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Review article

The link between women's body image disturbances and body-focused cancer screening behaviors: A critical review of the literature and a new integrated model for women

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ABSTRACT

A large body of literature demonstrates the association between body image disturbances and health compromising behaviors among women (e.g., pathological eating, substance use, inappropriate exercise). However, given that disturbed body image is a pervasive problem, it is likely inversely related to health maintenance behaviors. Cancer screenings for breast, skin, and cervical cancer represent an important type of health maintenance behavior, yet adherence rates are low. Given the body-focused nature of these screenings, body image may be a salient predictor. This paper reviews the literature on the relationship between body image disturbances and cancer screening behaviors among women culminating in the proposal of a theoretical model. This model posits that body shame and body avoidance predict performance of cancer screenings and that variables drawn from the cancer literature, including risk perception, health anxiety, subjective norms, and self-efficacy, may moderate this relationship. Clinical implications and suggestions for research are discussed.

Introduction

Body image is a multidimensional construct that refers to the way in which an individual experiences or evaluates his or her body shape, weight, or overall appearance as well as one's thoughts, feelings, perceptions, and behaviors related to these domains of physical appearance (Cash & Henry, 1995; Stewart & Williamson, 2004). Thus, a disturbance in body image can manifest as dysfunctional perceptions, cognitions, emotions, or behaviors that impact one's daily functioning and quality of life (Cash & Deagle, 1997; Cash & Smolak, 2011). Although body image disturbances exist in both men and women (Heywood & McCabe, 2006; Markey & Markey, 2005; Murnen, 2011; Neumark-Sztainer, Paxton, Hannan, Haines, & Story, 2006), the manifestations of these disturbances are qualitatively different, with men evidencing higher drive for muscularity and women evidencing higher drive for thinness (Cafri & Thompson, 2004; Cohane & Pope, 2001; McCreary & Sasse, 2000; Murnen, 2011). Moreover, women have higher overall rates of general concerns regarding their bodies and eating habits than men (Cohane & Pope, 2001; Murnen, 2011; Pliner, Chaiken, & Flett, 1990; Varnado-Sullivan, Horton, & Savoy, 2006). In fact, body image disturbances are so common among women in Western cultures that researchers consider appearance dissatisfaction to be normative for women (Cash & Henry, 1995; Rodin, Silberstein, & Striegel-Moore, 1984).

Although body image disturbances have been consistently linked to eating pathology among women (Cattarin & Thompson, 1994; Stice, 2002; Thompson, Coovert, Richards, Johnson, & Cattarin, 1995), it is likely that such a pervasive problem would be related to other health behaviors for women as well. In fact, body image disturbances are associated with various types of health compromising behaviors among women, including substance use (e.g., Nelson, Lust, Story, & Ehlinger, 2009; Stice & Shaw, 2003), inappropriate or inadequate exercise (e.g., LePage, Crowther, Harrington, & Engler, 2008; Neumark-Sztainer et al., 2006), poor disease management (e.g., Neumark-Sztainer et al., 2002), natural sun and artificial ultraviolet light (i.e., tanning bed) exposure (e.g., Stapleton, Tursi, Todaro, & Robinson, 2009), and risky sexual behaviors (e.g., Littleton, Breitkopf, & Berenson, 2005). Alternatively, a facet of positive body image, body appreciation, has been linked with various types of health maintenance behaviors, or behaviors that one engages in for the purpose of promoting health and preventing negative health outcomes, including moderate exercise, adequate nutrition, and preventative medical care (Wood-Barcalow, Tylka, & Augustus-Horvath, 2010). Most notably, a relatively recent body of literature suggests that women's body image disturbances are associated with cancer screening behaviors, an important subset of health maintenance behaviors that

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have implications for the prevention and early identification of disease (Chait, Thompson, & Jacobsen, 2009; Clark et al., 2009; Fish & Wilkinson, 2003; Jensen & Moriarty, 2008; Oscarsson, Wijma, & Benzein, 2008; Risica, Weinstock, Rakowski, Kirtania, Martin, & Smith, 2008; Thomas & Usher, 2009).

Thus, the first purpose of the current paper is to critically review the literature on the relationship between body image disturbances and cancer screening behaviors among women. A secondary purpose is to propose a theoretical model to guide future research on this population. To fulfill these aims, the literature linking women's body image to a subset of cancer screening behaviors that require exposure or examination of one's body will be reviewed. Because much of this literature has focused on body mass index (BMI) as a predictor of frequency of engaging in cancer screening behaviors among women and because BMI is positively associated with body image disturbances (Sarwer, Dilks, & Spitzer, 2011; Striegel-Moore & Franko, 2002), studies on obese women will be reviewed first and potential explanations for the relationship between BMI and cancer screening behaviors, including body image disturbances, will be discussed. Next, seven studies that more directly examine the association between women's body image disturbances and cancer screening behaviors will be reviewed. Finally, specific components of women's body image disturbances that may predict cancer screening behaviors (i.e., body shame and body avoidance) and proposed moderators of the relationship between body image disturbances and frequency of cancer screening behaviors (i.e., health anxiety, risk perception, subjective norms, self-efficacy, and demographic variables) will be discussed, culminating in the proposal of a new theoretical model for women that integrates these constructs.

