

## **The Role of Teachers and Other Educators in the Prevention of Eating Disorders and Child Obesity: What Are the Issues?**

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*This paper examines the important contribution that teachers and other educators (including health educators, school nurses, school counselors, school psychologists, and sports coaches) have to offer in the prevention of eating disorders and child obesity. Our paper notes the important contribution of school educators whilst warning of the current need to specifically examine how teachers and school personnel may be best trained and prepared for such a preventive role, whether they currently feel willing and able to undertake such a role, and whether some groups of teachers may be personally susceptible to body image and eating problems. It is vital to understand the knowledge, behaviors, attitudes, and expectations of educators implementing prevention programs in order to ensure that they are personally and professionally capable of carrying out prevention initiatives in schools. Individuals involved in food and exercise-related careers have been identified as being at environmental and situational risk for body image and eating problems, and it may be possible that they chose their career path due to their own personal experience with eating disorders or weight issues. In such cases, specific training or assistance may be required in order to enable the educators to conduct effective preventive activities. Discussion focuses on what needs to be done in order to enable teachers and other school-based educators to perform most effectively in the implementation of school based eating disorder and child obesity prevention programs.*

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Schools have been recognized as an appropriate setting for the prevention of eating disorders and child obesity due to the continual and concentrated access to a large number of individuals at a developmentally appropriate age (Neumark-Sztainer, 1996; O'Dea, 2000; O'Dea & Abraham, 2000; Smolak, Harris, Levine, & Shisslak, 2001; Piran, 2004). In addition to providing access to children and adolescents, school based programs offer the opportunity for curriculum support and reinforcement using a whole school approach to health promotion (Smolak, Levine, & Schermer, 1998; O'Dea & Maloney, 2000). Although much emphasis and evaluation have been directed towards the theoretical grounding and content of prevention programs, few studies have investigated the nutrition and weight control knowledge, attitudes, and behaviors of those who are delivering them (O'Dea & Abraham Smolak et al. 2001).

Many school and health professionals are perfectly positioned and have the potential to become involved in the prevention or treatment of eating disorders and child obesity. Physical education and health teachers have formal and informal access to a large number of young people in an environment that stimulates discussion and allows for lessons about body image, nutrition, and weight control (O'Dea & Abraham, 2001; Smolak et al., 2001). These teachers also have the chance to initiate the reinforcement of prevention programs using the whole school approach (Neumark-Sztainer, 1996; O'Dea & Maloney, 2000). Home Economics, Science, Dance, and English teachers have opportunities to become involved in preventive activities within their appropriate curriculum areas as well as through involvement in pastoral care roles such as advisors, student welfare coordinators, and head teachers. Health care workers in schools, such as school counselors and school nurses also have many opportunities to present information to students and implement prevention programs (Neumark-Sztainer, Story, & Harris, 1999).

At present, schools do not make the most of these potential opportunities for the prevention of eating disorders and child obesity. School teachers and school personnel receive little or no training in nutrition or prevention techniques, and they consistently report a lack of knowledge as a barrier to implementing prevention programs (Neumark-Sztainer, Story, & Collier, 1999; Stang, Story, & Kalina, 1997). The knowledge, attitudes, and willingness of school professionals must be considered before deeming them prepared and capable of implementing prevention or treatment programs. In addition, such intervention also would serve to protect the well-being of the professionals and the students and promote the likely success of prevention initiatives.

This paper aims to examine the role of teachers and other school professionals (such as health educators, school nurses, school counselors, school psychologists, and sports coaches) in the prevention of eating disorders and child obesity with a specific examination of (1) whether teachers and school professionals are currently adequately trained and prepared to undertake a preventive role; (2) whether this training is likely to affect their

attitudes; and (3) whether the teachers and other school education professionals are susceptible to body image and eating problems themselves. Finally, the paper aims to examine recommendations for a coordinated approach that would enable teachers and other school-based educators to perform effectively in the implementation of eating disorder and child obesity prevention programs.

