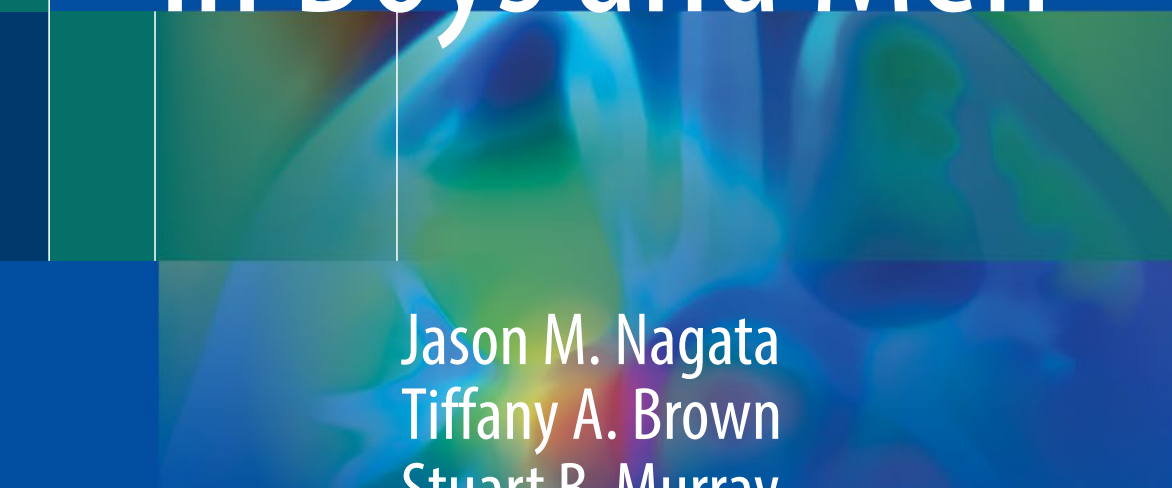
Eating Disorders in Boys and Men



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Springer

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Foreword

Among the "Nine Truths about Eating Disorders," Truth #5 states, "Eating disorders affect people of all genders, ages, races, ethnicities, body shapes and weights, sexual orientations, and socioeconomic statuses" [1]. Despite this fact, the notion that eating disorders are a "female problem" has created a systemic gap in the recognition, understanding, prevention, and treatment of eating disorders in boys and men. This gap is widened by the decreased likelihood of boys and men seeking treatment for their eating disorders or even volunteering for research on eating disorders. The resulting reliance on information based on female patients and participants contributes to a vicious cycle in which eating disorders have been defined, assessed, and treated based on their clinical presentation in girls and women, and then these same definitions, assessments, and interventions exclude boys and men. *Eating Disorders in Boys and Men* represents a must-read text for every clinician, researcher, and student to break this vicious cycle by offering the most up-to-date clinical information describing clinical presentation, assessment and diagnosis, medical considerations, prevention, treatment, and the intersection of gender with race, ethnicity, culture, sexual orientation, athletics, social media, and age.

My own interest in this topic dates back to a 1998 article I authored titled "Disordered eating in adolescent males from a school-based sample" [2]. In the opening paragraph of this article, I stated:

> Published research of eating disorders in males is sparse compared to the estimated proportions of males with eating disorders. For example, Carlat and Camargo (1991) reported that males comprise 10–15% of all subjects diagnosed with bulimia nervosa (BN); however, far less than 10% of BN studies screened by Carlat and Camargo (1991) included data or hypotheses concerning males. Similarly, a recent report concluded that "lack of familiarity with AN [anorexia nervosa] in males leads to a delay in evaluation, diagnosis, and referral," and increased risk for medical complications (Siegel, Hardoff, Golden, & Shenker, 1995:452). Early estimates indicate that 40% of binge-eating disorder (BED) occurs in males (Spitzer et al., 1992, 1993), but similar tendencies to exclude male subjects from empirical investigations have occurred (e.g., Arnow, Kenardy, & Agras, 1992; deZwaan, Nutzinger, & Schoenbeck, 1993; Berkowitz, Stunkard, & Stallings, 1993). Given these patterns, determining the development of AN, BN, and BED in males may be hindered if findings for females do not generalize to males.

The article proceeded to provide correlational analyses of eating pathology in adolescent boys because that represented a significant contribution to the literature at that time! In the two decades since this paper was published, the field has made significant advances in determining the prevalence of eating disorders in boys and men from representative population-based studies, identifying prospective risk factors for the development and maintenance of eating disorders in boys and men from adolescence to late mid-life in longitudinal studies, and examining interventions that reduce eating pathology in men using randomized controlled trials. However, the value of this information depends entirely upon making it accessible outside academic and medical journals.

