most salient for those persons with an existing diagnosis of a clinical eating disorder or obesity. In that vein, our suggestions for integrating efforts to prevent eating disorders and obesity are most salient for the purposes of primary prevention, that is, efforts to prevent these problems from occurring in asymptomatic individuals [70]. An integrated approach to prevention would help to prevent unaffected individuals from following the trajectory of an eating-related problem by promoting healthy attitudes and behaviors regarding food, physical activity, and body image and by reducing vulnerability to pressures (e.g., from peers, media, family) to engage in unhealthy behaviors.

Elements of an integrated approach could also be used within interventions aimed at secondary prevention (i.e., interventions for those with clear precursors to a disorder) and tertiary prevention efforts (i.e., intervening to minimize the impact of an existing disorder) [70]. Secondary and tertiary interventions for obesity and eating disorders may share certain components, for example, an emphasis on promoting positive body image, healthy lifestyle habits, and increasing resiliency to pressure from peers, family, and media to engage in unhealthy behaviors. That said, it is important to note that the goals of secondary and tertiary prevention for eating disorders and obesity may be quite distinct. For example, in the case of morbid obesity, the goals for intervention may need to be weight loss and healthy weight control strategies. In the case of anorexia nervosa, the intervention goals may need to be weight gain and relinquishing unhealthy weight control strategies. In each of these cases, the treatment goals and measures of treatment “success” are measured differently, and these goals/markers of success may be necessary to prevent morbidity and mortality.

One example of a program designed to prevent both obesity and disordered eating in an “at-risk” population is New Moves, which was developed by the second author and her colleagues at the University of Minnesota [12,71]. The program, which targets girls who are overweight or at risk for overweight, was developed out of concerns over the increased prevalence of obesity in youth and an awareness of an overlap between adolescents’ weight loss efforts and reliance on unhealthy dieting practices. New Moves is designed to promote healthy nutrition and lifelong exercise in adolescent girls who are overweight, or at risk for overweight, due to low levels of physical activity. However, New Moves is more than an “obesity prevention program.” In addition to physical education and nutrition components (both of which are commonly included in obesity prevention programs), New Moves includes a social support component that addresses media pressures to conform to a uniform standard of beauty; the importance of support from family, peers, and others; identifying role models of all shapes, sizes, and diverse backgrounds; and coping with pressures to diet (e.g., teasing, discrimination based on weight). The program’s principal aims include increased physical activity, reduced consumption of high-fat foods, improved body image and self-esteem, and reductions in unhealthy dieting practices associated with eating disorders (e.g., fasting, use of diet pills and laxatives, self-induced vomiting). New Moves was developed following a comprehensive needs assessment including in-depth interviews with overweight adolescent girls in which they made clear recommendations for program development.

New Moves is currently being implemented and evaluated. A major challenge faced in implementing the New Moves program has been the development of messages that are appropriate for girls with different types of weight-related concerns and behaviors. Whereas some overweight girls may not be aware of their eating patterns and their potential impact for weight gain, other girls are alternating between restrictive dieting and binge eating. Nevertheless, the investigators’ initial impression is that the potential benefits of such an approach far outweigh its disadvantages.

Philosophical Differences between the Fields of Obesity and Eating Disorders

Philosophical differences between those who study obesity and those who study eating disorders are daunting barriers to integrated approaches to obesity and eating disorders prevention. The field of obesity is dominated by a medical or behavioral approach to understanding issues of high body weight; conversely, the field of eating disorders has traditionally emphasized the role of psychological and social factors in the development, prevention, and treatment of these problems. On the surface, these philosophical differences may seem minor and of little consequence; however, in practical terms, these differences can be experienced as irreconcilable. One possible “irreconcilable” difference is how these respective fields conceptualize “dieting.” To those who study obesity, caloric restriction and increased physical activity are essential behavioral solutions to a public health problem of epidemic proportions. In contrast, to those who study eating disorders, dieting is a final “trigger” in a series of events that can lead to an eating disorder in vulnerable individuals.
Many eating disorder professionals argue that effective prevention and treatment of eating disorders requires a complete relinquishment of dieting behaviors.