### ISSUES OF PROFESSIONAL TRAINING AND PREPAREDNESS

Knowledge of eating disorders, nutrition, and obesity is expected and assumed, but not guaranteed, among professionals who are likely to be involved in the prevention of eating disorders and obesity. Teachers and school professionals receive little training in nutrition and techniques used in prevention of eating disorders/obesity, and this lack of knowledge is reported as a barrier to the implementation of prevention initiatives (Neumark-Sztainer, Story, & Collier, 1999; Stang et al., 1997). In her study of 114 school professionals in the US, Neumark-Sztainer, Story, & Collier, (1999) found that no participant was currently involved in staff training to learn prevention tools, yet 72% indicated a high or very high interest in the area. An additional problem is that school professionals are becoming confused about their role in the prevention of eating disorders and child obesity with many believing that they should be providing treatment. This lack of knowledge and clearly defined roles may be linked to the current low level of teacher involvement in preventive efforts and the modest impact of school-based prevention initiatives.

The nutrition training that school professionals receive is limited and is largely dependent upon the subject in which they are trained, the university that they attended, and the teacher's personal interest in the topic. Teachers (Neumark-Sztainer, Story, & Harris, 1999), school nurses (Price, Desmond, Ruppert, & Stelzer, 1987), and elementary school principals (Price, Desmond, & Stelzer, 1987) have a poor knowledge of the causes of obesity; with the majority holding largely outdated and simplistic views about obesity being exclusively related to excessive calorie consumption and lack of physical activity whilst ignoring biological or genetic factors. In a recent study O'Dea and Abraham (2001) found that 87% of physical education and home economics trainee teachers reported giving strict and unsuitable dietary advice to overweight young adolescent students, such as recommending that they go on a 1,200 calorie diet. The teachers also had poor knowledge and many misconceptions about the etiology and effects of eating disorders. School professionals have been shown to both require and demand further training to assist them in the prevention of eating and weight related problems in schools.

A study of coaches and trainers of high school athletics teams in the US (Graves, Farthing, Smith, & Turchi, 1991) found considerable variance in the amount and nature of professional training the school sports staff had received. The study also found that coaches and trainers scored poorly on a test of nutrition knowledge (59% and 64%, respectively) and did not feel that it was their responsibility to disseminate nutrition information, despite the nature of their exposure to the students offering many opportunities for them to do so (Graves et al.). In another US study, Price and colleagues (1990) found that 40% of school counselors did not feel competent in helping students with eating disorders and 49% reported that they felt only moderately competent. Half of the school counselors also reported using the mass media as a source of information about nutrition and eating disorders (Price, Desmond, Price, & Mossing, 1990). Similarly, the knowledge and skills of school nurses has been emphasized as crucial in their role of detection of eating disorders, yet the nutrition and weight-related training of this important group of health professionals is known to be inadequate (Connolly & Corbett-Dick, 1990).

High proportions (70%) of high school science, physical education, health, and home economics teachers have shown interest in staff training to improve their knowledge and skills in the prevention of weight-related disorders (Neumark-Sztainer, Story, & Collier, 1999; Stang et al., 1997). Lack of training (53%) and lack of educational materials (42%) have been identified as major barriers to the implementation of weight management information in schools (Stang et al.). School professionals attending an Australian conference about the prevention of eating disorders also requested increased staff training in preference to other resources to enable them to implement prevention activities in schools (Yager, 2003). Although this evidence may indicate a low level of current knowledge and skills, it is promising in that it suggests that school professionals would be dedicated to the school-based prevention of obesity and eating disorders provided they were adequately trained.

### Prepared for Prevention or Treatment?

The roles of teachers and school personnel in the prevention or treatment of child obesity and eating disorders need to be clearly defined. The clinical treatment of such disorders should remain the realm of trained professionals who are capable of implementing an appropriate treatment regime. Teachers should not be expected to become involved in activities that encroach on clinical treatment or any activity that may inadvertently delay appropriate referral or treatment of individuals. Such inappropriate activities would include attempts to counsel the child or the prescription of diets or weight control regimes.