The editors of this essential text bring a wealth of expertise based on their ground-breaking contributions to identifying medical complications of eating disorders in adolescent boys (Dr. Nagata), developing and evaluating prevention and treatment of eating disorders in late adolescent and young adult men (Dr. Brown), identifying clinical presentations more prevalent in boys and men (Dr. Murray), and contributing to more refined assessments tailored to these clinical presentations (Dr. Lavender). Prior to *Eating Disorders in Boys and Men*, each editor published scientific findings in leading academic and medical journals and shared their insights at national and international conferences. However, these methods of dissemination reach a small fraction of those who need the information most. Collecting the expertise of the top researchers and clinicians for each chapter provides readers with an accessible resource for all of their questions.

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Preface

The eating disorders field developed primarily through a female-centric lens. Although there has been progress in recognizing the diversity of individuals who are affected by eating disorders, certain stereotypes remain that may perpetuate stigma in particular groups. The goal of this book is to highlight boys and men, a population that has been historically underrecognized and underserved with regard to eating disorders research and clinical care. The first section offers a background and overview of eating disorders and body image in boys and men. The second section focuses on the diagnosis and assessment of eating disorders and related symptoms. The third section addresses medical considerations, nutrition, and appearance/performance-enhancing substance use. The fourth section focuses on prevention and treatment. The final section is devoted to addressing specific populations and sociocultural considerations. We conclude with a brief review of the core points raised within each section, as well as a discussion of future directions in this area.

We wish to acknowledge at the outset that, although this book is focused on boys and men, many of the empirical findings and clinical topics may have some degree of relevance across individuals with other gender identities. We also recognize that the majority of existing knowledge in this area derives from research on samples of predominantly cisgender boys and men. We further note that the opinions and assertions expressed herein are those of the editors or contributing authors, and do not necessarily reflect the official policy or position of any academic or governmental institutions or agencies with which the editors or authors are affiliated.

In sum, our goal for this book is to provide a comprehensive and empirically informed synthesis of the most up-to-date information on important topics relevant to research and clinical care with boys and men with eating disorders.

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To my husband, Ryan,
and to my parents, Ronnie and Ada
-Jason M. Nagata

To my family and friends,
for their support and encouragement.
-Tiffany A. Brown

To Emilíana and Lucíana,
my inspiration.
-Stuart B. Murray

To my family and friends,
for their unwavering support.
-Jason M. Lavender

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Part I
Overview and Perspectives

Chapter 1
A Historical Overview of Eating Disorders in Males

Stuart B. Murray

Learning Objectives

1. Overview the history of eating disorders in males.
2. Evaluate how males were excluded from eating disorder research.
3. Synthesize how this has impacted the recognition of eating disorders in males.

Key Points

- Males were reported among the first reported cases of eating disorders, although, subsequently, males were excluded from eating disorder research.
- It has been thought that eating disorders in males are rare, although this may have been due to the female-centricity of research examining EDs.
- The increasing recognition of EDs in males suggest physicians will likely see an upsurge in male presentations of EDs.

Eating disorders (EDs) are among the most pernicious of psychiatric disorders, characterized by elevated rates of mortality, suicidality, multi-systemic medical complexities, and an often chronic and relapsing illness course which may extend over several decades [1–4]. Phenomenologically, EDs have historically been considered one of the most gendered of psychiatric disorders, demonstrating a striking sexual dimorphism. Yet, while many associate the term "eating disorder" with stereotypes of affluent, middle-class, young White females, EDs have been reported in male patients for as long as they have been reported in female patients.

In fact, the very first case description of the cluster of symptoms that would later be termed anorexia nervosa included a careful description of one female patient and one adolescent male patient [5]. Similarly, the simultaneous work of Gull [6] and Lasegue [7], which was critical in identifying the phenotype they later termed

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anorexia nervosa, described the characteristics and sequelae of this disorder in male patients. Further reflecting the centrality of males in this seminal literature relating to EDs, even the term anorexia *nervosa* itself was coined to underscore the presence of male patients with this syndrome. An alternatively considered moniker at the time, anorexia *hysterica*, was ruled out due to the commonly held belief at the time that males could not be hysterical [8].

