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Primary Prevention of Eating Disorders in Children and a Proposed Parent Education Program

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Research suggests that body dissatisfaction and concern with weight gain, characteristic of eating disorders, begin in childhood. Given that eating disorders have a complex etiology, are often treatment resistant and result in chronic problems, prevention programs offer great appeal. The attitudes underpinning eating disorders begin during childhood, yet remain somewhat malleable, suggesting that prevention programs initiated during elementary school offer the best possibility for success. The current article reviews research on the etiology of eating disorders, general principles of prevention programs, and specific eating disorder prevention efforts developed thus far. The article proposes a parent education program aimed at promoting healthy eating attitudes and body satisfaction in children to help prevent the onset of eating disorders. The target population consists of the various adults involved in a young child's life, such as parents, teachers, coaches, and mentors. Children in grades 3 through 6, approximately ages 8 to 12, are a particularly important group to target. The program is composed of four one-hour sessions, scheduled on four consecutive Saturdays, and is offered twice during the academic year. The first three sessions involve parents, teachers, coaches, and mentors and are didactic and interactive in nature. The fourth session includes the children, and involves an interactive puppet show. The current article concludes with a critique of the program and suggestions for future research.

Significance of the Problem

Younger and younger children are increasingly concerned about their body size and eating behaviors (American Academy of Pediatrics, 2003). Such concerns are often associated with changes in weight, a normative and important part of child development. Although adolescence typically involves prominent bodily change, younger children also experience significant physical growth. The body can change significantly over short periods, adding inches to one's height, drastically altering one's shape, and creating shifts in weight (U. S. Department of Health and Human Services, 2002). Therefore, it is no wonder that some children endure what is commonly known as "growing pains." While the term "growing pains" typically refers to physical aches and pains, physical maturation can have an emotional impact as well, particularly in children whose personalities tend toward perfectionism, inflexibility, and constraint (Klump et al., 2004). Constant, perhaps relentless, physical change requires a tolerance for uncertainty and a degree of adaptability in both the child and his or her family (Polivy & Herman, 2002).

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The emergence of fears around weight gain is embedded within a cultural context that both glorifies the pursuit of thinness and venerates engagement in dieting behaviors, which reinforces body dissatisfaction (Szmukler & Patton, 1995). A focus on thinness, coupled with low self-esteem and negative parental attitudes toward weight, presents as considerable risk factors for the development of a variety of eating disorder symptoms (Stice, Agras, & Hammer, 1999). While the prevalence of clinically significant eating disorders among children under the age of 11 does not appear to be increasing (Fisher, 2009), studies indicate the underpinnings of such disorders in pre-adolescence (Stein & Woolley, 1996). Adolescents who later present with clinically diagnosed eating disorders show signs and symptoms as young children (Bulik, 2002). Therefore, effective methods to prevent the development of risk factors for these disorders are of critical importance.

This article reviews the etiology of eating disorders, general principles of prevention programs, and eating disorder prevention efforts developed thus far. Following this overview, the article proposes a parent education program aimed at promoting healthy eating attitudes and body satisfaction in children to help prevent the onset of eating disorders. The program is described in terms of approach, target population, preparation, structure, content, and assessment of outcomes. Finally, a critique of the program is provided.

Overview of Eating Disorders

While a poor relationship with food, hunger, and the body may have various presentations (e.g., reliance on fad diets, emotional eating, etc.), the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision* (APA, 2000) recognizes three specific eating disorders: Anorexia Nervosa (AN), refusal to keep a minimally normal body weight; Bulimia Nervosa (BN), binge eating and inappropriate compensatory methods to avoid weight gain; and Eating Disorder Not Otherwise Specified (EDNOS), a clinically significant eating disorder that does not meet criteria for AN or BN. Each of these disorders is characterized by a distorted perception of body weight and shape, which commonly involves issues of body dissatisfaction and low self-esteem.

Nearly all cases of eating disorders are complex (Fairburn, Cooper, & Waller, 2008), and are often difficult to treat (Fairburn, 2008). In a review of outcome studies involving 5,590 patients with Anorexia Nervosa (AN), nearly one-half of patients demonstrated a full recovery, one-third improved but still had symptoms, and 20% remained chronically ill (Steinhausen, 2002). Furthermore, the mortality rate for AN is higher than for any other mental illness due to the common medical issues associated with significant loss of body weight and other AN symptoms (Sullivan, 1995). Indeed, prevention of eating disorders is critical, as they are often associated with and contribute to serious medical, social, and psychological problems (American Psychiatric Association [APA], 2000).