The separation of clinical treatment and prevention of eating disorders and child obesity should be made very clear to school personnel. School professionals have a variety of formal and informal opportunities for the prevention of child obesity and eating disorders. However, at present, many seem to believe that they are responsible for the treatment of weight related disorders; a role that is better left to professionals who are more appropriately trained. Surveys have reported that teachers and school health workers (Neumark-Sztainer, Story, & Collier, 1999), elementary school principals (Price, Desmond, & Stelzer, 1987), and school nurses (Price, Desmond, Ruppert, & Stelzer, 1987) believe that the school should play a role in the treatment of obesity, but the majority of respondents believed that they were currently not competent to do so. Elementary school principals named the school nurse (77%), the school counselor (69%) and the physical education teacher (59%) as the school professionals who should play a major role in the treatment of childhood obesity in schools (Price, Desmond, & Stelzer, 1987). One quarter of school counselors believed that it was their responsibility to treat students for eating disorders (Price & Mossing, 1990).

It is vital that the distinction between the school's role in the prevention and treatment of eating disorders and obesity be highlighted in future teacher training programs. School professionals must be reminded of the prospect of informal and formal opportunities for prevention, and of their important role in the early detection of eating disorders and obesity. They must be clearly advised about appropriate and inappropriate treatments for weight related disorders, and, most importantly, teachers need to be trained to establish and follow proper processes of referral for at-risk students. Schools do not need to be burdened by the responsibility of providing treatment for these problems, nor to they possess the resources or suitably trained professionals to do so.

### Issues of Referral

In the research literature to date, school professionals report referring at-risk students to general practitioners, counselors, and dietitians (Graves et al., 1991; Price et al., 1990). However, medical professionals such as dietitians (Story et al., 2002), pediatricians (Story et al.), and general practitioners (Gurney & Halmi, 2001) report that their own lack of knowledge is a barrier in the treatment of obesity and eating disorders. In particular, dietitians and pediatricians report limited knowledge about behavioral management and providing guidance on parenting techniques (Story et al.). In addition, 90% of doctors did not feel that their knowledge of nutrition was adequate enough for them to feel confident in providing nutritional counseling (Kushner, 1995). It may seem that the medical profession is also unprepared for the proliferation of weight-related disorders with a lack of specialized professionals to treat obesity and eating disorders in young people.

## Attitudes Toward Obesity and Eating Disorders

Reports of negative attitudes towards individuals who are obese in employment, medical, and education settings dominate the literature (Puhl & Brownell, 2001). This has been linked to the stigma attached to being overweight, the pervasive dominance of the thin ideal, and the perception that individual factors are the main causes of obesity. Health professionals presumed to be most knowledgeable about obesity, and who work closely with obese people in research or treatment, are not immune to bias, prejudice, and discrimination toward their overweight patients. Research studies have utilized implicit attitude tests that enable the measurement of automatic associations that exist beyond conscious control that individuals may be unaware of, or unwilling to report. These measures have consistently shown professionals and the general public to have implicit negative attitudes towards obesity and obese people (Schwartz, O'Neal Chambliss, Brownell, Blair, & Billington, 2003; Teachman & Brownell, 2001). One study found that medical students characterize obese individuals as lazy (57%), sloppy (52%), and lacking in self-control (62%). Negative attitudes and bias towards obese individuals were particularly prevalent among those professionals who were young and female (Schwartz et al., 2003).

School professionals often incorrectly identify individual behaviors such as over consumption and inactivity as the major or only causes of obesity (Neumark-Sztainer, Story, & Harris, 1999; Price, Desmond, & Stelzer, 1987). This has been suggested to lead to a negative, "victim blaming" attitude towards obese people (Neumark-Sztainer et al., 1999; Schwartz et al., 2003). Teachers have been shown to associate thinness with intelligence, motivation, and willpower (Piran, 1998). The development of appropriate attitudes towards obesity among teachers and other school professionals is crucial in the effectiveness of prevention programs (O'Dea, 2000; O'Dea & Abraham, 2001; Piran, 1998; Stewart, 1998).

The relatively low clinical prevalence, covert behavior of individuals with eating disorders, and considerable media interest in the conditions has led to a variety of attitudes towards sufferers. While dieting and body dissatisfaction are generally accepted as a type of "normative discontent" for women (Rodin, Silberstein, & Striegel-Moore, 1985, p. 267), eating disorders still tend to carry a stigma different to the majority of mental illnesses (Mond, Hay, Rodgers, Owen, & Beumont, 2004). Research regarding the attitudes of the lay public in Britain reported that one third of respondents believed that people with eating disorders could "pull themselves together" and had only themselves to blame for the development of their disorder (Crisp, Gelder, Rix, Meltzer, & Rowlands, 2000). School professionals have been shown to have misperceptions about the causes and development of eating disorders which could perpetuate negative attitudes by passing them on to students (O'Dea & Abraham, 2001).

