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## **Social Media and Mental Health: A Comprehensive Review of Eating Disorders in Young Men and the Literature Gap**

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SOCIAL MEDIA AND MENTAL HEALTH

A Comprehensive Review of Eating Disorders in Young Men and the Literature Gap

By Samantha Bryan

## ABSTRACT

Mental Health and Social Media is a literature review of how social networking sites (i.e., Snapchat) and mass media impacts the incidence, risk, and symptoms of eating disorders and disordered eating in men aged 18 to 27. The literature review begins with a general overview and the current literature and research gap. Peer-reviewed articles were searched and entered into an abstract matrix, and 36 were chosen to be in the review. The role of social networking sites (SNS) and mass media in the impact of eating disorder risk, symptoms, and incidence in college-aged men will be explored via the articles, discussing the impact of body image, self-esteem, and drive for muscularity. The main themes in the articles covered for the review are discussed as well as limitations the review faced. Clinical and research implications will be discussed as well.

**KEY WORDS:** eating disorders, young men, college men, self-esteem, social media, body image, drive for muscularity

## Introduction

Disordered eating behaviors and eating disorders have historically been considered female-specific issues. However, anyone can exhibit symptoms and be affected by eating disorders (specified and non-specified) regardless of gender, race, and age (Marques et al., 2011). Eating disorders are rising in prevalence among young adults, with an estimate of eight million Americans diagnosed with OSED or UFED (South Carolina Department of Health, 2018). 1 in 3 men are diagnosed with eating disorders and exhibit disordered eating behaviors and symptoms (National Eating Disorder Association, 2018). The statistics are concerningly high, therefore it is imperative to develop and assess interventional, educational, and preventional programs to assist vulnerable individuals.

Although eating disorders were considered a primarily female psychopathology, there are various factors that can place individuals at risk for developing an eating disorder. Sociocultural models of eating disorders see “Western” culture of beauty (i.e., extreme thin-ness and the objectification of the female body) as specific risk factors for the development of an eating disorder (Moore, 2007). Moore and Bulik (2007) conducted a literature review on the risk factors of eating disorders, and discovered that evidence accumulated in support of both biological (genetic and early developmental trauma) and cultural factors contributing to the increased risk for the development of eating disorders or associated behaviors and attitudes.

Schoen, Brock, and Hannon (2019) examined perceptions of eating disorders in their peers and sought to find gender bias and stereotypes with general eating disorder knowledge. 237 undergraduate college students examined vignettes, and multilevel modeling showed that female characters received stronger endorsements of eating pathology than male characters for similar

symptom presentations. They discovered that college men were more likely than college women to rate female characters as having eating disorders, which shows that there is clear gender bias within perceptions of eating disorder pathology. Eating disorder outreach and prevention work on college campuses should be both gender-inclusive and gender-sensitive.

While the occurrence of bulimia nervosa has decreased since the early nineties of the last century, anorexia nervosa has been on the rise. Smink, Hoeken, and Hoek (2012) reviewed the current literature of the incidence, prevalence, and mortality rates of eating disorders. Using several related databases (such as Pubmed, PsycINFO, etc.), they discovered that all eating disorders had high mortality rates, but anorexia nervosa was the highest. Binge eating disorders were more common among males and older individuals compared to other eating disorders. However, the literature review was limited to Western countries; therefore, research in diverse, marginalized communities is needed.

According to the recent update of the DSM-V, the diagnostic criteria for eating disorders are as follows: **Anorexia Nervosa** is categorized as “restriction of energy intake relative to requirements,” “intense fear of gaining weight or persistent behaviors that interferes with weight gain,” or a disturbance in body image; **Bulimia Nervosa** is categorized as “recurrent episodes of binge eating,”; **Binge-Eating Disorder** is also categorized as “recurrent episodes of binge eating,” but differing from bulimia nervosa due to other criteria; **Other Specified Feeding or Eating Disorder (OSFED)** and **Unspecified Feeding or Eating Disorder (USFED)** are specified as “symptoms characteristic of disordered eating behaviors causes clinically significant distress or impairment in daily life” (DSM-V, 2013).

An estimated 10 to 15% of people diagnosed with anorexia or bulimia are males, but due to misinformation, negative stereotypes, lack of education, and social stigma, many believe this estimate is underreported (Mirasol Recovery Center, 2018). There was an underlying assumption within the study that the majority of participants were female within current literature and research, and that, as a whole, males did not have a place within the conversation despite their apparent vulnerability to this disorder.

