THE INFLUENCE OF SOCIAL COMPARISONS ON BODY IMAGE IN MEN: A SCOPING REVIEW

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ABSTRACT

Research indicates that men use social comparisons as a mechanism to evaluate their body image (e.g., Schaefer, 2018). The present study investigated literature utilizing Social Comparison Theory (Festinger, 1954) as a framework for explaining male body image outcomes. To achieve the study's purpose, the authors conducted a scoping systematic review of peer-reviewed literature on body image in men, yielding 27 relevant articles. Tabular analysis and line coding of each article uncovered four emergent themes: 1) sociocultural ideals of body image set by peers, friends, and media initiated social comparisons; 2) social comparisons led to men's internalization of body ideals, resulting in both positive and negative physical and psychological outcomes; 3) comparison implications depended on target (e.g., friend, peer), and direction of comparison (e.g., upward or downward); and 4) comparison activity was influenced by protective and contributing factors which included age, ethnicity, race, and social involvement. Although it is clear that men experience body image and conduct social comparisons differently than women, sources of body-related influence remain consistent across genders. Findings from this review support the continued application of theoretical frameworks in body image inquiry as they enhance the rigor of research findings.

Keywords: appearance comparisons, male body image dissatisfaction, scoping review

INTRODUCTION

Researchers and clinicians have recently given more attention to body image as it relates to the health and well-being of men (e.g. Gorman, Sheffield, Clark & Griffiths, 2019; McNeill & Firman, 2019). At one time, body image was only thought to be a female concern associated with clinical pathologies such as anorexia and bulimia nervosa; however, studies show that men experience body concerns differently than women, making research more challenging with men (McCabe & Ricciardelli, 2002). For example, women tend to be preoccupied with thinness as it correlates to body weight, with less body weight indicating higher levels of body satisfaction (Muren & Karazsia, 2017). Men, on the other hand, seesaw between having too much body weight in the form of body fat, or too little body weight in the form of muscularity (Griffiths, Mond, Murray, & Touyz, 2015; Smolak & Murnen, 2008). Negative attitudes, perceptions, and thoughts associated with body fat and muscularity (i.e. body dissatisfaction) are correlated with harmful physical and psychological outcomes such as depression, performance-enhancing drug use, compulsive exercise, and eating disorders (Blashill & Whilhelm, 2014; Darcy et al., 2005; De Jesus et al., 2015; Grogan, 2016; Eisenberg, Wall & Neumark-Sztainer, 2012; Mellor et al., 2014; Payton, 2014). Research suggests that behaviors directed at modifying the body signify the importance men place on appearance, specifically in accordance to Western norms for masculinity (Gattario, Frisén, Fuller-Tyszkiewicz, Ricciardelli, Diedrichs, Yager, & Smolak, 2015; Murray & Lewis, 2012).

Traditional masculine norms are exhibited through courage, confidence, and assertiveness, which quantify what it means to be a "man" (Darcy et al., 2012; Muren & Don, 2012). A man's aptitude in demonstrating masculinity also means displaying certain physical characteristics, including a tall stature, low body fat, and lean muscularity (McCreary, 2002; Olivardia, Pope, Borowiecki & Cohane, 2004). According to McCabe & McGreevy (2010), men historically equated good body image with physical functionality and utility (e.g. displaying strength and endurance in physical tasks); however, norms for body image among heterosexual men have shifted in the last three decades (Law & Labre, 2002). For example, a preoccupation with physical appearance has superseded body utility and functionality, shifting body modification habits towards a focus on muscle-building activities and the use of supplementation to build muscle (Leit, Pope, & Gray, 2001; McCreary & Sasse, 2000). Morrison and colleagues (2004) report the amount and definition of muscularity as the primary concern men have with body image.

The Masculinity Hypothesis (Blishill, 2011) purports that a muscular body is important for showing others that a man has attained norms associated with masculinity (Christiensen & Jensen, 2007; Lefkowich, Oliffe, Hurd Clarke, & Hannan-Leith, 2017). For example, actors such as Hugh Jackman in Wolverine, and Brad Pitt in Fight Club epitomize the physical characteristics associated with normative masculine values such as muscularity that accompanies hyper-leanness, which is imperative for showing muscle definition (Tylka, 2011).

Some scholars have argued otherwise, suggesting that a plurality exists in acceptable body types for men (e.g., Connell & Messerschmidt, 2005). With a sense of evolving masculinity, models, and professional athletes are both considered to have ideal physiques, yet each differ in muscularity, height, and body fat proportion (Connell & Messerschmidt, 2005; Leit, Gray & Pope, 2002; Parent & Bradstreet, 2017). Despite the plurality of body types portrayed by sociocultural influences such as the media, most men are not able to obtain ideals for body image without the use of performance-enhancing drugs, or extreme dieting (Hargreaves & Tiggemann, 2009; Kouri, Pope, Katz & Olivardia, 1995; Matthews, Lynch & Martins, 2016; Mulgrew & Cragg, 2016).

