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Developmental considerations in measuring children's disordered eating attitudes and behaviors

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Abstract

This study examined the discriminant ability of the Children's version of the Eating Attitudes Test (ChEAT) clinical cut-off in a low/low–middle socioeconomic status, non-clinical sample of primarily Hispanic and non-Hispanic white (Caucasian) girls aged 8 to 12. We investigated how age, age-standardized body mass index (z-BMI), body dissatisfaction, body esteem, self-esteem, and depressive symptoms contributed to disordered eating status in 152 girls. Girls scoring at/above the ChEAT clinical cut-off reported significantly greater body dissatisfaction and depressive symptoms and lower body esteem than did girls who scored below the cut-off. We then investigated whether age moderated the discriminant ability of the ChEAT threshold and found that the ChEAT was significantly more sensitive when our sample was limited to 10- to 12-year-olds. An abbreviated 6-item ChEAT scale, based on marker items distinguishing at-risk and non-clinical status, was subsequently developed. Findings indicate that this abbreviated ChEAT scale has improved sensitivity with older girls (10- to 12-year-olds). However, sensitivity was unacceptable for younger girls (8- and 9-year-olds) for both the ChEAT and abbreviated ChEAT scale, regardless of cut-off.

Keywords: Disordered eating; Children; Weight; Body esteem; Body dissatisfaction; Depressive symptoms

1. Introduction

1.1. Disordered eating behaviors and attitudes

Although prevalence rates for adolescent eating disorders remain low (between 0.3% and 1.0%; Rosenvinge, Borgen, & Börresen, 1999; Steiner & Lock, 1998), and rates for prepubertal children are even lower (Lask & Bryant-Waugh, 2000), there are markedly higher rates for partial syndrome disorders (4–10%; Killen et al., 1994; Shisslak, Crago, & Estes, 1995). Furthermore, there is consensus that subclinical forms of eating disturbance are becoming alarmingly common (Hill, 1993; Steiner & Lock, 1998; Thompson & Smolak, 2001). Few studies directly address cohort effects, but one recent Swedish study found that scores on eating disorder measures were significantly higher among 11-year-old girls in 1999 than in 1995 (Halvarsson, Lunner, Westerberg, Anteson, & Sjödén, 2002). In addition,

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more than 40% of 9- to 16-year-olds reported feeling fat and/or wishing to lose weight, 23% reported being afraid to eat because of the possibility of gaining weight, and 31.4% had dieted previously (Childress, Brewerton, Hodges, & Jarrell, 1993). In a study of 10- to 14-year-old girls, 29.3% were currently trying to lose weight, and 10.5% had scored at or above the clinical threshold for disordered eating attitudes and behaviors (McVey, Tweed, & Blackmore, 2004). This high rate of dieting and related behaviors is especially concerning because childhood and preadolescent dieting is often a precursor for development of an adolescent eating disorder (Hsu, 1996; Killen et al., 1994; Kotler, Cohen, Davies, Pine, & Walsh, 2001; Marchi & Cohen, 1990; Patton, Selzer, Coffey, Carlin, & Wolfe, 1999; Stice, 2001; Stice, Mazotti, Krebs, & Martin, 1998).

Furthermore, disordered eating attitudes and behaviors are affecting girls at younger ages (Hill, 1993; Smolak & Levine, 1994). Although there are limited studies that directly address age trends in disordered eating symptoms, girls as young as 6 and 7 years old have reported engaging in disordered eating behaviors and expressing dieting and weight concerns (Flannery-Schroeder & Chrisler, 1996), and girls as young as 8 have reported being knowledgeable about dieting practices and engaging in some dieting behavior (Schur, Sanders, & Steiner, 2000). In addition, Shapiro, Newcomb, and Loeb (1997) found that 13% to 41% of 8- to 10-year-old girls endorsed some aspect of dysregulated-restrained eating attitudes and behaviors.

A popular screening instrument for measuring the levels of disordered eating in children is the Children's version of the Eating Attitudes Test (ChEAT; Maloney, McGuire, & Daniels, 1988). The ChEAT, which has been widely used to measure levels of disordered eating attitudes and behaviors in children aged 8 to 13, was adapted from the Eating Attitudes Test (EAT; Garner, Olmsted, Bohr, & Garfinkel, 1982) that is utilized with older adolescents and adults. Parallel to the EAT, Maloney et al. (1988) recommended a ChEAT clinical cut-off score of 20 to identify children who may be at risk for problematic eating behaviors.

Concerns about these clinical cut-offs with children began with validity questions of the EAT clinical cut-off with adolescents (Wood, Waller, Miller, & Slade, 1992) and has more recently included concerns about the suitability of the ChEAT cut-off with younger populations (e.g., Rolland, Farnill, & Griffiths, 1998; Sasson, Lewin, & Roth, 1995). Specifically, the validity of the ChEAT threshold of 20 has been criticized by Rolland et al. (1998) who found that 14% of their sample (girls aged 8 to 12 years) scored above the threshold compared with 9% in the Maloney et al. study. Rolland et al. found that the younger girls in their sample (i.e., 8-year-olds) tended to endorse an unusually high number of items, calling into question the ChEAT's validity with young children, and potentially inflating prevalence rates. In fact, 28% of these younger girls scored above the clinical cut-off. Flannery-Schroeder and Chrisler (1996) reported similar concerns with young children (6- and 7-year-olds), suggesting that they may not understand items related to vomiting after eating. Although the ChEAT has not been standardized on children this young, their findings suggest concern regarding comprehension in using the ChEAT with young children. In fact, Smolak and Levine (1994), in their factor analysis of the ChEAT, suggested that this instrument appeared to be more reliable with older children (i.e., their sample with a mean age of 13.2 years compared to Maloney et al.'s sample of 8- to 13-year-olds) and that wording changes may be necessary to make the measure more comprehensible to younger children. Moreover, regardless of age, Lattimore and Halford (2003) questioned the validity of the ChEAT cut-off as an indicator of high risk for disordered eating because girls in their sample (aged 11 to 16 years) who scored above this cut-off appeared to be making relatively healthy eating choices.

As disordered eating is impacting children at younger ages, and because the most widely used screening instrument (i.e., the ChEAT) has received some criticism with younger children, we sought to investigate the discriminant ability of the ChEAT with our sample of ethnically diverse, low/low–middle socioeconomic status third- to sixth-grade girls (aged 8 to 12 years). For this purpose, we employed measures that are theoretically associated with components of the multidimensional nature of disordered eating attitudes and behaviors and for which there are significant data with children in this age range (i.e., body dissatisfaction, body esteem, self-esteem, depressive symptoms, and age-standardized weight).

1.2. Body dissatisfaction and body esteem

In the literature addressing associations between preadolescent body dissatisfaction and disordered eating, Gustafson-Larson and Terry (1992) found that a desire for less body fat in 9- to 11-year-old children was significantly associated with an increased frequency of weight-related behaviors and concerns. In addition, body dissatisfaction is associated with many facets of problematic eating in early adolescence, such as emotional eating, binge eating, and