## Eating and Exercise Behaviors of School Professionals

School professionals are expected to implement prevention programs for eating disorders and obesity, yet there has been no prior investigation of their personal and professional capability in these roles. Evaluations of prevention programs for eating disorders and obesity have articulated the importance of the personal body image and eating behaviors of those presenting the programs (Bassler, 2001; Piran, 1998,2004; Rutz, 1993; Stewart, 1998). School professionals are likely to be influenced by the same socio-cultural factors as other adults. There is also the possibility that home economics and physical education teachers may be more susceptible to body image and eating problems due to a personal preoccupation with, or interest in, food, exercise, and weight control, which has led them into that professional field of study (O'Dea & Abraham, 2001).

There is a paucity of research into the body image, dieting, and eating behaviors of teachers and school professionals. One report of junior and senior high school teachers and health workers in the US found that 76.6% were practicing some form of weight control, with 48.6% trying to lose weight and 28% trying to keep from gaining weight (Neumark-Sztainer, Story, & Harris, 1999). High numbers of Australian female trainee physical education and home economics teachers report currently dieting to lose weight (47%), and a further 14% believed that they currently had an eating disorder (O'Dea & Abraham, 2001). Both male and female teachers reported engaging in dangerous dieting behaviors such as excessive exercise, trying to induce vomiting, starvation, and using laxatives. These findings were particularly significant as the majority of participants were in the normal or under weight ranges (O'Dea & Abraham, 2001). The potential for teachers to transfer these unhealthy and undesirable behaviors to their students needs to be ascertained and acknowledged.

### ISSUES OF SUSCEPTIBILITY TO EATING PROBLEMS

Dieting, body dissatisfaction, weight preoccupation, disordered eating, and exercise behaviors, are documented among normal weight, non-clinical populations of women (Crawford & Worsley, 1988; Hill, 2002; Kenardy, Brown, & Vogt, 2001), men (Drummond, 2002; O'Dea & Abraham, 2002), and university students worldwide. Body image and weight control issues affect the majority of young adults in some way and to some degree. Research is yet to conclude if those in food and exercise related careers are more susceptible to these problems and if food, body, and weight related attitudes and behaviors of professionals may be modeled and transferred to their students and clients.

Some studies have found individuals in food and exercise related career paths to be at risk for engaging in disturbed dieting and exercise behaviors to the same or higher extent as the general population (Kinzl, Traweger, Trefalt, Mangweth, & Biebl, 1999; McArthur & Howard, 2001; O'Dea & Abraham, 2001; Palmquist-Fredenberg, Berglund, & Dieken, 1996; Worobey & Schoenfeld, 1999). They are exposed to similar socio-cultural pressures as other adults, yet their career path is highly involved with food, eating, and weight control. A preoccupation with food and exercise is known to be characteristic of some individuals with eating disorders (Larson, 1989; Worobey & Schoenfeld, 1999) and it has been suggested that this may cause them to gravitate towards careers that are food and exercise related (Crockett & Littrell, 1985; Reinstein, Koszewski, Chamberlain, & Smith-Johnson, 1992; Sours, 1980). Kinzl and colleagues (1999) reported that 14% of the Austrian dietitians studied had chosen their career path partly due to their own preoccupation with food and exercise.

There is evidence supporting the premise that professionals in food and exercise related career paths are susceptible to eating and weight control problems. The personal lifetime prevalence of eating disorders among eating disorder treatment professionals has been self-reported to range from 27.3%–31% (Barbarich, 2002; Bloomgarden, Gerstein, & Moss, 2003). This proportion reflects prevalence significantly higher than that of the general population. These findings were accompanied by evidence that not all professionals had received treatment, and that 24 percent had experienced a relapse after entering the field (Barbarich, 2002).

