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Motivation for eating behaviour in adolescent girls: the body beautiful

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Body dissatisfaction is commonplace for teenage girls and is associated with dieting and unhealthy weight-control behaviours. The idealisation and pursuit of thinness are seen as the main drivers of body dissatisfaction, with the media prominent in setting thin body ideals. Television and consumer magazine production in the UK are extensive, annually releasing 1×10^6 h programming and >3000 magazine titles. Their engagement by adolescent girls is high, and in surveys girls identify thin and revealing body images as influential to the appeal of thinness and their pursuit of dieting. Experimental studies show a short-term impact of these images on body dissatisfaction, especially in teenagers who are already concerned about body image. Magazine images appear more influential than television viewing. For many adolescents selecting thin-image media is purposive, permitting comparison of themselves with the models or celebrities featured. Indeed, the impact of the media needs to be understood within a social context, as engagement is often a highly-social process. Media influence is uneven because of differences in its content and manner of communication, and individual differences in vulnerability to its content. Greater social responsibility on the part of the media and better media literacy by children would be beneficial. For those working in adolescent nutrition it is a reminder that adolescent food choice and intake are subject to many competing, contradictory and non-health-related determinants.

Adolescence: Body dissatisfaction: Dieting: Eating disorders

A UK survey of 2000 teenage girls, which was commissioned by the teenage magazine *Bliss*, reported in January 2005 that just 8% were happy with their body (see Barton, 2005). Despite the sample averaging at a BMI of 20.5 kg/m², 71% claimed they would be ‘100% happier if they could lose half a stone [3.2 kg]’. Images of perfect celebrities were cited by many of the girls as a source of pressure to be thinner. Quite understandably, the press release issued by the magazine stimulated the interest of other media and the content was covered widely by newspapers, television (TV) and radio. The survey is of note for two reasons. First, it describes a picture of adolescent female body discontent that is exaggerated but broadly consistent with academic research. Second, it shows the

peculiar position of the media; appearing to be self-critical and filling pages of newsprint and hours of broadcasting in doing so, without recommending or taking specific action in response.

Let there be no doubt about the extent of adolescent body dissatisfaction, dieting and association with disordered eating. Studies showing that $\geq 50\%$ of adolescent girls currently ‘feel fat’ are not uncommon (for example, see Wardle & Marsland, 1990). Adolescent dieting is not a new phenomenon. It was reported in the late 1960s (Dwyer *et al.* 1967) that over one-third of the 17-year-olds studied were currently dieting. However, in a recent study (Crow *et al.* 2006) >50% of US adolescent girls report having dieted in the previous year. Unhealthy weight-control

Abbreviation: TV, television.

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behaviours such as fasting, vomiting and the taking of diet pills or laxatives are also common. Between 50 and 60% of US adolescent girls report that they have engaged in one of these practices in the previous year (Croll *et al.* 2002). Unsurprisingly, the majority of the girls have strong appearance concerns. Dieting, especially that which includes these extreme behaviours, is a major risk to eating-disorder onset (Patton *et al.* 1999), although whether it is restrained eating or body dissatisfaction that is key is still open to debate (Johnson & Wardle, 2005).

So what about the media and the role that it plays in setting body-image standards, the body beautiful, for adolescent girls? The purpose of the present paper is to examine how standards for body shape are set and the social context in which media such as TV and magazines operate.

Media influence

There have been several reviews of the role of the media in negative body image and disordered eating (for example, see Levine & Smolak, 1996; Levine & Harrison, 2004). They identify TV and magazines as the primary focus of research interest. Relatively unresearched parts of the mass media are newspapers, books, radio, the internet, mobile phones and advertising outdoors and on transport. Clearly, they are extensive, potentially influential and in need of more scientific scrutiny.

The public engage with media because they are entertaining and informative, allowing an exploration of a range of social, political and presentational issues. Magazines differ from media such as TV in that they are more often niche driven and target their content to specific audiences; teenage girls being one such audience. Furthermore, while many media share the production motives of entertainment and education, they operate in a commercial and competitive environment. The need to compete and maximise profits has drawn similar criticisms to those directed at the advertising industry; that they fail to exercise social responsibility. In other words, the drive to make money is at the expense of clear reasoning about the consequences of the material presented.

Levine & Smolak (1996) have outlined several ways in which the media impacts on body image in terms of the belief system that is endorsed (Table 1). Promoting thinness as the gold standard for body shape is only part of the package. The confusion of image with reality and the promise of personal transformation via dieting and weight

loss are widespread and pernicious. However, just how extensive is the influence of the media on the lives of teenagers? One way of addressing this question is to look at levels of media production and engagement.

Media production and engagement

TV is big business, generating £10.1 × 10⁹ in revenue in the UK during 2004 (Ofcom, 2005). At the end of May 2005, 376 channels were broadcasting in the UK, achieving an output of >1 × 10⁶ h annually. Of UK households 99% have a TV and 81% of individuals live in households with two or more TV sets (Satter *et al.* 2005). Approximately 65% of households are capable of receiving multi-channel TV. Unsurprisingly, about 60% of TV viewing by <16-year-olds is directed at non-traditional channels (Ofcom, 2005). A report on children's TV viewing has estimated that in 2001 the daily viewing times of those in 'multi-channel' homes were 2 h 27 min, about 35 min more than those for children with access to only terrestrial channels (Atwal *et al.* 2003). However, only 30 min/d were reported to be spent by 4–15-year-olds watching children's programming; the majority was family or adult programming.

