Body Image Concerns Throughout the Lifespan

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Abstract

Due to the rising rates of eating disorders and obesity, increasingly more attention is being paid to body image and body image difficulties. Body dissatisfaction, which is ubiquitous among girls and women, can be defined by the difference between one's perceived body size and ideal body, particularly with regard to the desire to be thin. Body dissatisfaction has become so commonplace that it has been described as "normative discontent." It is also considered one of the most robust risk and maintenance factors for clinical eating disorders. A wide range of risk factors contribute to the development of body dissatisfaction, including biological and physical factors, sociocultural influences, and individual characteristics. In addition, females who place a strong emphasis on thinness and physical appearance and routinely engage in body comparison are especially vulnerable to experiencing body dissatisfaction. Body image problems and disordered eating behaviors know no boundaries; they impact females across age groups, ethnicities, cultures, and socioeconomic levels. Therefore, it is essential for health professionals to understand the development of body image difficulties and be knowledgeable about body image assessment techniques and effective prevention and intervention programs. Armed with this insight, health professionals will be in position to foster healthy body image and enhance quality of life among females across the lifespan.

Keywords

Body image • Body dissatisfaction • Risk factors • Assessment • Theoretical foundations • Prevention

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1.1 Learning Objectives

After completing this chapter, readers should be able to:

1. Explain the difference between normal body image concerns, body dissatisfaction, and body image distortion.
2. Analyze risk factors that contribute to body dissatisfaction in females.
3. Compare and contrast how body image concerns affect females throughout the life course.
4. Discuss body image among various ethnic and cultural groups.
5. Examine different assessment tools for the evaluation of body image.
6. Explain the different categories of prevention.
7. Examine theoretical foundations that can be applied to body image interventions.
8. Examine various strategies that can be used in body image interventions.
9. Discuss future directions for body image and eating disorder research.

1.2 Introduction

Positive body image is integral to healthy development and overall well-being throughout the lifespan. Body image is a multidimensional and highly complex construct [1] that can be defined in general terms as "the subjective evaluation of one's appearance" [2] (p. 4). Body image encompasses cognitive, perceptual, affective, and behavioral dimensions [3] and is a dynamic representation that the person constructs over time from daily experiences and within a certain sociocultural milieu [4]. Due to the rising rates of eating disorders and obesity, increasingly more attention is being paid to body image and body image difficulties [5]. Various terms have been used to depict body image concerns, including negative body image, body dissatisfaction, body dysphoria, body image distortion, and body image disturbance. Due to the complexity of the body image construct, researchers have typically focused on examining disturbances within the cognitive-affective (evaluative) and perceptual components of body image. A disruption within the evaluative component is usually represented as body dissatisfaction [6], which refers to a person's negative self-evaluation of his or her body weight, size, and shape that can lead to cognitive, psychological, affective, and behavioral disturbances [7, 8]. Body dissatisfaction can also be defined by the difference between one's perceived body size and ideal body size. In contrast, a disturbance within the perceptual component is usually referred to as body image distortion, which involves a person's inability to accurately perceive body size and shape [9] and is a symptom of eating disorders such as anorexia nervosa, bulimia nervosa, and eating disorder not otherwise specified [10].

It is widely recognized that body dissatisfaction is ubiquitous among girls and women, particularly with regard to the desire to be thin. In fact, body dissatisfaction has become so commonplace that it has been described as "normative discontent." [11] Moreover, body dissatisfaction is considered one of the most robust risk and maintenance factors for clinical eating disorders [12]. Body image and eating disturbances have also been linked to other psychological problems, including depression, low self-esteem [13–16] as well as anxiety [14], body dysmorphic disorder [17], self-harm and childhood sexual abuse [18], and social phobia [14, 19]. In sum, body image and eating problems hinder healthy development and negatively impact overall well-being and quality of life.

Negative body image, body image disturbances, and disordered eating behaviors know no boundaries; they impact females across age groups, ethnicities, cultures, and socioeconomic levels. It is essential for health educators and health care clinicians to understand the etiology and development of body image problems and be knowledgeable about body image assessment techniques and effective prevention and intervention programs. It is also important for health professionals to reflect about their own perceptions of body image and eating concerns and how these perceptions may influence their own attitudes and behaviors as well as their interpersonal interactions with clients and patients.

1.3 Research Findings

1.3.1 Risk Factors for the Development of Body Dissatisfaction

A wide range of risk factors contribute to the development of body dissatisfaction, including biological and physical factors, sociocultural influences, and individual characteristics [16, 20]. Females with a higher body mass index (BMI) that is not in line with societal expectations of a thin ideal body type—the thin ideal—can experience body dissatisfaction. Sociocultural factors often exert a powerful influence on body image by promoting the thin ideal, which can be particularly problematic for females who tend to internalize such messages [16, 21–25]. Even females from ethnic groups who are generally more accepting of larger body types can experience an internal tug-of-war regarding their body image and sense of self-worth, particularly when they are acculturated or exposed to Western or Western-influenced cultures that promote the thin ideal [26, 27]. In addition, females who place a strong emphasis on thinness and physical appearance and routinely engage in body comparison are especially vulnerable to experiencing body dissatisfaction [28–30].

Sociocultural influences on body image have been the focus of numerous studies, and various sociocultural models have been developed to depict how these factors promote the thin ideal as the societal standard for beauty [28, 31]. More specifically, the tripartite influence model (see Fig. 1.1) posits that three major sociocultural influences—peers, parents, and media—play a role in the development of body dissatisfaction, eating disorders, and negative affect.

The model also proposes that internalization of the thin ideal and appearance comparison mediate the relationships between these influences and body image and eating concerns [25]. This model has been used with diverse cultural samples and appears to be a viable model for studying risk factors leading to body dissatisfaction and eating disorders [14, 25, 32].