Anecdotal and empirical evidence have revealed disordered eating pathology, behaviors, and symptoms among students enrolled in dietetics majors (Crockett & Littrell, 1985; Drake, 1989; Johnston & Christopher, 1991; Joseph, Wood, & Goldberg, 1982; Kinzl et al., 1999; McArthur & Howard, 2001; Palmquist-Fredenberg et al., 1996; Reinstein et al., 1992; Worobey & Schoenfeld, 1999). Approximately 24% of dietetics majors in the US (Drake, 1989) and 25% in Austria (Drake; Kinzl et al., 1999) were found to exhibit characteristics of anorexia nervosa. Dangerous weight loss techniques such as fasting, vomiting, using laxatives, and skipping meals also were reported to be used by trainee dietitians even though they would not recommend these techniques to clients, and some dietitians reported that they continued to use the techniques even though they did not find them useful (McArthur & Howard, 2001).

Personal trainers and aerobics instructors are often perceived as more approachable and credible sources of nutrition and weight control information than doctors due to their lean, muscular appearance despite the fact most that have received no formal training in nutrition (Barr, 1986; Kirk & Tinning, 1994; Soper, Carpenter, & Shannon, 1992; Vertinsky, 1985). Employment in the health and fitness industry is unique in that the knowledge and com-

petence of staff is intentionally or subconsciously judged by appearance. A recent study of male fitness leaders in Australia revealed comments such as:

In this industry you have to look the part. I mean, there's no point in having someone who's overweight as a fitness leader. It's not the right image. You've got to look fit (Phillips & Drummond, 2001, p. 99).

Health and fitness professionals are therefore subjected to a myriad of intrinsic and external pressures to achieve the coveted lean, muscular appearance. This may lead them to engage in exercise behaviors and other dangerous weight loss techniques (Brownell, Rodin, & Wilmore, 1992; Phillips & Drummond, 2001).

Physical education teachers are presumed and expected to be slim, physically fit, and to embody the lean, muscular ideal body shape (Clark, Blair, & Culan, 1988; Davis, 1999; Jenkins & Olsen, 1994; Kirk & Tinning, 1994; Melville & Cardinal, 1997; Melville & Maddalozzo, 1988). In order to adhere to this idealistic and often unattainable goal, extreme forms of dieting and weight control may be employed. In a large study of female undergraduates in Australia, many of whom were trainee teachers, O'Dea (1999) found that almost half were currently dieting, including 42% of those with a Body Mass Index [BMI] below 18 and classified as clinically underweight (O'Dea, 1999). In another study of young female teachers, 29% reported using excessive exercise, 19% used starvation, 22% induced vomiting, 19% used laxatives, and 7% used smoking to control their weight (O'Dea & Abraham, 2001). Among male teachers, 29% desired weight gain to "bulk up" their muscles and some reported disordered eating behaviors (O'Dea & Abraham, 2001).

The susceptibility of professionals involved in the prevention and treatment of eating disorders and obesity to eating and weight issues themselves may present serious issues in terms of their own health. Furthermore, attitudes and behaviors may be inadvertently modeled or intentionally transferred to students, patients, or clients (O'Dea, 2000; Rutz, 1993). On a more positive note, teachers and school personnel who have been treated for and recovered from eating disorders or who have had a personal history of weight problems may be more empathetic and sensitive to students with similar issues.

### "FIRST, DO NO HARM"

To date, the majority of eating disorder prevention programs have produced moderate results in terms of effecting attitudinal and behavioral change. Programs aimed at the treatment and prevention of childhood obesity have had similarly disappointing results, with most failing to achieve significant change of target behaviors (Campbell, Waters, O'Meara, Kelly, & Summerbell, 2004; Donnelly et al., 1996; Epstein et al., 2001; Gortmaker et al., 2000;

Mo-Suwan, Pongprani, Junjana, & Peutpaiboon, 1998; Muller, Mast, Asbeck, Langnase, & Grund, 2001). It is crucial that program developers and implementers recognize the potential for potentially negative effects of programs designed to prevent eating disorders and child obesity (Garner, 1985; O'Dea, 2000, 2004). Although research into eating disorder programs confirms that planned interventions to date have not been iatrogenic (Stice & Shaw, 2004), the potential for adverse effects from unplanned, unsupervised, and unproven programs is still a matter of concern. For example, the authors are aware of several schools in the US and Australia where teachers have set up weight loss groups for overweight female adolescent students. One of the schools in question used a weight-loss sponsoring program as a fund-raising activity wherein girls who lost the most weight raised the most money. This sort of intervention is obviously unhelpful, inappropriate, and dangerous.

