Body Image 10 (2013) 8–15

Contents lists available at SciVerse ScienceDirect

Body Image

journal homepage: www.elsevier.com/locate/bodyimage

Body dissatisfaction and disordered eating attitudes in 7- to 11-year-old girls: Testing a sociocultural model

Elizabeth H. Evans[a,*,1], Martin J. Tovée[b], Lynda G. Boothroyd[a], Robert F. Drewett[a]

[a] Department of Psychology, Durham University Science Laboratories, South Road, Durham, DH1 3LE England, United Kingdom
[b] Institute of Neuroscience, Henry Wellcome Building for Neuroecology, Newcastle University, Framlington Place, Newcastle upon Tyne, NE2 4HH England, United Kingdom

ARTICLE INFO

Article history:
Received 31 August 2011
Received in revised form
19 September 2012
Accepted 8 October 2012

Keywords:
Thin-ideal internalization
Body dissatisfaction
Eating
Child

ABSTRACT

We examined the sociocultural model of body dissatisfaction and disordered eating attitude development in young girls for the first time. According to the model, internalizing an unrealistically thin ideal body increases the risk of disordered eating via body dissatisfaction, dietary restraint, and depression. Girls aged 7–11 years ($N = 127$) completed measures of thin-ideal internalization, body dissatisfaction, dieting, depression, and disordered eating attitudes. Participants' height and weight were measured and their body mass index calculated. Thin-ideal internalization predicted disordered eating attitudes indirectly via body dissatisfaction, dietary restraint, and depression; it also predicted disordered eating attitudes directly. Path analyses showed that a revised sociocultural model fit well with the data. These data show that a sociocultural framework for understanding disordered eating and body dissatisfaction in adults is useful, with minor modifications, in understanding the development of related attitudes in young girls.

Introduction

For several decades, sociocultural factors have been firmly implicated in the development and expression of body dissatisfaction and disordered eating (Striegel-Moore, Silberstein, & Rodin, 1986). Whilst the societal prevalence of obesity trends upwards, more numerous images of an unhealthily thin, unrealistically proportioned female ideal body populate the visual diet (Nemeroff, Stein, Diehl, & Smilack, 1994; Spitzer, Henderson, & Zivian, 1999). In short, Western females have never been more aware of the socially prescribed thin-ideal and have never been physically further from it (Cusumano & Thompson, 1997).

Children are not immune to these influences; most are exposed to thin beauty ideals before the age of formal schooling (Blowers, Loxton, Grady-Flesser, Occhipinti, & Dawe, 2003; Dittmar, Halliwell, & Ive, 2006). By 6 or 7 years of age, girls' level of awareness of the thin ideal body matches that of girls five or six years their senior (Murnen, Smolak, Mills, & Good, 2003). A wealth of research shows that body dissatisfaction and disordered eating attitudes are also common at this point in childhood, particularly amongst girls (for reviews, see Ricciardelli & McCabe, 2001; Smolak, 2004). Between 40 and 50% of girls aged 7–11 years select an ideal body that is more slender than their current perceived figure (Clark & Tiggemann, 2006; McCabe & Ricciardelli, 2003; Truby & Paxton, 2002). Disordered eating attitudes are reported by 10–20% of girls of this age in school settings (Erickson & Gerstle, 2007; Rolland, Farnhill, & Griffiths, 1997; Sasson, Lewin, & Roth, 1995), encompassing weight concerns (McCabe & Ricciardelli, 2003), fear of fatness (Shapiro, Newcomb, & Loeb, 1997), intentional weight loss behaviours (McCabe, Ricciardelli, & Holt, 2005), and episodes of loss of control over eating (Field, Camarago, Taylor, Berkey, & Colditz, 1999). These interrelated cognitions and behaviours, whilst less serious and vastly more prevalent than full-threshold eating disorders in children (Nicholls, 2004; Nicholls, Lynn, & Viner, 2011), nevertheless threaten girls' growth and nutritional status (Lask & Bryant-Waugh, 2000). They also predict subsequent chronic weight cycling, obesity, depression, and disordered eating (Field et al., 2001, 2002; McVey, Tweed, & Blackmore, 2004; Neumark-Sztainer, Wall, Guo, Story, Haines, & Eisenberg, 2006).

