

## **Can Body Image Education Programs Be Harmful to Adolescent Females?**

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*The aim of the study was to evaluate two body image education posters to determine whether such preventive strategies have any negative effects on the body image of adolescent females. Female school students (N = 328) of mean age 14.4 (SD = 1.8) years from six high schools evaluated two body image education posters using a questionnaire. Participants made suggestions for improving the posters and conducting future body image interventions. The posters were rated as not-beneficial by 28% of participants; 35% did not like the posters, and 69% did not want their own copy, the major reason being that self-comparison with the teenage models in the poster made them feel worse about themselves. The 5 Girls poster was rated lowest among older girls. Eight percent of girls did not know what message the posters were meant to portray and 8% received an incorrect or harmful message from the posters. This research suggests that educational initiatives to improve body image in adolescent girls may have negative effects. Planning of preventive interventions should involve program recipients and the educational materials should be pretested to prevent unintended and potentially harmful outcomes.*

The prevention of body image and eating problems using educational strategies is one of the most desirable goals in contemporary adolescent health education. There have been several suggestions for the prevention of poor body image, disordered eating, and eating problems among schoolchildren using educational interventions (Crisp, 1988; Fairburn, 1995; O'Dea & Maloney, 2000; Shisslak, Crago, & Neal, 1990) and there have been several school-based educational strategies aimed at improving body image and preventing disordered eating in adolescents (Neumark-Sztainer, Butler, & Palti, 1995;

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Buddeberg-Fisher, Klaghofer, Gnam, & Buddeberg, 1998; Killen et al., 1993; Moriarty, Shore, & Maxim, 1990; Neumark-Sztainer, Sherwood, Collier, & Hannan, 2000; O'Dea & Abraham, 2000; Paxton, 1993; Smolak, Levine & Schermer, 1998).

Those involved in educational initiatives to prevent eating disorders, disordered eating, and associated factors such as dietary restraint and body dissatisfaction assume that such interventions will benefit the adolescent participants. Program planners and educators may not realize that one of the potential dangers of programs aimed at prevention of eating and body image problems is the risk of the education process doing more harm to participants than good. There have been warnings about the potentially harmful outcomes of eating disorder prevention programs among adolescents (Garner, 1985; O'Dea, 2000) and two recent studies suggest that such interventions may inadvertently contribute to harmful rather than beneficial effects (Carter, Stewart, Dunn, & Fairburn, 1997; Mann, Nolen-Hoeksema, Huang, Burgard, Wright, & Hanson, 1997).

The aim of the current study was to evaluate two posters that have been produced with the intention of improving the body image of adolescent females and young women. The study was designed to determine whether such preventive strategies have any negative effects on the body image of adolescent females. The study was also designed to examine adolescent females' opinions and suggestions for the development of appropriate body image improvement strategies.

## METHODS

### Participants

Female high school students were asked to volunteer from six schools including three government, one private, and two parochial schools. Schools were randomly selected from the state register of schools. After consultation with the school principal and teachers, class groups from grades 7–10 were randomly selected to participate in the poster evaluation activities. The random selection of class groups was undertaken in order to reduce selection bias. Participants were aged 12–19 years ( $M = 14.4$ ;  $SD = 1.8$ ).

### Body Image Posters

Two body image education posters were evaluated. The poster shown in Figure 1 (NSW Department of Health, 1997) was referred to as "5 Girls." The other poster (The Body Shop International, 1997) consisted of an image of a blond haired female doll that is popular among girls. The doll's body size had been enlarged to present a normal weight, but not overweight female figure. The doll was lying on a sofa with the caption below stating "There are 3 billion women who don't look like supermodels and only 8 who do." This



**FIGURE 1.** Picture of the “5 Girls” body image education poster. © New South Wales Health Department, 1997; Reprinted with the permission of NSW Health, Australia. Captions on the poster read from left to right; “She wants to be thinner”; “She wants smaller breasts”; “She wants bigger breasts”; “She wants a smaller bottom”; “She wants a bigger bottom.” Caption below the poster reads “It isn’t your body you need to change, it’s your mind.”

poster was referred to as “Ruby.” The posters were selected for evaluation by adolescents because they had been widely distributed in schools, teenage magazines, doctors rooms, and other public places (5 Girls) and in The Body Shop stores and The Body Shop magazines (Ruby).