Etiology of Eating Disorders in Children and Adolescents

The etiology of eating disorders is multifaceted, complex, and in many ways remains quite unclear (Watkins & Lask, 2002). Researchers currently conceptualize the development of eating disorders according to multidimensional models that relate genetic, biological, psychological, socio-cultural, and familial factors to particular symptoms (Jacobi, Hayward, de Zwaan, Kraemer, & Agras, 2004). For the purposes of this article, psychological, socio-cultural, and familial factors will be discussed in relation to the development of eating disorder symptoms in children.

Many young females value the cultural ideal of thinness, at times leading them to question their own bodies and consequently become displeased with their weight, body shape, and self perception (Levine & Smolak, 2006). Unrealistic ideals related to beauty and thinness are presented and reinforced by various media sources that are readily available to many children from diverse backgrounds (Herbozo, Tantleff-Dunn, Gokee-Larose, & Thompson, 2004). These negative images likely initiate a child's decision to diet or engage in forms of weight management (Levine & Smolak, 2006). Of note, repeated dieting and the associated weight fluctuations have been found to be a risk factor for eating disorders (Rohwer & Massey-Stokes, 2001).

Although eating disorders typically emerge in adolescence (APA, 2000), many children in grades 3 through 5 already exhibit body dissatisfaction; nearly 35% of children perceive that they "should" diet as early as the third grade (Pierce & Wardle, 1997). Thus, these concerns about body weight and shape are present before the onset of adolescent development, which typically begins around age 11 and includes the additional development of secondary sex characteristics (Rohwer & Massey-Stokes, 2001).

The transition from childhood to adolescence entails a reorganization of personality, cognitive, and relational structures as well as alterations in cultural expectations and social roles (Rohwer & Massey-Stokes, 2001). When eating is linked to perceptions of attractiveness, control, success, and self-worth, it can become disordered during this transition (Rohwer & Massey-Stokes, 2001). Yet, research indicates that despite the presence of body dissatisfaction and fear of gaining weight in elementary school children, these attitudes and behaviors are not as developed and entrenched as they are in their adolescent counterparts (Smolak & Levine, as cited by Rohwer, 2001). Therefore, prevention programs that target this younger population could help reduce the likelihood of future eating disorder symptomatology during adolescence (Rohwer, 2001).

Although eating disorders have been associated with upper-class Caucasian females from industrialized Western nations, recent research demonstrates that this pathology is increasingly common among minority ethnic groups in the United States (Woo & Keatinge, 2008). Further, Tomiyama and Mann (2008) found that children who grew up in cultures that foster independence and separation from the family were often at a higher risk of eating disorders when their particular families did not encourage that same individuation. These familial and societal factors are important to consider as they might impact the success of a prevention intervention.

Prevention of Eating Disorders in Children and Adolescents

Effective prevention programs share some principles in terms of program characteristics, target population, and implementation and evaluation (Nation et al., 2003). Effective programs are characterized as being comprehensive, having a basis in theory, using various teaching methods, and offering opportunities to build strong, positive relationships. They are timed appropriately, are socio-culturally relevant to their target populations, have well-trained staff and include outcome evaluation (Nation et al., 2003). Theory-based interventions grounded in research are important for prevention programs (Nation et al., 2003). Etiological theories address the causes (risk and protective factors), and intervention theories address the optimal means for modifying the risks. Intervention theories form the basis for successful prevention programs and have been shown to bring about the desired changes in the causes and then the behavior associated with a given disorder (Nation et al., 2003).

Prevention programs should focus on strengthening protective factors, including social skills and healthy self-perception, which function as a means of building resiliency.

This contrasts with a focus on risk factors, such as social stresses, cultural influences, family dysfunction, and general environmental influences (Pransky, as cited by Massey-Stokes, 2001). A focus on protective factors could include the implementation of skill-building strategies that help children develop problem-solving/decision-making skills, improve their abilities to evaluate social messages, and increase self-awareness and feelings of self-worth (Rohwer, 2001).

Primary Prevention of Eating Disorders

Research on prevention is critical due to the high cost and challenges associated with the treatment of eating disorders (Loth, Neumark-Sztainer, & Croll, 2008). Prevention programs for eating disorders were initially developed to provide information and later incorporated socio-cultural considerations. More recently, prevention has shifted to targeting groups of at-risk individuals (Stice & Shaw, 2004).