Choice is even greater when it comes to magazines. Consumer magazines, as opposed to those directed at the business and professional market, numbered 3366 UK titles in 2005 and generated £2.2 × 10⁹ in sales and advertising (Periodical Publishers Association, 2006). Approximately 90% of 10–14-year-old girls in the UK read a teenage magazine, and popular titles like *Bliss* and *Sugar* sell >0.25 × 10⁶ copies per issue (Periodical Publishers Association, 2006). It is estimated that the likely readership for each magazine is two or three times greater than the sales figures, as issues are shared or passed on between friends. Although they are targeted at females, the readership of these titles amongst teenage boys is also high. The problem pages in particular cater for and respond to both sexes. Like TV, teenagers' engagement with magazines is not exclusive to those produced for them, and the data for teenage magazine readership may represent only part of their total magazine exposure and use.

Other media are being increasingly used by adolescents. Almost all children now have a personal computer at home (ChildWise, 2006). Seven in ten 5–16-year-olds have internet access and half have broadband. The popularity of internet messaging services such as MSN mean that teenage internet users spend approximately 2 h/d on line (in addition to, or simultaneous with, the 2.5 h daily TV viewing). Advertisers are aware of this changing media use. Expenditure on advertising on the internet in the UK approximately doubled from 2004 to 2005 and, at £1.1 × 10⁹, surpassed for the first time that spent on advertising in consumer magazines (a mere £827 × 10⁶).

Depicting the female body

Not only is media access and engagement increasing, but the depiction of women's bodies in the media has altered, albeit over a longer timescale. The way that women's ideal body weight has decreased since the late 1950s is well documented (see Wiseman *et al.* 1992). Taking magazine

Table 1. Media-endorsed beliefs relevant to eating disorders (from Levine & Smolak, 1996)

Creation of slenderness as the gold standard for a narrow range of ideal body shapes
Promotion of slenderness as the path to social, sexual and occupational success for women
Emphasis in the possibility and desirability of personal transformation through fashion and dieting
Promotion of the importance (i.e. reality) of image as substance
Establishment of gender roles based on impossible expectations
Fatness as a sign of personal loss of control and failure

centrefolds and beauty contestants as metrics of changing ideals, Miss America contestants continued to decrease in body size during the 1980s while the Playboy centrefolds plateaued at an extremely low weight (Wiseman *et al.* 1992).

Complementing this research Sypeck *et al.* (2004) have examined the models used on the covers of the four most popular American fashion magazines between 1959 and 1999 (*Vogue, Mademoiselle, Glamour, Cosmopolitan*). The body size of the models decreased during the 1980s and 1990s. Of equal importance was the change in body portrayal. In the first two decades studied the magazine covers depicted the models' faces or their faces and upper torso. From the mid-1980s onwards, full-body depictions became much more common. In addition, in the later editions they were much more likely to be wearing revealing clothes. So, the presentation of ideal female body shapes has become more complete (full-body) and more revealing, and is patently thin. This change is not likely to be restricted to fashion magazine covers. It is apparent in women's lifestyle magazines and in advertising, be it on TV or on public display.

Adolescent's perception of influence

A number of studies have looked at the adolescent's perception of media influence. For example, in a frequently-cited questionnaire study (Field *et al.* 1999) 69% of the American girls who participated reported that magazine pictures influenced their idea of a perfect body shape and 47% reported wanting to lose weight because of magazine pictures. This perceived influence was shown to increase with increasing teenage age, and a positive association was found between these endorsements and the frequency of reading women's magazines.

However, these questionnaire responses fail to do justice to the depth of girls' appreciation of media influence. In a focus-group study Australian adolescents were found to be in broad agreement that the thin but perfect body appearance of models determines their views of what is normal and what everyone should look like (Tiggemann *et al.* 2000). They describe the process as automatic and instilling the belief that thinness promises happiness and success. However, a variety of other reasons were given as underpinning their desire for thinness, including: feeling more attractive and confident; receiving more attention; being able to wear and look good in fashionable clothes. It was found that wanting to be thinner is not always synonymous with being dissatisfied with current weight and shape. For some girls at least, personal distress does not drive the appeal of thinness. Indeed, the authors note the sophistication of girl's observations regarding the socio-cultural pressures on them and the ways they negotiate externally-imposed representations of body-shape ideals.

Experimental studies

Attempts at understanding the effects of exposure to media body images on self-perception have for some time used more-tightly controlled experimental investigations. Unsurprisingly, these investigations have taken many

forms. However, a meta-analysis by Groesz *et al.* (2002) draws out some of the main issues. The authors only included studies that: used female participants; used published whole-body images; included a control or comparison group; measured body dissatisfaction or physical attractiveness as a dependent variable. Overall, twenty-five studies met these criteria, yielding forty-three effect sizes. It was found that the mean effect size was -0.30 , a small but relatively consistent effect, indicating that exposure significantly decreased body satisfaction. The value of this evidence synthesis can be seen in the correlates of outcome. Body image was shown to be more negative after viewing thin media images than average- or plus-size models or non-body objects. The effect was found to be greater in between-subject designs, in participants younger than 19 years and in those with existing body dissatisfaction and body-shape concerns.