### Questionnaire

The questionnaire related to the participants’ evaluation of the two body image education posters. The questionnaire contained questions pertaining to penetration and understanding of the educational messages (Have you seen the poster before today? [Yes/No], What is the main message of the poster? [open-ended question]; Suitability and relevance of the messages for adolescent girls (Do you like the poster? [Yes/No] [Why/Why Not], Do you think the poster is helpful to you? [Yes/No] [Why/Why Not]) and value of the posters to adolescent girls (Would you like your own copy of the poster? [Yes/No] [Why/Why Not]). Space was provided on the questionnaire for participants to write their reasons for each answer.

Participants also were asked to comment on changes required to make the educational poster more appropriate and useful for adolescent girls by asking “How could the poster be changed to make it better?” Each respondent was asked to allocate an overall score out of 10 points to each poster

(10 being excellent). An open-ended question asked, "What do you think would help you to feel better about your body?" and space was provided for written suggestions.

## Procedure

Participants participated in their usual class groups (98.5% of students chose to participate). Participants were given copies of the body image posters and allowed 45 minutes to consider its impact on them and discuss it. Students were then asked to anonymously complete the written questionnaire. The study design and protocol were approved by the University of Sydney, Human Ethics Committee.

## Analysis

Chi square analyses were used to compare differences in participants' evaluations of each poster by the three age groups: 12–14 years, 14–16 years, and 16–19 years. T-tests were used to test differences in the mean scores given for each poster. Statistical significance was taken at 0.05. The participants' written answers were collated, grouped into common themes (Krueger, 1998), and tallied as frequency tables. The statistical analyses were undertaken using SPSS Base 9.0 for Windows.

## Results

Results from the poster questionnaire relating to participants' evaluation are presented in Table 1. The suitability of the poster was poor among 28% of participants who evaluated the posters as not helpful. The most common explanation for the posters not being helpful (reported by 78%) was that participants compared themselves unfavorably with the girls in the "5 Girls" poster (Figure 1) making the participants feel bad about themselves. Common comments included that the poster "reminds me of my problems"; "makes me feel depressed"; "makes me feel fat and ugly"; "gives me bad ideas about myself"; and "there is nothing wrong with these girls, so I must be really bad." The major reasons given for the "Ruby" poster being rated as nonhelpful was the misunderstanding that the poster promoted an unhealthy weight ideal, the difficulty the girls had in understanding its message, and their feelings that the message was meant for older people, not teenage girls. Participants typically reported comments such as the poster "promotes unhealthiness"; "tries to make you want to get fat"; "I don't get it"; "It insults fat people"; "You can't change people's minds about fat"; and "It is meant for older people."

The written reasons for the 5 Girls poster being rated as helpful included common comments such as the poster "shows you don't have to be perfect;" "helps you understand that you don't need to change"; and "you