Although routine cancer screenings are also recommended for men (e.g., testicular self-examinations, skin self-examinations, breast self-examinations), this review only focuses on women for a variety of reasons. First, given that overall rates of body image disturbances are higher in women than in men (Cohane & Pope, 2001; Murnen, 2011; Pliner et al., 1990; Varnado-Sullivan et al., 2006), body image may be a more powerful predictor of health behaviors for women. In fact, male body image disturbances have been linked to health behaviors like protein supplement and anabolic steroid use and weight-bearing exercise (Murnen, 2011), but have not been linked to the variety of health compromising and maintenance behaviors with which female body image disturbances are associated (e.g., Bryden, Neil, Mayou, Peveler, Fairburn, & Dunger, 1999; Cash & Smolak, 2011; French, Perry, Leon, & Fulkerson, 1994; Gillen, Lefkowitz, & Shearer, 2006). Second, the facets of body image disturbances relevant to women's health behaviors, including body shame and body avoidance, are less salient for men (e.g., Daniel & Bridges, 2010; Fredrickson & Roberts, 1997), making a dual gender model impractical at this time. Finally, the existing research examining the relationship between body image disturbances and cancer screening behaviors focuses primarily on women. To our knowledge, there are only two studies examining body image constructs as predictors of cancer screenings that have included male participants. Of these two studies, one found no relationship between body image disturbances and cancer screenings for men (Jensen & Moriarty, 2008); the other found that the relationship between body image disturbances and cancer screenings was stronger for women than for men (Risica et al., 2008).

The Relationship between Women's Body Image and Cancer Screening Behaviors

A variety of behaviors fall into the category of health maintenance behaviors, including engaging in routine medical examinations and screenings for various diseases and physical conditions. These disease screenings and physical examinations help to maintain health in that they serve to detect any physical problems or disease processes which may require treatment before serious complications occur. One of the primary types of routine disease screenings that physicians recommend for women are cancer screenings for various types of cancer including breast, gynecological, and skin cancer (American Cancer Society [ACS], 2012a, 2012b, 2012c).

Although cancer screening behaviors encompass only a small subset of health maintenance behaviors recommended for women, this model focuses on cancer screening behaviors to the exclusion of other health maintenance behaviors (e.g., hand washing, sleep hygiene, adequate nutrition, physical activity, blood pressure monitoring, etc.). While these other health maintenance behaviors are also important for health promotion, cancer screenings are unique in that they are essential for the prevention and detection of a potentially terminal disease that often requires immediate treatment to reduce mortality and increase quality of life (ACS, 2012a, 2012b, 2012c). Additionally, unlike some health maintenance behaviors, cancer screenings are discrete behaviors which can be easily monitored and measured through medical records and patient self-report; therefore, cancer screening behaviors lend themselves well to research. Most importantly, unlike other health maintenance behaviors, cancer screening behaviors often require either physical examination of one's own body or exposure of one's body to a medical professional, making these behaviors particularly relevant to the body image literature.

In general, physicians recommend that all women over age 20 perform monthly breast self-examinations to screen for breast cancer (ACS, 2012a). Despite recent speculation that breast self-examination should no longer be recommended due to ineffectiveness (Humphrey, Helfand, Chan, & Woolf, 2002), these screenings are still widely presented as options for women's health regimens (National Cancer Institute [NCI], 2012). Given research suggesting that breast self-examination is more effective when performed correctly (Harvey, Miller, Baines, & Corey, 1997), education is a vital component of breast screening recommendations, if physicians choose to make them. Furthermore, it is recommended that women ages 50–74 have a mammogram every two years and that women ages 40–49 consult with their doctor regarding how frequently to receive mammograms (Centers for Disease Control and Prevention [CDC], 2012a). To screen for gynecological cancers, particularly cervical cancer, physicians recommend that women receive an annual gynecological examination by a physician starting at age 21, with most advisory boards recommending that a Papanicolaou (pap) test be administered every 2–3 years for young women and every 3–5 years for women 30–65 years old (ACS, 2012b; CDC, 2012b). Additionally, to screen for cancerous skin lesions such as melanoma, physicians recommend that all women engage in an at-home, full-body skin self-examination about once a month by examining the skin on all parts of the body for abnormalities using a mirror or the assistance of a partner (ACS, 2012c; Jensen & Moriarty, 2008). As previously discussed, this subset of cancer screening behaviors shares a common theme; they each require women to either visually or manually examine their own body for physical changes or submit to a physical examination during a medical appointment.

Despite physician recommendations, rates of engaging regularly in these body-focused cancer screening behaviors are fairly low. Research suggests that only about one third of women regularly perform breast self-examinations and furthermore, only about 27% of women perform breast self-examinations adequately (Elmore, Armstrong, Lehman, & Fletcher, 2005; Tu, Reisch, Taplin, Kreuter, & Elmore, 2006). Among women aged 40 or above, only 66% receive regular mammograms, which indicates a decline in rates over the past several years (Breen et al., 2007). Rates are similarly low for skin self-examinations, as research suggests that only one third of