These data led to the conclusion that in experimental settings exposure to thin body images activates rather than cultivates a thinness schema. In other words, it facilitates negative body image in women who already think about themselves in terms of concerns about body shape and weight. The implication is that the existence of a thinness schema is a vulnerability in circumstances in which weight, shape and attractiveness information is salient. The authors also hypothesise that young adolescent girls are particularly vulnerable, because some girls are entering adolescence who already have body-image concerns and because self-presentation and physical appearance are common adolescent concerns.

A problem with many of these experimental studies is that they present participants with a very salient but essentially weak stimulus. Exposure to thin images rarely lasts more than a few minutes and the effects are never followed to the next days or weeks. The topic is in desperate need of longer-term laboratory or field studies of media image exposure.

The value of this approach can be seen in a study by Stice *et al.* (2001). As an incentive to participation in a survey, 50% of a group of adolescent girls were given a 15-month subscription to *Seventeen*, a popular US adolescent magazine. The others were entered into a draw for book or music store gift vouchers. Although the original purpose of the study was a longitudinal survey of adolescent body image and dieting, the authors analysed the data as though it was a trial evaluating magazine exposure. Overall, no effects of prolonged exposure on body dissatisfaction, dieting or negative affect were found. However, and consistent with the notion of vulnerability mentioned earlier, those girls with initially higher body dissatisfaction were found to increase their level of negative affect over the trial. Thus, longer-term exposure to, and engagement with, body-image media may have effects on a body-image-vulnerable group in a manner not limited to body weight and shape issues. Also of relevance to issues raised later in the present paper, it was found that girls who at the trial outset rated themselves as low in peer and family support had increased in body dissatisfaction and dieting by the end of the trial. This finding suggests that any proposed vulnerability to media effects involves more than the existence of a thinness schema.

Socially-isolated adolescents may use and interact with body-image media in different ways to those satisfied with their bodies and content in their peer group.

Magazines or television?

This study by Stice *et al.* (2001) is a rarity, and it illustrates some of the problems in implementing longer-term research. The issue of a weak experimental manipulation is also apparent, and it is difficult to properly measure manipulated exposure dose against the background of other body-focused media. The same would be true of any attempt to manipulate the content of adolescent TV exposure. However, there is evidence that magazine body-image exposure has more influence than that of TV. Vaughan & Fouts (2003) have collected information on eating-disorder psychopathology and magazine and TV exposure in a group of young adolescent girls on two occasions, 16 months apart. The girls were divided into three groups according to whether they increased, decreased or did not change in eating-disorder symptoms. It was found that those girls who with increased symptoms, increased in their exposure to fashion magazines but decreased their TV viewing, while those whose symptoms decreased, reduced their exposure to both magazine and TV media.

Although this study was longitudinal it says nothing about causal processes. Plausible directional influences could be argued for in either direction and the possible influence of a third variable such as reduced self-esteem cannot be ruled out. However, it does reinforce the idea that in this context magazine and TV engagement are functionally-different activities. Tiggemann (2003), for example, argues that women with high body dissatisfaction may be more likely to buy and read magazines for their explicit depictions of thinness and advice on appearance enhancement. In this respect, their engagement is purposive and active, something very different from the entertainment value of TV viewing. It also mirrors the inclusion of 'thinspiration' sections in nearly every pro-ana (pro-anorexia) website. 'Thinspiration' comprises a host of images of very thin models and celebrities often wearing very revealing clothes. The purpose is to remind browsers who have disordered eating about the body shape they are striving for and to help them manage their control over eating.

This functional aspect of media engagement can also be seen in the relationship between the frequency of reading magazines and weight-loss attempts. For example, frequent readers are twice as likely to report dieting to lose weight and three times more likely to exercise to lose weight because of a magazine article (Field *et al.* 1999). In addition, reading magazine articles about dieting or weight loss is strongly associated with unhealthy weight-control behaviours such as fasting or vomiting. Girls who often read these articles are seven times more likely to engage in these behaviours (Utter *et al.* 2003). The most likely explanation is that most girls are motivated to diet and seek the information they are looking for, which is obviously easy to find.

Conceptual approaches

A socio-cultural perspective on eating disorders has been popular for some time. At its heart is the process by which an individual internalises the core themes of society as they relate to appearance and body shape (Fig. 1). This information is transmitted or carried via three principal routes: the media; the family; peers. Personal characteristics such as self-esteem and relative weight may buffer or inflate the importance and valence of the prevailing social issues. However, it is their internalisation that drives body dissatisfaction and dieting, and that ultimately makes a major contribution to eating-disorder onset and maintenance.