Beyond these seminal works, however, the history of EDs is characterized by a striking absence of male patients, and it wasn't until almost 300 years after the work of Morton [5] and 100 years after the simultaneous work of Gull [6] and Lasegue [7] that the presence of EDs in males was systematically studied by leading authorities in the field [9, 10]. Crucially, the misnomer that EDs did not afflict males prevailed for large parts of the twentieth century, during a period of rapid evolution for the field of EDs in which the first (i) diagnostic framework, (ii) treatment modalities, and (iii) measures of symptom profiles were developed [11]. As such, all critically important developments relating to diagnostic criteria were predicated on clinical trials exclusively comprising female patients, which inherently excluded male patients. The lack of utility of these diagnostic criteria in accounting for male presentations was broadly misconstrued as evidence that males cannot be afflicted by EDs.

This is perhaps best exemplified by the argument that, owing to the absence of a direct endocrine equivalent of the amenorrhea criterion of anorexia nervosa, which for many decades was a key diagnostic feature of this disorder, males could not meet diagnostic criteria for anorexia nervosa [12]. Indeed, despite weight loss being occasionally documented in clinical reports of male patients, it was thought that any dietary restriction or disordered eating was not a primary concern and was secondary to a more general psychiatric illness such as depression [13, 14]. This was exacerbated by the active exclusion of male patients from clinical trials on the basis of their proposed atypicality or rarity [15]. Consequently, the marginalization of male ED patients is apparent today, with less than 1% of all contemporary eating disorder-related scientific manuscripts relating specifically to male patients [16].

Where Are We Now?

It wasn't until the 1980s that clinical data began to illustrate a limited number of male patients in specialist ED clinics [17–20], which forced the field to reconsider the premise that EDs don't afflict males. More systematic research in the 1990s examined the prevalence and correlates of male presentations in specialist ED clinics, noting that males accounted for 5–10% of cases [12, 21–23], although this was likely an underrepresentation, since males have faced unique stigma in seeking treatment for EDs. Notwithstanding, this emerging evidence was critical in dispelling the long-held misnomer that EDs did not afflict males [12].

However, evidence from specialist ED clinics now suggest that males represent more than one in four EDs among young adolescents in Australia [24] and up to

Table 1.1 An overview of the earliest accounts of eating disorders and their findings relating to male patients

Year	Author	Findings
1689	Richard Morton	Reported "nervous consumption caused by sadness and anxious cares" in a 16-year-old boy
1874	Sir William Gull	Noted that anorexia nervosa occurs in males
1874	Ernest-Charles Lasegue	Described the family dynamics of male patients with anorexia nervosa

33% in the UK [25]. Moreover, ED diagnoses in non-ED settings (i.e., gastroenterology settings) may be *more* prevalent among males than females, where up to 67% of avoidant/restrictive food intake disorder (ARFID) diagnoses, for instance, are accounted for by males [26]. Even in specialist ED settings, male presentations of "selective eating" may account for up to 50% of all cases [27].

More broadly, epidemiological surveillance has recently illustrated shifting trends around the prevalence of anorexia nervosa and bulimia nervosa in males. In the USA, evidence now suggests that males may account for one in four cases of AN and BN [28]. Similarly, in Australia, epidemiological data suggest that one third of those reporting ED behaviors in community settings are male [29]. In light of these findings, it no longer appears tenable to assume that EDs are uncommon among males nor that males account for only a negligible proportion of the public health burden of EDs and disordered eating [16]. As such, efforts to advance research around clinical practice relating to the treatment of males with EDs are now critical (Table 1.1).

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Chapter 2
Models of Body Image for Boys and Men

Tracy L. Tylka

Learning Objectives

1. Evaluate whether current models of body image can explain body concerns among boys and men.
2. Synthesize variables and pathways with empirical support to generate an integrated model.
3. Explore how this integrated model can direct future research and clinical/prevention work.

Key Points

- Three models of body image were explored in relation to boys' and men's body concerns: the tripartite influence model, objectification theory, and gender role endorsement.
- Elements (variables, pathways) of these three models with empirical support among samples of boys and men were synthesized into an integrated model.
- This integrated model can be used to direct the next generation of research on body image for boys and men, which can be useful to guide public health, clinical, and prevention efforts.

Body image is a multi-faceted construct that represents a person's "inside view" of their body—that is, their feelings, perceptions, and thoughts about their body, which collectively impact how they behave toward it [1]. Body image is often studied in conjunction with disordered eating behavior, and both have been stereotyped as concerns that largely affect white adolescent girls and young adult women [2–4]. This stereotype guided how body image and disordered eating were originally defined (i.e., motivation to become very thin), measured (i.e., scales developed to

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assess this motivation), studied (i.e., samples were predominantly young white women, and others were excluded), and modeled (i.e., factors primarily relevant to thinness were integrated) [4]. Basing the study of body dissatisfaction and disordered eating on the experiences of young white women created an illusion that they had higher body dissatisfaction and disordered eating relative to other groups, without regard to considering or assessing others' different and diverse body and eating-related concerns [3, 4]. See Chaps. 15 and 16 for further discussion of racial and ethnic factors in relation to body image and disordered eating among boys and men.