Scholars in psychology (e.g. Tylka 2011), sociology (e.g. Gough, 2007), and gender studies (e.g. Drummond, 2011; Frederick, Shapiro, Williams, Seoane, McIntosh, & Fischer, 2017) have expressed interest in body image pathologies as they relate to sociocultural influences. Sociocultural Theory suggests that external influences from the media, peers, family, friends, and partners play an impactful role in setting body standards for men (Thompson et al., 1999). Hyper-masculine representations of the male body are prevalent in popular media such as television, pornography, and video games (Strubel & Petrie, 2017; Schwartz & Grimm, 2016;Mulgrew & Cragg, 2017). Robl & Mulgrew (2016) illustrated the impact of idealized media exposure when they reported that men expressed significantly poorer body, fitness and muscularity satisfaction after viewing hyper-masculine video images verses men that only viewed average looking bodies. Morrison and colleagues (2004) discussed the psychological implications of exposure to hyper-masculine bodies, including how men perceive that they should be actively pursuing bodies portrayed by the media. Sociocultural influences have thus received increasing attention from scholars investigating causation of body image pathologies (e.g., Karaszia & Crowther, 2009; Levine & Muren, 2009; Tylka, 2011)

Sociocultural and psychosocial processes that influence men's body attitudes and behaviors are central to Tylka's (2011) modified Tripartite Influence Model. Tylka (2011) illustrates that sociocultural influences push men to reconsider norms for body image, creating pressure to adopt socially constructed body ideals. External pressures further exacerbate psychosocial processes, such as body comparisons and internalization of body ideals, which play a key role in the development of attitudes and beliefs about body image (Franzoi & Klaiber, 2007; McNeill & Firman, 2013). Currently, a large body of literature supports psychosocial processes as a mechanism through which men create attitudes and beliefs about their body (Franzoi, Vasquez, Sparapani, Frost, Martin & Aebly, 2012; Girard, Chabrol & Rodgers (2017). For example, Martin & Govender (2015) discussed the importance of investigating how men integrate perceptions of others' bodies and behaviors when assigning meaning to their own appearance. Scholars have supported this call by applying Festinger's (1954) Social Comparison Theory. Many scholars have shown Social Comparison Theory to be a fruitful theoretical framework for explaining attitudes and behaviors relating to male body perceptions, evaluations, and experiences (e.g., Fox & Vendemia, 2016; Keum, 2016; Lamarche, Gammage, & Ozimok 2018; Schaefer, 2018; Schwartz & Grimm, 2016; Strubel & Petrie, 2016).

Social Comparison Theory suggests that humans have an innate drive to self-evaluate via acquiring knowledge about the attributes of others when making self-assessments (Festinger, 1954). By conducting comparisons, men determine similarities and differences they hold relative to others (Kruglanski & Mayseless, 1990). When finding the physical qualities of others to be superior (i.e., upward comparisons), men often experience negative affect as achieving these standards can be challenging (e.g., Pila et al. 2014); however, when attributes of others are perceived as inferior (i.e., downward comparisons), men often experience a boost in self-esteem, interpreting their current situation as better-off (Wood, 1989). Most researchers utilizing Social Comparison Theory investigate the impact of upward comparisons (e.g., Franzoi & Klaiber 2007; Keum, 2016), and the way men internalize the attainability of others' attributes perceived as superior (Tsiantas & King, 2001). Research has demonstrated the harmful effects of upward appearance comparisons (e.g., Franzoi & Klaiber, 2007; Sohn, 2010). For example, Cash & Smolak (2011) found that upward comparisons appear to be highly associated with negative affect showing the utility of social comparison as a fruitful framework for further examination within male body image research.

Social Comparison Theory has proven to be a worthwhile theoretical framework for investigating male body image as it has direct implications on the health and well-being of men (e.g. Dougherty & Krawczyk, 2018; Hargreaves & Tiggemann, 2009). A body of research exists showing that comparisons remain pervasive, and perhaps one of the most influential psychosocial processes involved in body image evaluations (Schaefer, 2018). Comparisons provide motivation for body enhancement through exercise and healthy diet changes (e.g., Pila et al, 2016), but become detrimental when behaviors such as extreme exercise, and anabolic androgenic steroid use occur (e.g., Breslow & Eklund, 2017). Currently, a body of research exists supporting social comparisons as a common psychosocial process through which men create attitudes and beliefs about body image. However, prior to this study, no other research had systematically examined the relevant body image literature. A scoping review of pertinent literature will assist future scholars to understand the breadth and depth of research. The present work is a compilation, and synthesis of literature related to the implications of social comparisons on male body image.

