

## The impact of the media on eating disorders in children and adolescents

Anne M Morris MBBS MPH FRACP<sup>1</sup>, Debra K Katzman MD FRCPC<sup>2</sup>

Epidemiological studies have suggested that the incidence of eating disorders among adolescent girls has increased over the last 50 years. The reported prevalence rate for anorexia nervosa is 0.48% among girls 15 to 19 years old. Approximately 1% to 5% of adolescent girls meet the criteria for bulimia nervosa (1). Today, more than ever, adolescents are prone to concerns about their weight, shape, size and body image, and as a result, diet to lose weight (2-5). Little is known about how these body image- and weight-related concerns arise. These behaviours have been suggested as possible risk factors for the development of eating disorders. Many researchers have hypothesized that the media may play a central role in creating and intensifying the phenomenon of body dissatisfaction and consequently, may be partly responsible for the increase in the prevalence of eating disorders.

This paper reviews some of the evidence regarding the influence of the media on the development of an adolescent's self-perception, body image, weight concerns and weight control practices. In addition, we examine how media content might be attended to and positively incorporated into the lives of children and adolescents.

### TYPES OF MEDIA EXPOSURE

Today's children and adolescents grow up in a world flooded with the mass media (television, films, videos, billboards, magazines, movies, music, newspapers, fashion designers and the Internet) (6,7). Staggering statistics reveal that, on average, a child or adolescent watches up to 5 h of television per day (7) and spends an average of 6 to 7 h viewing the various media combined (6).

Over the past 20 years, several articles have proposed a link between the thin female beauty ideal and the muscular male body ideal portrayed in the media with a range of psychological symptomatology including body dissatisfaction and eating disorders. Studies have reported a significant change in the weight and size of female and male models portrayed throughout the media in western society and the concept of the 'perfect or ideal body' (8-10). Over time the cultural ideal for women's body size and shape has become considerably thinner and leaner and men's body size and shape has become stronger and more muscular. This is best illustrated in a study by Katzmarzyk and Davis (8) who examined changes in the body weight and shape of Playboy centerfolds over two decades (1978-1998). They found that there was a significant decrease in the models' body weights and measurements, with 70% of

the women being underweight and greater than 75% of the women were less than 85% of their ideal body weight. A similar study looking at male centerfold models in Playgirl magazine from 1973 to 1997 found that male models had become significantly more muscular over time (9). Guillen and Barr (10) focused on the messages in a popular magazine for adolescent girls and found that between 1970 to 1990 the emphasis on fitness increased, and the body shape of models reported a trend toward more androgynous-looking bodies.

These cultural standards may well explain, in part, why many adolescents are preoccupied with their bodies and dissatisfied with their body image, and are willing to try a variety of dangerous weight-loss practices in their quest for the perfect body.

### MEDIA AND BODY DISSATISFACTION IN CHILDREN AND ADOLESCENTS

Research studies have shown that young people frequently report body dissatisfaction, with adolescent girls experiencing more body dissatisfaction than boys (11,12). Adolescent girls generally want to weigh less, while adolescent boys want to be bigger and stronger. A meta-analysis of 25 studies involving female subjects, examined the effect of exposure to media images of the slender body ideal. Body image was significantly more negative after viewing thin media images than after viewing images of either average size models, plus size models or inanimate objects. This effect was found to be stronger in women younger than 19 years of age (13).

Tiggemann et al (14) studied body concerns in adolescent girls (aged 16 years old) and attempted to understand the underlying motivations for their wish to be thin. The factor exerting the strongest pressure to be thin was the media. Despite the fact that these adolescent girls clearly articulated a desire to be thinner, they also described how this did not necessarily mean they were dissatisfied with their bodies. The authors found that the girls had a surprisingly well-developed understanding of the media and its possible role in influencing self-image. The authors suggested that this understanding may serve to moderate against overwhelming media forces.