Within the sphere of major sociocultural influences, mass media transmit powerful messages to both adults and youth, particularly with regard to body image. This media influence conveys another level of meaning in light of the fact that US children and adolescents aged 8–18 use media roughly 7½ h/day [33]. Furthermore, because most young people use two or more media concurrently, they actually engage with media for more than 10½ h/day. This time does *not* include doing schoolwork on the computer, texting, or talking on a cell phone [33]. Lower-income,

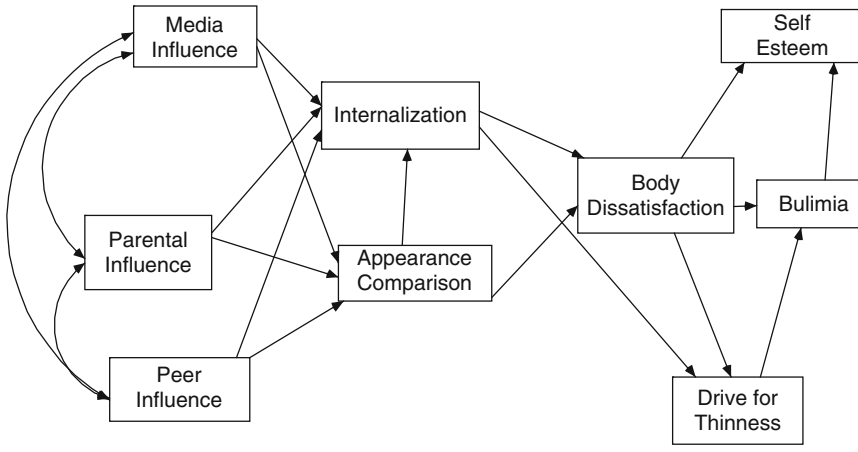

Fig. 1.1 The theoretical tripartite model. Source: Rodgers R, Chabrol H, Paxton SJ. An exploration of the tripartite influence model of body dissatisfaction and disordered eating among Australian and French college women. Body Image. 2011:208–215. doi:10.1016/j.bodyim.2011.04.009. p. 210

Hispanic, and African-American children consume much more media than their middle-class and Caucasian peers. Young children are also mass media consumers; although computer and Internet use are on the rise, television is still the medium of choice for this age group [34].

There is also evidence to suggest that children watch adult television after the age of 9; and in watching these programs, they learn about social norms that might influence their attitudes and behaviors [35]. For example, many adult programs contain content and cues that uphold the thin ideal, which can influence the way young girls view their own bodies. In fact, young girls have mentioned that they learn about dieting through the media [36]. Furthermore, research has shown that perceived pressure from the media predicts body image and eating difficulties among girls aged 10–18 [37].

Parents and other caregivers make many decisions regarding the media use of young people; however, they often do not set or consistently enforce rules regarding their children's media exposure [33]. Therefore, the subtle and overt messages that young people receive about body image via various media outlets often go unchecked. Children and youth do not yet possess completely developed higher-order cognitive skills (e.g., critical thinking and problem solving), which makes them even more vulnerable to the constant barrage of media messages endorsing the thin ideal. Studies have shown that a relationship exists between media influences and body image development in girls. For example, preadolescent and adolescent girls who watch television shows with an emphasis on appearance experience less satisfaction with their own appearance [24, 35, 38]. Moreover, meta-analyses have clearly demonstrated that exposure to the thin ideal in the media is strongly related to negative body image in girls and women, with adolescent girls displaying particular vulnerability [39, 40]. According to Bell and Dittmar [41] (p. 489), "it is not the *type* of media exposure that is important in understanding girls' vulnerability to negative body image, but rather the extent of girls' identification with media models."

1.3.2 Body Image Concerns Across Age Groups

1.3.2.1 Preadolescent and Adolescent Females

Most studies concerning body image in preadolescent and adolescent females have focused on girls' desire to be thinner [5, 16, 42]. Researchers have shown that psychological processes related to body dissatisfaction are already well established by the age of 9 [23, 35, 43], and the "normative discontent" with body shape and size that is so common among adolescent females and young adult women is applicable to young girls as well [38, 44]. Many girls and women who internalize these "thin is in" messages are unable to meet the high standard and therefore often experience body dissatisfaction [38, 41, 45]. Girls as young as 5 and 6 experience a greater awareness and internalization of the thin ideal in ways that negatively impact their body image development and self-esteem [29, 46]. Therefore, it appears that the development of body dissatisfaction emerges around the time that girls start school [16].

The peer group is another key sociocultural influence in the development of body image and body image concerns, especially among adolescent females. Schools, which are major socialization environments for young people [28] and give rise to various peer groups, contribute to the formation of "appearance cultures" [24] in which adolescent girls integrate sociocultural standards for female attractiveness (e.g., the thin ideal) into their peer group cultures [23, 42, 47]. Adolescent girls who frequently engage in appearance conversations and appearance comparisons with their peers are more likely to internalize the thin ideal and experience body dissatisfaction [22–24]. In addition, watching or reading appearance-based media is significantly related to appearance conversations with peers, which, in turn, are related to internalization of appearance ideals and body dissatisfaction [23]. A related peer group element involves heterosocial involvement, which has also been associated with peer pressure to be thin; and this peer pressure has been associated with increased body dissatisfaction

[42]. Data from Project EAT-II, a longitudinal study of large, ethnically, and socioeconomically diverse group of adolescents, revealed that adolescent females are strongly influenced by their peers' dieting behaviors. More specifically, the more the teens perceived that their friends were dieting, the more likely they were to report engaging in chronic dieting, extreme weight control behaviors, and binge eating 5 years later [48]. Therefore, peer groups exert a strong influence on adolescent females' attitudes and behaviors related to body image and weight control.

