**Body Confidence Campaign: Body Image as a Public Health Concern**

**Michaela M. Bucchianeri, PhD and Dianne Neumark-Sztainer, PhD, MPH, RD**

**University of Minnesota**

Despite the historical divide between the fields of obesity and eating disorder research, empirical evidence points to the co-occurrence of eating- and weight-related problems, as well as to their shared risk factors (e.g., Fairburn et al., 1997; Field et al., 2003; Neumark-Sztainer et al., 2006; Neumark-Sztainer et al., 2007). In recognition of these findings, there have been some recent initiatives that have adopted an integrated approach to prevention (see Sanchez-Carracedo, Neumark-Sztainer, & Lopez-Guimera, 2012). Highlighted here is one uniquely informative and cross-cutting area of interest—body image—a critical consideration in the prevention of eating- and weight-related problems, and an important public health concern in its own right.

 **Body image and disordered eating behaviors**

 Body image is a key factor in the development of disordered eating (e.g. Keery, van den Berg, & Thompson, 2004; Stice, 2002; Stice & Shaw, 2002; van den Berg, Thompson, Obremski-Brandon, & Coovert, 2002). Body dissatisfaction, in particular, is a robust risk factor for eating disorder symptomatology (Stice & Shaw, 2002) and clinical eating disorders (see Jacobi et al., 2004) and predicts a wide range of disordered eating outcomes, including frequent dieting (e.g., Ackard et al., 2002; Neumark-Sztainer et al., 2006a), dietary restraint and bulimic symptoms (e.g., Cooley and Toray, 2001; Neumark-Sztainer et al., 2006b).

 **Body image and weight-related problems**

 Given the associations between low body satisfaction and attempts to regulate one’s body size (e.g., Ackard et al., 2002; Neumark-Sztainer et al., 2006a, 2006b), it seems plausible that body dissatisfaction may serve as a protective factor against overweight and obesity. However, body dissatisfaction in fact has been linked to weight gain over time, such that positive body image seems to be protective against increased BMI (van den Berg & Neumark-Sztainer, 2007). One possible explanation for this relationship is that body image also is associated with a number of health-related behaviors that may enhance or inhibit one’s ability to maintain a healthy weight over time. For instance, among adolescent boys and girls, dissatisfaction with one’s body predicts higher levels of unhealthy and extreme weight control behaviors, such as skipping meals, self-induced vomiting, and laxative use; among girls, body dissatisfaction also predicts decreased fruit and vegetable intake (Neumark-Sztainer et al., 2006). Evidence from correlational and prospective studies also suggests a negative association between body dissatisfaction and engagement in physical activity (e.g., Kavussanu & McAuley, 1995; Marsh, Hey, Roche, & Perry, 1997; Neumark-Sztainer et al., 2004, 2006). More research is needed to better understand these mechanisms; it may be that young people who do not feel good about their bodies are less likely to engaging in self-care behaviors.

 **Body image and psychological health**

Body image has important implications for psychological outcomes, as well. As just one example, body dissatisfaction has been identified as a risk factor in the development of related psychopathology, including symptoms of depression (e.g., Paxton, Neumark-Sztainer, Hannan, & Eisenberg, 2006; Rierdan & Koff, 1991, 1997; Stice et al., 2000; Stice & Bearman, 2001). In addition, body dissatisfaction has been found to mediate the relationship between BMI and psychological health outcomes, including self-esteem (e.g., Mond et al., 2011; Wertheim et al., 2001) and depressive mood (Mond et al., 2011), such that the link between a person’s weight status and a person’s psychological health is accounted for by his or her level of body dissatisfaction.