The process of thin-ideal internalisation has been the focus of scale development and research scrutiny. The term refers to the extent to which an individual subscribes to socially-defined ideas regarding attractiveness and a thin body shape (Thompson & Stice, 2001). The extent of internalisation should be reflected in the behaviours that help individuals move closer to their ideals. Also, since thin ideals are unattainable for most individuals, the outcome is body dissatisfaction, dieting and negative affect. Since the socialising agents are media, family and friends, much of the process of internalisation is guided by modelling and social reinforcement. Modelling refers to the way that individuals learn by observation and use witnessed patterns of behaviours in similar situations. So, body-shape concerns and weight-control strategies that are read about or observed being used by others are more likely to be tried. This outcome is even more likely when these others who approve them are important or respected. Such social reinforcement can occur directly through

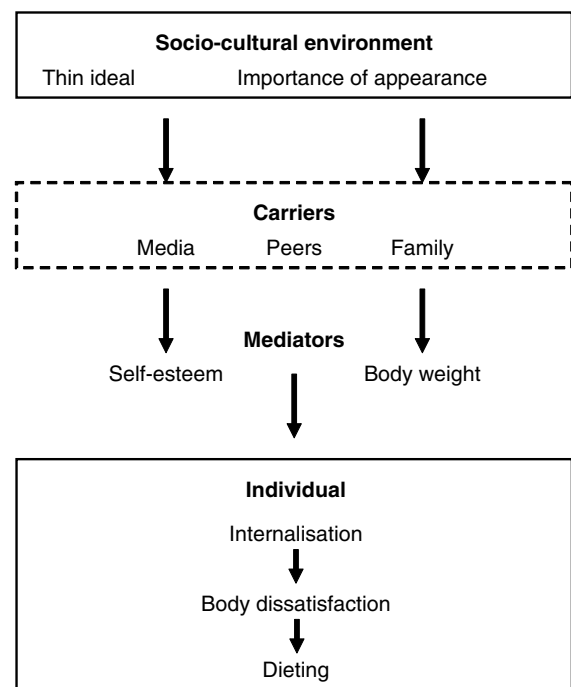


Fig. 1. The basic elements of the socio-cultural model of dieting and weight control. (Adapted from Stice, 1994.)

people's comments and indirectly by watching what others in similar situations say they think and how they act.

Evaluating the research support for thin-ideal internalisation and related processes, Cafri *et al.* (2005) have found a clear relationship between internalisation and body-image dissatisfaction. The effect size in this meta-analysis was shown to be 0.50, a medium to large effect, with no moderation by either age or ethnicity. Much of the evidence is derived from cross-sectional studies, and surprisingly they, rather than longitudinal or experimental studies, show the clearest effects. The direction of causation is therefore again a problem. Not only may internalisation drive body dissatisfaction but dissatisfaction is also likely to motivate the seeking of thin-related information and any social reinforcement available (such as in magazines). Clearly, thin-ideal internalisation and body dissatisfaction are inter-dependent and self-maintaining.

Another core feature of the socio-cultural approach is the importance of interpersonal processes. Reference has already been made to social isolation and social reinforcement. Social comparisons are also integral to this perspective. Social-comparison theory has its origins in conceptualisations of self and self-esteem, and refers to the way that individuals make self-appraisals based on evaluations of the same characteristics of others. So, this drive for self-evaluation is met by the individual comparing their abilities, achievements and appearance with those of others. These others tend to be those who are regularly encountered or who are archetypes of the features that are being self-evaluated. Furthermore, social comparisons are used more in circumstances in which internal standards are not yet established. So, uncertainty over issues relating to body shape, weight and appearance for adolescent girls are very amenable to social comparisons. Social comparisons are again functional. They are used to maintain self-esteem. Downward comparisons are used by the individual to compare themselves with others who perform poorly or who are worse off. Upward comparisons can be compensated for, but it is easy to envisage how body dissatisfaction is fostered and maintained by comparison with thin-ideal media images.

Social influence

One of the most striking recent accounts of increasing body dissatisfaction and eating pathology comes from Anne Becker's (Becker *et al.* 2002) studies of Fijian adolescent girls. TV became available in the Nadroga province of Fiji in 1995, which enabled investigation of the prolonged effects of TV exposure on a previously media-naïve population. The impact over a 3-year period was apparent in that more than twice the number of girls was found to have scores indicative of an eating disorder at the end of the study compared with the start. No girl reported using self-induced vomiting in 1995 but 11% reported it in 1998. At the follow-up assessment 74% felt too big or fat and 62% reported having dieted in the previous 4 weeks. In addition, 77% reported that TV had influenced their own body image. Many described wanting to lose weight or to re-shape their body to become more like the Western TV characters. Social comparisons with celebrities such as

Cindy Crawford and the actresses in *Beverly Hills 90210* are reported in the paper. However, the authors are careful to point out that the response was not a dose effect of TV exposure. TV character social comparisons were not the only determinant. Rather, the study shows what effect prolonged exposure to TV has on a peer environment by changing community-wide aesthetic ideals and stimulating consumerism.

Comparisons with peers and models

The process by which adolescents may use thin media images for body-comparison purposes is described by Botta (1999). Consulting TV or magazines, adolescents see glamorous and attractive images as representing realistic goals to achieve. Comparing themselves with these images they find themselves wanting. The focus may be on a single body feature or more generalised. The more they compare themselves, the more they strive to be thin, the more they dislike their bodies, and the more they engage in unhealthy weight-control behaviours.