Literature on the primary prevention of eating disorders suggests a focus on altering behaviors that impact eating habits, coping skills, body image, and self-esteem (Rohwer, 2001). More specifically, Rohwer (2001) identified the following topics as central to a successful prevention program in children: pubertal changes in the body, nutrition and the connection between food and emotions, physical health and exercise, weight control and dieting, societal pressures to be thin, gender imbalances, personal identity, coping skills, and eating disorders in general.

Because there is concern that educating the public about eating disorders may actually encourage them (e.g., by providing ideas on dieting methods), prevention should be geared toward building a positive body image and accepting the bodily changes that occur during puberty (Rohwer, 2001). This proposition is in alignment with the general principal that primary prevention consists of decreasing risk factors that influence a problem as well as developing qualities and building conditions that promote wellness (Stice & Shaw, 2004).

In terms of effectiveness, there have been few controlled studies of successful eating disorder prevention programs (Russell-Mayhew, Arthur, & Ewashen, 2007). Nonetheless, the most effective eating disorder prevention programs have included cognitive interventions to modify maladaptive attitudes such as body dissatisfaction and behavioral interventions to alter dysfunctional behaviors such as fasting (Stice & Shaw, 2004). In addition, they have utilized interactive approaches that include creating self-esteem strategies and developing social and relational practices that incorporate family and teachers. These approaches work to create an environment that facilitates students' positive view of their bodies (Piran, 1997), an approach that has informed wellness-based prevention programs (Russell-Mayhew et al., 2007).

Furthermore, the results of one study on the effectiveness of a wellness-based eating disorder prevention program (Russell-Mayhew et al., 2007) suggested that involving parents and teachers was more effective in altering attitudes (e.g., self-concept) and behaviors of elementary school students than involving the students alone. Indeed, parental participation in prevention is essential for a number of reasons (Smolak & Levine, as cited by Massey-Stokes, 2001). First, findings support a potential connection between mothers' attitudes and behaviors and daughters' dieting and eating behaviors. Second, family members' teasing appears to influence adolescent eating attitudes; teasing is believed to contribute to AN in prepubertal youth. Third, parents have more control over younger children's eating behaviors. Thus, parents might inadvertently encourage their children's dieting, particularly if the parents have their own weight and body image issues (Massey-Stokes, 2001).

The Proposed Program

Russell-Mayhew and colleagues (2007) developed the principle model for the prevention of eating disorders in children. Their model is a wellness-based prevention method used to target prevention of eating disorders among elementary and middle school students (grades 4 through 9). The model includes one 90-minute session with parents and one 60-minute session with teachers in addition to a single session with the students. The model's specific application to a younger, elementary-school-aged population provides the theoretical basis of the current proposed program. However, the current program expands on the single session parent/teacher model, providing four adult sessions to encourage practice between sessions, interaction with the material, and opportunities to ask questions and problem-solve. Such an approach fulfills the requirement of sufficient dosage that is suggestive of a successful prevention program (Nation et al., 2003) and is considered more conducive to learning and knowledge acquisition (Ethridge & Branscomb, 2009; Stice & Shaw, 2004). The current program also incorporates recommendations for families that emerged from Loth, Neumark-Sztainer, and Croll (2009), a qualitative study that assessed the impact of family environment on the development of eating disorder symptomatology. In the study, participants in treatment for eating disorders identified the following areas that might have possibly prevented the development of their illness: increased parent support, less talk about weight and body shape, the promotion of healthy eating and exercise, increased self-esteem unrelated to physicality, the development of emotional regulation and healthy coping skills, increased awareness of eating disorder symptoms, and parents' use of support.

Approach

Given the complex etiology of eating disorders, some experts have proposed an ecological approach to prevention. Such an approach considers the environmental (e.g., personal, group, community, etc.) and socio-cultural factors that may influence whether or not an individual develops a disorder (Levine & Smolak, 2006). The ecological approach is particularly helpful in understanding the development of eating disorder symptomatology. From this perspective,

eating disorders are believed to serve as coping mechanisms to aid individuals in functioning within their greater social environment (Levine & Smolak, 2006). The ecological approach is consistent with the hypothesis that cultural values are primarily communicated through the family (Rohwer & Massey-Stokes, 2001). Therefore, the proposed program targets the people in the child's environment.