More recently, research on body image and disordered eating has been expanded to reflect experiences from more diverse samples and has revealed the complexity of body image among boys and men [5]. Researchers have moved away from assuming that boys' and men's body concerns mirror girls' and women's body concerns (i.e., drive for thinness) and toward exploring their drive for muscularity [6], which has prompted additional studies that demonstrated that the body ideal for boys and men, or the "mesomorphic ideal," differs from the "thin ideal" for girls and women [4, 7–9]. The mesomorphic ideal combines well-developed musculature with low body fat (to showcase muscles) and features larger shoulders, chest, and biceps and a narrower yet still muscled midsection (i.e., "six-pack") [4, 8]. Measures focused on the drive for muscularity [6] as well as dissatisfaction with muscularity and body fat [4] have emerged and guided a new generation of research on boys' and men's body image (see Chap. 7 for a discussion of assessment instruments). Indeed, the importance of both muscularity *and* low body fat to boys' and men's body image has been supported in many samples [4, 6, 10, 11].

A recent meta-analysis has upheld gender differences in body concerns. This study revealed that girls and women consistently scored higher than boys and men on thinness-oriented body dissatisfaction with moderate-to-large effects, whereas boys and men scored higher than girls and women on muscularity-oriented body dissatisfaction with large effects [12]. Importantly, thinness-oriented body dissatisfaction decreased over time for girls and women, whereas drive for muscularity did not decrease over time for boys and men. The authors posited that body positive programming developed for girls and women may have promoted sociocultural shifts in their body acceptance, whereas such programming has not been developed to be able to effectively target boys' and men's body image concerns. This meta-analysis highlights the need for additional theory and research into the predictors and outcomes of body image and concerns in boys and men, which then could be used to guide more effective programming. Exploring predictors and outcomes within body image models, then, is an excellent starting point for this endeavor.

Thus, in this chapter, body image models are explored in terms of their theoretical and empirical relevance for boys and men. How these models have been modified to account for their body concerns, social identities, and adoption of gender roles is reviewed. An integrated conceptual model of boys' and men's body image is presented to guide research and clinical work.

Tripartite Influence Model

Originally developed to represent the experiences of girls and women, the tripartite influence model [13] specifies how appearance-related pressures from three social influences (media, peers, and parents) encourage girls and women to experience body dissatisfaction directly as well as indirectly through internalizing appearance ideals (i.e., adopting cultural beauty ideals, such as the thin ideal, as their own personal aspiration, e.g., "I should be thin") and body comparison (i.e., comparing their body size and shape with others' bodies). Body dissatisfaction in turn predicts disordered eating. This model has been studied and validated extensively with girls and women [e.g., 13–15] and has been more recently expanded and modified to more closely fit the experiences of boys and men [15–19]. This research is reviewed within the following subsections. While some studies also included girls or women, only the findings for boys and men are reported.

Social Influences

Findings support the importance of examining media, peer, and parental appearance-related influences on boys' and men's body dissatisfaction, and they emphasize the need to assess both social pressures to gain muscle and decrease body fat across cultures. Adolescent boys from varied cultural backgrounds report high pressure from media, parents, and peers to lose body fat, as well as high pressure from media, but lower pressure from peers and parents, to increase muscularity [20]. In Brazil, sources of appearance-related pressure and internalization of appearance ideals were strong predictors of adolescent boys' increased body dissatisfaction over a 1-year period [21] (see Chap. 16 for further discussion of body image and disordered eating in boys and men from Latin America). In China, appearance-related media pressure predicted disordered eating among young adult men over a 1-year period, and appearance comparison mediated this association [22]. Various sources of appearance-related pressures are discussed below.

Media influence Traditional forms of media showcase mesomorphic men and promulgate messages to boys and men that they should aspire to be muscular and lean. Indeed, meta-analyses have shown that media appearance-related pressure is significantly linked to boys' and men's body dissatisfaction, with small-to-moderate effects [23]. A recent experimental study found that depictions of the mesomorphic ideal on television (in comparison to music videos or still images of male models) may be particularly detrimental to boys' and men's body image, as these televised images appear to activate appearance comparisons [24]. Another experimental study also found that men who viewed television commercials featuring mesomorphic

men experienced lower muscle satisfaction than those who viewed non-appearance commercials, with men high on appearance investment (i.e., placing more importance on appearance) more vulnerable to the effects [25]. Men high on appearance investment also compared themselves more to the mesomorphic men in the commercials, which then predicted their lower body satisfaction.