METHODS

In order to uphold transparency and rigor, the authors utilized a framework recommended by Arksey & O'Malley (2005) for conducting and reporting scoping review results, which included: 1) identifying research question(s); 2) identifying relevant studies; 3) selecting of studies; 4) charting data; and 5) collecting, summarizing and reporting results. Suggestions from Booth, Sutton & Papaioannou (2013) were used to support and supplement charting of the data and themes. The Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) flow diagram illustrated the researchers' identification and screening process (Moher, Liberati, Tetzlaff & Altman, 2009).

Identifying the Research Questions

The authors used facets of Social Comparison Theory to frame the research questions. Constructs of the theory deemed relevant to male body image included: 1) self-evaluations made by men who compared their body to others; 2) self-improvement and enhancement strategies used by men who socially compare themselves with others; and 3) directional (e.g., upward or downward), and target comparisons (e.g., peers, friends, media images). The research questions developed from this effort included:

- What influences men to make appearance comparisons, and how do comparisons relate to body image dissatisfaction?
- What themes arise from line coding the literature relevant to male body image and appearance comparisons?

Study Identification

The PRISMA diagram provided structure for the article identification process (Moher, Liberati, Tetzlaff & Altman, 2009). Literature relevant to male body image and social comparison was searched via library databases including PsychINFO (EBSCOhost), MEDLINE (Ovid), PsycARTICLES, Psychology and Behavioral Sciences Collection, and Scopus. Literature not available through database searching was identified through Google Scholar. Key terms were selected based on a preliminary review of the literature, followed by a subject and term search conducted via Gale Onefile Psychology using combinations of the three terms "body image" AND "social comparison" OR "appearance comparison" AND "male OR men OR mascul*." Other terms related to social comparison such as "self-enhancement," "self-improvement," and "self-evaluation" were used, but produced no literature containing social comparison elements. Other terms related to male physique were used, such as "body dissatisfaction," "drive for muscularity," and "muscle dysmorphia," but produced no new, or significant results. Citations, along with full abstracts were imported and saved in EndNote X9 for citation management purposes.

Study Selection

All searches were merged into EndNote X9. Removal of duplicates took place in three stages: initially with EBSCOhost's de-duplication removal application, followed by EndNote's de-duplication process, and finally by hand searching literature for missed duplicates. Records were screened by the first author for keywords in the title and abstract as many articles neglected to mention body image and social comparison in the title. If titles and abstracts neglected to provide keywords or suitable synonyms about "male," "body image," "social comparison," or "appearance comparison," studies were excluded. If title and abstract criteria were met for inclusion, full-text articles were included for the eligibility process (N = 113). Criteria for inclusion in the eligibility process were limited t: 1) English language and human subjects; 2) peer-reviewed articles published between 2005 and 2018; 3) the presence of men, male, or mixed-gender; 4) study participants above the age of 18; and 5) the use of at least one measure of social comparison in the methods.

Charting the Data

When conducting a scoping review, Booth, Sutton & Papaioannou (2013) suggest approaching, organizing, and critiquing studies through the use of tabular analysis to descriptively map data and critical themes. Microsoft Excel was used to organize article information into a tabular analysis, which resulted in a key theme chart.

Collecting, Summarizing, and Reporting Results

Characteristics of each study were organized into a Microsoft Excel file that included: 1) location and year of the study; 2) study design and characteristics, and; 3) sample and participant characteristics. Thematic grouping was used for analysis by systematizing key outcomes from heterogeneous literature (Gough, Oliver & Thomas 2017). The authors constructed a thematic analysis in two stages to organize studies into similar groups. First, the purpose, aims, and key outcomes of each study were extracted into a Microsoft Excel file, followed by line coding of the key outcomes and study conclusions into a second file. Key themes were categorized into groups as they related to the influence of comparisons on body image. See Table. 1 for thematic analysis.