Kukk and Akkermann (2017) investigated associations between emotional fluctuations and regulation difficulties to predict binge eating and overeating episodes. They used the experience sampling method with both men ( $N = 61$ ) and women ( $N = 97$ ). Among women, fluctuations in negative emotion, negative emotion regulation difficulties, predicted binge eating. Among men, however, “trait impulsivity and fluctuations in negative emotion” predicted binge eating (Kukk, 2017). Overeating was not associated with the aforementioned aspects.

College students in particular are vulnerable to eating disorders and disordered eating behaviors (Eisenberg, Nicklett, Roeder, & Kirz, 2011). However, many might be unaware they exhibit symptoms of eating disorders/disordered eating behaviors. After examining the prevalence, correlation, persistence, and treatment-seeking symptoms of eating disorders in college students through the use of an anonymous survey, Eisenberg (2011) found that of the 56% of students who completed the baseline survey, the prevalence of positive screens was 13.5% for women and 3.6% for men.

The perception that eating disorders occur solely or primarily among women, and the consequent exclusion of men from eating disorder research for much of the previous decades has caused crucial gaps in our understanding of the clinical presentation and management of eating

disorder in men, including gaps within our personal understanding of issues related to classification and assessment (Murray et al., 2017). An overview of the history of men diagnosed with eating disorders and synthesized “current evidence that relate to the unique characteristics of male presentations across the diagnostic spectrum of disordered eating” (Murray et al., 2017) discovered that men were significantly more likely to be diagnosed with a residual “other eating disorder” diagnosis, which further demonstrates the lack of applicability of the current classifications schemes to men who are vulnerable to this disorder.

Men with eating disorders are currently underdiagnosed and undertreated, misunderstood by their clinicians and those around them. Most body image/dissatisfaction research and assessments place emphasis on feminine ideals, having more of a focus on areas of importance for females. As a result, men don’t have a space in the discussion or feel like they won’t be treated as seriously (Strother, Lemberg, Stanford, & Tuberville, 2012). Awareness of these issues is crucial in order to improve the current state of the research and clinical field as an increase in awareness may encourage environments in which men will feel comfortable and have the space and voice to talk about their issues with food and their body without feeling ashamed or ridiculed.

This summative but not exhaustive literature review seeks to evaluate, critique, and synthesize information on research regarding social media’s effect on eating disorders and disordered eating in college-aged men. There are a variety of areas that do not have robust research and/or data to target populations like men, such as symptoms of eating disorders and disordered eating, the role of social media on the incidence and risk of eating disorders, the impact of body image, drive for muscularity, and self-esteem, as well as effective treatments and

intervention programs for this community. Current research was analyzed to bring awareness to the literature gap and individuals being excluded in this area, in addition to raising new questions that have yet to be answered within the field. Much of the literature that exists focuses on the diagnosis, symptoms, and treatment of female-identifying people who meet the criteria for eating disorders and disordered eating, but men are rarely allowed a space in this discussion.

### **Methods**

The articles for this literature review were found by searching for a combination of terms regarding social media, eating disorders, and disordered eating among young men. Search terms were restricted by year published and age range. Articles must have been published in the last fifteen years (2004-2019) in order to have current and accurate information within the field. The age range was 18 to 27 years old as this literature review focused on college-aged men, rather than adolescents, as there was not much focus placed on them in this field of research.

The types of articles included in this integrative literature review were limited to prior conducted literature reviews (cross-sectional, meta-analytic) and a small amount of experimental research. With the exception of three, they were focused on W.E.I.R.D. (Western, Educated, Industrialized, Rich, Democratic) societies as there was limited research done in non-western regions. In the EBSCO PsychINFO database, when the search terms “eating disorders” and “young men” are searched together, 1,240 items were found. In Google Scholar, when these same terms were searched together, 18,100 articles were discovered. When “social media” and “eating disorders” were searched together with “young adults”, the results shrink to 300. When “young adults” were switched with “young men,” the results turned to 170. When “eating

disorders in young men” were searched in the Wiley Online Library, 9,481 items were found. However, the majority of the articles and books included appeared due to the “college” term in the search and were irrelevant. In the peer-reviewed database Science Direct, when these terms are searched together, 9,042 articles were discovered. When “social media” was added, the results shrunk to 2,038. However, the majority placed an emphasis on women. Articles from the Journal of Eating Disorders and the Journal of Behavioral Medicine were discovered through Google Scholar.