**TABLE 1.** Adolescent Females' Evaluation of Two Body Image Posters

	12-14 yrs (n = 77)				14-16yrs (n = 189)				16-19 yrs (n = 62)				Chi square <sup>a</sup>	Chi square <sup>b</sup>
	5 Girls		Ruby		5 Girls		Ruby		5 Girls		Ruby		5 Girls	Ruby
	%Yes (n)	%No (n)	%Yes (n)	%No (n)	%Yes (n)	%No (n)	%Yes (n)	%No (n)	%Yes (n)	%No (n)	%Yes (n)	%No (n)	F value	F value
Suitability and relevance	71 (55)	29 (22)	68 (52)	32 (25)	79 (149)	21 (40)	70 (132)	30 (57)	66 (41)	34 (21)	79 (49)	21 (13)	4.5	2.5
Poster is helpful to you (Yes/No)														
Like the poster (Yes/No)	60 (47)	40 (30)	64 (50)	36 (27)	60 (114)	40 (75)	67 (127)	33 (62)	59 (34)	49 (28)	86 (54)	14 (8)	1.5	9.5**
Value of poster Like own copy of poster (Yes/No)	26 (20)	74 (57)	31(40)	69 (53)	21 (40)	79 (149)	40 (76)	60 (113)	16 (10)	84 (52)	55 (34)	45 (28)	15.3***	8.1*
Penetration Recognize the poster (Yes/No)	53 (41)	47 (36)	30 (23)	70 (54)	53 (100)	47 (89)	42 (79)	58 (110)	26 (16)	74 (46)	63 (39)	37 (23)	14.9***	15.5***
Overall rating Score out of 10 points	mean(SD) 7.1 (2.1)	mean(SD) 6.9 (2.9)	mean(SD) 6.7 (2.1)	mean(SD) 7.4 (2.4)	mean(SD) 6.0 (2.3)	mean(SD) 6.7 (2.1)	mean(SD) 7.4 (2.4)	mean(SD) 6.0 (2.3)	mean(SD) 8.2 (1.8)	mean(SD) 6.0 (2.3)	mean(SD) 8.2 (1.8)	mean(SD) 6.0*	F value 6.0*	F value 6.5**

<sup>a</sup> Chi square compares age differences for 5 Girls

<sup>b</sup> Chi square compares age differences for Ruby

\* p < 0.05 \*\* p < 0.01 \*\*\* p < 0.001 df = 2

realize that no one's body is perfect." The written reasons for why the Ruby poster was rated as beneficial included "you realize no one is perfect"; "it makes you laugh and relax"; "it makes you feel good about yourself"; "it makes you understand that some fat is normal;" and "it helps you realize that you don't have to be like everyone else."

Penetration of the educational message was moderate, with 55% of participants not having previously seen the posters (Table 1). The majority of older girls (74%) did not recognize 5 Girls ( $p < 0.001$ ) and the majority of younger girls did not recognize Ruby ( $p < 0.001$ ).

The suitability and relevance of the posters was poor among 35% of participants who reported that they did not like the posters. Significantly more reported that they did not like 5 Girls (40%) versus Ruby (30%) (Chi square = 8.2,  $df = 1$ ,  $p < 0.01$ ). Results in Table 1 show that older participants were the most likely to report not liking the 5 Girls poster (49%) and the youngest participants were most likely to not like Ruby ( $p < 0.01$ ). The most common reason for participants not liking 5 Girls was that the poster made them feel worse about their appearance and their bodies, with common comments such as "It made me feel fat"; "The girls in the poster were too pretty and too perfect"; and "It makes me feel depressed about how I look." The major reason for participants not liking Ruby was that it was confusing because it appeared to promote being overweight. Comments included "It is confusing—why are they trying to make us fat?"; "She is not appealing because she is too fat"; and "It discriminates against fat people."

Participants who reported positive evaluation of the 5 Girls poster reasoned that it encouraged them to be more self-accepting and less self-critical. Participants positively evaluating the Ruby poster stated that it encouraged self-acceptance and was humorous—"It makes you laugh, relax and feel better."

The majority of participants did not find the poster of value to them with 69% indicating they did not want their own copy of the poster (Table 1); more reported not wanting 5 Girls (79%) than Ruby (59%) (Chi square = 28.2,  $df = 1$ ,  $p < 0.001$ ). Older girls were least likely to want a copy of the 5 Girls poster and most likely to want Ruby ( $p < 0.001$ ). Reported reasons for not wanting the posters were similar to reasons for disliking the posters, and were mainly related to the poster making them think and feel negatively about their bodies.