The proposed program is considered a selective prevention program, a type of primary prevention as defined by the Institute of Medicine (IOM; Munoz, Mrazek, & Haggerty, 1996), due to its focus on parents, teachers, and mentors of children who may not be symptomatic but are at heightened risk due to a variety of cultural factors (Levine & Smolak, 2006). Prevention is accomplished by educating participants about normative physical growth in children, healthy eating, and the potential impact of their own attitudes about weight on children's self-image. The underlying assumption is that knowledge of such topics will better guide the adults' future interactions with the children under their care (Lancy & Grove, 2010). The following is a description of aspects of the proposed program, including basics of its development and implementation.

Target Population

The target population for the proposed program consists of various adults involved in a young child's life, who might include an elementary student's parents, teachers, and/or mentors. While the intervention is aimed at preventing eating disorders in children, it is initially implemented via the adults involved in the child's life due to the aforementioned research that indicates parental and adult involvement is critical in preventive efforts.

Engagement in the proposed program is particularly relevant for parents with children in grades 3 through 6, approximately ages 8 to 12, as research has shown that many children in this age group already hold maladaptive beliefs about body weight and shape (Massey-Stokes, 2001). Additional findings also support focusing efforts on this age group. For example, females as young as six have been found to internalize cultural expectations of the thin ideal, and females as young as nine have been found to engage in dieting and exercise behaviors solely for the purpose of weight loss (Thelen, Powell, Lawrence, & Kuhnert, 1992). Further, significant biological changes can also occur during pre-adolescence, making this age group of particular concern for the development of eating disorder symptomatology (Smolak & Levine, 1996).

Preparation

The proposed program begins with one person who acts as the program "advisor." His or her primary role is to coordinate the administrator training, schedule dates and locations for the programs, and generally serve as a primary resource for program development.

First, the advisor gathers preliminary data (e.g., interest in the program, available resources) about a community to which the program is to be offered. Approximately three months prior to the program start date, the program advisor meets with several elementary school principals and counselors to gather information about student demographics. The program advisor also consults with the school's Parent Teacher Association (PTA) or other parent groups that are actively involved in school activities. Additional outreach includes visitation to the local YMCA, community sports leagues, and other popular organizations among the community's youth. Specific places of focus include dance studios, gymnastics gymnasiums, and performing arts centers, as these activities tend to be more highly related to the development of eating disorder symptoms (Massey-Stokes, 2001).

After preliminary research is complete, the program advisor seeks the availability of local psychologists, social workers, or other mental health professionals who are able and willing to participate without compensation. These "administrators" are then familiarized with the program and its objectives and are trained in the application of its techniques.

The program advisor then takes steps to market the program to the target community. Flyers and other advertising materials are distributed to the schools and facilities previously visited by the program advisor. Flyers are posted on elementary school bulletin boards and mailed to each family's home, along with a cover letter from the principal and school nurse advocating for participation in the prevention program. Coaches, mentors, and teachers from these locations are invited to attend the workshops as well, as they also influence children's perceptions of body image and health.

To accommodate those who require childcare in order to attend, older student volunteers are available to provide childcare while parents attend program activities. The additional incentive of free childcare also serves to increase the likelihood of attendance. The program itself takes place in a gymnasium at a select number of elementary schools in the community, or other locations that are familiar and easily accessible.

Structure

The program is composed of four one-hour sessions, scheduled on four consecutive Saturdays during the academic year. In addition, the program is offered twice during the academic year (e.g., in October and April) to reach as large an audience as possible and promote participant reflection and internalization of information. Finally, free breakfast items and refreshments are offered for thirty minutes prior to the workshop.

The first three sessions (each one hour in length) are structured to address parents, teachers, coaches, and mentors. The fourth session, described in further detail below, includes the children in the activities. The program is first offered in the fall, which provides time for the program advisor to make arrangements before long-term school, sports, and activities schedules are established. Another installment of the program is provided in the spring for those adults who were unable to

attend the fall program or for those who wish to gain additional knowledge, experience, or support.

Content

The content of the first three sessions emphasizes the collaborative necessity of successful prevention of eating disorders in children (Graber & Brooks-Gunn, 1996). These sessions are both didactic and interactive in nature, as such an integrative approach is considered more conducive to learning and knowledge acquisition (Stice & Shaw, 2004). These sessions also include psychoeducation, presented through open dialogue, activities, and role-play.

Specifically, participants are taught the power of modeling and their influence on the younger generation (Graber & Brooks-Gunn, 1996). These sessions encourage open discussion of parental/participant experiences that might have affected their own learning. Such an approach may be helpful in addressing societal pressures to be thin (Harrison & Hefner, 2008). Participants are encouraged to examine the messages they could be inadvertently communicating to children and to identify ways to alter their behavior to promote a child's health (Levine, 1987).