1.3.2.2 Young Adult Women

A sizeable number of young adult females are concerned about their body weight and shape as well [49]. According to the American College Health Association [50], an estimated 44 % of college women are dieting to lose weight; and approximately 61 % of these young women are exercising to lose weight. Other studies have also shown that college-aged females struggle with body image issues and report high levels of body dissatisfaction and disordered eating [14, 51–53]. In addition, college females who report more fear about receiving negative appearance evaluation from others experience a greater drive for thinness and higher body dissatisfaction [54].

There is support for the sociocultural model as it relates to body image and eating disorders among college-aged women [55]. More specifically, sociocultural pressures aimed at the thin ideal exert the most negative impact on young women when they are internalized [56, 57]. To shed light concerning *how* internalization of the thin ideal may lead to body dissatisfaction, Fitzsimmons-Craft et al. [57] (p. 48) found that social comparison and body surveillance mediated the relationship between thin ideal internalization and body dissatisfaction in a sample of college-aged women. Nevertheless, "only body surveillance emerged as a significant specific mediator of this relation." In a different study [14], the combination of media influence and social phobia emerged as a significant predictor of body dissatisfaction in college-aged females.

A related aspect of body image centers on "fat talk," which is a term for how females talk with each other about the size and shape of their bodies, generally in negative terms [58]. Studies have revealed that fat talk occurs so frequently among college-aged women that it is considered a "normative phenomenon." [59] Young women have indicated that engaging in fat talk acts as a coping mechanism of sorts because it helps them express distress about *feeling* fat as opposed to *being* fat. However, engaging in fat talk may actually be maladaptive because this type of talk is linked with thin-ideal internalization, body dissatisfaction, body image disturbance, and eating pathology [59, 60].

1.3.2.3 Older Women

Similar to younger females, body image in older women is multifaceted and varies among women [61]. However, there are some distinct differences. For example, as women age, they experience physical, social, and environmental changes that impact how they perceive their bodies [62, 63]. Although more attention has been devoted to studying body image in middle-aged and older women in recent years, there have been mixed findings regarding the relationship between aging and body image [61, 62]. For example, Webster and Tiggemann [64] found no difference with age, while other researchers [65, 66] have supported the thought that women who experience body dissatisfaction may struggle with this concern throughout their lifetime.

Many correlates and risk factors associated with body dissatisfaction and disordered eating that are found in younger females have also been found in older women, such as BMI, sociocultural influences, and internalization of the thin ideal. Nevertheless, other factors present unique body image challenges to older women, including menopause and anxiety related to the aging process [6]. Women in midlife and beyond may face similar eating- and weight-related obstacles as younger girls and women, including body dissatisfaction and body image distortions; and these issues are often intensified by the aging process. For example, life events that often take place in midlife, such as career changes, marital problems, divorce, "empty-nest" syndrome, and chronic illness, can create even more distress for

women who are already struggling with body image and eating difficulties. Among the indicators that body image and disordered eating among older women appear to be on the rise is that fact that there has been a 42 % increase in the number of women over the age of 35 who sought treatment within the past 10 years [67].

In a large Internet survey study of women aged 50 and older, 13 % of the sample reported current eating disorder symptomology. In addition, over 70 % of the participants reported experiencing body dissatisfaction, with a large percentage (83.9 %) expressing dissatisfaction with the stomach. Researchers also found that higher BMI was associated with higher rates of diet pill/diuretic use, both of which are considered maladaptive weight management behaviors and have been reported in other studies. However, regardless of BMI, excessive concern with body shape and weight and body dissatisfaction can negatively impact women's self-esteem and overall quality of life, and even lead to full-blown clinical eating disorders. Therefore, health professionals need to be aware of and appropriately screen for eating and body image difficulties among older women [68].

In spite of these challenges and risk factors, Liechty's [61] (p. 84) qualitative study of older women revealed "complex cognitive and behavioral means by which older women were able to feel satisfaction with their bodies despite desire for physical change." Participants conveyed that health and functionality were more important to their body image than their physical appearance. Those with positive body image focused on controllable elements of their physical appearance (e.g., clothing) and had developed at least some degree of acceptance of their physical imperfections. Conversely, participants who highly valued youthfulness and conforming to society's thin ideal experienced increasing body dissatisfaction as they aged. According to McLean et al. [69], appearance acceptance and placing less emphasis on the appearance aspect of self-concept may serve as protective factors that buffer aging women from the negative impact of body dissatisfaction.

In addition, Liechty and Yarnal [62] (p. 1213, 1215) found that women's body image exhibited both stable and fluctuating patterns throughout the lifespan. The participants' thoughts about body image went beyond "level of satisfaction" and "included evaluations of health and ability, beliefs about the importance of appearance, and feelings about their overall lives." These findings supported Hatch's [70]"life course perspective" about body image, which can help researchers design more robust studies, including how the body image construct might change as women age [61–63].

1.3.2.4 Females with Type 1 Diabetes

Females with type 1 diabetes are an important subgroup who are at heightened risk for experiencing body dissatisfaction and eating problems. According to Jones et al. [71], eating disorders occur approximately twice as often among adolescent females with type 1 diabetes as in their peers without diabetes [72–74]. Insulin omission or restriction along with maladaptive eating and exercise attitudes and behaviors can lead to a number of negative health and medical consequences for females with type 1 diabetes [71–74]. Health professionals working with these individuals should be alert to warning signs of a possible eating disorder, including symptoms of depressed or anxious mood, over-concern about body weight and shape, atypical exercise habits (sometimes accompanied or followed by frequent hypoglycemia), and very low-calorie meal plans. In addition, unexplained increases in hemoglobin A1c (HbA1c) values and recurring problems with diabetic ketoacidosis (DKA) should raise a raise flag that insulin restriction may be occurring [71, 72].