### MEDIA AND EATING, AND WEIGHT CONTROL BEHAVIOURS

Dissatisfaction with body image and unhealthy eating behaviours are important issues for adolescent girls. Many young

<sup>1</sup>Department of Paediatrics and Psychiatry, and <sup>2</sup>The Eating Disorders Program, The Hospital for Sick Children, University of Toronto, Toronto, Ontario

Correspondence: Dr Debra K Katzman, Division of Adolescent Medicine, Department of Paediatrics, The Hospital for Sick Children, 555 University Avenue, Toronto, Ontario M5G 1X8. Telephone 416-813-5084, fax 416-813-5392, e-mail [debbie.katzman@sickkids.ca](mailto:debbie.katzman@sickkids.ca)

women believe that they are overweight and want to weigh less. In one study, 44% of adolescent girls believed they were overweight and 60% were actively trying to lose weight even though the majority of these young girls were within normal weight ranges (15).

Several cross-sectional studies have reported a positive association between exposure to beauty and fashion magazines and an increased level of weight concerns or eating disorder symptoms in girls. Field et al (16) found that the importance of thinness and trying to look like women on television, in movies or in magazines were predictive of young girls (9 to 14 years old) beginning to purge at least monthly. In another prospective study (17), this same group found that both boys and girls (aged 9 to 14 years old) who were making an effort to look like the figures in the media, were more likely than their peers to develop weight concerns and become constant dieters.

One study measured indicators of disordered eating in a "media naïve population" of Fijian schoolgirls after the introduction of Western television. The key indicators of disordered eating were found to be significantly more prevalent following prolonged television exposure, suggesting a negative impact of this media. Among the narrative data was the frequent theme of subjects reporting an interest in weight loss as a means of modelling themselves after television characters (18).

A study of the relationship between media and eating disorders among undergraduate college students found that media exposure predicted disordered eating symptomatology, drive for thinness, body dissatisfaction and ineffectiveness in women, and endorsement of personal thinness and dieting in men (19).

In a cross-sectional survey of 548 girls from grades 5 to 12, participants self-reported the frequency of reading fashion magazines, and attitudes and behaviours, including dieting and exercise. After controlling for weight status, school level and racial group, those who frequently read fashion magazines were twice as likely to have dieted and three times as likely to have initiated an exercise program to lose weight, than infrequent readers (11).

These methodologically diverse studies illustrate how exposure to unrealistic and often unhealthy body images can influence young people's perceptions of their own body shape and size as well as their own sense of body satisfaction. The effect of the media may also extend to the development of specific, and possibly harmful, weight losing behaviours.

### WHAT TO DO ABOUT THE MEDIA

The literature confirms that children and adolescents are particularly vulnerable to messages and images conveyed through the mass media. Many children and adolescents cannot discriminate between what they see and what is real. For instance, young people are often unaware that digital technology and manipulation in the fashion industry use air brush and digital enhancement to portray the 'ideal' female and male body. These images promote unrealistic standards that are impossible to achieve.

Physicians should regularly inquire about media involved behaviours including television watching, video watching, the use of video games, time spent in front of the computer and listening to radio programs, and types of magazines read. Health care providers, parents, teachers, school officials and other professionals should be aware of the kinds of programs that young people are exposed to, the content of the programs and the media-associated health risks (20). Those concerned about the

media's negative impact on body image, self-esteem, food, dieting and eating disorders need to consider a number of different interventions such as health communication campaigns, entertainment education, media advocacy and media literacy training (6). Such interventions need to be evaluated with respect to the media's portrayal of the idealized and unattainable images of beauty that young people are exposed to and its impact on disordered eating behaviours and eating disorders.

Media literacy, an example of such an intervention, is a process of understanding and using mass media and has been shown to help young people evaluate program and advertising content more critically (20). In particular, media education interventions have revealed a decrease in the harmful effects of media violence (21) and alcohol advertising (22) on children and adolescents. Media education programs have been included in the school curricula in some schools in Canada and may include media activism and media advocacy (6). Again, this has not been evaluated with respect to eating disorders. Another very important objective of media literacy is educating and empowering parents to evaluate media content critically. Parents can be powerful advocates for the promotion of health and healthy behaviours by way of the media.

While the media may contribute to the development of weight concerns and body dissatisfaction in children and adolescents, we cannot disregard the fact that media can also be used as an important tool for health promotion and prevention strategies. Longitudinal research, especially with children and young adolescents, is needed to learn more about how media content is attended to, interpreted, and incorporated into the healthy development of our children and adolescents.