School professionals' knowledge of nutrition, weight control, and preventive techniques is known to be poor (Graves et al., 1991; O'Dea & Abraham, 2001; Price et al., 1990) and studies have reported that school professionals intentionally give students weight control advice that is inappropriate and dangerous (O'Dea & Abraham, 2001; Price, Desmond, Ruppert, & Stelzer, 1987). This may result in lessons about child obesity and eating disorders providing misinformation, inappropriate advice, transference of attitudes and behaviors, and perpetuation of the thin ideal as well as increasing weight concerns and weight loss attempts among all children and adolescents, even those who are of normal weight status (O'Dea, 2000; Parcel, Green, & Bettes, 1988). In other words, such educational approaches may "suggest to students that they could or should be trying to lose weight, and to inform them of new ways to do so" (O'Dea, 2000, p. 126).

It has been suggested that programs featuring recovered peers and celebrities may glamorize eating disorders, normalize dieting and disordered eating, and have the potential to introduce students to dangerous dieting and disordered eating behaviors such as vomiting and cigarette smoking (Garner, 1985; O'Dea, 2000; Tomeo, Field, Berkey, Colditz, & Frazier, 1999). School-based obesity prevention programs have the potential to endorse negative labeling of fat children and to promote excessive food restrictions. It is imperative that those developing and implementing eating disorder or child obesity prevention programs take note of previous ineffective and negative approaches and deliberately aim to develop new educational programs that "do no harm" (O'Dea, 2000, 2004).

## MODELING AND TRANSFERENCE OF ATTITUDES AND BEHAVIORS

The influence of the teacher or program presenter on the success of programs aimed at preventing child obesity and eating disorders is largely unexplored. There is the possibility that teachers and school professionals, who have been shown to have low perceived competence in (Price et al.,

1990; Price, Desmond, & Stelzer, 1987); misconceptions of (Graves et al., 1991; O'Dea & Abraham, 2001); and susceptibility to (O'Dea & Abraham, 2001; Reinstein et al., 1992; Worobey & Schoenfeld, 1999) nutrition, body image, and weight control problems and have the potential to model and transfer these attitudes to their students.

Bandura's (1986) social learning theory recognizes the significant opportunity of teachers to vicariously influence student behavior by role modeling, normative practices, and social support. Interestingly, applied studies also confirm that role modeling plays a significant role in the success of school physical education programs (Clark et al., 1988; Davis, 1999; Jenkins & Olsen, 1994), and that the student's observation of their teacher's behavior has a greater influence on their learning than their verbal communication (Bryan & Walbek, 1970; Spencer, 1988; Westcott, 1979). Although teachers have little control over whether their students perceive them as role models, the possibility of vicarious learning in and outside of the classroom always exists (Bandura, 1986; Davis, 1999).

Much research has investigated the potential for modeling positive health behaviors such as participation in physical activity (Cardinal, 2001), however little has been done to investigate modeling undesirable and inappropriate behaviors that may cause harm. Bulimic symptoms in adolescents have been reported to be increased due to the social reinforcement of the thin-ideal and direct modeling of unhealthy attitudes from peers, family, and the media (Stice, 1998). Physical education teachers are known to be under social (McCarthy, 1990; Mishkind, Rodin, Silberstein, & Striegel-Moore, 1996), personal (Phillips & Drummond, 2001), and employment related (Melville & Cardinal, 1997) pressure to be slim and physically fit, and they may use dangerous dieting and weight control practices (O'Dea & Abraham, 2001). There is anecdotal and empirical evidence to show that some physical education teachers are likely to be transferring their own negative body image, as well as their inadequate knowledge and inappropriate beliefs and attitudes about food, exercise, and weight control to students (O'Dea, 2002; O'Dea & Abraham, 2001; Rutz, 1993; Stewart, 1998).