Certain social media platforms and practices also can contribute to body concerns in boys and men. Appearance-focused social media applications such as Instagram, Facebook, and Snapchat have been linked to sexual minority men's muscularity dissatisfaction, eating disorder symptoms, and thoughts about using anabolic steroids [26]. Viewing others' selfie posts and related likes and comments were positively related to adolescent boys' facial dissatisfaction, with internalization of social appearance ideals accounting for this association [27]. Interestingly, the more that boys appreciated their bodies, the less internalization related to facial dissatisfaction, suggesting that body appreciation may be a protective factor with regard to facial satisfaction when viewing selfies. Further, men who are more likely to digitally alter their selfies posted online and are more concerned with selecting and uploading their selfies to social media also report higher body dissatisfaction [28]. Although hypothesized as a potential protective factor, self-compassion was not found to moderate this link.

Dating-specific social networking applications also have been linked to men's body dissatisfaction. Men who use Tinder (a dating-specific social networking application geared toward finding sexual partners) have been found to report higher facial and body dissatisfaction, internalization, and appearance comparison compared to non-users [29]. Similarly, men who use Grindr (a dating-specific social networking application for gay, bisexual, and other men who have sex with men) perceived that these applications negatively impact their body image due to their promotion of weight stigma and objectification, as well as the encouragement of appearance comparison [30].

Other media sources that are not considered in the context of the tripartite influence model may be of relevance to boys' and men's body image. Pro-muscularity websites may also promote body dissatisfaction, disordered eating, and unhealthy muscularity-focused behaviors. Indeed, a systematic content analysis of pro-muscularity websites revealed that these websites espouse rigid dietary practices, rigid exercise rules, the marginalization of other areas of life, and the use of muscle-enhancing substances, as well as minimizing risks associated with these practices [31]. Additionally, pornography often displays men who are muscular and lean. Even after considering appearance-related pressures from other media, partners, family, and friends, the extent to which men viewed pornography uniquely contributed to their internalization of mesomorphic ideal, which was then linked to their muscularity and body fat dissatisfaction [32].

Peer influence Peers also reinforce media messages for boys and men to be muscular and lean to improve their performance (e.g., in sports) and appearance. Preadolescent boys often discuss sports with their peers, and sports help shape their appearance ideals related to being fit and muscular, as well as their athletic skills to

obtain popularity and acceptance [33]. By adolescence, boys report distinct body concerns related to body fat and muscularity, which are linked to appearance-related conversations with their peers [11]. Indeed, boys' muscularity concerns were found to be related to more frequent muscle-building conversations, and weight concerns were associated with more frequent appearance conversations [11]. Men's appearance-related conversations with peers were found to focus on both muscularity and body fat, which were related to their body dissatisfaction, muscle dysmorphia, and disordered eating behaviors [34]. Further, peer pressure to be both muscular and lean was found to be related to higher muscularity dissatisfaction among men [16], and peer pressure to be lean was related to higher body fat dissatisfaction and disordered eating among gay men [17].

Parent influence Parents are an important influence on boys' body image. A systematic review revealed that mothers communicated more messages to their sons (compared to daughters) about the need to become more muscular, and these messages uniquely predicted boys' body image disturbance [35]. Adolescent boys' reports of parental teasing and negative parental attitudes toward their weight and appearance also were associated with their appearance-related rejection sensitivity and body dysmorphic symptoms [36]. College men's retrospective accounts of their parents' restrictive and critical eating messages were positively linked to their current body dissatisfaction and disordered eating and inversely linked to their body appreciation and intuitive eating [37]. Further, parental influences (i.e., messages from fathers and mothers about the importance of being muscular and losing weight) were more closely associated with adolescent boys' body dissatisfaction and body change strategies (i.e., behaviors geared toward increasing muscles and decreasing weight) compared to media and peer influences [38].

Partner influence While not included in the original tripartite influence model, research has suggested that partners may be an important influence on men's body image and body change behaviors. Pressures from partners to be muscular and lean were related to men's internalization of the mesomorphic ideal, body comparison, muscularity and body fat dissatisfaction, muscularity-related behaviors, and disordered eating [16, 17]. When examined alongside other sources of social influence, partner pressure to be mesomorphic was uniquely and directly related to men's disordered eating [16]. Further, among gay men, partner pressure to be muscular was uniquely related to internalization of the mesomorphic ideal and muscularity enhancement behaviors [17].