The overall rating of the posters were significantly smaller for 5 Girls than for Ruby (6.7(2.1) versus 7.5(2.4),  $t = 1.96$ ,  $df = 2, 327$ ,  $p < 0.05$ ). The overall rating for 5 Girls decreased with age ( $p < 0.05$ ) and the score for Ruby increased with age ( $p < 0.01$ ).

Penetration of the educational message was high with 85% of participants accurately reported that the main message of the 5 Girls poster was that girls should try to be more self-accepting of their body shape and size. Ten percent reported "Don't know" to the question and 5% reported inaccurate perceptions of the messages such as "We should all be trying to improve

parts of our bodies”; “It is OK to be worried about your body”; and “You need to be thin to have a boyfriend.”

The main messages from the Ruby poster were correctly identified by 84% of students to be self-acceptance and body-acceptance. Ten percent reported inaccurate messages from the poster such as “You have to be thin to be a supermodel”; “The majority of people are fat like Ruby”; “There are now lots of big models”; “The only perfect people are models”; and “It is wrong to look up to supermodels.” The remaining 6% did not know the meaning of the poster.

The participants’ written responses to the open-ended question “How would you change the posters to make them better?” are summarized in descending order in Table 2, and the participants’ responses to the open-ended question “What would help you to feel better about your body?” are given in descending order of importance in Table 3. The factors reported by the students were weighted evenly between intrinsic factors essentially under the students’ own control (lose weight, change appearance, exercise, eat healthy, develop a positive attitude) (46% of the total responses) and extrinsic factors outside of the students control (media, positive comments from others, less criticism/teasing from others, education, fashion, knowledge about normal weight for age (6% of the total responses).

**TABLE 2.** Written Responses of Adolescent Females to the Question “How Could You Change the Posters to Make Them Better?”

	% ( <i>n</i> )
5 Girls ( <i>n</i> = 256 written responses)	
• Use real, normal girls, not perfect looking models	30 (78)
• Make the poster more positive and not so negative and boring. Use happy, smiling girls who are happy with themselves	25 (65)
• Make words on the poster bigger	15 (38)
• No changes, like the poster the way it is	13 (32)
• Don’t know	7 (18)
• Include boys/males	4 (10)
• Poster is too bad to be improved	3 (7)
• Change caption to show how silly and impossible it is to have the perfect body	2 (5)
• Have the girls wearing school uniforms	1 (3)
Ruby ( <i>n</i> = 259 written responses)	
• No changes. Like the poster the way it is	57 (144)
• Use brighter colors	10 (28)
• Put some clothes on Ruby	10 (26)
• Make it less exaggerated. Slightly slimmer	8 (21)
• Don’t know	6 (15)
• Include boys/males	3 (8)
• Use a real person, not a doll	2 (5)
• Make the poster bigger	2 (5)
• Make the caption easier to understand and less confusing	1 (4)
• Make it suitable for younger age group	1 (4)

**TABLE 3.** Written Responses of Adolescent Females to the Question "What Would Help You to Feel Better About Your Body?"

	%	(n)
Lose weight, change physical appearance	27	(83)
Fewer media images of perfect, skinny models	18	(54)
More exercise, fitness, healthy eating; less junk food	12	(35)
More positive comments from others	10	(29)
Less criticism/teasing from others	8	(23)
Positive attitude. More self-esteem	7	(21)
More education	5	(15)
Don't know	3	(9)
Fashions for bigger girls and women	3	(9)
To know what weight is normal	2	(8)
I don't want to change	2	(8)
If I had a boyfriend	2	(6)
Nothing would make me feel better	1	(5)

*Note:* A total of 93% ( $n = 305$ ) of participants made written suggestions. Percentages have been rounded up.