This account is compelling in its simplicity but the reality is more complex. For example, media engagement is often a highly social process and media knowledge a social currency. As an illustration of this aspect Jones *et al.* (2004) have used path analysis to examine how appearance-magazine exposure and peer relationships are associated with body dissatisfactions in a large group of adolescents. The pattern of relationships suggests that magazine images in their own right probably have limited impact on girls' body image. Rather, those more involved with appearance magazines are also engaged in friendships that focus attention on appearance concerns. It would appear that magazine content provides material for conversation that is personalised with friends. Thus, it is within this interpersonal context of interactions with friends that these thin-body media have an effect.

The functions of social comparisons with media models have been explored by contrasting them with comparisons with same-gender peers (Jones, 2001). As previously described, social comparisons may be made across a variety of abilities or attributes, not all of which are appearance related. The results show that both models and celebrities and same-gender peers are the targets for physical and appearance comparisons. In contrast, comparisons on personal and social attributes are more directed at peers. So, social comparisons with models and celebrities are primarily for appearance self-evaluation. Interestingly, weight and shape comparisons with both models and peers were shown to be correlated with body dissatisfaction, once more suggesting that this focus for comparison is greatest in those most dissatisfied. It was also noted that girls make more social comparisons than boys across all targets and attributes. This greater frequency, especially in relation to appearance attributes, is likely to reflect the greater sensitivity and need for this information by girls.

Celebrity

A brief reference to the appeal of celebrity figures is appropriate. Looking at celebrity interest in British teenagers,

Giles & Maltby (2004) argue that celebrities provide adolescents with a secondary group of pseudo-friends during a time when they are becoming more autonomous, in particular separating from parents. The appearance attributes or attitudes and behaviour of a celebrity may be highly influential, providing teenagers with exemplars to mimic, aspire to or reject. So, celebrity interest meets developmental needs, and celebrities' appearance and body shape are likely to be highly influential.

Supporting this reasoning, Maltby *et al.* (2005) have found an association between celebrity interest for intense personal reasons and the importance they placed on body shape and weight. This relationship was shown to be age-related, becoming apparent at 14 years but disappearing from 17 years onwards. This outcome is consistent with the idea that adolescent girls who develop intense celebrity interest in an individual with an attractive or thin body shape develop a poor body image in themselves. However, once again there are alternative explanations. The opposite may be true. Someone with body dissatisfaction may become obsessed with an attractive or thin celebrity. Most likely, these relationships are reciprocal and alternate, inflating both body dissatisfaction and celebrity interest.

A final observation concerns the changing way that the media manages celebrity. There is great cynicism apparent in many media, and celebrity figures are not held in the exclusive high regard they once were. Distinctions are made between 'A' lists and 'B' lists, with 'minor' celebrities seen as in the media spotlight for money or their 15 min of fame. Women in the public eye are featured in popular magazines for praise and for ridicule. Public display enables public commentary, much of which is spiteful. Two forms are readily apparent. Popular young women's magazine covers regularly feature photographs of celebrities chosen for looking over-thin or overweight. The accompanying narrative is judgemental: too fat; too thin; has cellulite. Inside, features are on what not to wear, celebrities in bikinis and the circle of (appearance) shame poke fun at their clothes or appearance. This media coverage is not designed to inspire appearance confidence in its readership.

Social support and social contagion

The issue of social isolation as a component of an individual's susceptibility to thin media has been raised earlier in describing the study by Stice *et al.* (2001). It is also apparent in a later study by this group. Here, perceived low social support by parents, and to a lesser extent by peers, was shown to predict body dissatisfaction (Bearman *et al.* 2006); the effect being weak. Participants were younger adolescents (mean 13.5 years) and from a mix of public and private schools, suggesting a more even balance of parental and peer affiliation that might be seen in later teenage years.

Peer friendship groups can make a positive or negative contribution to body image and dieting. Using a social-network analysis to identify friendship clusters or cliques, Paxton *et al.* (1999) have found higher within-group than between-group similarity for body-image concern, dieting and extreme weight-loss behaviours. In addition, groupings

of 15-year-old girls scoring high in body dissatisfaction and dieting were found to show high levels of peer engagement in weight- and shape-related issues. This social-contagion model of weight concern and dieting is similar to that proposed to account for adolescent smoking and alcohol consumption. For certain groups these behaviours and accompanying attitudes become socially normative and define group identity. Group affiliation is maintained by sharing information on weight-control strategies, modelling dieting and disordered eating and participating in fat talk, i.e. discussion with peers on the negative perception of particular body areas. It should come as no surprise therefore that the number of friends dieting has been found to be a predictor of the use of unhealthy weight-control behaviours in overweight and average-weight girls (Eisenberg *et al.* 2005).

On the positive side, friendship groups less invested in weight and shape issues provide a protective environment for girls who are otherwise vulnerable. Much of the time friends can offer sensible advice and emotional support, and act as a gateway to helpful adults.