Abstracts were searched for relevant information and entered into a matrix. Following the abstract review, the articles were then reviewed in full. Thirty-six articles were included in the final literature review.

See appendix A for the abstract matrix.

### **Role of Social Media on Eating Disorder Symptoms and Incidence**

People were continuously bombarded with images of cisgender, white, uncommonly skinny or muscular people on Social Networking Sites (SNS), such as Instagram, Snapchat, and Facebook (to name a few of the most frequented forums), and, subsequently, experienced a disconnect between the reality of what their body actually looked like and the “ideal” body that was perfectly tailored with editing software (Shoger, 2010). People could become insecure about their bodies and have negatively impacted self-esteem and body image due to this disconnection, which, in turn, could lead to an increased susceptibility in eating disorder risk and symptoms (Lee, Lee, Choi, Kim, & Han, 2014).

The psychological effect of social media, mass media, and popularized images on individuals wasn't a new discovery. However, research and literature only looked at the males' perspective within the recent fifteen years in an attempt to decrease the gap found in this population. Mass Media was seen as a pervasive force in shaping physical appearance and aesthetic ideals, coined as "pop culture," but there were few who studied media exposure on males' body image. 158 men were exposed to TV ads that contained either neutral images or images of the "ideal male." While considered inconsistent with previous research, as there were no dispositional effects noted to influence the schematicity on mood and body image changes, Aguata and Tantleff-Dunn (2004) discovered that participants who were exposed to ideal image ads became significantly more depressed and reported a higher level of muscle dissatisfaction than participants in the neutral ad group.

Pressure from mass media images significantly related to mens' negative body image, feeling worse about themselves and their own bodies, as they failed to conform to the muscular "ideal" male body (Barlett, Vowels, & Saucier, 2008). After conducting a meta-analysis of 25 studies with 93 effect sizes, results from both Study 1 [ $d = -0.19$ ,  $p < .0001$ ; CI:  $-0.21$  to  $-0.17$ ,] and Study 2 [ $d = -0.22$ ,  $p < .0001$ ; CI:  $-0.30$  to  $-0.14$ ] suggested that as men felt an increased pressure from the media to conform to societal ideals, their emotions toward their bodies worsened. The meta-analysis showed that pressure from mass media and images correlated negatively, to body satisfaction, body esteem, self-esteem, psychological disorders, and behavioral outcomes (i.e., excessive exercise and disordered eating) (Barlett, 2008).

Image exposure in young men (i.e., exposure of images saturated with the societal expectations of what a man is supposed to look like) had a negative impact on their body

satisfaction. Blond (2008) reviewed experimental studies in young men's body dissatisfaction in relation to exposure of images of attractive, muscular men who achieved the beauty ideal. Effect sizes indicated that exposure to these images had a small, but statistically significant negative effect on men's body dissatisfaction. The literature review suggested that young men who are dissatisfied with their bodies have an increased risk for negative self-evaluations when they are exposed to these idealized images (Blond, 2008).

Dittmar (2009) critically analysed the causal link between media and body image. They identified various diverse factors that made individuals susceptible to perfect body ideals in media (i.e., drive for muscularity), and presented findings of previous research that supported a qualified and complex picture of media effects (or influences), and highlighted the importance of individual differences and psychological processes related to self and identity (Dittmar, 2009). However, their study placed more emphasis on females diagnosed with eating disorders than with males, further exacerbating the literature and research gap within this field.

Diggan and McCreary (2004) examined the relationship between consumption of muscle and fitness magazines and body satisfaction in gay and heterosexual men. They found that gay men were more concerned with thinness compared to heterosexual men, and had an increased risk of maladaptive disordered eating whereas heterosexual men had a greater drive for muscularity. Men who did not identify as heterosexual, on average, scored higher on the EAT compared to heterosexual men, indicating poorer eating habits and a higher drive for thinness. However, it was noted that the study lacked a larger sample size and diverse population.