Table 1. Tabular Analysis of Included Studies

	Authors	Sample Size	Aim/Purpose	Key Findings & Outcomes
1	Bucchianeri, Serrano, Pastula, & Corning (2014)	(N = 226) University sample (Mage = 25.77)	Examined if body dissatisfaction positively correlated with drive for muscularity in relevance to young, middle-age, and older men.	Young men displayed greater dissatisfaction with their bodies, exhibited greater social comparison tendency, and higher drive for muscularity.
2	Cahill & Mussap, (2007)	Female N = 133, (Mage = 22.42); Male N = 93, (Mage = 22.34)	Examined extent of changes in men and women's emotional state post-exposure to idealized images that predicted unhealthy body changes.	Frequency of comparisons identified as a mediator between state anxiety and decreased state body satisfaction.
3	Davison & McCabe (2005)	Female N = 226; Male = 211, (Mage = 42.26)	Examined systematically the role of body image in men and women.	Men high on self-esteem rated high on body attractiveness, low on body importance, and low on frequency of comparisons. Older men reported less concern with body evaluation and comparisons.
4	Dougherty & Krawczyk (2018)	Female N = 337; Male (N = 137) (Mage = 20.69)	Examined trait appearance comparisons as potential moderators between TV and internet exposure, appearance evaluation, and body satisfaction.	Frequency of appearance comparisons were made in conjunction with high media usage. Appearance comparisons moderated relationships between internet use and body dissatisfaction in men.
5	Fox & Vendemia (2016)	Female N= 908; Male N = 778, (Mage = 29.31)	Examined men's and women's photo posting, editing, and engagement on social media. Measured upward and downward social comparisons with peer photos.	Women socially compared more often than men, and put more effort into adhering to societal norms of beauty.
6	Franzoi & Klaiber (2007)	Female N = 104; Male N= 76, (Mage = 22)	Examined reference group choices of men and women as comparison targets when making self-evaluations.	Comparison to elite athletes and models were not significantly related to negative attitudes about muscularity or strength. Men viewed body as a process rather than object.
7	Franzoi, Vasquez, Sparapani, Frost, Martin & Aebly (2012)	Female N = 90; Male N = 88, (Mage = 18.85)	Evaluated men and women's comparison tendency and body beliefs when evaluating face, body shape, physical abilities, body esteem and personal perfection body beliefs.	Men relied on future temporal comparisons when evaluating body shape. Comparisons were self-hopeful, evoking self-enhancement and improvement.
8	Girard, Chabrol & Rodgers (2017)	Male N = 147, (Mage = 22.09)	Extend literature via modified tripartite dual pathway model to assess male body image and eating concerns in French men.	Sociocultural influences led to appearance comparisons and internalization of the lean and muscular ideal, body fat dissatisfaction, disordered eating, and muscularity dissatisfaction.

	Authors	Sample Size	Aim/Purpose	Key Findings & Outcomes
9	Hanna, Ward, Seabrook, Jerald, Reed, Giaccardi & Lippman (2017)	Female N = 690; Male N = 414, (Mage N = 19.27)	Evaluated social media use and role of social comparison as possible mediator in link between self-esteem, mental health, and body shame.	Social media usage associated with greater social comparison frequency, body objectification, lower self-esteem, and body shaming.
10	Hargreaves & Tiggemann (2009)	Male N = 104, (Mage = 21.4)	Examined the role of social comparison processes in men's response to images of muscular ideal, and male beauty standards.	Men who viewed muscular ideal commercials rated themselves as "less strong" then men who viewed nonappearance commercials. Greater exposure to muscular ideal led to increased upward comparison tendency.
11	Karazsia & Crowther (2009)	Male N = 204, (Mage = 19.37)	Examined association of internalization and social comparison as mediating effects on relationship between social influences and muscle dissatisfaction. Identified common targets of body comparisons.	Internalization and social comparison linked to muscularity dissatisfaction. Comparison frequency more prevalent with targets similar to self.
12	Karazsia & Crowther (2010)	Male N = 210, (Mage = 19.34)	Investigated male engagement in risky body change behaviors. Predicted internalization and social comparison would mediate sociocultural influences and muscularity-oriented dissatisfaction. Body comparisons predicted as mediators of social influence and internalization.	Model did not support social comparison as a mediator between social influences and muscularity related body dissatisfaction. Body dissatisfaction fully explained through internalization.
13	Keum (2016)	Male N = 165, (Mage = 28.13)	Investigated relationship between Asian American internalization of Western media, and acculturative stress. Tested social comparison and media exposure affect.	Internalization of media associated with higher levels of social comparison. Higher acculturative stress linked to increase in social comparison. Men resort to social comparisons as part of acculturation process.
15	Matthews, Lynch & Martins (2016)	Male N = 197	Examined how comparisons to hyper-idealized video game bodies affected women and men's body image dissatisfaction.	Exposure to hyper-idealized bodies caused men with low comparison frequency to report similar negative affect about upper body strength as men with higher comparison tendency.
16	McNeill & Firman (2014)	Male N = 18	Examined age in relation to appearance evaluations, and motives for appearance changes. Participants asked to compare themselves to media and other men.	Young men focused on the lean and muscular ideal, while older focused on health and lifestyle concerns. Overly muscular ideals had no effect on younger males as they were not seen as functional or attainable. Older men reported children and partner as motivation to make lifestyle changes.