1.3.3 Body Image Among Different Ethnic and Cultural Groups

1.3.3.1 Body Dissatisfaction Across the Globe

Although females residing in westernized nations (e.g., USA, Australia, UK) have been the focus of much body image and eating disorder research, studies have shown that these issues are a global concern [22, 75–83]. It is important to examine body dissatisfaction across various cultures in

order to obtain richer understanding regarding how the cultural environment influences body image concerns [79].

Numerous studies point to the influence of "Westernization" in advancing the thin ideal and contributing to the development of body dissatisfaction globally, but other factors appear to play a role as well [75, 79–81]. For example, results from the International Body Project I [81] indicated that within Malaysia and South Africa, heavier bodies are preferred in low-SES areas compared to high-SES areas; however, this is not the case in Austria. Also, some studies show mixed results regarding the impact of Western influences on body image concerns, such as those that have been conducted in Latin-American countries [79].

In addition to the degree of Westernization, other factors that appear to contribute to different body weight ideals across different cultures include the role and level of equality of women in society, the acceptance of the overweight stigma [81], and BMI [79].

The thin ideal for female attractiveness is also esteemed in China, and some studies have shown that the relation between appearance pressure and comparison to body dissatisfaction in Chinese adolescents is somewhat similar to that of adolescents in Western countries. Other findings have revealed some cultural differences in select developmental and interpersonal influences on body dissatisfaction, with Chinese adolescents showing lower levels of body dissatisfaction [22]. However, according to Holmqvist and Frisén [79], when Asian research participants are recruited from parts of East Asia that are affluent and more westernized, they appear to demonstrate more body dissatisfaction than their US counterparts. Chen and Jackson's [22] study also highlighted middle adolescent Chinese girls' susceptibility to body dissatisfaction and perceived appearance pressure from media and interpersonal influences compared to their early adolescent peers.

Japan is another country that has witnessed an alarming increase in body image and eating problems [32]. According to studies cited by Yamamiya and colleagues [32], eating disorders have increased approximately sixfold over the past 25 years; and Japanese women's perception of the "ideal" body type appears to be thinner than that of American women. In addition, a study involving Japanese female undergraduate students revealed that sociocultural factors (family, peers, media) appear to influence body image and eating problems similar to what is found with US samples [32]. For more thorough discussions of body image and eating disorders across various cultures, see Anderson-Fye [75], Holmqvist and Frisén [79], Levine and Smolak [80], and Swami et al. [81].

1.3.3.2 Body Dissatisfaction Among US Ethnic Groups

According to Levine and Smolak [80] (p. 224), "ethnicity is a *culturally constructed* definition of a group of people who are assumed to be related in terms of values and beliefs and, often, in terms of race." In the USA, the relationships among ethnicity, acculturation, and body satisfaction are not clear [80, 84–88]. One of the hindrances associated with body image research is that many of the studies have been conducted in samples of predominantly Caucasian female samples, with less focus on ethnic differences [85], particularly among preadolescents [5]. When body image among different ethnic groups has been studied, much of the focus has focused on differences between Caucasians and African Americans, with surprisingly few studies investigating body image among Hispanics/Latinos, Asian Americans, and Native Americans [89]. Furthermore, body image research conducted with ethnically diverse populations may not account for the heterogeneity that exists within each group.

In studies examining body image and problematic eating among ethnically and culturally diverse samples, results have been mixed. For example, many studies have shown that African American females tend to be more accepting of larger body types and display higher levels of body satisfaction than other ethnic groups, whereas study findings are less clear-cut concerning Hispanic/Latino and Asian American groups. Some studies indicate no significant differences between these groups and Caucasians,

while other studies reveal differences [80]. These mixed findings have led researchers to posit that some of the differences in body dissatisfaction among various ethnicities may depend on the assessment instruments that are used [79, 80]. Even if females from two different ethnic groups display similar levels of body dissatisfaction, the cultural messages about body image as well as the impact of these messages are likely to be different for each group [5]. For more detailed discussions concerning the relationships of body dissatisfaction and eating disorders across different ethnic and cultural groups, see Anderson-Fye [75], Franko and George [89], Holmqvist and Frisén [79], and Levine and Smolak [80].

1.3.4 Body Image Assessment

It is important to emphasize that assessment is a process, and there is no particular instrument or battery of tests that is appropriate to use in all situations [90]. Moreover, due to the multidimensionality of the body image construct and the wide availability of various instruments, it is particularly important to carefully consider the selection of body image assessment tools [91].

Thompson [91] outlined ten tips for enhancing body image assessment in clinical and research settings, including the importance of selecting instruments with established reliability and validity and using selected instruments with appropriate target populations. Banasiak et al. [92] pointed out that many instruments used to assess body image concerns in adolescents have been validated using adult samples. Nevertheless, many of the measures can still be used with adolescent females when care is taken to ensure that girls understand the terms used in the particular instrument. For example, the Physical Appearance State and Trait Anxiety Scale [93] was validated with an adult sample, yet exhibited excellent internal reliability (0.93) in measuring weight-related body dissatisfaction in adolescent girls aged 14–16 [41]. In the same study [41], researchers measured appearance dissatisfaction with an adapted version of the Body Image State Scale, a six-item scale that has good construct validity [94] and demonstrated high internal reliability with an adolescent sample in a previous study [95]. As illustrated in these examples, it is important for researchers to establish new reliability and validity scores whenever they use an instrument with a target population that differs from the standardized sample [91]. In addition, researchers have acknowledged the need to develop valid and reliable instrumentation for studying body image in diverse female populations, including younger girls [75], older women [61, 65], and females from diverse ethnic and cultural backgrounds [55, 61, 80, 96].