The participants are encouraged to take steps toward altering their behaviors and monitoring the potential effects of these changes. They are also taught specific skills and strategies, such as relaxation, which has been shown to prevent eating disturbances (Deckro et al., 2002). Since both direct experience and reflection on that experience is necessary to reinforce learning (Ethridge & Branscomb, 2009), the adults are encouraged to attempt implementation of the new techniques between sessions and report back with their experiences. Adults who participate are given resources and referrals should further intervention be needed (Levine, 1987).

The fourth and final session of the proposed program is an interactive puppet show initially introduced by the Eating Disorders Awareness and Prevention (EDAP) organization for classroom instruction. Based on the Russell-Mayhew et al. (2007) model, it emphasizes acceptance of diverse body shapes and rejection of the "perfect" body ideal. The proposed program differs in that it invites the participants to perform in the show, even creating their own scripts and practicing the use of healthy dialogue. The show is performed for the children during the last session. After the show, the participants have the opportunity to engage in a guided discussion about the performance with the children and engage in more direct conversation about their beliefs.

Assessment of Outcomes

The outcome of the program is assessed based on the use of the Piers-Harris Children's Self-Concept Scale (PHCSCS) and the children's version of the Eating Attitudes Test (ChEAT). The PHCSCS, a self-report questionnaire developed by Piers (1999), was utilized by Russell-Mayhew and colleagues (2007) to measure self-concept in children and adolescents, and includes several subscales, such as Physical Appearance and Attributes and Happiness and Satisfaction. The ChEAT (Maloney, McGuire, & Daniels, 1988), is a self-report measure of children's eating attitudes, food preoccupation, and dieting behaviors. The children are administered the measures before the beginning of the first session and then again after the puppet show during the fourth session. Significant changes on these measures will suggest correlation between the program implementation and the children's risk of eating disorder development.

The adults are also administered the children's versions of the measures and are asked to complete the measures based upon how they believe their children might respond. These scores are used solely for the purpose of evaluating the correlation between the adults' beliefs and their children's responses. It is hoped that any variance in scores will encourage parents to evaluate their own assumptions about their children's beliefs and the effectiveness of their communication with their children. Teachers, coaches, and mentors who do not have their own children in the program may choose to complete the evaluation to be compared with responses from a child they believe they know well.

The effectiveness of the program is also assessed via pre- and post-test questionnaires, which are provided to the adults only. These questionnaires serve to assess their knowledge of eating disorder prevention, appropriate behaviors to model for children, and how to promote positive coping skills. It is hypothesized that the scores on these program-specific assessments (created by the trainers to assess the content learned during the sessions) will increase at the completion of the program. Adults are provided a qualitative feedback form in which they can anonymously report what was most helpful in their application of the techniques acquired. Additionally, they are encouraged to provide feedback on their level of satisfaction with the program, including whether they enjoyed the course, would attend again, and would recommend it to others.

One of the major benefits of the proposed program is the potential for generalization. For example, Tolan and Guerra (1994) found clinic-based interventions to be limited in their ability to generalize improvements across settings and to effect lasting change once reinforcement contingencies are discontinued. Conversely, community-based interventions produce sustained change and greater generalization because such efforts are anchored in one's daily life (Tolan & Guerra, 1994).

Critique of the Proposed Program

Strengths of the Program

The proposed parent education program to help prevent eating disorders presents a number of strengths. First, the program targets parents of children who are at the optimal age for eating disorder prevention. Russell-Mayhew and colleagues (2007) found that elementary school children and their parents and teachers demonstrated the most unhealthy and negative attitudes and behaviors toward weight and eating, compared to the group composed only of junior high students. This finding presents an opportunity for

preventative intervention. Additionally, these unhealthy attitudes and behaviors are less ingrained in elementary school children, suggesting that primary prevention might be most effective when it includes young children, their parents, their teachers, and/or other adults involved in their lives (Smolak & Levine, 1994). Further, many experts agree that elementary and middle school/junior high school students are the most appropriate age groups for primary and secondary prevention efforts (Rohwer, 2001). In fact, one of the only eating disorder prevention programs found to be empirically supported included elementary school children and their parents and teachers, an approach that researchers found particularly effective and indicative of the need to start prevention programs early (Russell-Mayhew et al., 2007). The primary prevention design is considered the most effective approach to confront eating disorders as its timing addresses problems before they begin. Given the complex nature of eating disorders and the subsequent treatment challenges (Fairburn, 2008), timing is of utmost importance.