People tend to compare their bodies to those that appear in social media. Berg, Paxton, Keery, Wall, Guo, and Neumark-Sztainer (2007) examined the role of media body comparison as

a mediator of the causal link between the psychological factors and sociocultural factors discovered with the pressures of both body dissatisfaction and drive to be thin in females and males. Although male body comparison was not a significant predictor of body dissatisfaction compared to female body comparison, the study provided a methodology in which the nature of body comparison in young adults were able to be further explored (Berg et al., 2007). However, more research was needed for the development of body comparison and dissatisfaction in males.

Muscularity, self-esteem, depression, and body image had a negative correlation with eating disorder symptoms. In an experimental study, 150 college men were surveyed with comprehensive measurements that included computerized tests which assessed body image perception and the Somatomorphic Matrix (SMM), a computerized body image assessment of an individual's body image related to their known body composition values (Olivardia, Pope Jr., Boroweicki III, & Cohane, 2004). American college men displayed substantial body dissatisfaction, which was closely linked to depression, low self-esteem, eating pathology, and the usage of performance-enhancing drugs. The SMM assessment confirmed the hypotheses that men perceived themselves to have slightly more body fat than in reality, but also perceived themselves to have more muscle than their measured muscularity (Olivardia, 2004).

Holland and Tiggerman (2015) reviewed literature on mass media effects on body image and disordered eating. They conducted a systematic review of 20 studies that were peer-reviewed articles on social networking site (SNS) usage and body image and eating disorders. The articles demonstrated that the use of SNS was associated with negative body image and an increase in eating disordered behaviors. The most problematic were specific activities on SNS that involved viewing and uploading photos, and seeking negative feedback via status updates (Holland,

2015). Underlying processes were addressed in a small amount of studies, and discovered that appearance-based social comparison mediated the relationship between SNS usage, body image, and eating concerns. There were no differences between genders.

1,765 young adults were randomly selected and participated in a cross-sectional survey that examined the association between social media use and eating concerns. There were significantly positive linear associations between the social media use variables and eating concerns ( $p < 0.001$ ) (Sidani et al., 2016). Participants who spent the majority of their time on social networking sites had a higher risk for disordered eating. Results indicated strong and consistent associations between social media use and eating concerns in a nationally represented sample of young adults.

Gigi, Bachner-Melman, and Lev-Ari (2016) hypothesized that disturbed body image and eating attitudes in gay and bisexual men could be explained by a susceptibility to social messaging. 260 men between the ages of 18 to 25 participated in the study and completed measures of disordered eating, body image, internalization of attitudes toward appearance, and concern for appropriateness (Gigi, 2016). Men who identified as gay and/or bisexual reported higher levels of disordered eating and dissatisfied body image compared to men who identified as heterosexual. Men who identified as gay or bisexual were also vulnerable to social messages and reported being significantly more likely to be influenced by ads of “conventionally attractive” physical appearances than heterosexual men (Gigi, 2016). The results of this study supported the hypothesis that sensitivity to social messages about appearance was a link between sexual orientation and disordered eating in men.

Kim and Chock (2016) sought to examine the relationship between young men and women's social media use and their body image concerns. 186 participants were sampled for a cross-sectional survey. Results of their study indicated that media exposure (i.e., time spent on social media) was not related to body image concerns. However, online social grooming behaviors (i.e., viewing and commenting on peer's profiles) were significantly correlated with the drive for thinness for all participants (Kim, 2016). The study contributes to the relatively small number of studies that examine the relationships between social media and body image concerns. As social networking sites rise in popularity, a development in understanding how these relationships work is imperative.

Bardone-Cone, Cass, and Ford (2008) examined biopsychosocial factors related to body dissatisfaction in young men within a multivariate and moderator context. Male ( $n = 111$ ) and female ( $n = 236$ ) undergraduates filled out self-report questionnaires assessing body mass index (BMI), media influence, a history of weight-related teasing, and socially prescribed perfectionism, along with various indices of body dissatisfaction (Bardone-Cone, 2008). Perceived pressure from the media was consistently related to body dissatisfaction in men whereas multiple biopsychosocial variables accounted for body dissatisfaction in women. Socially prescribed perfectionism and a history of weight teasing each moderated the relationship between BMI and male body dissatisfaction, and identified men who were low in body dissatisfaction. Findings indicated that applying a biopsychosocial framework to the study of body dissatisfaction in men was useful and suggested the need for including other factors, such as male peers and sports involvement, in understanding contributors to male body image (Bardone-Cone, 2008).