1.3.4.1 Body Image Assessment Scales and Questionnaires

There are a number of well-validated instruments that have been developed to assess body image and eating concerns in children, adolescents, and adults; many of these measures are discussed in more detail elsewhere [3, 90, 96–100]. Table 1.1 lists a few of the body image measures that have been reported in the research literature with an internal consistency rating and test-retest reliability rating of at least 0.70 [93, 94, 101–107].

In addition, examples of body image questionnaires that have been validated for college-aged women and have internal consistency and test-retest reliability scores above 0.70 are located in Appendices 1–3: Body Image Quality of Life Inventory [101], Body Image Concern Inventory [105], and Physical Appearance State and Trait Anxiety Scale [93]. In addition, Cash and Grasso [108] reported the normative data and acceptable internal reliability measures of four body image instruments—Body Image Disturbance Questionnaire [109], Appearance Schemas Inventory-Revised [110], Body Image Coping Strategies Inventory [111], and Body Image Quality of Life Inventory [101, 112]. These instruments measure various facets of the body image construct and were used across seven studies with female and male college students. Other valid and reliable scales that can be used in body image research include Body Image Assessment Scale-Body Dimensions [113]; Body Shape Questionnaire [114], which has a shortened version [115] and is available in different language

Table 1.1 Instruments for assessing body image with high internal consistency and test-retest coefficients (>0.70)

Author	Test name	Description of test	Reliability IC: Internal consistency TR: Test-retest	Standardization sample
Cash and Fleming [101]	Body Image Quality of Life Inventory	A 19-item instrument designed to quantify the impact of body image on aspects of one's life Participants rate the impact of their own body image on each of the 19 areas using a 7-point bipolar scale from −3 to +3	IC: 0. 95 TR: 0.79	116 college-aged women ($M = 21.3 \pm 5.1$)
Cash et al. [94]	Body Image States Scale	A multi-item measure of momentary evaluative/ affective experiences of one's physical appearance	IC: 0.77 (women) IC: 0.72 (men) TR-state: 0.69 (women)[a] TR-state: 0.68 (men)[a]	174 college students—116 women, 58 men (median age = 20)
Cash and Szymanski [102]	Body-Image Ideals Questionnaire	A measurement of self-perceived discrepancies from and importance of internalized ideals for multiple physical characteristics	IC-BIQ discrepancy: 0.75 IC-BIQ importance: 0.82 IC-weighted discrepancy: 0.77 TR: none given	284 college undergraduate women at a mid-Atlantic urban university
Garner [103]; Garner and Olmstead [104]	Eating Disorder Inventory (EDI and EDI-2). Body Dissatisfaction Scale	9-item subscale assesses feelings about satisfaction with body size; items are 6-point, forced choice; reading level is 5th grade	IC: Adolescents (11–18) Females = 0.91 Males = 0.86 Children (8–10) Females = 0.84 TR: None given	610 males and females ages 11–18 (Shore & Porter, 1990) 109 males and females ages 8–10 (Wood et al., 1996)
Littleton et al. [105]	Body Image Concern Inventory	A *brief* instrument for assessing dysmorphic concern; only takes a few minutes to answer. Despite its brevity, the BICI provides an assessment of body dissatisfaction, checking and camouflaging behavior, and interference due to symptoms—such as discomfort with and avoidance of social activities (see Appendix 2)	IC: 0.93 TR: None given	184 undergraduates at a medium-sized Southeastern University; approximately 89 % were women
Reed et al. [93]	Physical Appearance State and Trait Anxiety Scale	Participants rate the anxiety associated with 16 body sites (8 weight relevant, 8 nonrelevant); trait and state versions available	IC: Trait: 0.88–0.82, state: 0.82–0.92 TR: 2 weeks, 0.87	205 female undergraduate students
Shisslack et al. [106]	McKnight Risk Factor Survey III (MFRS-III)	Participants use 5-item subscale that assesses concern with body weight and shape	IC: Elementary = 0.82 Middle school = 0.86 High school = 0.87 TR: Elementary = 0.79 Middle school = 0.84 High school = 0.90	103 females, 4–5th grade; 420 females, 6–8th grade; 66 females, 9–12th grade
Wooley & Roll [107]	Color-A-Person Body Dissatisfaction Test	Participants use five colors to indicate level of satisfaction with body sites by masking on a schematic figure	IC: 0.74–0.85 TR: 2 weeks (0.72–0.84) 4 weeks (0.75–0.89)	102 male and female college students, 103 bulimic individuals

[a]Acceptable for a *state* assessment

[116]; Eating Disorder Inventory-3 [117], which contains the Drive for Thinness and the Body Dissatisfaction subscales; the Sociocultural Attitudes Towards Appearance Scale-3 for measuring multiple societal influences on body image and eating disturbances [118]; and Children's Body Image Scale [119, 120]. Researchers have also explored using realistic 3-dimensional body-scan images for body image research and found that the scanned images are a viable alternative to contour line drawings [121]. Innovative tools for investigating changes in adolescent body perception have also been developed, such as the Adolescent Body-Shape Database and Adolescent Body Morphing Tool [122].