 **Implications for interventions**

Evidence from recent research on body image and the related topic of weight stigma provides several potential points of guidance for interventions. First, findings from longitudinal research suggest that body dissatisfaction is not merely a developmental phase, as is commonly believed, but in fact continues through adolescence into young adulthood (Bucchianeri et al., 2013). This finding underscores the need for addressing body image beyond childhood and adolescence. Second, bullying/harassment on the basis of weight is prevalent and on the rise (Puhl & Latner, 2007), poses serious risks for poor emotional and physical functioning (Eisenberg, Neumark-Sztainer, & Story, 2003; Eisenberg et al., 2006), and is strongly associated with weight status such that overweight and obese individuals are at significantly greater risk (Bucchianeri, Eisenberg, & Neumark-Sztainer, 2013; Griffiths et al., 2006; McCormack et al., 2011; Neumark-Sztainer et al., 2002; Puhl, Luedicke, & Heuer, 2011). These findings demonstrate a need for interventions and policies aimed at decreasing weight-related bullying and harassment. Third, obesity-related public health media campaigns perceived as most positive, least stigmatizing, and most motivating are those that make no mention of “obesity” and rather focus on health behavior change regardless of one’s body size (Puhl, Peterson, & Luedicke, 2012). Thus, in obesity prevention efforts, the focus should be on behavioral change and not on weight per se. If weight is discussed, it should be done in a sensitive and non-stigmatizing manner. In recent years, intervention efforts have begun to jointly target both obesity and eating disorders in an integrated fashion, such as the Healthy Buddies program (Stock et al., 2007). However, even programs expressly designed to address obesity can be enhanced through thoughtful attention to body image and promotion of healthy behaviors for participants of all shapes and sizes, such as New Moves (Neumark-Sztainer et al., 2010). A move toward programs that take an integrated approach to the prevention of a broad spectrum of eating and weight-related problems is warranted (Neumark-Sztainer, 2007, 2009, 2012).

**Recommendations for practice and policy**

 Based on existing evidence regarding body image as a public health issue, the following recommendations are offered:

1. Health promotion efforts should be developed so as to minimize potential for weight-related bias, discrimination, and shaming.
2. In public health efforts addressing obesity, body image should be specifically addressed and evaluated to ensure that there have been no adverse effects and to assess for positive impact.
3. In supporting obesity-related research, funding sources should require that investigators clearly address the role of body image and potential adverse consequences, as well as how these factors are to be assessed.
4. Given the observed relation between body dissatisfaction and decreased engagement in physical activity, programs should simultaneously strive to increase physical activity and improve body satisfaction.
5. Training of healthcare professionals should include instruction on evaluating, addressing, and promoting body satisfaction in their work with patients/clients.
6. Healthcare professionals should provide guidance to parents aimed at promoting a positive body image and a healthy weight.
7. Given its strong support and high level of perceived potential impact within the general public, the implementation of anti-bullying policies should be adopted by schools.
8. School-based health curriculum and programs should include content aimed at promoting a positive body image to prevent both eating disorders and obesity.

**References**

Ackard, D. M., Croll, J. K., & Kearney-Cooke, A. (2002). Dieting frequency among college

females: Association with disordered eating, body image, and related psychological problems. *Journal of Psychosomatic Research, 52*, 129-136.

Bucchianeri, M. M., Arikian, A. J., Hannan, P. J., Eisenberg, M. E., & Neumark-Sztainer, D.

(2013). Body dissatisfaction from adolescence to young adulthood: Findings from a 10-year longitudinal study. *Body Image, 10*, 1-7.

Bucchianeri, M. M., Eisenberg, M. E., & Neumark-Sztainer, D. (2013). Weightism, racism,

classism, and sexism: Shared forms of harassment in adolescents. *Journal of Adolescent Health, 53*, 47-53.

Cooley, E., & Toray, T. (2001). Body image and personality predictors of eating disorder

symptoms during the college years. *International Journal of Eating Disorders, 30*, 28-36.

Eisenberg, M. E., Neumark-Sztainer, D., Haines, J., & Wall, M. (2006). Weight-teasing and

emotional well-being in adolescents: Longitudinal findings from Project EAT. *Journal of Adolescent Health, 38*, 675-683.

Eisenberg, M. E., Neumark-Sztainer, D., & Story, M. (2003). Associations of weight-based

teasing and emotional well-being among adolescents. *Archives of Pediatrics and Adolescent Medicine, 157,* 733-738.