Due to the complex nature of eating disorders and child obesity, and the strong emotional and psychological connections among food, exercise, weight control, and body image, it is dangerous to place individuals who have little knowledge about nutrition and prevention science and who are susceptible to, and dealing with, body image and weight control problems in positions to teach about these sensitive topics in schools. There is potential for inadvertent harm through misinformation, simplification of weight control attitudes, glamorization, and normalization of eating disorders and perpetuation of the thin ideal. In order to "do no harm" and implement effective school based prevention for obesity and eating disorders, the personal and professional ability of those implementing any aspects of these programs must be evaluated. To address this potential problem appropriate training or re-training must be provided in the substance of any preventive package or as an early part of any preventive activity. These important issues are outlined in more detail below.

## Implications for Teacher Training and Re-Training

The apparent lack of knowledge and susceptibility to body image and eating problems in professionals dealing with such issues in schools has implications for university teacher training programs as well as in-service training programs for current teachers.

College and university training programs for school professionals should assess and address the personal and professional needs of future health educators. They should aim to include information about the detection, prevention, and treatment of eating disorders and obesity in such a way that dispels popular myths and negative attitudes. It has been suggested that a combined primary and secondary prevention approach is ineffective in the college setting (Mann, Nolen-Hoeksema, & Huang, 1997). Research has recommended that the knowledge, attitudes, and behaviors of all school professionals be addressed using a didactic, psycho-educational approach to training about nutrition and eating disorders rather than an information-giving approach (Drake, 1989; Higgins & Gray, 1998; Springer, Winzelberg, Perkins, & Taylor, 1999; Zabinski et al., 2001). This should include training in prevention science and preventive techniques, and preparation for teaching about weight control and weight related issues. Students at high risk of disordered eating problems may need to be identified and given specialized psycho-educational interventions to improve their body image and eating behaviors. The importance of school professionals having appropriate body image and weight control knowledge, attitudes, and behaviors should also be emphasized in terms of the potential for students to view teachers and school professionals as appropriate role models.

In-service training for school professionals should be directed at their personal and professional needs. It has been suggested that the use of a school resource person would be an efficient method of in-service training and implementation of prevention programs (Piran, 2004; Smolak et al., 2001; Yager, 2003). Smolak and her colleagues argue that there is at least one person within every school who has an interest in body image, eating disorders, and child obesity. The existing motivation and knowledge of this person is then put to use, and he or she should receive appropriate, controlled, and planned training, which would allow him or her to conduct staff training sessions and act as a resource if students or staff have any questions (Smolak et al., 2001).

The prevention programs developed and tested by eating disorder prevention specialists and child obesity prevention experts should make certain to include a teacher training component to their programs. Teacher training may be addressed by providing accurate and up-to-date information, factual content, attitudinal testing activities, or continuing education classes. Grant applicants would be well advised to write such budget requirements into their grant proposals and grant reviewers should identify the obvious need to train those who are expected to undertake intervention roles.

## CONCLUSION

Teachers and school personnel have a valuable contribution to make in the prevention of eating disorders and child obesity but school personnel have been largely under utilized as such potential change agents. In fact, failure to investigate the nutrition, dieting, and weight control knowledge, values, attitudes, and behaviors of teachers and other school professionals involved in the treatment or prevention of obesity and eating disorders in schools may be one factor that could explain the modest success of some of these prevention programs. It is possible that school professionals are unknowledgeable about nutrition, prevention science, and appropriate methods of prevention for eating disorders and obesity. They also may be susceptible to body image and weight-related problems themselves, especially if they are young and female. Furthermore their professional role and experience may not necessarily protect them against having significant levels of anti-fat bias. The combination of these factors may have a significant impact on the success of prevention initiatives, in particular, due to the potential for inappropriate role modeling and transference of these attitudes and behaviors.

In order for future prevention of eating disorders and child obesity to be successful, preservice and ongoing training for the various school professionals involved are urgently required. This training must increase their knowledge of nutrition, eating disorders, obesity, and preventive techniques. Taking a psycho-educational approach as a form of secondary prevention is likely to improve the personal weight-related attitudes and behaviors of school professionals. Finally, teacher-training programs should stress the importance of school professionals having a healthy body image and address appropriate weight control practices in order to assure the appropriate modeling and transference of these attitudes and behaviors to the many students in their care. These coordinated measures are required in order to fully utilize schools as a setting for prevention initiatives, to improve the success of future prevention initiatives, and to promote the health of our young people.

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