1.4 Contemporary Understanding of the Issues

1.4.1 Body Image Interventions

1.4.1.1 Prevention Categories

Body image and eating disorder prevention programs focus on preventing or delaying the onset of subclinical and full-blown clinical eating disorders by reducing risk factors and increasing protective factors that promote resilience and overall health and well-being [123–126]. According to a report from the National Academies [127], there are different categories of prevention activities that can drive health promotion interventions—universal, selective, and indicated. *Universal* prevention programs are aimed at educating an entire group (population). These programs are often implemented in schools and focus on educating children and youth about particular health issues such as body image and eating disorders. Many researchers have also called for universal and *integrated* prevention programs that address the spectrum of body image and weight-related issues that encompass both disordered eating and childhood obesity [128–131]. While these programs are aimed at preventing risk factors such as body dissatisfaction, dieting, and unhealthy weight-control practices [129, 132], they can also foster important protective factors such as self-esteem, self-efficacy, media literacy, social-emotional learning, stress management, creative problem solving, and overall resilience [133].

Selective prevention programs are designed to reach a population subgroup who is considered at higher-than-average risk for a particular health concern (e.g., eating disorders). *Indicated* (or *targeted*) prevention programs target individuals considered to be at very high risk or actually exhibiting early signs of the disorder. A meta-analysis [134] highlighted that both universal and targeted prevention programs produced favorable and significant effects at follow-up on the measures of risk and eating pathology; this finding held steady for younger and older participants. In addition, the analysis demonstrated that the most effective programs are those that target high-risk individuals and use interactive strategies (as opposed to didactic ones) to teach life skills for healthy eating and physical activity and/or countering sociocultural pressure promoting the thin ideal. It is also important to note that evidence from meta-analyses has not supported iatrogenesis; therefore, "concerns about inducing body image or eating problems should be carefully considered but should not deter the development of prevention programs" [135] (p. 219).

1.4.1.2 Theoretical Foundations

Health education and health behavior theories and models can guide the development and evaluation of health promotion and education programs and interventions [136]. For example, the ecological model can be effective for prevention programs aimed at improving body image and decreasing eating disorder risk [81, 125, 135]. The underlying premise of the ecological model is that there are multiple levels of influences on health attitudes and behaviors, including intrapersonal (biological, psychological), interpersonal (social, cultural), organizational, community, physical environmental, and policy. Ecological models serve as "comprehensive frameworks for understanding the multiple and interacting determinants of health behaviors. . . . and can be used to develop comprehensive intervention approaches that systematically target mechanisms of change at each level of influence" [137] (p. 466). For example, healthy body image can be

promoted through targeting individual attitudes, knowledge, beliefs, and behaviors (intrapersonal); involving the family and peers in reinforcing positive body image in concert with healthy and balanced nutrition and physical activity (interpersonal, environmental); integrating healthy body image, eating, and physical activity interventions into school health programs (organizational, environmental); and advocating for communication, education, and motivational campaigns with messages that promote healthy body image (community).

Additional theoretical frameworks that can be used to guide body image interventions include Social Cognitive Theory (SCT) [138] and Social Marketing [139]. The hallmark of SCT is reciprocal determinism, which is the dynamic interaction of individuals and groups, their behavior, and the environment. Other SCT concepts relevant to the promotion of healthy body image include outcome expectations (beliefs about the likelihood and value of the consequences associated with behavioral choices), self-efficacy (beliefs about one's ability to successfully engage in positive behavior change), observational learning (learning to perform new behaviors by observing others, e.g., via peer modeling), facilitation (providing tools and resources or modifying the environment to facilitate behavior change), and self-regulation (controlling oneself through self-monitoring, goal setting, self-reward, and social support) [140]. School- and community-based body image interventions can reinforce key SCT concepts by emphasizing personal and group goal setting, teaching media-literacy skills, encouraging healthy peer group interaction, providing regular opportunities to practice decision-making and problem-solving skills linked to real-life body image issues, and incorporating meaningful family involvement activities.

Healthy body image can also be fostered through social marketing, which is designed to influence voluntary behavior change that can positively impact health and quality of life at the intrapersonal, interpersonal, organizational, community, and public policy levels, thereby contributing to an ecological approach to mitigate body image and eating problems. Social marketing includes communication that focuses on the four "Ps" of the marketing mix: product, price, place, and promotion [141]. For example, with positive body image as the *product*, health professionals can develop messages and slogans to emphasize the benefits of healthy body image and identify the negative costs associated with body dissatisfaction. These messages can influence females' perceptions of the cost-benefit ratio associated with adopting and maintaining attitudes and behaviors reflecting positive body image, sound nutrition, and healthy physical activity (*price*). Health professionals can also increase access to quality information about body image through various *places*, such as schools and other education centers, medical offices, health clinics, community centers, churches and other places of worship, hair and nail salons, and social media outlets. *Promotion* of healthy body image can occur by making incentives accessible to the target audience, including popular items such as T-shirts and water bottles, sling bags, posters, magazine and Internet ads, social media contests, and games.

With a consumer focus in mind, targeting social norms has proven to be another successful social marketing strategy. Social norms have been defined as "expectations about how different people will evaluate our behavior and our willingness to be guided by their evaluation" [140] (p. 172). Therefore, because "perception usually trumps reality" [141] (p. 447), social norms marketing can be used to inform females about the actual frequency of certain attitudes and behaviors linked with body image dissatisfaction (e.g., dieting among peers, unrealistic expectations for body type, internalizing the thin ideal), with the intent to create social pressure for change. Health professionals can also implement programs to promote a new social norm [142] emphasizing healthy body image, followed by positive reinforcement at different levels of influence within the ecological framework (e.g., social support from family and peers, "body image friendly" messages and environments that facilitate the development of positive body image). For additional discussions involving theoretical approaches and prevention programs aimed at

promoting healthy body image and preventing disordered eating, see Bauer et al. [143], Levine and Smolak [135], Massey-Stokes et al. [125], and Sinton and Taylor [124].