Fat: the body unbeautiful

The media does not simply endorse a belief system around thinness and attractiveness. The appeal of thinness is consolidated by the negative portrayal of fatness (Table 1). At best the unacceptability of being fat is marked by its invisibility in fashion magazines and similar media. However, increasingly women (and some men) in the public eye are derided in the public press for their overweight, associated lack of attractiveness and failure to exert self-control. In these circumstances the media acts as the playground bully, taunting for fatness, taking the moral high ground and inviting all to share in the joke. It seems strange that at a time when there are unprecedented levels of obesity, societal attitudes to fatness have not softened.

Children's views

Recently, Latner & Stunkard (2003) have conducted a replication of a very well-known study of children's perceptions of disability, originally published in the early 1960s. The task faced by 10–11-year-olds was to choose from a series of drawings the child they would most like as their friend. The pictures were of a child as physically normal, in a leg brace or crutches, in a wheelchair, with facial disfigurement, without a hand or overweight. The overweight child was found to be the last to be chosen. Some 40 years on, the overweight child was again found to be liked least and placed bottom by even more children than in the original study, especially by girls. In addition, the healthy non-disabled child was more consistently chosen first, again more so than 40 years before. So the polarisation of children's views has paralleled that of the adults around them.

An indication of the extent to which these views are socially ingrained comes from work with very young children. For example, Musher-Eizenman *et al.* (2004) have asked 4–6 years olds to rate three body

figure drawings. Overall, the fat body shape was found to be the most negatively rated. This drawing was chosen as a friend on 16% of occasions (*v.* 39% and 45% of occasions for thin and average figures respectively), and as best friend only 7% of the time. Using a storyline procedure in which one child was mean, the other nice, Cramer & Steinwert (1998) have found that 3–5-year-old children are more likely to choose a drawing of a fat figure as the mean child than a thin or average-shape figure. Furthermore, these authors report that body-size stigmatising increases with age but is clearly present in 3-year-olds. In addition, girls show more stigmatisation than boys, and while the preferred playmate of low- and average-weight children is average shaped, overweight children are more likely to choose the thin figure. Even preschool children have acquired the belief that fat is bad.

Fatness is also a target for children's bullying and victimisation; between one-quarter and one-third of adolescents report being teased by peers for reasons of weight (Eisenberg *et al.* 2003). Those teased were found to have low body satisfaction, low self-esteem and more depressive symptoms. The author's research has looked specifically at fat-teasing, *i.e.* being teased, bullied or called horrible names for being fat. Of the 450 12-year-olds studied, 12% of girls and 16% of boys were found to identify with the description of themselves as a fat-teased child (Hill & Murphy, 2000). Again, being fat-teased was found to be associated with body dissatisfaction and low self-esteem.

Personal responsibility

With a strong public health focus on obesity and governments that promise action, overweight has high visibility. The personal-responsibility approach remains prominent, fostering the idea that individual choice is the key to implementing behavioural change. The population is urged to become more physically active and to eat less. Obesity, it is implied, is a modifiable state of body (Hill, 2003). However, making obesity a lifestyle disorder has helped relatively few. Instead, it has inflamed anti-fat attitudes and the prejudice directed at the obese. The messages concerning the pathology associated with obesity confirm the bleak picture. If any adolescent had a reason to dread being fat, then health professionals have provided several more. Also, of course, a fear of fatness is at the very heart of eating disorder psychopathology. Teenagers are directed to alter their nutritional behaviour not just because of their bombardment with thin ideals but for the disgrace and disease of fatness.

Conclusions

The present paper has described how the media markets female body image. It outlines some of the research showing its operation in leaving a marked proportion of its audience disappointed, perceiving itself as having failed to meet high standards of thinness and physical attractiveness. The resulting dissatisfaction drives attempts at change, much of which involves altered eating behaviour.

Several important issues have been overlooked for reasons of space. First, the focus has been on adolescent girls rather than boys. Boys share some body-image issues with girls but have other and different pressures and aspirations (for example, see McCabe & Ricciardelli, 2004). Boys are also a potent social influence on girls' body image as instigators of weight or appearance-related teasing and in the rituals surrounding dating. Second, there is a growing literature on ways of challenging the body beautiful, often by informing and empowering children. Much of this approach is via training in media literacy, developing their skills in critical analysis (Levine & Harrison, 2004). There are a growing number of media-literacy classroom resources and it has a small but visible place in the English school curriculum. Third, the impact of body dissatisfaction, dieting and disordered eating on eating behaviour and nutritional intake has not been considered in detail. While the nutritional effects of extreme weight-control behaviours may be considered obvious, dieting in adolescents has more subtle and varied effects on eating behaviour (Hill, 2002).

Central to the discussion of media effects has been the issue of causality. Too often this issue is presented as an over-simplistic 'A causes B' process, portraying the viewer as a passive recipient of noxious stimuli. Media engagement must be seen as purposive. Individuals seek out information, viewpoints and images that suit their own purpose and pathology. Also, they respond to what they see. In psychological terms the media presents abundant opportunities to activate elaborated thinness and attractiveness schema. However, it cannot be absolved of its role in cultivating these schema in the first place.