Previous research suggests, then, that girls' disturbances of body image and eating – which were formerly characterized as problems of adolescence – frequently originate well before puberty (Sands, Tricker, Sherman, Armatas, & Maschette, 1997). The process by which these phenomena are differentially experienced and expressed remains under-researched and incompletely understood; specifically, it is not known why certain groups of children are most vulnerable to body dissatisfaction and disordered eating attitudes (Hoek, 1991). The very pervasiveness of cultural standards of thinness means that awareness of them is not a sufficient antecedent to the development of eating and body image disturbance (Polivy & Herman, 2004). Disordered eating attitudes and

* Corresponding author at: Institute for Aging & Health, Clinical Aging Research Unit, Newcastle upon Tyne, NE4 5PL, United Kingdom. Tel.: +44 0191 2481246.
E-mail address: Elizabeth.Evans@newcastle.ac.uk (E.H. Evans).
[1] Elizabeth H. Evans is now at the Institute for Ageing & Health, Newcastle University, United Kingdom.

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http://dx.doi.org/10.1016/j.bodyim.2012.10.001

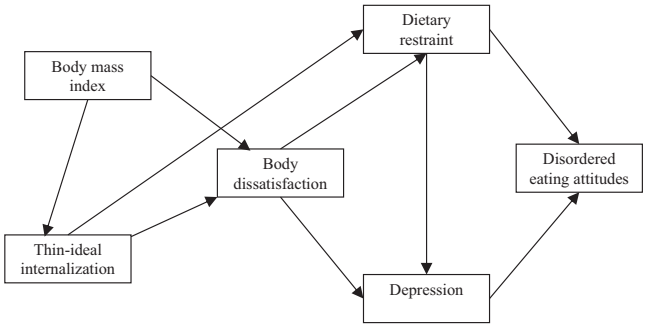

Fig. 1. The sociocultural framework of body dissatisfaction and disordered eating development, incorporating adiposity.

body dissatisfaction are not confined to girls who are, or who risk being, overweight, although both are more common in this group (Ranzenhofer et al., 2008; Smolak, 2004). Further research with girls during middle-childhood is therefore needed to elucidate the sociocultural and psychological context in which body dissatisfaction and disordered eating attitudes develop and operate (Wertheim, Paxton, & Blaney, 2009). Such insights are of considerable value given the threat posed by these phenomena to girls' health, wellbeing, and development. The present research, therefore, sought to characterize and contextualize disordered eating attitudes and body dissatisfaction in a cross-sectional sample of 7- to 11-year-old girls.

To partially account for individual differential vulnerability to disturbances of body image and eating, some researchers have considered thin-ideal internalization, the extent to which one "cognitively 'buys into' socially defined ideals of attractiveness and engages in behaviours designed to produce an approximation of these ideals" (Thompson & Stice, 2001, p. 55). Whilst awareness of the thin-ideal and internalization are necessarily related, thin-ideal internalization accounts for significant additional variance in body dissatisfaction and disordered-eating variables beyond that accounted for by thin-ideal awareness, indicating distinctness (Heinberg, Thompson, & Stormer, 1995). Thin-ideal internalization is a discriminating predictor of body dissatisfaction and disordered eating attitudes, particularly amongst adolescent girls (Groesz, Levine, & Murnen, 2001; Heinberg et al., 1995; Stice, Ng, & Shaw, 2010). However, relatively few studies have focused upon sociocultural factors and body dissatisfaction in girls below the age of 12 years and those that have, have not simultaneously assessed disordered eating attitudes (Blowers et al., 2003; Brown & Slaughter, 2011; Dittmar et al., 2006; Murnen et al., 2003; Phares, Steinberg, & Thompson, 2004). The present study sought to address this research need by examining girls' eating attitudes, body dissatisfaction, and adiposity within a network of related variables known collectively as the sociocultural model (Stice, 2001).

The sociocultural model – one of the most thoroughly supported models of disordered eating – originally described the development of bulimic symptoms, but has since been applied to a range of clinical and non-clinical pathological behaviours around food (Thompson & Stice, 2001). It proposes that thin-ideal internalization leads to body dissatisfaction and thence to an increased risk of disordered eating attitudes via two distinct 'pathways': dietary restraint and depression. Elevated adiposity also acts upon this process, contributing to initial variance in both thin-ideal internalization and body dissatisfaction (Stice & Shaw, 2002). Fig. 1 depicts the sociocultural model, incorporating the influence of adiposity.