Fairburn, C. G., Welch, S. L., Doll, H. A., Davies, B. A., & O'Connor, M. E. (1997). Risk factors

for bulimia nervosa: A community-based case-control study. *Archives of General Psychiatry, 54*, 509-517.

Field, A. E., Austin, S. B., Taylor, C. B., Malspeis, S., Rosner, B., Rockett, H. R.,…Colditz,

G. A. (2003). Relation between dieting and weight change among preadolescents and adolescents. *Pediatrics, 112*, 900-906.

Griffiths, L. J., Wolke, D., Page, A. S., & Horwood, J. P. (2006). Obesity and bullying: Different

effects for boys and girls. *Archives of Disease in Childhood, 91*, 121-125.

Jacobi, C., Hayward, C., de Zwaan, M., Kraemer, H. C., & Agras, W. S. (2004). Coming to

terms with risk factors for eating disorders: Application of risk terminology and suggestions for a general taxonomy. *Psychological Bulletin, 130*, 19-65.

Kavussanu, M., & McAuley, E. (1995). Exercise and optimism: Are highly active individuals

more optimistic? *Journal of Sport and Exercise Psychology, 17*, 246-246.

Keery, H., van den Berg, P., & Thompson, J. K. (2004). An evaluation of the Tripartite Influence

Model of body dissatisfaction and eating disturbance with adolescent girls. *Body Image, 1*, 237-251.

Marsh, H. W., Hey, J., Roche, L. A., & Perry, C. (1997). Structure of physical self-concept: Elite

athletes and physical education students. *Journal of Educational Psychology, 89*, 369-380.

McCormack, L. A., Laska, M. N., Gray, C., Veblen-Mortenson, S., Barr-Anderson, D., & Story,

M. (2011). Weight-related teasing in a racially diverse sample of sixth-grade children. *Journal of the American Dietetic Association*, *111*, 431-436.

Mond, J., Van den Berg, P., Boutelle, K., Hannan, P., & Neumark-Sztainer, D. (2011). Obesity,

body dissatisfaction, and emotional well-being in early and late adolescence: Findings from the Project EAT study. *Journal of Adolescent Health, 48*, 373-378.

Neumark-Sztainer, D. (2005). *I’m, like, SO fat. Helping your teen make healthy choices about*

*eating and exercise in a weight-obsessed world*. New York: Guilford.

Neumark-Sztainer, D. (2007). Addressing the spectrum of weight-related problems: Engaging

parents and communities. *The Prevention Researcher, 14,* 11-14.

Neumark-Sztainer, D. (2009). The interface between the eating disorders and obesity fields:

Moving toward a model of shared knowledge and collaboration. *Eating and Weight Disorders, 14,* 51-58.

Neumark-Sztainer, D. (2012). Integrating messages from the eating disorders field into obesity

prevention. *Adolescent Medicine: State of the Art Reviews, 23*, 529-543.

Neumark-Sztainer, D., Falkner, N., Story, M., Perry, C., Hannan, P. J., & Mulert, S. (2002).

Weight-teasing among adolescents: Correlations with weight status and disordered eating behaviors. *International Journal of Obesity, 26,* 123-131.

Neumark-Sztainer, D. R., Friend, S. E., Flattum, C. F., Hannan, P. J., Story, M. T., Bauer, K. W.,

... & Petrich, C. A. (2010). New Moves—preventing weight-related problems in adolescent girls: A group-randomized study. *American Journal of Preventive Medicine, 39*, 421-432.

Neumark-Sztainer, D., Goeden, C., Story, M., & Wall, M. (2004). Associations between body

satisfaction and physical activity in adolescents: Implications for programs aimed at preventing a broad spectrum of weight-related disorders. *Eating Disorders, 12*, 125-137.