## DISCUSSION

The results of the current study confirm the hypothesis that body image education and materials for the prevention of eating disorders or disordered eating may have a negative impact on some adolescent girls. Despite a large number (84%) of girls generally understanding the purpose and messages of the posters, the psychological impact of the posters was not all positive. One third of the girls in this study reported a nonbeneficial impact of the posters, a similar number did not like the posters, and fewer than 30% wanted their own copy. Of particular concern were evaluations of the 5 Girls poster, which the girls reported to have made them feel worse about themselves because they compared themselves unfavorably with the attractive young models in the poster. Being exposed to their beautiful, slim, and attractive counterparts in the 5 Girls poster simply served to remind the girls that they were not perfect and that they were unlikely to ever achieve the ideal body. This phenomena known as social comparison occurs when young women compare themselves unfavorably with peers, models, and significant others (Garner, 1997; Muir, Wertheim, & Paxton, 1999).

The results of the current study are similar to those of Garner (1997) who found that of more than 3,000 young women studied, 30% reported that they always or very often compare themselves to models in magazines and that comparison makes them feel insecure about their weight, and makes them angry, resentful, and want to lose weight. The current results also are similar to the process of "fat talk" (Nichter & Vuckovic, 1994; Wertheim, Paxton, Schutz, & Muir, 1997) where girls were found to discuss their body shape and size and come to the conclusion that they are too fat after comparing themselves with each other. The results of the current study confirm

previous findings that media images of slim, beautiful, and “perfect” young women are known to be damaging and unhelpful to the psychological welfare of the young women who see them in fashion magazines and advertisements (Field, Cheung, Wolf, et al., 1999; Hamilton & Walter, 1993; Shaw, 1995; Waller, Shaw, Hamilton, et al., 1994). The girls in the current study criticized the use of “perfect looking people” in the 5 Girls poster and their major suggestion for improvement of the poster was to change the images to normal, not flawless females who were actively demonstrating that they understood they were not perfect rather than criticizing themselves. They also suggested the use of a normal diversity of appearances, body shapes, and sizes in order to dispel rather than reinforce common body image stereotypes.

Perceptions of the Ruby poster were slightly more positive than those of the 5 Girls poster with fewer girls reporting that they disliked the poster and Ruby receiving a significantly higher overall rating from older girls. More girls reported wanting to own their own copy of Ruby (41% versus 21%); the main reason for this was because it made them “laugh, relax, and feel better.” This result may be associated with the known role of humor in the enhancement of psychological well being (Brodén, 1994; Brooks, 1994; Gelkopf & Kreitler, 1996; Rutherford, 1994). It is important that the clarity of humorous educational messages be ensured if they are to be disseminated among young people whose sense of humor may not be as sophisticated as that of the adults who design the messages. Those designing health education interventions should be aware that messages that are suitable for adults may not necessarily be suitable for or understood by adolescent girls.

One of the study aims was to assess girls’ suggestions about preventive strategies for eating and body image problems. The girls in this study cited a combination of intrinsic and extrinsic factors to be important in helping them to feel better about their bodies, including being involved in more physical activity, fitness, weight loss, healthy eating, and actively trying to develop a more positive self-image. These findings support previous suggestions for effective preventive strategies to combat body image and eating problems including involving girls in sports (Patton, Selzer, Coffey, et al., 1999) and self-esteem development (Button, Loan, Davies, & Sonuga-Burke, 1997; O’Dea & Abraham, 2000; Shisslak, Crago, Renger, & Clark-Wagner, 1998). Similarly, the extrinsic factors cited as needing to be changed in order for girls to feel better about their bodies are supported by previous suggestions including the use of fewer thin and seemingly “perfect” stereotypical female images in the media (Field, et al., 1999; Spillman & Everington, 1989), less criticism from mothers (Smolak, Levine, & Schermer, 1999; Swarr & Richards, 1996), less teasing (Garner, 1997; Levine, Smolak, & Hayden, 1994; Muir et al., 1999; O’Dea & Maloney, 2000), and a reorientation by the fashion industry to design and produce fashions that better suit women of various body shapes and sizes. (O’Dea, 1992).

The girls’ suggestion that they would feel better about their bodies if

they received positive comments from peers and significant others also has been recently reinforced as a strategy that appears to be beneficial to the body image of adolescents (O'Dea & Abraham, 2000; Paxton, Schutz, Wertheim, & Muir, 1999).