About 10 years ago, Alexandra Shulman, as editor of British *Vogue* defended her magazine and industry saying, 'Young women who tend towards anorexia do not get it from magazines, but from feelings of loss of self-worth that are instilled in them long before they are looking in *Vogue*' (Hill, 2006). This argument is shallow and defensive, akin to that of the advertising industry's refusal to accept that it plays a role in the promotion of a less-than-healthy diet to children. The desirability of thinness and stigma of fatness are cultivated long before children can be diagnosed with an eating disorder such as anorexia nervosa. Girls aged 5–8 years of age show the same associations between exposure to appearance-focused TV and magazines, and increased body dissatisfaction and dieting awareness, as girls 10 years older (Dohnt & Tiggemann, 2006). Most researchers in this area are not trying to apportion blame but are looking to the media to acknowledge and exercise some form of social responsibility. This change in media approach is needed not simply in the marketing of an over-thin ideal and the vilification of fatness but in the way that more varied and realistic body shapes are visible.

So, media influence in the context of the body beautiful is uneven. It is uneven because of differences in media content, focus and manner of communication. It is also uneven because of individual differences in purposive engagement and how information is used. These factors may constitute a vulnerability to thin-ideal media. The understanding of this vulnerability is taking shape. It

includes the presence of body dissatisfaction, a need for social comparison and a broader social context, be it isolation from peers or immersion within a peer group for which weight control is normative.

Finally, those working to set good nutritional standards and improve the eating behaviour of adolescents need to be realistic about their circumstance. More than at any other age, adolescent food choice and intake are subject to a variety of competing, contradictory and non-health-related determinants. The challenge is to work with adolescents and acknowledge their priorities, supporting them and enabling the young adults they become to be informed, skilled and independent in their food choices and eating behaviour.

References

- Atwal K, Millwood-Hargrave A & Sancho J (2003) *What Children Watch. An Analysis of Children's Programming Provision between 1997–2001, and Children's Views*. London: Independent Television Commission.
- Barton L (2005) Celebrities distort body weight. http://www.guardian.co.uk/uk_news/story/0,3604,1383344,00.html
- Bearman SK, Presnell K, Martinez E & Stice E (2006) The skinny on body dissatisfaction: A longitudinal study of adolescent girls and boys. *Journal of Youth and Adolescence* **35**, 217–229.
- Becker AE, Burwell RA, Gilman SE, Herzog DB & Hamburg P (2002) Eating behaviours and attitudes following prolonged exposure to television among ethnic Fijian adolescent girls. *British Journal of Psychiatry* **180**, 509–514.
- Botta RA (1999) Television images and adolescent girls' body image disturbance. *Journal of Communication* **49**, 22–41.
- Cafri G, Yamamiya Y, Brannick M & Thompson JK (2005) The influence of sociocultural factors on body image: A meta-analysis. *Clinical Psychology, Science and Practice* **12**, 421–433.
- ChildWise (2006) *ChildWise Monitor Trends Report 2006*. <http://www.childwise.co.uk/trends.htm>
- Cramer P & Steinwert T (1998) Thin is good, fat is bad: how early does it begin? *Journal of Applied Developmental Psychology* **19**, 429–451.
- Croll J, Neumark-Sztainer D, Story M & Ireland M (2002) Relevance and risk and protective factors related to disordered eating behaviours among adolescents: Relationship to gender and ethnicity. *Journal of Adolescent Health* **31**, 166–175.
- Crow S, Eisenberg ME, Story M & Neumark-Sztainer D (2006) Psychosocial and behavioural correlates of dieting among overweight and non-overweight adolescents. *Journal of Adolescent Health* **38**, 569–574.
- Dohnt HK & Tiggemann T (2006) Body image concerns in young girls: The role of peers and media prior to adolescence. *Journal of Youth and Adolescence* **35**, 135–145.
- Dwyer JT, Feldman JJ & Mayer J (1967) Adolescent dieters: Who are they? *American Journal of Clinical Nutrition* **20**, 1045–1056.
- Eisenberg ME, Neumark-Sztainer D & Story M (2003) Associations of weight-based teasing and emotional well-being among adolescents. *Archives of Pediatric and Adolescent Medicine* **157**, 733–738.
- Eisenberg ME, Neumark-Sztainer D, Story M & Perry C (2005) The role of social norms and friends' influences on unhealthy weight-control behaviours among adolescent girls. *Social Science & Medicine* **60**, 1165–1173.
- Field AE, Cheung L, Wolf AM, Herzog DB, Gortmaker SL & Colditz GA (1999) Exposure to the mass media and weight concerns among girls. *Pediatrics* **103**, e36.
- Giles DC & Maltby J (2004) The role of media figures in adolescent development: Relations between autonomy, attachment, and interest in celebrities. *Personality and Individual Differences* **36**, 813–822.
- Groesz LM, Levine MP & Murnen SK (2002) The effect of experimental presentation of thin media images on body satisfaction: A meta-analytic review. *International Journal of Eating Disorders* **31**, 1–16.
- Hill AJ (2002) Developmental issues in attitudes to food and diet. *Proceedings of the Nutrition Society* **61**, 259–266.
- Hill AJ (2003) Self-image and the stigma of obesity. In *Adult Obesity: A Paediatric Challenge*, pp. 61–72 [L Voss and T Wilkin, editors]. London: Taylor & Francis.
- Hill AJ (2006) Body dissatisfaction and dieting in children. In *Childhood Feeding Problems and Adolescent Eating Disorders*, pp. 123–149 [PJ Cooper and A Stein, editors]. London: Routledge.
- Hill AJ & Murphy JA (2000) The psycho-social consequences of fat-teasing in young adolescent children. *International Journal of Obesity* **24**, Suppl. 1, 161.
- Johnson F & Wardle J (2005) Dietary restraint, body dissatisfaction, and psychological distress: A prospective analysis. *Journal of Abnormal Psychology* **114**, 119–125.
- Jones DC (2001) Social comparison and body image: Attractiveness comparisons to models and peers among adolescent girls and boys. *Sex Roles* **45**, 645–664.
- Jones DC, Vigfusdottir TH & Lee Y (2004) Body image and the appearance culture among adolescent girls and boys: An examination of friend conversations, peer criticism, appearance magazines, and the internalization of appearance ideals. *Journal of Adolescent Research* **19**, 323–339.
- Latner JD & Stunkard AJ (2003) Getting worse: The stigmatization of obese children. *Obesity Research* **11**, 452–456.
- Levine MP & Harrison K (2004) Media's role in the perpetuation and prevention of negative body image and disordered eating. In *Handbook of Eating Disorders and Obesity*, pp. 695–717 [JK Thompson, editor]. Hoboken, NJ: John Wiley & Sons.
- Levine MP & Smolak L (1996) Media as a context for the development of disordered eating. In *The Developmental Psychopathology of Eating Disorders*, pp. 235–257 [L Smolak, MP Levine and R Striegel-Moore, editors]. Mahwah, NJ: Lawrence Erlbaum Associates.
- McCabe MP & Ricciardelli LA (2004) Body image dissatisfaction among males across the lifespan: A review of past literature. *Journal of Psychosomatic Research* **56**, 675–685.
- Maltby J, Giles DC, Barber L & McCutcheon LE (2005) Intense-personal celebrity worship and body image: Evidence of a link among female adolescents. *British Journal of Health Psychology* **10**, 17–32.
- Musher-Eizenman DR, Holub SC, Miller AB, Goldstein SE & Edwards-Leaper L (2004) Body size stigmatization in pre-school children: the role of control attributions. *Journal of Pediatric Psychology* **29**, 613–620.
- Ofcom Office of Communications (2005) *Communications Market 2005*. http://www.ofcom.org.uk/research/cm/cm05/comms_mkt_report05.pdf
- Patton GC, Selzer R, Coffey C, Carlin JB & Wolfe R (1999) Onset of adolescent eating disorders: Population based cohort study over 3 years. *British Medical Journal* **318**, 765–768.
- Paxton SJ, Schutz HK, Wertheim EH & Muir SL (1999) Friendship clique and peer influences on body image concerns, dietary restraint, extreme weight-loss behaviours, and binge eating in adolescent girls. *Journal of Abnormal Psychology* **108**, 255–266.