1.4.1.3 Strategies Aimed at Sociocultural Influences

Developing interventions aimed at preventing or reducing body image and eating problems must include skill development for recognizing and effectively managing sociocultural pressures espousing the thin ideal. Within this scope, it is very important to emphasize the key mediational variables of appearance comparison and internalization of the thin ideal [25, 32, 55], including strategies for dealing with these tendencies. Body image interventions should also accurately reflect the central role of popular culture and traditional values across diverse cultural, ethnic, and socioeconomic populations [22, 144, 145]. The heterogeneity within each group should be taken into account when planning and implementing body image intervention programs so as not to miss other manifestations of disordered eating and related health issues [87]. It can also be beneficial to tailor body image interventions to address a range of treatment barriers that have been identified across ethnic groups [5, 27].

Interactive programs that can be effective in addressing sociocultural influences on females' body image include those emphasizing media literacy [23, 41, 129, 146–148], self-awareness and self-esteem [129, 146, 148], healthy weight management [147–150], peer support groups [23, 151, 152], and healthy emotions and coping skills [126, 148]. Studies have also supported the use of a dissonance intervention to increase girls' resistance to internalizing the thin ideal that often resonates from peer appearance conversations [23] and other appearance-related messages that are so prevalent in the lives of adolescent females [150]. Dissonance education involves having young women with body image difficulties who have internalized the thin ideal participate in verbal, written, and behavioral exercises in which they critique this ideal. The intended result of such activities is that they "will result in psychological discomfort that motivates [the young women] to reduce internalization of the thin-ideal, which decreases body dissatisfaction, dieting, negative affect, and eating disorder symptoms [150]" (p. 2).

Related research has shown that high general self-determination (a strong sense of self that is "integrated, unified, and noncontingent") can buffer females from having an adverse response to the thin ideal portrayed through the media. Therefore, prevention efforts aimed at enhancing self-determination can help foster the development of healthy body image [153] (p. 490). Additionally, given that females often perceive that males prefer a thinner body type than they typically do [154], health professionals can educate females about actual male preferences [84] via a social norms approach. Health professionals can also tap into the power of social networks by incorporating the influence of family and friends on attitudes and behaviors related to body image and eating concerns. Lastly, training young adult women to serve as positive role models and mentors for younger girls is an intervention strategy that appears to hold promise for decreasing body dissatisfaction and drive for thinness among younger girls [149].

1.5 Future Directions

According to Glanz, Rimer, and Viswanath [136] (p. 25), the "task of health behavior and health education is both to understand health behavior and to transform knowledge about behavior into effective strategies for health enhancement." It is important for researchers to continue developing and refining theories and models to guide research and practice in the areas of body image and eating disorder prevention. In sync with this focus, practitioners must be diligent in staying abreast of the literature so they can implement programs that have a sound evidence base.

Because there are various social, cultural, and economic risk factors that contribute to the development of body dissatisfaction and eating disturbances among girls and women from different ethnic groups [32, 55, 84, 87, 89, 155], it is important to continue to study how the impact of

sociocultural and socioeconomic factors on body image and eating may vary across different ethnic and cultural groups [55, 79]. These differences can be studied between as well as within groups to provide a richer knowledge base to inform body image assessment and development of culturally relevant prevention programs that reflect distinctive ethnic and cultural factors [32, 79, 89]. Similarly, there is a need for researchers to examine how age interacts with culture [79] in order to provide a framework for planning and implementing age-appropriate and culturally relevant body image interventions.

It is important to tailor prevention programs to align with various female populations who deal with body image and eating issues, which increases the relevance for program participants and has the potential to promote real, positive behavior change. For instance, there is a need to implement and evaluate prevention interventions that address the negative impact of engaging in body comparison [30]. Future studies also need to examine whether there are ways to enhance the effects of dissonance and healthy weight interventions, such as by using web-based booster sessions and web-based support groups, increasing the number and duration of program sessions, or adding an intervention component targeting parents [150]. Studying how self-determination at the intrapersonal and interpersonal levels of influence can buffer females from the thin ideal and improve body image and eating-related outcomes is a worthwhile line of research as well [153]. Then, too, researchers can contribute to the prevention knowledge base by further examining the use of yoga as a creative intervention strategy to enhance body awareness and prevent disordered eating among women [156]. Virtual reality is another emerging strategy for enhancing body image in patients with eating disorders as well as in high-risk, subclinical samples; therefore, this is an area that warrants further investigation [9]. Regardless of what particular type of body image intervention is implemented, it is important for researchers and practitioners to conduct formative and summative evaluation, including follow-up procedures to determine whether changes in attitudes, knowledge, and behaviors are sustainable over time.

Future directions should also include targeted health communication interventions to promote healthy body image among females. Schiavo [157] (p. 10) comprehensively defined health communication as "a multifaceted and multidisciplinary approach to reach different audiences and share health-related information with the goal of influencing, engaging, and supporting individuals, communities, health professionals, special groups, policymakers and the public to champion, introduce, adopt, or sustain a behavior, practice, or policy that will ultimately improve health outcomes." Although health communication interventions can be multifaceted, it is important to remember that health communication efforts are part of an overall prevention initiative. Therefore, health communication is an effective adjunct to other body image programming. For example, because most teens and young adults are prolific users of technology, health communication campaigns and health promotion interventions aimed at promoting healthy body image among these groups should incorporate social networking, blogging, emailing, and texting. Health communication can be enhanced by developing multimedia campaigns that integrate words, music, and images to produce messaging that resonates with the target group [158]. Furthermore, it is important to pilot health communication campaigns to ensure that the intended audience will both understand the materials and act on their message [159]. This is particularly relevant when targeting individuals who may experience communication and health literacy barriers, such as those who speak English as a second language and those who are d/Deaf and hard-of-hearing. For more information and resources pertaining to health communication, see Schiavo [157].