Neumark-Sztainer, D., Paxton, S. J., Hannan, P. J., Haines, J., & Story, M. (2006). Does body

satisfaction matter? Five-year longitudinal associations between body satisfaction and health behaviors in adolescent females and males. *Journal of Adolescent Health, 39*, 244-251.

Neumark-Sztainer, D., Wall, M., Guo, J., Story, M., Haines, J., & Eisenberg, M. E. (2006).

Obesity, disordered eating, and eating disorders in a longitudinal study of adolescents: How do dieters fare 5 years later? *Journal of the American Dietetic Association, 106*, 559-568.

Neumark-Sztainer, D., Wall, M., Haines, J. I., Story, M., Sherwood, N. E., & van den Berg, P. A.

(2007). Shared risk and protective factors for overweight and disordered eating in adolescents. *American Journal of Preventive Medicine, 33*, 359-369.

Ogden, C. L., Carroll, M. D., Curtin, L. R., Lamb, M. M., & Flegal, K. M. (2010). Prevalence of

high body mass index in US children and adolescents, 2007-2008. *JAMA, 303*, 242–249.

Paxton, S. J., Neumark-Sztainer, D., Hannan, P. J., & Eisenberg, M. E. (2006). Body

dissatisfaction prospectively predicts depressive mood and low self-esteem in adolescent girls and boys. *Journal of Clinical Child and Adolescent Psychology, 35*, 539-549.

Puhl, R. M., & Latner, J. D. (2007). Stigma, obesity, and the health of the nation’s children.

*Psychological Bulletin, 133,* 557-580.

Puhl, R. M., Luedicke, J., & Heuer, C. (2011). Weight‐based victimization toward overweight

adolescents: Observations and reactions of peers. *Journal of School Health, 81*, 696-703.

Puhl, R. M., Peterson, J. L., & Luedicke, J. (2012). Fighting obesity or obese persons?: Public

perceptions of obesity-related health messages. *International Journal of Obesity, 37*, 774-782.

Rierdan, J., & Koff, E. (1991). Depressive symptomatology among very early maturing girls.

*Journal of Youth and Adolescence, 20*, 415-425.

Rierdan, J., & Koff, E. (1997). Weight, weight-related aspects of body image, and depression in

early adolescent girls. *Adolescence, 32*, 615-624.

Sanchez-Carracedo, D., Neumark-Sztainer, D., & Lopez-Guimera, G. (2012). Integrated

prevention of obesity and eating disorders: Barriers, developments and opportunities. *Public Health Nutrition, 15*, 2295-2309.

Stice, E. (2002). Risk and maintenance factors for eating pathology: A meta-analytic review.

*Psychological Bulletin*, *128*, 825-848.

Stice, E., & Bearman, S. K. (2001). Body-image and eating disturbances prospectively predict

increases in depressive symptoms in adolescent girls: A growth curve analysis. *Developmental Psychology, 37*, 597-607.

Stice, E., Hayward, C., Cameron, R. P., Killen, J. D., & Taylor, C. B. (2000). Body-image and

eating disturbances predict onset of depression among female adolescents: A longitudinal study. *Journal of Abnormal psychology, 109*, 438-444.

Stice, E., & Shaw, H. E. (2002). Role of body dissatisfaction in the onset and maintenance of

eating pathology: A synthesis of research findings. *Journal of Psychosomatic Research, 53*, 985-993.

van den Berg, P., & Neumark-Sztainer, D. (2007). Fat ‘n happy 5 years later: Is it bad for

overweight girls to like their bodies? *Journal of Adolescent Health, 41*, 415-417.

van den Berg, P., Thompson, J. K., Obremski-Brandon, K., & Coovert, M. (2002). The Tripartite

Influence Model of body image and eating disturbance: A covariance structure modeling investigation testing the mediational role of appearance comparison. *Journal of Psychosomatic Research, 53*, 1007-1020.

Wertheim, E. H., Koerner, J., & Paxton, S. J. (2001). Longitudinal predictors of restrictive eating

and bulimic tendencies in three different age groups of adolescent girls. *Journal of Youth and Adolescence, 30*, 69-81.