- Periodical Publishers Association (2006) PPA marketing data and trends. <http://www.ppamarketing.net/cgi-bin/wms.pl/60>
- Satter G, Glen F & Diaper A (2005) *General Household Survey 2004. Overview Report*. London: Office for National Statistics.
- Stice E (1994) Review of the evidence for a sociocultural model of bulimia nervosa and an exploration of the mechanisms of action. *Clinical Psychology Review* **14**, 633–661.
- Stice E, Spangler D & Agras WS (2001) Exposure to media-portrayed thin-idea images adversely affects vulnerable girls: A longitudinal experiment. *Journal of Social and Clinical Psychology* **20**, 270–288.
- Sypeck MF, Gray JJ & Ahrens AH (2004) No longer just a pretty face: Fashion magazines' depiction of ideal female body from 1959 to 1999. *International Journal of Eating Disorders* **36**, 342–347.
- Thompson JK & Stice E (2001) Thin-ideal internalization: Mounting evidence for a new risk factor for body image disturbance and eating pathology. *Current Directions in Psychological Sciences* **10**, 181–183.
- Tiggemann M (2003) Media exposure, body dissatisfaction and disordered eating: Television and magazines are not the same! *European Eating Disorders Review* **11**, 418–430.
- Tiggemann M, Gardiner M & Slater A (2000) 'I would rather be size 10 than have straight A's': A focus group study of adolescent girls' wish to be thinner. *Journal of Adolescence* **23**, 645–659.
- Utter J, Neumark-Sztainer D, Wall M & Story M (2003) Reading magazine articles about dieting and associated weight control behaviours among adolescents. *Journal of Adolescent Health* **32**, 78–82.
- Vaughan KK & Fouts GT (2003) Changes in television and magazine exposure and eating disorder symptomatology. *Sex Roles* **49**, 313–320.
- Wardle J & Marsland L (1990) Adolescent concerns about weight and eating: A social-developmental perspective. *Journal of Psychosomatic Research* **34**, 377–391.
- Wiseman CV, Gray JJ, Mosimann JE & Ahrens AH (1992) Cultural expectations of thinness in women: An update. *International Journal of Eating Disorders* **11**, 85–89.