

Evaluation of an Eating Disorder Prevention Program: Potentially Helpful or Harmful to Junior High Students?

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ABSTRACT

Current statistics indicate that the proportion of today's youth suffering from an eating disorder is steadily increasing (Shisslak et al., 1990). In light of this finding, an eating disorders prevention curriculum was tested at the middle school level.

Analysis of the results demonstrated that the intervention did have beneficial results in terms of improving global self-esteem and body esteem. Furthermore, it is believed that the intervention may have acted as a preventative buffer.

INTRODUCTION

Today researchers estimate that 5-10 million American females and 1 million American males suffer from an eating disorder (Shisslak et al., 1990). Once thought of as the "rich, white girl's disease," anorexia nervosa and bulimia nervosa are now crossing race, gender, and socioeconomic barriers. New evidence has found that along with the increase in modernization and the expansion of the vast consumer market (appealing to youth), males and females of various ethnic and social classes are experiencing added pressure to diet and maintain that ideal "thinness" (Graber & Brooks-Gunn, 1996).

With the rate of eating disorder symptomatology now reaching epidemic proportions in American youth, anorexia nervosa and bulimia nervosa have become a serious health problem in our society. Although the onset of an eating disorder typically occurs between 13 and 20 years of age, new findings indicate that body dissatisfaction is manifesting in children as young as 8 years of age (Kater, 2000). This is an alarming fact in that each year 20% of anorexic individuals die from complications associated with this eating disorder (Shisslak et al., 1990). Additional health concerns for anorexia include amenorrhea, estrogen deficiency, abnormal thyroid functioning, renal complications, and cardiac abnormalities (Shisslak, 1987). A substantial minority of bulimics (14-27%) will also suffer from electrolyte imbalances, along with menstrual irregularities, gastric dilation rupture, dental enamel erosion, esophagitis, and potassium deficiencies (Shisslak, 1987).

In light of this, several eating disorder prevention programs have been implemented in school districts across the nation. Such programs have typically focused on the nature and consequences of eating disorders, the effects of dieting and other various methods of weight control, along with coping strategies to resist pressures to diet (Carter et al., 1997). However, these programs have had mixed results and have raised serious concerns about potential harmful effects on the students. In terms of information retention the results are mixed. But in terms of eating disorder behaviors, there is some evidence that these programs increase

interest in dieting. In a study of 50 schoolgirls who participated in a prevention program, Carter et al. (1997) found that knowledge of eating disorders increased, but at the six-month follow-up eating disorder features (such as dietary restraint) were even higher than when the intervention was begun. Shisslak (1987) initiated a prevention program that primarily focused on eating disorders (e.g., what they are, symptoms, and the physical and psychological effects suffered). In the post-test, participants showed an increase in eating disordered behaviors, such as, restrictive dieting, obsessive and compulsive exercising, vomiting and laxative use as a means of purging.

The present study will test the effectiveness of the eating disorder prevention curriculum *Healthy Body Image: Teaching Kids to Eat and Love Their Bodies Too!*, developed by Kater (1998). The primary focus of this curriculum is an emphasis on critical thinking in terms of unrealistic attitudes about body size and shape that are generated through society, family, and peers. The classroom curriculum uses stories, activities, and discussion to foster self-esteem and self-concept that will enable children to resist unhealthy messages. Furthermore, research has shown that programs which foster self-esteem via empowerment, in areas such as eating and body image, are likely to enhance the overall effectiveness of the prevention. Therefore, exhibiting more favorable outcomes (Piran, 1998). Most importantly, there is no overt discussion on eating disorders, so it is expected to create a more effective prevention program than traditional curricula.

Our hypothesis was that children who received the curriculum, *Healthy Body Image: Teaching Kids to Eat and Love Their Bodies Too!* would demonstrate increased levels of attitudinal change compared to those not receiving a prevention program. If the hypothesis were supported, future researchers would have a better idea of the curricula that should be implemented in the fight against the development of eating disorders for youth. A more in-depth understanding of eating disorder prevention should allow youth nationwide a chance to live a life free from the dangerous and sometimes deadly constraints of anorexia and bulimia nervosa.