The current study was limited in a number of ways. The sample was randomly selected by school and class, but individuals were not strictly randomly selected. In addition, the effect of current body weight or dieting behaviors on participants' evaluations of body image education materials were not examined. Future evaluations should include an investigation of the impact of body weight, dieting behaviors, and pubertal development on the way adolescent females evaluate body image education materials as these factors are known to influence the body image of adolescents (O'Dea & Abraham, 1999).

The findings of this study confirm that some types of body image education may be unsuitable and potentially dangerous for adolescent females. Negative messages and those that use images of seemingly "perfect" models are likely to have an adverse impact by promoting self-comparison and inadvertently making some girls more dissatisfied and concerned about their body weight, shape, and size. Images that incorporate clear and positive messages with age-appropriate humor are likely to help young people feel more self-accepting and satisfied with themselves and their bodies.

Future preventive strategies should focus on making certain that body image education programs deliver appropriate messages to adolescents, that the messages are understood, and that they do no harm to young participants. This can be ensured by involving the target audience in all aspects of the program planning and thoroughly pretesting educational materials with young people in order to examine the messages they are receiving, both intended and unintended. Youth health education strategies that incorporate young peoples' perceptions, comments and suggestions are known to be the most successful (Fuerstein, 1986; Lefebvre & Flora, 1988; U.S. Department of Health & Human Services, 1989; Gilmore, Campbell, & Becker, 1989; Maibach & Parrott, 1995). Comprehensive, well-designed, and continuous education programs are the most likely to be effective in the prevention of body image problems among adolescents. Cohn and Maine (1998) argue that educational initiatives to prevent eating problems cannot be expected to work when they are "one-off" activities with little comprehensive planning or long-term follow-up. They argue that eating disorder prevention programs cannot be "conducted like a driver's training course" and that for prevention programs to be successful, they must expose young people to ideas of self-acceptance and positive body image over and over. Preventive strategies aimed at improving body image and eating behaviors of young people should incorporate activities that are currently known to do no harm including peer and community support, self-esteem development, and the appropriate use of humor. The many useful comments and suggestions contributed by the young participants in this study demonstrate that they have

an important role to play in the design of the educational activities in which they are expected to participate and from which they are believed to derive benefit.

## REFERENCES

- Broden, S. (1994). The therapeutic use of humor in the treatment of eating disorders; or, There is life even after fat thighs. In B. P. Kinoy (Ed.), *Eating disorders: New directions in treatment and recovery* (pp. 92–99). New York, Columbia University Press.
- Brooks, R. B. (1994). Humour in psychotherapy: An invaluable technique with adolescents. In E. S. Buckman. (Ed.), *The handbook of humor: Clinical applications in psychotherapy* (pp. 53–73). Melbourne, FL: Krieger.
- Buddeberg-Fischer, B., Klaghofer, R., Gnam, G., & Buddeberg, C. (1998). Prevention of disturbed eating behaviour: A prospective intervention study in 14–19 year old Swiss students. *Acta Psychiatrica Scandinavica*, *98*, 146–155.
- Button, E., Loan, P., Davies, J., & Sonuga-Barke, E. (1997). Self-esteem, eating problems and psychological well being in a cohort of schoolgirls aged 15–16: A questionnaire and interview study. *International Journal of Eating Disorders*, *21*, 39–47.
- Carter, J. C., Stewart, A., Dunn, V. J., & Fairburn, C. (1997). Primary prevention of eating disorders: Might it do more harm than good? *International Journal of Eating Disorders*, *22*, 167–172.
- Cohn, L., & Maine, M. (1998). More harm than good. *Eating Disorders: The Journal of Treatment and Prevention*, *6*(1), 93–95.
- Crisp, A. H. (1988). Some possible approaches to prevention of eating and body weight/shape disorders with particular reference to anorexia nervosa. *International Journal of Eating Disorders*, *7*, 1–17.
- Fairburn, C. G. (1995). The prevention of eating disorders. In K. D. Brownell & C. G. Fairburn (Eds.), *Eating Disorders and Obesity: A Comprehensive Handbook*. New York: The Guildford Press.
- Feuerstein, M. (1986). *Partners in evaluation: evaluating development and community programmes with participants*. London: Macmillan.
- Field, A. E., Cheung, L., Wolf, A. M., Herzog, D. B., Gortmaker, S. L., & Colditz, G. A. (1999). Exposure to the mass media and weight concerns among girls. *Pediatrics*, *103*(3), E36.
- Garner, D. M. (1985). Iatrogenesis in anorexia nervosa and bulimia nervosa. *International Journal of Eating Disorders*, *2*, 15–34.
- Garner, D. M. (1997) The body image survey results. *Psychology Today*, *30*(1), 31–84.
- Gelkopf, M., & Kreidler, S. (1996). Is humor only fun, an alternative cure or magic: The cognitive therapeutic potential of humor. *Journal of Cognitive Psychotherapy*, *10*(4), 235–254.
- Gilmore, G. D., Campbell, M. D., & Becker, B. (1989). *Needs assessment strategies for health education and health promotion*. Indianapolis, IN: Benchmark Press.
- Hamilton, K., & Waller, G. (1993). Media influences on body size estimation in anorexia and bulimia. An experimental study. *British Journal of Psychiatry*, *162*, 837–40.