In addition, robust assessment for body image problems and eating disorders is necessary in order to more accurately detect body image difficulties and disturbances in diverse female populations. Instruments that are valid and reliable to use with a certain group of females must be reevaluated when used with other groups. For example, many body image and eating disorder instruments that have been validated with adult Caucasian females may not be appropriate or

relevant to use with adult females within other ethnic groups. Practitioners must be careful when administering assessments to make sure they are following recommended assessment protocol. There also continues to be an increased use of online instruments for assessing body image disturbances and eating disorders, which will require researchers to validate these assessment tools [96] for use with different female populations.

1.6 Concluding Remarks

The complexities inherent in body image are well documented, and body image concerns can range from a desire to look attractive to body dissatisfaction and a pathological concern with thinness or perfection. There are numerous risk factors associated with body image and eating concerns, including biological and physical factors, sociocultural influences, and individual characteristics. Body image concerns affect females of all ages across different ethnic, cultural, and socioeconomic groups; therefore, it is important to examine and address body image difficulties from various angles and at different levels of influence. As a result of these efforts, health professionals will be in better position to foster healthy body image and enhance quality of life among females across the lifespan.

1.7 Appendix 1: Body Image Quality of Life Inventory

Different people have different feelings about their physical appearances. These feelings are called "body image." Some people are generally satisfied with their looks, whereas others are dissatisfied. At the same time, people differ in terms of how their body image experiences affect other aspects of their lives. Body image may have positive effects, negative effects, or no effects at all. Listed below are various ways that your own body image may or may not influence your life. For each item, circle how and how much our feelings about you experience affect that aspect of your life. Before answering each item, think carefully about the answer that is most accurate about how your body image usually affects you.

BIQLI items	−3 Very negative effect	−2 Moderate negative effect	−1 Slight negative effect	0 No effect	+1 Slight positive effect	+2 Moderate positive effect	+3 Very positive effect
1. My basic feelings about myself—feelings of personal adequacy and self-worth							
2. My feelings about my adequacy as a man or women—feelings of masculinity or femininity							
3. My interactions with people of my own sex							
4. My interactions with people of the other sex							
5. My experiences when I meet new people							
6. My experiences at work or at school							
7. My relationships with friends							
8. My relationships with family members							
9. My day-to-day emotions							
10. My satisfaction with my life in general							
11. My feelings of acceptability as a sexual partner							
12. My enjoyment of my sex life							
13. My ability to control what and how much I eat							

(continued)

BIQLI items	−3 Very negative effect	−2 Moderate negative effect	−1 Slight negative effect	0 No effect	+1 Slight positive effect	+2 Moderate positive effect	+3 Very positive effect
14. My ability to control my weight							
15. My activities for physical exercise							
16. My willingness to do things that might call attention to my appearance							
17. My daily "grooming" activities (i.e., getting dressed and physically ready for the day)							
18. How confident I feel in my everyday life							
19. How happy I feel in my everyday life							

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1.8 Appendix 2: Body Image Concern Inventory

Please rate how often you have had the described feeling or performed the described behavior on a Likert scale anchored by 1 = "never" and 5 = "always"

	1 Never	2 Seldom	3 Sometimes	4 Often	5 Always
1. I am dissatisfied with some aspect of my appearance					
2. I spend a significant amount of time checking my appearance in the mirror					
3. I feel others are speaking negatively of my appearance					
4. I am reluctant to engage in social activities when my appearance does not meet my satisfaction					
5. I feel there are certain aspects of my appearance that are extremely unattractive					
6. I buy cosmetic products to try to improve my appearance					
7. I seek reassurance from others about my appearance					
8. I feel there are certain aspects of my appearance that I would like to change					
9. I am ashamed of some part of my body					
10. I compare my appearance to that of fashion models or others					
11. I try to camouflage certain flaws in my appearance					
12. I examine flaws in my appearance					
13. I have bought clothing to hide a certain aspect of my appearance					
14. I feel others are more physically attractive than me					
15. I have considered consulting/consulted some sort of medical expert regarding flaws in my appearance					
16. I have missed social activities because of my appearance					
17. I have been embarrassed to leave the house because of my appearance					
18. I fear that others will discover my flaws in appearance					
19. I have avoided looking at my appearance in the mirror					

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1.9 Appendix 3: Physical Appearance State and Trait Anxiety Scale: Trait

The statements listed below are to be used to describe how anxious, tense, or nervous you feel in general (i.e., usually) about your body or specific parts of your body.

Please read each statement and circle the number that best indicates the extent to which each statement holds true in general. Remember, there are no right or wrong answers.

Never	Seldom	Sometimes	Often	Always
1	2	3	4	5

In general I feel *anxious*, *tense*, *or nervous* about

1. The extent to which I look overweight	1	2	3	4	5
2. My thighs	1	2	3	4	5
3. My buttocks	1	2	3	4	5
4. My hips	1	2	3	4	5
5. My stomach	1	2	3	4	5
6. My legs	1	2	3	4	5
7. My waist	1	2	3	4	5
8. My muscle tone	1	2	3	4	5
9. My ears	1	2	3	4	5
10. My lips	1	2	3	4	5
11. My wrists	1	2	3	4	5
12. My hands	1	2	3	4	5
13. My forehead	1	2	3	4	5
14. My neck	1	2	3	4	5
15. My chin	1	2	3	4	5
16. My feet	1	2	3	4	5

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