Gay community Certain gay communities that emphasize appearance and lean muscularity may also be a source of social influence impacting gay men's body image and body change behaviors. Indeed, men's regular involvement in gay culture has been found to be related to their internalization of the mesomorphic ideal, appearance comparison, and engagement in behaviors to enhance their muscularity; these relationships remained even when examined alongside other sources of social influence [17].

Mediating Variables Connecting Social Influences with Body Change Behaviors

A key feature of the tripartite influence model is its central "mediating" variables that connect the sources of social influence with disordered eating [13]. Variables in this central role in the original model include thin-ideal internalization, body comparison, and body dissatisfaction. Specifically, once the thin ideal is internalized, it is manifested in behaviors that help girls and women gauge the status of their bodies (body comparison). Because the vast majority of girls and women do not have a body type that is consistent with the "thin ideal," they are dissatisfied with their bodies if they have internalized this ideal and regularly engage in body comparison, which then may prompt them to engage in disordered eating.

For boys and men, the thin ideal is replaced with the mesomorphic ideal. Because the mesomorphic ideal focuses on muscularity and leanness, boys and men can become dissatisfied with their bodies on two dimensions: muscularity and body fat [11, 16]. Muscularity dissatisfaction may prompt muscularity enhancement behaviors, whereas body fat dissatisfaction may prompt disordered eating [16]. Many studies uphold the mediating roles of internalization of the mesomorphic ideal [16–19, 39, 40], body comparison [16, 18, 39, 40], muscularity dissatisfaction [16, 17, 19, 39], and body fat dissatisfaction [16, 17, 39] with men. A prospective study with adolescent boys revealed that internalization of the mesomorphic ideal predicted increased muscularity dissatisfaction, body fat dissatisfaction predicted increased disordered eating, and internalization of the mesomorphic ideal predicted increased use of muscularity enhancement behaviors across a 5-year period [41]. Therefore, many of the proposed pathways within the tripartite influence model are supported cross-sectionally as well as longitudinally.

Objectification Theory

Researchers have also used objectification theory as a model to study men's body image, albeit far less frequently than the tripartite influence model. Objectification theory [42] posits that the sexual objectification of women in the media and through interpersonal encounters (e.g., being touched or grabbed against their will, the target of catcalls and leering) places women at a higher risk for eating disorders, depression, and sexual dysfunction. This connection occurs due to a sequential process by which repeated exposure to instances of sexual objectification orients women to see themselves from an "observer's perspective" or focus more on their appearance and less on their internal experience (e.g., how they feel). This is referred to as self-objectification, which prompts women's body shame, appearance anxiety, and safety anxiety as well as disrupts their internal body experiences (e.g., feelings, hunger) and flow (i.e., ability to become absorbed in challenging tasks). These consequences of self-objectification then place women at higher risk for disordered

eating, depression, and sexual dysfunction. The tenets of objectification theory have been upheld in diverse samples of women [43].

Generally, research has not supported most of the proposed objectification theory pathways in samples of straight men [44–46]. Of note, more support for objectification theory has been accrued for men who may personally experience being sexually objectified, such as sexual minority men [44, 47, 48] (for links between sexual objectification and gay community involvement, see [49]). Evidence for this assertion is that straight men report lower levels of objectification (both sexual and self) compared to gay men [44, 47], experimentally induced self-objectification does not increase body shame and restrained eating for straight men but it does for gay men [47], and sexual objectification is unrelated to self-objectification and self-objectification is unrelated to body shame in straight men [44, 48], although these links are significant in sexual minority men [44, 48]. Of note, gay men often experience minority stress, including both experienced and expected stigma for being gay and internalized homophobia, and these sources of minority stress are linked to their body dissatisfaction [50]. Researchers have examined whether objectification theory may be more relevant for straight men when measures of male body image (e.g., drive for muscularity) are included in the model. However, self-objectification is either not linked or weakly linked to body shame and drive for muscularity among predominantly straight men [45, 46, 51].

Bodybuilding may represent a subculture that fosters sexual objectification due to its heightened focus on appearance [52]. In a mixed sample of male bodybuilders, male weightlifters, and undergraduate men, bodybuilders reported higher levels of self-objectification and drive for muscularity than weightlifters and/or undergraduate men [52]. Additionally, self-objectification accounted for bodybuilders' higher drive for muscularity.