	Authors	Sample Size	Aim/Purpose	Key Findings & Outcomes
17	Melki, Hitti, Oghia & Mufarrij (2015)	Male N = 523	Examined association between anabolic androgenic steroid (AAS) use, and media exposure to idealized images.	Men perceived hyper-muscular images as motivators for achieving muscularity goals, and were susceptible to frequent AAS use.
18	Mulgrew & Cragg (2017)	Male N= 116 (Mage = 40.92)	Extended the literature on effects of media on body satisfaction. Music television effect on mood and body satisfaction in diverse age groups were evaluated.	Younger men viewing muscular images made more social comparisons in muscular and average looking condition, and experienced more negative effects then middle-aged or older men.
19	Pila, Barlow, Wrosch, & Sabiston (2016)	Female N = 47; Male N = 40, (Mage = 20.92)	Researchers tested link between upward comparisons, exercise behavior, and association between appearance evaluation and gender.	Men displayed negative appearance evaluations, and more exercise engagement when making comparisons. Upward comparisons resulted in self-enhancement strategies.
20	Pila, Stamiris, Castonguay & Sabiston (2014)	Female N = 5; Male N = 6, (Mage = 20.27)	Examined the experience of upward social comparisons on body related envy. Interviews conducted to understand body envy within a social comparison framework.	Body comparisons were motivating, but also induce body envy with others. Men reported upward comparison's as motivation for exercise engagement.
21	Robl & Mulgrew (2016)	Male N= 103, (Mage = 37.62)	Examined effects of viewing music video clips on male body satisfaction, mood, and social comparison activity.	Men viewing images of idealized bodies reported poor body satisfaction, fitness, and upper body strength. Comparison frequency was higher in muscular and thin condition opposed to average appearance condition.
22	Schneider, Agthe, Yanagida, Voracek, & Hennig-Fast (2017)	Male N = 100, (Mage 24.2)	Explored differences in men with and without muscle dysmorphia in desire for social interaction. Investigated effects of upward and downward comparisons, body schema, and desire for social interaction.	Downward comparisons related to diminished desire for social interaction. Social withdrawal correlated with downward comparisons.
23	Schwartz & Grimm (2016)	Male N = 269	Authors conducted a content analysis of photographs on Queerty.com.	User comments indicated upward comparisons. Explicit comparisons to images were not made.
24	Sohn (2010)	Female N= 419; Male N = 246, (Mage = 19.97)	Examined gender differences in comparison processes and outcome effects on male and female body image processes.	Lateral comparisons produced significant difference in actual-ideal body discrepancy. Men experienced body dissatisfaction after making comparisons.

	Authors	Sample Size	Aim/Purpose	Key Findings & Outcomes
25	Strubel & Petrie (2017)	Female non-users N = 844; Male non-users N = 203; Female users N = 69; Male users N = 3, Age range 18-34	Examined effects of Tinder use and gender interaction in relation to men's and women's body image, internalization process, and self-esteem.	Tinder users displayed high levels of internalization, appearance comparison, and body shame. Dating sites associated with negative body perceptions, likelihood to internalize appearance ideals, and make comparisons.
26	Tylka & Andorka (2012)	Male N = 346, (Mage = 24.7)	Expansion of the Tripartite Influence Model to capture gay men's experience with body image. Internalization and comparisons were hypothesized to mediate mesomorphic ideals, pressure to be muscular, and effects of gay community involvement.	Internalization and comparisons were mediators in the model. Partners and gay community involvement influenced conformation to muscular ideal, and pressured partners to lose body fat.
27	Warren & Rios (2013)	Male N = 100, (Mage 24.2)	Authors examined relationships between Western appearance ideals, perceived pressure, athletic-ideal internalization, social comparison, body image, acculturation, and acculturative stress in Hispanic men.	Acculturative stress correlated with media consumption, comparisons, and poor body image. Acculturative stress correlated with comparison tendencies to both models and Western ideal.

RESULTS & DISCUSSION

The initial search resulted in 430 studies, followed by 31 studies identified in Google Scholar. After titles and abstracts were screened, 115 full-text articles were assessed for the eligibility process by one author, and 34 articles were retained. The second author reviewed these articles, and both individuals concluded that an additional seven articles should be excluded, leaving 27 studies for final inclusion (Figure 1).

Year and Location of Included Studies

The studies included in this review were published between 2005 and 2018. Prior to 2005 social comparisons were infrequently applied to explain male body image outcomes. In total, N = 27 studies met criteria for the qualitative synthesis. The majority of studies (n = 18) were published in North America, while five studies were published in Australia, two in Europe, and the remaining two in New Zealand and Lebanon.

Study Characteristics and Design

Most articles (n= 23) were identified as quantitative, seventeen were cross-sectional and non-experimental, while four were experimental. Experimental studies used pre and post-test, visual analog scales (VAS), control and experimental (2X2), and (2X2X2) priming condition group designs while four articles were identified as qualitative, with study designs including structured and semi-structured interviews, focus groups, and a content analysis.

Sample and Participant Characteristics

Eleven of the 27 studies included male and female participants, while the remaining 16 studies only sampled men. Within each article, we separated male and female results when both genders were included. Male participants totaled 5,143 for all articles, and participants per study ranged from three to 778. The majority of studies sampled men attending university (n = 19), while the remaining looked at populations of men including athletes, the general community, and gay men.