METHODS

Participants

All participants were from a middle school of 6th, 7th, and 8th graders. A total of 57 sixth grade students enrolled in a Family and Consumer Education course participated in the study (M age =11.23, $SD=0.43$). The students came from a rural community of 5000 and were predominately of European-American descent.

Procedure

Two classes, each containing 29 students, participated in the study. One served as the intervention group and received three subsets of the curriculum, *Healthy Body Image: Teaching Kids to Eat and Love Their Bodies Too!* (Kater, 1998). The three one-hour sessions occurred during the second week of classes. The second class served as the control group and received the curriculum at the conclusion of data collection.

Attitudes were assessed at three critical intervals: pre-testing (prior to curricula), immediate post-testing following the presentation, and at a one-month follow-up.

Materials

Subsets of the curricula were administered over three 50- minute class periods. As a result, the following core issues were addressed: natural changes via puberty, influence of the

mass media, and eating well in regard to hunger, pleasure, and nutrition.

Both the goals and objectives of *Healthy Body Image: Teaching Kids to Eat and Love Their Bodies Too!* have been deemed developmentally appropriate for children in grades 4-6. Additionally, the curriculum has been approved by the National Health Education Standards and The Minnesota Profile of Learning Preparatory and High Standards (Kater, 1998).

Measurements

At each session students completed the Body-Esteem Scale for Children (Mendelson & White, 1994) and the Piers-Harris Self-Concept Scale (Piers & Harris, 1969). The Body-Esteem Scale consists of twenty yes or no questions pertaining to three factors: general appearance and body esteem, satisfaction with weight, and attributions of positive evaluations of others (Mendelson & White, 1994). Previous research has found that the Body-Esteem Scale for Children exhibits good internal reliability (Mendelson & White, 1994).

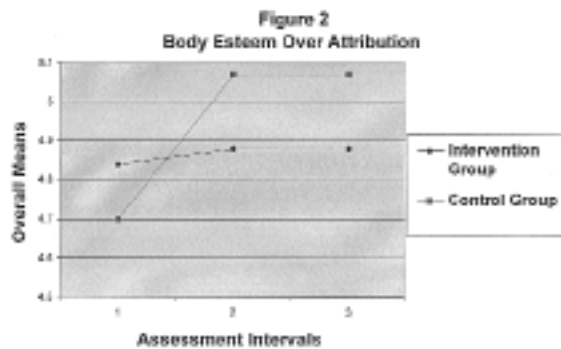
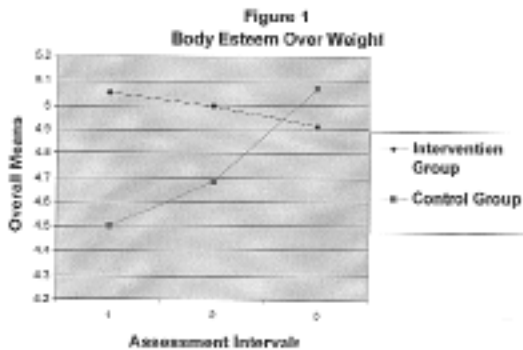
The Piers-Harris Self-Concept Scale consists of 80 yes or no questions, that measure a student’s perception of himself or herself pertaining to the following six domains. Behavior and intellect; school status; physical appearance; anxiety; popularity; and happiness/satisfaction (Piers & Harris, 1969). The Piers-Harris is geared for students in grades four through twelve and maintains a good internal consistency and reliability of .89-.93 (Piers & Harris, 1969).

RESULTS

On the Body Esteem subscale for Weight an interaction effect of treatment over time was found [$F(1,48)=3.93, p<.05$] (see Figure 1). In other words, over time participants in the control group felt worse about their perceived weight ($M1=4.50, SD1=0.58, M2=4.68, SD2=0.55, M3=5.07, SD3=0.38$), while those receiving the intervention showed no decline in body esteem for weight over assessment intervals ($M1=5.05, SD1=1.70, M2=5.00, SD2=0.62, M3=4.91, SD3=0.43$).

The results for the subscale Body Esteem Attribution taken from the Body Esteem Scale for children show an interaction effect for treatment over time [$F(1,53)=3.87, p<.05$] (see Figure 2).