A second potential irreconcilable difference between the fields of obesity and eating disorders is how these respective groups think about body dissatisfaction. To those who study obesity, dissatisfaction with one’s current body weight may be seen as appropriate and necessary to motivate individuals to participate in a weight loss program. To those who study eating disorders, however, body dissatisfaction is a "risk factor" for the later development of disordered eating habits. Prevention and treatment of eating disorders typically encourages self-acceptance at any size, with a goal of greater body satisfaction regardless of one’s objective weight and shape. To be accepted by the fields of both eating disorders and obesity, an integrated approach to prevention would need to balance the importance of healthy lifestyle habits that includes a healthy, balanced diet with lifelong physical activity and an acceptance of the diversity of the human body, including its height, weight, and shape.

Sociopolitical Obstacles

Perhaps the biggest obstacle to the integration of eating disorders and obesity prevention is the political nature of this work. An integrated approach to prevention involves challenging social norms, the cultural context, and economic interests that glorify thinness, stigmatize fatness, and simultaneously promote both dietary indulgence and restraint. Even politically active scholars who study eating disorders acknowledge that these macrolevel influences will not be easily challenged or changed [4,5,72–74]. In committing ourselves to an integrated approach to preventing the spectrum of problems related to food and weight, we must meet social and cultural obstacles head-on by acknowledging our own role in participating in and perpetuating an environment around food and weight that exults thinness, stigmatizes fatness, encourages unregulated consumption of calorie dense foods, and promotes quick fixes to weight loss [6,36,52,73,75–77]. This commitment involves challenging personal and cultural beliefs about food and weight and being proactive in challenging macrolevel actions that contribute to the spectrum of problems related to food and weight (e.g., ad campaigns, school policies, federal funding decisions, legislative policies). For example, on a personal level we can adopt healthy eating and exercise habits and challenge derogatory self-talk regarding food and weight. On an interpersonal level, we can promote a healthy lifestyle in our families, confront friends and family members who tell "fat" jokes, or approach a colleague who is discriminatory in how they treat students or clients who are thin or fat. Within school systems, we can work toward the integration of appropriate messages, educational programs, and school policies (e.g., regarding weight-related teasing). Staff training is needed for teachers regarding their potential role in transmitting positive messages to youth and for school administrators regarding a need for adequate resources to implement additional programs. Finally, we can be proactive in demanding more research funds for the development and evaluation of interventions aimed at preventing unhealthy weight control behaviors and harmful social norms that promote these behaviors.

WORKING TOWARD AN INTEGRATED APPROACH

The high prevalence and potentially serious psychosocial and physical consequences of eating disorders/disordered eating and obesity clearly indicate a need for interventions aimed at their prevention. An integrated prevention approach that addresses the broad spectrum of weight-related conditions appears to make sense in light of the overlap between these conditions and the potentially harmful consequences associated with addressing only one end of the spectrum. An integrated approach may also help when addressing practical needs associated with limited time availability within schools and clinical settings and with limited funding resources for program implementation and evaluation.

Nevertheless, the development of interventions aimed at the broad spectrum of weight-related disorders presents a number of challenges. Professionals from eating disorders and obesity fields may have differing philosophies as to the types of messages to be relayed within interventions. Furthermore, the messages to be relayed within interventions that address the broad spectrum of weight-related disorders may be more complex than in interventions that aim to prevent only one end of the spectrum. We believe that many of these challenges may be met through the fostering of collaborative relationships between eating disorder and obesity professionals. It is essential to continue to open up lines of communication between professionals working in the fields of eating disorders and obesity through formal networks (e.g., shared conferences and journals) and through informal conversations.

Finally, and most importantly, it is essential to experiment with different types of approaches and to include evaluation components to assess the impact on the broad spectrum of weight-related concerns, behaviors, and conditions. It may not be possible to adequately address all of the factors presented in this paper within a single intervention. Through the comparison of the effectiveness of different types of approaches that address different factors, the most salient factors to be addressed will become clearer. Through the allocation of adequate resources for the development, evaluation, and continual refinement of interventions, approaches toward preventing eating disorders and obesity will become more effective.
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