Thematic Analysis

Results from the thematic analysis formed four unique groups: 1) sociocultural influences such as peers, friends, family members, and media that evoked comparison activity; 2) comparisons influencing men's internalization of mainstream body ideals resulted in positive

and negative physical and psychological effects; 3) outcomes of comparisons depended on the target and direction of comparison; and 4) protective and contributing factors for making comparisons depended on demographic information such as age, gender, ethnicity, and race. See Table. 3 for the organization of articles by theme.

Table 2. Article Organization by Theme

Reference Number	**Study**	**Theme #1** *Sociocultural Influence*	**Theme #2** *Internalization of Body Ideals*	**Theme #** *Target and Direction of Comparison*	**Theme #4** *Protective and Contributing Factors*
1	Bucchianeri, Serrano, Pastula, & Corning (2014)			X	X
2	Cahill & Mussap, (2007)	X	X		
3	Davison & McCabe (2005)				X
4	Dougherty & Krawczyk (2018)	X			
5	Fox & Vendemia (2016)	X			
6	Franzoi & Klaiber (2007)	X		X	
7	Franzoi, Vasquez, Sparapani, Frost, Martin & Aebly (2012)			X	
8	Girard, Chabrol & Rodgers (2017)	X	X		
9	Hanna, Ward, Seabrook, Jerald, Reed, Giaccardi & Lippman (2017)	X			
10	Hargreaves & Tiggemann (2009)	X		X	
11	Karazsia & Crowther (2009)	X	X	X	
12	Karazsia & Crowther (2010)	X	X		
13	Keum (2016)	X	X	X	X
14	Lamarche, Gammage, & Ozimok (2018)	X		X	
15	Matthews, Lynch & Martins (2016)	X			
16	McNeill & Firman (2014)	X			X
17	Melki, Hitti, Oghia & Mufarrij (2015)	X		X	X
18	Mulgrew & Cragg (2017)	X		X	X
19	Pila, Barlow, Wrosch, & Sabiston (2016)			X	
20	Pila, Stamiris, Castonguay & Sabiston (2014)			X	
21	Robl & Mulgrew (2016)	X			
22	Schneider, Agthe, Yanagida, Voracek, & Hennig-Fast			X	

Reference Number	Study	Theme #1 *Sociocultural Influence*	Theme #2 *Internalization of Body Ideals*	Theme # *Target and Direction of Comparison*	Theme #4 *Protective and Contributing Factors*
	(2017)				
23	Schwartz & Grimm (2016)	X		X	X
24	Sohn (2010)	X		X	
25	Strubel & Petrie (2017)		X		
26	Tylka & Andorka (2012)		X		X
27	Warren & Rios (2013)	X			X

Depending on the source of influence (e.g., family, friend, partner, media), the authors found that men experienced different psychological and behavioral outcomes. Media outlets provided the quickest source of comparisons, but were also idealized, and found to be highly unachievable. Fifteen articles discussed various negative repercussions from viewing media. Men felt particularly pressured to use performance enhancing drugs, and start excessive weightlifting routines when posting pictures of themselves on dating sites and social media outlets. Studies experimentally manipulating viewing of media content all shared similar findings; viewing of mainstream media elicited more upward comparisons resulting in adverse outcomes associated with body image. Men in experimental conditions reported post-viewing feelings of being weak, small, and less attractive. However, being in the physical presence of friends, peers, and other men (who held desirable, yet attainable physical qualities) were influential when initiating body change behaviors such as adopting a new exercise regime. For example, two studies found that comparisons with friends who mimicked realistic sources of body ideals offered a source of body related inspiration. Comparisons to peers or friends were less demoralizing as real-life depictions of the male body typically provide unedited, humanistic qualities.

Different body types depicted by sociocultural sources also determined whether men experienced a positive or negative effect from comparisons. For example, when men comparing to muscular bodies in the media, men were more likely to experience adverse outcomes such as feeling thin and weak as the obtainability of these physiques were perceived to be desirable, yet unobtainable. However, when targets of comparison were hyper-muscular, men showed little to no adverse effect. For example, targets such as bodybuilders were seen as too bulky. Conversely, when men viewed targets internalized as realistic and obtainable, they were motivated to achieve

physiques similar to targets. The researchers concluded that comparisons to different body types provided both negative and positive affect depending on one's likelihood of attaining a particular physical quality.

Internalization of body ideals along with social comparisons were noted as separate, yet important psychosocial processes that men navigated when making decisions about body image, and body modification behaviors. For example, Karazsia & Crowther's (2009) study showed that social influences positively predicted the internalization of body comparisons, resulting in body dissatisfaction, and a higher drive for muscularity. Tylka & Andorka (2012) illustrated in an expanded tripartite influence model that internalization and comparison processes positively correlated with body modification behaviors such as disordered eating practices, and muscle-building activities.