Second, the prevention program presented primarily targets the parents of elementary school children and welcomes the participation of teachers and coaches. Prevention models that include parents and teachers are believed to be more effective (Russell-Mayhew et al., 2007), as adults greatly influence children's attitudes toward weight and body image (Massey-Stokes, 2001). Research has demonstrated an association between mothers' attitudes and behaviors and their daughters' eating and dieting behaviors as well as adolescent eating attitudes and family members' teasing, suggesting that parent involvement in prevention efforts is critical (Smolak & Levine, 1994). Moreover, parents control the foods that are available at home for their children. Overall, focusing on parental and teacher involvement as part of a school-based intervention program has shown promise in preventing eating disorders in children (Russell-Mayhew et al., 2007).

Third, consistent with the findings of Russell-Mayhew and colleagues (2007), the program is based at the children's school. Rohwer (2001) strongly recommends schools as the site of prevention programs as there are sizeable audiences at one setting, and schools can serve as a location for early identification of eating disorders.

Fourth, the multisession approach used in the proposed program is consistent with recommendations for sufficient dosage in prevention programs (Nation et al., 2003) and is the primary improvement over the Russell-Mayhew et al. (2007) model, which utilizes a single-session approach. Because both direct experience and reflection on that experience is necessary to reinforce learning (Ethridge & Branscomb, 2009), the current multisession prevention program offers a possible advantage over the Russell-Mayhew et al. (2007) model by promoting participant reflection and internalization of information.

Weaknesses of the Program

As with any model, the current prevention program is not without limitations. Perhaps the most salient limitation is the focus on parents and adults in children's lives rather than an emphasis on direct contact with the children. Although the children participate in the fourth session of the program alongside the parents, one session of direct contact might not be sufficient. Additional research is necessary to determine if the proposed program might be implemented in combination with another program focused on working directly with the children.

A second limitation of the current program proposal is its limited focus on follow-up assessments. It is possible that administration of the measures immediately following the puppet show may create a recency effect. Long-term assessment is crucial to determine if the prevention program resulted in sustained change in attitudes and behaviors.

Another limitation is that the program depends upon voluntary parent participation. While researchers believe that parents are inherently motivated to participate in programs that might benefit their children (Levine & Smolak, 2006), it is possible that parents might perceive the program as a critical commentary on their parenting skills and decide not to participate. Those parents who are in the most need of help (e.g., those whose children are already demonstrating negative eating attitudes or behaviors) might be especially sensitive to perceived criticism and therefore choose not to attend, thereby limiting the program's ability to reach all children in need of preventive education. Should such a scenario present itself, more research on how to potentially make the prevention program mandatory might warrant further exploration.

Even if parents attend the program, there is the risk that the information obtained might not be put into practice. For example, parents might continue to behave in ways that encourage eating disordered behavior, such as dieting or promoting the thin body shape as ideal. Such behavior will be difficult to monitor as the program relies heavily on parental self-report. One way to compensate for these limitations might be to educate parents on how to encourage their children to advocate for themselves, such as seeking outside help from teachers, counselors, or other mentors if needed to avoid total reliance on the parents for assistance.

Finally, finding mental health professionals to serve as program administrators on a voluntary basis may be difficult. Should such a circumstance arise, further research would be necessary to determine whether non-mental health care professionals could be trained to deliver the intervention and whether there are benefits in doing so.

Conclusion

Given the serious social, psychological and medical problems associated with eating disorders and the challenges encountered when treating them, prevention programs offer a needed approach and deserve further consideration and examination. The few studies which have investigated the effectiveness of prevention programs addressing eating disorders found that including younger children (e.g., those ages 8 to 12) was particularly beneficial (Russell-Mayhew et

al., 2007). Nonetheless, the Russell-Mayhew et al. (2007) model does not appear to offer the recommended sufficient dosage for prevention programs (Nation et al., 2003). The single session format does not allow time for participants to interact with the material at home and return to ask questions or problem-solve; such interaction is critical in the learning process (Ethridge & Branscomb, 2009; Stice & Shaw, 2004). The proposed program addresses these concerns by offering four sessions that are interactive in nature and promote practice between sessions. Moreover, this proposed program, while general in nature, could be modified for delivery to culturally diverse communities. Ultimately, it is hoped that this approach will foster young children's healthy attitudes toward eating and body satisfaction and will provide adults with adequate knowledge and tools to build protective factors to prevent the development of eating disorders.

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