### REFERENCES

1. Fisher M, Golden NH, Katzman DK, et al. Eating disorders in adolescents: A background paper. *J Adolesc Health* 1995;16:420-37.
2. Schreiber GB, Robins M, Striegel-Moore R, Obarzanek E, Morrison JA, Wright DJ. Weight modification efforts reported by black and white preadolescent girls: National Heart, Lung, and Blood Institute Growth and Health Study. *Pediatrics* 1996;98:62-70.
3. Field A, Camargo C, Taylor CB, et al. Overweight, weight concerns, and bulimic behaviours among girls and boys. *J Am Acad Child Adolesc Psychiatry* 1999;38:754-60.
4. Wood KC, Becker JA, Thompson JK. Body image dissatisfaction in preadolescent children. *J Applied Devel Psychol* 1996;17:85-100.
5. Davison KK, Markey CN, Birch LL. Etiology of body dissatisfaction and weight concerns in 5-year-old-girls. *Appetite* 2000;35:143-51.
6. Brown JD, Witherspoon EM. The mass media and American adolescents' health. *J Adolesc Health* 2002;31(Suppl 6):153-70.
7. Canadian Paediatric Society, Psychosocial Paediatrics Committee. Children and the media. *Paediatr Child Health* 1999;4:350-4.
8. Katzmarzyk PT, Davis C. Thinness and body shape of Playboy centerfolds from 1978 to 1998. *Int J Obes Relat Metab Disord* 2001;25:590-2.
9. Leit RA, Pope HG, Gray JJ. Cultural expectations of muscularity in men: The evolution of Playgirl centerfolds. *Int J Eat Disord* 2001;29:90-3.
10. Guillen EO, Barr SI. Nutrition, dieting, and fitness messages in a magazine for adolescent women, 1970-90. *J Adolesc Health* 1994;15:464-72.
11. Field AE, Cheung L, Wolf AMH, Herzog DB, Gortmaker SL, Colditz GA. Exposure to the mass media and weight concerns among girls. *Pediatrics* 1999;103:E36.
12. Labre MP. Adolescent boys and the muscular male body ideal. *J Adolesc Health* 2002;20:233-42.
13. Groesz LM, Levine MP, Murnen SK. The effect of experimental presentation of thin media images on body satisfaction: A meta-analytic review. *Int J Eat Disord* 2002;31:1-16.
14. Tiggemann M, Gardiner M, Slater A. "I would rather be size 10 than have straight A's": A focus group study of adolescent girls' wish to be thinner. *J Adolesc* 2000;23:645-59.

15. Ozer EM, Brindis CD, Millstein SG, et al. America's adolescents: Are they healthy? San Francisco: University of California, School of Medicine, 1998.
  16. Field AE, Camargo CA, Taylor CB, Berkey CS, Colditz GA. Relation of peer and media influences to the development of purging behaviors among preadolescent and adolescent girls. *Arch Pediatr Adolesc Med* 1999;153:1184-9.
  17. Field AE, Camargo CAJ, Taylor CB, Berkey CS, Roberts SB, Colditz GA. Peer, parent, and media influences on the development of weight concerns and frequent dieting among preadolescent and adolescent girls and boys. *Pediatrics* 2001;107:54-60.
  18. Becker AE, Burwell RA, Gilman SE, Herzog DB, Hamburg P. Eating behaviours and attitudes following exposure to television among ethnic Fijian adolescent girls. *Br J Psychiatry* 2002;180:509-14.
  19. Harrison K, Cantor J. The relationship between media consumption and eating disorders. *J Commun* 1997;47:40-67.
  20. American Academy of Pediatrics, Committee on Public Education. Media Education (RE9911) Policy Statement. *Pediatrics* 1999;104:341-3.
  21. Gunter B. The question of media violence. In: Bryant J, Zillman D, eds. *Media Effects: Advances in Theory and Research*. Hillsdale: Lawrence Erlbaum Associates, 1994:163-211.
  22. Austin EW, Johnson KK. Effects of general and alcohol-specific media literacy training on children's decision making model about alcohol. *J Health Commun* 1997;2:17-42.
-