Given the role comparisons play for gathering information on mesomorphic body ideals, multiple authors justified internalization as a second psychological process proceeding comparison activity. For example, Karazsia & Crowther (2009) suggested that information obtained through comparisons may influence the extent to which men internalize body ideals, highlighting the worthwhileness of using both when investigating male body dissatisfaction. One argument discussed by Girard, Chabrol, & Rodgers (2017) was whether internalization preceded comparisons, or vice versa. The directionality of this relationship remains unknown and in need of future clarification.

Twelve articles discussed implications of upward comparisons on body image, while two of the twelve additionally discussed effects of downward comparisons. When discussing direction and target of comparison, all but two articles focused on upward comparisons with either proximal (e.g., friends, peers) or distal targets (e.g., media images). Upward comparisons were driven by self-hopefulness with intentions of enhancing physical attributes, but only when comparison targets held qualities perceived as slightly advantageous. When targets possessed difficult to obtain qualities, comparers encountered feelings of inferiority and body dissatisfaction as ideals were conceptualized as impossible to achieve. Physical and psychological health effects of upward comparisons were dependent on contextual factors. For example, comparisons to media content were always upward and detrimental to self-esteem and confidence; however, these comparisons conducted with friends and peers were perceived as

motivating and inspiring. The researchers found that influence from friends and peers overall induced feelings of self-hopefulness, and encouraged comparers to exercise and engage in muscle-building activities.

Comparisons were seldom made to men displaying hyper-masculine qualities such as bodybuilders. Given the body size and bulk of bodybuilders, men found they represented unattainable targets for comparison, and typically held no real-life viewing proximity where motivation could be derived. Rather, upward comparisons were more frequently made to men in physical proximity (e.g., peers, friends, men at the gym). The results of experimental studies consistently suggest that viewing hyper-idealized media was detrimental to men's body satisfaction but limitations of experimental conditions were noted. For instance, experimental conditions directed participants to make involuntary comparisons during prolonged viewing of hyper-masculine media. Given that a more realistic viewing setting would provide participants with commercial breaks, or the option to pause streaming, only state comparison habits could be quantified. Future research should look at men's trait comparison habits as these represent a more stable, and consistent pattern of comparison behavior over time.

Two articles investigated downward comparisons as a means to avoid social threat, or prove superiority by comparing to others holding less desirable physical qualities. Opportunities to make downward comparisons helped participants in one study feel more comfortable and attractive in social situations. Although results from this study were consistent with other literature investigating downward comparison implications (e.g., Bauer & Wrosch, 2011; Van Yperen, Brenninkmeijer, & Buunk, 2006) no consensus was reached on the effect of downward comparisons as only two articles met inclusion criteria. Body image research on downward comparisons exists predominantly in female populations examining eating behaviors (e.g., Rancourt, Schaefer, Bosson, & Thompson 2016), and internalization of the thin ideal (e.g., Tiggemann & Polivy, 2010).

Demographic variables such as age, ethnicity, and sexual orientation highly influenced comparison outcomes. For example, men identifying as homosexual reported higher comparison frequency, a greater fixation with leanness, and, on average, a desire for lower BMI compared to heterosexual men. Findings from Tylka & Andorka, (2012) show that comparison activity was positively correlated with gay community involvement, internalization of homosexual ideals, and

body change behaviors such as extreme dieting. These findings show consistency with Calzo, Corliss, Blood, Field & Austin's (2013) study showing that gay and bisexual men's concern with weight and shape often supersede that of heterosexual men.

For men acculturating to western body norms, comparisons were used to self-evaluate and internalize societal representations of physique. To avoid alienation from new social groups, men adopted body modification tactics to increase muscularity and leanness. Castillo and colleagues (2008) support that feeling physically similar to peers increases confidence, self-esteem, and cohesion. Ethnic populations including Hispanic, Lebanese, and Asian American men were particularly vulnerable to comparisons when acculturating to Western norms for body image. For example, performance-enhancing drug use, and intense exercise regimes were reported as the primary mechanisms used when mimicking Western body ideals.

Multiple authors found young adulthood, along with enrollment in higher education as providing unique opportunities for comparison activity. For example, fitting in with new peer groups challenged ideologies of self-identity and worth, including those associated with physique (e.g., Ridgeway & Tylka, 2005). Young men; being unstable in intimate relationships, sources of monetary income, and career; were more likely to see older men as a source of influence for body standards. Conversely, young men often felt pressured to engage in risky behaviors modeled by older peers in order to fit in which included excessive drinking, and drug use. The authors found that younger men were prone to pressure from peer group's influence of masculinity ideologies, which played a pivotal role in shaping men's ideas about body image.