Despite the prevalence of disordered eating attitudes amongst young girls, most of the more than 200 studies examining the sociocultural model involve adults and adolescents. There are challenges inherent in measuring the components of the sociocultural model in girls as young as 7 years; tests must be simple and comprehensible, reliable and sensitive enough to show individual variation, and they must exhibit construct validity with the age group in question (Kelly, Ricciardelli, & Clarke, 1999). The use of a range of measurement techniques that meet these criteria has shown that the years between 7 and 11 see the emergence of key concepts and behaviours around food and the body. Thin-ideal internalization has been reported, and the construct validated, in girls as young as 6 years old (Murnen et al., 2003). By 7 years old, girls can reliably report a range of their own eating behaviours (Van Strien & Oosterveld, 2007). By 8 years of age, girls are knowledgeable about the meaning and methods of weight loss strategies, including dietary restraint, increased exercise, and healthy food choices (Schur, Sanders, & Steiner, 2000); by 9 years of age, girls report dietary restraint in proportion to their measured body mass index (BMI; Shunk & Birch, 2004). During these years, to a greater extent than over any preceding period of childhood, considerable proportions of children gain weight to the extent that they become either overweight or obese (Whitaker, Pepe, Wright, Seidel, & Dietz, 1998). Furthermore, many of the individual relationships in the sociocultural model can be observed in this age group. Thin-ideal internalization, for instance, has been shown to partially mediate the relationship between body dissatisfaction and BMI in girls aged 9–12 years (Sands & Wardle, 2003).

Due to its high prevalence, dietary restraint is not a particularly discriminating predictor of disordered eating attitudes on its own (Stice et al., 2010). In adolescents it may, however, mediate the relationship between body dissatisfaction and disordered eating attitudes (Stice, 2002; Stice & Shaw, 2002). Although this mediational relationship has not yet been tested in children, girls' body dissatisfaction at 5 and 7 years of age has been shown to predict subsequent dietary restraint at 9 years old (Davison, Markey, & Birch, 2003) which, in turn, is associated with disordered eating attitudes from 8 years of age (Maloney, McGuire, Daniels, & Specker, 1989). Additionally, in young adult and adolescent females (Stice, 2001; Stice, Mazotti, Weibel, & Agras, 2000), dietary restraint mediates the relationship between thin-ideal internalization and disordered eating attitudes, even in the absence of body dissatisfaction, due to the wish to attain a socially desirable figure (Stice, 2002). Previous research has not examined whether a similar relationship exists in younger girls.

Body dissatisfaction may also lead to disordered eating attitudes by the second of the two pathways shown in Fig. 1, depression (Field et al., 2001; Stice, 2001). In 8-year-old girls, Phares et al. (2004) found that body dissatisfaction was associated with depression, which itself was associated with disordered eating attitudes. The original sociocultural model also posits that dietary restraint predicts depression, as shown in Fig. 1 (Stice & Bearman, 2001). Evidence for this relationship is both limited and mixed in adults and adolescents (Chen, McCloskey, & Keenan, 2009; Stice, 2001; Stice, Hayward, Cameron, Killen, & Taylor, 2000). For example, Stice (2001) found that negative affect and dietary restraint fully mediated the prospective relationship between body dissatisfaction and disordered eating attitudes, directly supporting the dual-pathway model, but failed to find the significant relationship between the two that the sociocultural model posits. In contrast, Sinton and Birch (2005) found that depression in 5- and 7-year-old girls prospectively predicted subsequent dietary restraint although initial dietary restraint was not taken into consideration.

Finally, there is evidence from research with adolescents that thin-ideal internalization influences eating attitudes directly, even when its relationship with intervening variables such as dietary restraint is taken into account (Field et al., 2001; Stice & Agras, 1998; Stice, Presnell, & Spangler, 2002). This pathway does not feature in the original sociocultural model but does feature in a recent extension of it with girls aged 12–14 years (Vander Wal,