Overall, the question of whether objectification theory is relevant for men may depend on whether they are involved in a community that sexually objectifies their bodies. As originally proposed by objectification theory, sexual objectification is the catalyst to psychological distress underlying body image disturbance. Objectifying communities may foster appearance investment [53], which may be conceptually similar to self-objectification, but does prospectively predict men's internalization of appearance ideals and drive for muscularity [54]. Men who report higher levels of sexual objectification also report higher body shame [44, 46], and this link may be due to appearance investment and perhaps sexual objectification's threats to masculinity.

Gender Role Endorsement

The mesomorphic ideal is embodied masculinity, representing strength, power, control, and dominance [55]. Indeed, men's drive for muscularity, leanness, and fitness are related to their endorsement of traditional notions of masculinity [56] and gendered expectations that they need to be successful and powerful [57].

The threatened masculinity hypothesis [58] suggests that increasing gender equality leaves men with fewer ways they can assert themselves over women. For men who endorse traditional notions of masculinity, this can lead to an identity crisis, whereby they may experience a compensatory need to publicly display their masculinity, such as through striving toward muscularity. Therefore, the more that men endorse traditional notions of masculinity, the more likely they are to be dissatisfied with their muscularity and engage in muscularity enhancement behaviors in particular. In contrast, the more they endorse gendered notions of femininity, the more they are dissatisfied with their body fat and engage in restrictive eating practices [59]. Research has supported associations between masculinity, muscularity dissatisfaction, and harmful muscularity enhancement behaviors, as well as associations between femininity, body fat dissatisfaction, and severe restrictive eating [60]. Further, men's higher endorsement of masculinity was found to predict higher muscularity dissatisfaction and muscularity-oriented disordered eating (e.g., eating according to a "bulking" and "cutting" cycle that involves the overconsumption of protein and restriction of dietary fats and carbohydrates), and higher endorsement of femininity predicted higher muscularity dissatisfaction and thinness- and muscularity-oriented disordered eating [61].

Given these findings, researchers have suggested the need to consider boys' and men's gender role endorsement within the tripartite influence model [62, 63] and objectification theory [46]. Specifically, internalization of the mesomorphic ideal was found to account for the relationships between masculinity and both drive for leanness and drive for muscularity in men from the United States, Sweden, and Australia [62]. Further, media influences (i.e., images of muscular men), masculine physical attributes investment (i.e., importance of athletic and physical superiority), and social comparison have been found to be uniquely related to preadolescent boys' drive for muscularity [63]. Also supporting this integration, gender role endorsement has been found to be related to body shame [46].

Integrated Model and Future Research

Aspects of the tripartite influence model, objectification theory, and gender role endorsement can be represented in a conceptual model that integrates current theory and research findings on boys' and men's body image, as well as generates ideas for future research in this area (see Fig. 2.1). While this integrated model contains pathways (see blue arrows) between variable domains (rectangles) similar to those from the tripartite influence model, it expands the variables included and pinpoints the need to examine moderators of certain relationships (see red arrows).

This integrated model can be used to guide research efforts in many ways. First, it greatly expands the sources of social influence from the original tripartite influence model. Preliminary research supports these additional sources (e.g., partner influences, social media, sexually objectifying contexts, pornography, stigmatic messages, gender role socialization) as relevant for boys and men, but more research

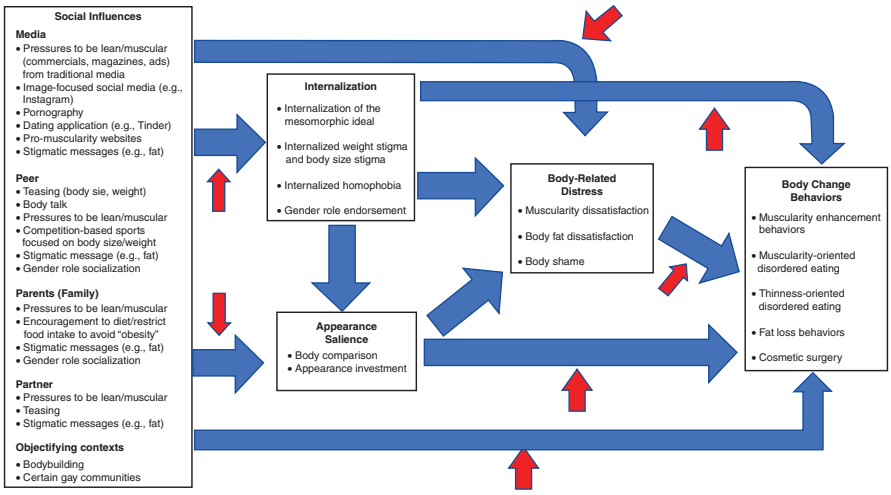

Fig. 2.1 Conceptual model, integrating elements of the tripartite influence model, objectification theory, and gender role endorsement to explain boys' and men's body image and body change behaviors. Blue arrows represent pathways connecting variables, and red arrows represent pathways that could be moderated by other variables, such as self-compassion, body appreciation, emotional regulation, body image flexibility, and social identities (e.g., sexual orientation, race/ethnicity, age, weight/body fat percentage). Stigmatic messages can include weight, but also other minority stress (e.g., stigma for being gay, racial stigma, etc.)