- Killen, J. D., Taylor, C. B., Hammer, L. D., Litt, I., Wilson, D. M., Rich, T., Hayward, C., Simmonds, B., Kraemer, H., & Varady, A. (1993). An attempt to modify unhealthful eating attitudes and weight regulation practices of young adolescent girls. *International Journal of Eating Disorders, 13*(4), 369–384.
- Krueger R. (1998). *Analyzing and reporting focus group results*. Thousand Oaks, CA: Sage.
- Lefebvre, R. C., & Flora, J. A. (1998). Social marketing & public health interventions. *Health Education Quarterly, 15*(3), 299–315.
- Levine, M. P., Smolak, L., & Hayden, H. (1994). The relation of sociocultural factors to eating attitudes and behaviours among middle school girls. *Journal of Early Adolescence, 14*, 471–490.
- Maibach, E., & Parrott, R. (1995). *Designing health messages: Approaches from communication theory & public health practice*. Thousand Oaks, CA: Sage.
- Mann, T., Nolen-Hoeksema, S., Huang, K., Burgard, D., Wright, A., & Hanson, K. (1997). Are two interventions worse than none? Joint primary and secondary prevention of eating disorders in college females. *Health Psychology, 16*, 214–225.
- Moriarty, D., Shore, R., & Maxim, N. (1990). Evaluation of an eating disorder curriculum. *Evaluation and Program Planning, 13*, 407–413.
- Muir, S. L., Wertheim, E. H., & Paxton, S. J. (1999) Adolescent girls' first diets: Triggers and the role of multiple dimensions of self-concept. *Eating Disorders, 7*, 259–270.
- Neumark-Sztainer, D., Butler, R., & Palti, H. (1995). Eating disturbances among adolescent girls: Evaluation of a school-based primary prevention program. *Journal of Nutrition Education, 27*, 24–31.
- Neumark-Sztainer, D., Sherwood, N. E., Collier, T., & Hannan, P. J. (2000). Primary prevention of disordered eating among preadolescent girls: Feasibility and short-term effect of a community-based intervention. *Journal of the American Dietetic Association, 100*(12), 1466–1473.
- New South Wales Department of Health. (1997). Body Image Poster—"It isn't your body you need to change, it's your mind." Sydney, NSW Health.
- Nichter, M., & Vuckovic, N. (1994) Fat talk: Body image among adolescent females. In N. Sault (Ed.), *Many mirrors: Body image and social relations*. New Brunswick, NJ: Rutgers University Press.
- O'Dea, J. (1992). Poor body image and women: What are the adverse effects? Proceedings from Fat or Fiction? Dieting, Body Image and Women's Health. National Conference Australian Sugar Industry, Sydney, 29–41.
- O'Dea, J. (2000). School-based interventions to prevent eating problems: First do no harm. *Eating Disorders: The Journal of Treatment and Prevention, 8*, 123–130.
- O'Dea, J., & Abraham, S. (1999). Onset of disordered eating attitudes and behaviors in early adolescence: Interplay of pubertal status, gender, weight and age. *Adolescence, 34*, 671–679.
- O'Dea, J., & Abraham, S. (2000). Improving the body image, eating attitudes and behaviors of young male and female adolescents: A new educational approach which focuses on self esteem. *International Journal of Eating Disorders, 28*, 43–57.
- O'Dea, J., & Maloney, D. (2000). Preventing eating and body image problems in children and adolescents using the health promoting schools framework. *Jour-*