Men identifying as 35 or older showed fewer adverse effects from comparisons, reporting a focus on health and longevity vs. physique and body aesthetics. Previous research shows that comparisons provide an opportunity for men to evaluate personal attractiveness, however adolescent populations report being more preoccupied with physical appearance than older adults (e.g., Gilbert, Price & Allan, 1995). Other studies suggest that ideals set by the media predominantly objectify bodies of younger men, giving older men irrelevant targets with whom to make comparisons (e.g., Peat, Peyerl, Ferraro & Butler, 2011). This review concluded that regardless of age, men rating low on appearance orientation (i.e., the importance of appearance), or high on self-esteem were not protected from the harmful effects of comparisons when viewing media that exposed them to hyper-idealized male bodies. Therefore, protective factors can be

mitigated as behaviors associated with media use impose negative effects. Clinicians should bear these factors in mind when assessing men for body image pathologies, as exposure to media exemplifying mesomorphic idealism can increase comparison activity, and exacerbate body dissatisfaction.

The scope of literature evaluated for the present study was diverse in terms of population sample, study design, and data collection method, while the utility of social comparison as a framework for examining male body image proved fruitful throughout the review. Themes consistently suggested that sociocultural influences evoke appearance comparisons, and, depending on the direction and target of comparison, are internalized either positively or negatively, resulting in newly formed attitudes and behaviors associated with body image.

Social comparison remains a useful framework when explaining male body image outcomes for a variety of reasons. First, because men feel the need to mimic societal norms for gender and masculinity, social comparisons offer an information seeking mechanism for learning about important facets of masculinity, particularly those pertaining to muscularity and body fat. Adhering to social norms for masculinity have many positive affects including attracting romantic partners, gaining favorable judgement from peers, and reports of confidence and high self-esteem (Stefanczyk, Wernecka, Sorokowski & Sorokowska, 2019). Second, social comparison frequency and affect differ among demographic groups, yet remain consistently used across all populations of men. This result showed the utility of applying Social Comparison Theory across an array of male populations.

LIMITATIONS & FUTURE INQUIRY

Themes from this review will help direct future inquiry; however, limitations of the study must be addressed. First, the authors included studies that sampled diverse populations of men, who reported different thoughts, perceptions, and attitudes regarding body image and comparison activity. Results of this study are therefore hard to generalize given that demographic variables emerged as an important mediator of body dissatisfaction. Second, this review did not exclude articles on the basis of study design, or methods of inquiry. Since a range of assessments looking at men's comparison tendencies were utilized, it is important to note results in the context of each individual study.

The abundance of literature looking at the effects of upward comparisons left question to the implication of downward comparison activity. Downward comparison research may be more fruitful than previously thought considering that downward comparisons can help preserve self-esteem by reducing self-threat. Future research should investigate if downward comparisons have protective factors against body dissatisfaction (Brown, Ferris, Heller, Keeping, 2007). For example, research in the field of psychology has shown that downward comparisons provide an opportunity to restore self-regard when upward comparisons pose a threat. By using the inferior qualities of others to self-actualize one's situation as not so adverse, individuals can derive a sense of self-hopefulness (e.g. Aspinwall & Taylor, 1993; Gibbons, 1986).

The paucity of qualitative studies in this review indicates that future research could gain a better understanding of men's personal narrative, and experience with comparisons through qualitative inquiry. Since demographics arose as a reliable indicator of protective and contributing factors for making comparisons, future studies might also examine comparison activity among specific populations of men.

CONCLUSIONS

The present scoping review identified 27 relevant articles that utilized Social Comparison Theory to explain body image outcomes in men. In scoping the literature, four themes arose revealing that appearance comparisons had unique effects on male body image. Themes included sociocultural influences that pressured men towards adherence to societal standards for body image. These pressures resulted in men gathering body image information via comparisons, and thereafter internalizing body image ideals. Diverse psychological and behavioral outcomes were a result of comparison directions and comparison targets, however, men experienced protective or contributing factors depending on demographic factors such as age, ethnicity, and sexual orientation.

The current study gives an in-depth overview of how social comparisons play an integral role in male body image outcomes; therefore, we believe the following points to be efficacious for researchers and practitioners to consider when working with male clients, and creating body image assessment measures. First, mental health specialists might consider assessing male clients for specific factors associated with comparison activity such as comparison frequency, target, and direction as these each play a dynamic role in the extent to which men experience

contributing or protective factors. Furthermore, mental health professionals may utilize results from this study to inform clients of the negative impact that making comparisons can have on body-esteem, confidence, and self-efficacy. When creating new psychometric measures to assess comparison activity, researchers might consider the four main findings of this study to be informative when construction measurement sub-scales (i.e., sociocultural standards, target and direction of comparisons, internalization of ideals, and contributing and protective factors).

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