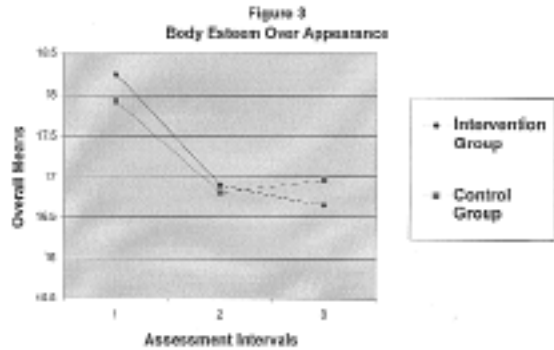
The interaction indicates that the intervention acted as some sort of buffer for the participants in the intervention group, such that over time control participants thought others saw



them in a more negative way ($M1=4.84$, $SD1=0.47$, $M2=4.88$, $SD2=0.44$, $M3=4.88$, $SD3=0.44$) in contrast to the intervention group ($M1=4.70$, $SD1=0.60$, $M2=5.07$, $SD2=0.37$, $M3=5.07$, $SD3=0.37$) which remained constant.

A main effect for the Body Esteem subscale Appearance over time was found [$F(1,45)=5.46$, $p<.05$] (see Figure 3). There was no interaction between groups over time. The results demon-

strate that over time both the intervention ($M1=18.25$, $SD1=5.22$, $M2=16.90$, $SD2=1.41$, $M3=16.65$, $SD3=1.34$) and the control groups ($M1=17.93$, $SD1=1.90$, $M2=16.81$, $SD2=1.30$, $M3=16.96$, $SD3=0.90$) had a more positive attitude toward their appearance.



DISCUSSION

The aim of the current study was to test an eating disorder prevention program that deliberately avoided talk of eating disorders and symptomatology, but instead focused on factors believed to be key in the onset and development of anorexia and bulimia nervosa. The a priori hypothesis stated that children who received the curriculum, Healthy Body Image Teaching Kids to Eat and Love Their Bodies Too! would demonstrate increased levels of attitudinal change compared to children who did not receive a prevention program. Although the children showed no immediate increase in global self-esteem or global body esteem, it appears that the intervention may have acted as a preventative buffer against a developmental decline in these areas.

The results demonstrated that over a one-month period participants in the intervention group remained fairly constant in their attitude concerning weight. However, students with no intervention demonstrated steady declines in attitude. When exposed to the intervention, students appear to have better body esteem on the weight subscale; hence, the intervention may have acted as a buffer to normal environmental experiences.

The data for body esteem derived from the perceived opinions of others (Body Esteem Attribution) revealed an unanticipated trend. Between pre- and post- testing a large jump occurred in the control group suggesting the control group saw others as perceiving them more negatively. This jump occurred over the course of one week, from the second to the third week at the start of the transition to middle school. One explanation for the downward trend could have been the stress due to the new experiences of middle school. Secondly, the assessment tools with questions concerning appearance, body weight, body image, and eating habits could have provoked the children toward greater thought and scrutiny about their bodies. Again, the intervention appeared to provide a buffer against this downward trend.

Body esteem based on appearance was not affected by the intervention. Both groups demonstrated improvement over the first months of middle school. One possible explanation could be that appearance tends to be a more encompassing concept unlike attribution and attitude, which are more specific. To be certain more research should be conducted in this area.

Future researchers should consider the use of Likert Scales when collecting data as to allow participants a wider range in choices. The current study used two dichotomously scored tests and may not have allowed for detection of subtle changes in the children's attitudes.

Secondly, greater emphasis should be placed on developmental trends occurring early in middle school. It may be that sixth grade children have already been inundated with societal body image messages. Perhaps, the attitudes already formed combined with a developmental process in early adolescence render this intervention less effective than it might otherwise be. Furthermore, is this developmental issue a contributing factor in the high proportions of eating disorders found in society?

Finally a more in-depth analysis into an intervention program is needed. The current study focused on a few issues thought to be relevant in teenage development of body esteem. There are however, more issues that affect the development of body esteem in children, such as parental influence on dieting and eating habits, the daily stressors of performing in school and extracurricular activities, the constant changing of hormones and how that affects mood, sexuality, and self-esteem. Taking account issues not researched in this study, what kind of protective barrier, if any, would an intervention program create to shield youth from developing an eating disorder?

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