is needed to explore the mechanisms by which they impact boys' and men's body image and body change behaviors. Second, it expands the internalization domain to include gender role endorsement, which can represent the internalization of societal gender roles, as well as internalized weight stigma and internalized homophobia. Third, it includes body comparison within the broader domain of appearance salience (i.e., how much mental energy is devoted to appearance, encompasses body comparison and appearance investment). Fourth, it broadens body dissatisfaction by including muscularity dissatisfaction, body fat dissatisfaction, and body shame (which may be particularly relevant to sexually objectifying environments and appearance investment). Fifth, it includes muscularity-oriented disordered eating as well as cosmetic surgery alongside thinness-oriented disordered eating and non-eating-related muscularity enhancement behaviors in the body change behaviors domain. Sixth, it encourages the examination of moderators, which are variables that may influence the strengths of the pathways. For example, sexual orientation, age, ethnicity, and weight/body fat percentage may impact the strength of the model paths (e.g., the path from internalization of the mesomorphic ideal to body fat dissatisfaction may be stronger for men who have a higher percentage of body fat). Personality variables, such as maladaptive perfectionism and emotional regulation, may impact the strength of the variable pathways as well. It is important that researchers also explore potential resilience and protective factors as moderators in the model. Variables such as self-compassion, body appreciation, and body

complexity (i.e., viewing the body as more than its appearance) could be potential candidates. For example, they may be able to offset maladaptive social influences, protecting men's body image from these influences. Overall, resilience variables have been understudied within the area of men's body image.

This model is conceptual, and thus it may not be feasible to examine the model in its entirety in one research study. Rather, researchers may want to examine specific pathways within the model to elucidate mechanisms of action (e.g., mediators), as well as examine whether certain pathways vary based on men's diverse social identities, experiences, personalities, and protective characteristics (e.g., moderators). In these investigations, variables within each domain (see bulleted terms) should be examined independently rather than combined into latent variables (e.g., body fat dissatisfaction and muscularity dissatisfaction should be treated as separate variables within the same analysis, given that they have been shown to be distinct facets of men's body image [16, 17]). While this suggestion does not apply to every case, it allows researchers to explore nuances between variables within the same domain. Further, the bulleted terms in Fig. 2.1 are examples that have research support, but they are not meant to be exhaustive. Researchers are encouraged to examine the ones provided and explore others that may be theoretically relevant to men's body image. For instance, there may be important positive social influences (e.g., unconditional body acceptance, non-appearance-related hobbies and sports, nature exposure) that prevent the development of negative body image and particularly harmful body change behaviors and thus need to be explored.

Conclusion

This chapter reviews three models of boys' and men's body image: the tripartite influence model, objectification theory, and gender role endorsement. Variables and pathways with empirical support were integrated into a unified model, which can direct the next generation of research on boys' and men's body image, shape public health and clinical efforts to prevent their body concerns, and guide clinical interventions with boys and men in eating disorder treatment. For example, pinpointing the sources of social influence that independently increase appearance investment and internalization of the mesomorphic ideal can inform public health and policy efforts to decrease the likelihood of these messages (e.g., removing pro-muscularity websites, changing public health messages to remove weight stigma). In addition, identifying personal variables that make boys less likely to internalize the mesomorphic ideal, invest their self-worth in their appearance, engage in body comparison, and/or experience body-related distress can be used to inform primary and secondary prevention programs. For example, if functionality appreciation is found to weaken the link between media sources and boys' internalization of the mesomorphic ideal, then prevention programs can design and incorporate interventions to increase their functionality appreciation. In clinical work, the model can be given to

boys and men to generate discussion on how their body dissatisfaction and/or body change behaviors developed and are maintained. Interventions can also be designed to increase variables shown to weaken the links between model variables. For example, if body image flexibility weakens the link between body-related distress and muscularity-oriented eating disorders, then interventions building body image flexibility can be incorporated in eating disorder treatment with boys and men.

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