*nal of School Health*, 70, 18–21

- Patton, G. C., Selzer, R., Coffey, C., Carlin, J. B., & Wolfe, R. (1999). Onset of adolescent eating disorders: Population based cohort study over 3 years. *British Medical Journal*, 318, 765–768.
- Paxton, S. J. (1993). A prevention program for disturbed eating and body dissatisfaction in adolescent girls: A one year follow-up. *Health Education Research*, 8(1), 43–51.
- Paxton, S. J., Schutz, H., Wertheim, E. H., & Muir, S. L. (1999). Friendship clique and peer influences on body image concerns, dietary restraint, external weight loss behaviors and binge eating in adolescent girls. *Journal of Abnormal Psychology*, 108, 255–266.
- Rutherford, K. (1994). Humor in psychotherapy. *Individual Psychology: Journal of Adlerian Theory, Research & Practice*, 50(2), 207–222.
- Shaw, J. (1995). Effects of fashion magazines on body dissatisfaction and eating psychopathology in adolescent and adult females. *European Eating Disorders Review*, 3(1), 15–23.
- Shisslak, C. M., Crago, M., & Neal, M. E. (1990). Prevention of eating disorders among adolescents. *American Journal of Health Promotion*, 5(2), 100–106.
- Shisslak, C. M., Crago, M., Renger, R., & Clark-Wagner, A. (1998). Self-esteem and the prevention of eating disorders. *Eating Disorders*, 6, 105–117.
- Smolak L., Levine, M., & Schermer, F. (1998). A controlled evaluation of an elementary school primary prevention program for eating problems. *Journal of Psychosomatic Research*, 44(3–4), 339–353.
- Smolak, L., Levine, M. P., & Schermer, F. (1999). Parental input and weight concerns among elementary school children. *International Journal of Eating Disorders*, 25(3), 263–271.
- Spillman, D. M., & Everington, C. (1989). Somatotypes revisited: have the media changed our perception of the female body image? *Psychological Reports*, 64(3), 887–890.
- Swarr, A. E., & Richards, M. H. (1996). Longitudinal effects on adolescent girls' pubertal development, perceptions of pubertal timing and parental relations on eating problems. *Development Psychology*, 32, 636–646.
- The Body Shop International. (1997). Full voice. The Body Shop and Self Esteem (Issue One). London, UK.
- U.S. Department of Health and Human Services. (1989). *Making health communications work*. NIH publication no. 89-1493. Washington, DC: National Institutes of Health, National Cancer Institute, Office of Cancer Communications.
- Waller, G., Shaw, J., Hamilton, K., Baldwin, G., Harding, T., & Summer, A. (1994). Beauty is in the eye of the beholder: Media influences on the psychopathology of eating problems. *Appetite*, 23(3), 287.
- Wertheim, E. H., Paxton, S. J., Schutz, H. K., & Muir, S. L. (1997). Why do adolescent girls watch their weight—An interview study examining sociocultural pressures to be thin. *Journal of Psychosomatic Research*, 42(4), 345–355.