Fardouly and Vartanian (2015) conducted a literature review on social media usage and body image concerns. They reviewed correlational, experimental, appearance comparisons, and longitudinal studies. Correlational studies consistently showed that social media usage (particularly Facebook) was associated with body image concerns among young women and men. Longitudinal studies suggested that this association would strengthen over time. Furthermore, appearance comparisons played a role in the relationship between social media and body image. Experimental studies, however, suggested that brief exposure to one's own Facebook account does not negatively impact young women's appearance concerns (Fardouly, 2015). Further longitudinal and experimental research was needed to determine which aspects of social media were most detrimental to people's body image concerns.

To investigate the role of social comparison processes in men's responses to images of muscular-ideal male beauty, Hargreaves and Tiggemann (2009) had a sample of 104 male university students view either 15 television commercials with an ideal male image or 15 nonappearance commercials with no ideal image. Men who scored high on appearance orientation were the most vulnerable and found to engage in "greater upward social comparison to muscular-ideal images" which, predictably, changed body satisfaction (Hargreaves, 2009). These findings provided consistent evidence that media images played a significant role in men's body image.

#### *Impact of Body Image, Drive for Muscularity, and Self-Esteem*

Not only did social media have an effect on disordered eating, it directly impacted body image, self-esteem, and a drive for muscularity. An insecure body image caused interpersonal problems. Attachment struggles, intimacy fears, and social anxiety could have a causal

relationship with negative body image. College students completed an assessment of the dimensions of body image, interpersonal anxiety and adult attachment processes for both sexes (Cash, Theriault, Armis, 2004). There were significant associations of body image and social anxiety for both sexes, and greater body dysfunction was linked to less secure attachment.

Holmstrom (2004) conducted a meta-analysis on media's effects on body image. An estimate of overall effect size, trends in the research, and the influence of moderating variables were examined and reported. Results suggested depictions might have little to no effect on viewers, but images of overweight people had a positive effect on body image (Holmstrom, 2004). Increasing the number of subjects by combining studies provided a better overall estimation of the relationship between media and body image. The analysis suggested that there was a relationship between media and body image, but that the relationship was discovered to be small. Nonetheless, it addressed the issue that awareness of media saturation on thin body image was needed.

Daniel and Bridges (2009) explored the objectification theory to see which objectification variables mediated the relationship between internalization of media ideals and the drive for muscularity. Through an online survey, 244 college-aged men completed questions with a variety of variables (i.e., internalization of media ideals, self-objectification, body surveillance, body shame, muscularity drive, and BMI). The study utilized path analysis to investigate the relationship and discovered that the internalization of media ideals was the strongest predictor of the drive for muscularity (Daniel & Bridges, 2009). While the variables of objectification theory did not have an impact, contrary to the hypothesis, the study suggested that the theory may not be applicable to men as it is currently measured, citing a need for an improved version.

To find an accurate measure of body image in men, Cafri and Thompson (2004) evaluated existing methods of male body image assessment. They used three guidelines, and found that the most effective measures were the Drive for Muscularity Scale, the Somatomorphic Matrix, and a modification of the previously mentioned measure. A standard of assessing male body image centered on muscular appearance was important as it gave future clinicians the tools they needed in order to properly assess and treat clients who were affected by this.

Self-esteem had an important component in weight concerns. Low self-esteem had been found to have a significant impact on weight concerns (Hatoum & Belle, 2004). After 89 college-aged men read male-directed magazines, the findings discovered an association with concerns about muscularity and general fitness, beauty product use, and dietary supplements for muscle building (Hatoum, 2004). Men's media exposure had also been associated with their standards for women's bodies, meaning that the more male-direction magazines and movies they consumed, the more they valued thinness in women.

Griffiths, Murray, Krug, and McLean (2018) sought to see if social media's association with body image dissatisfaction and eating disorder symptoms were generalizable to minority-identifying men. An online survey advertised for users of popular dating apps, and within a nationwide sample focused in Australia and New Zealand, 2,733 men who identified within the LGBTQ community completed the questionnaire. Participants answered questions about how frequently they used 11 different social media platforms, in addition to questions about their "dating app use, body image, eating disorder symptoms, and anabolic steroids" (Griffiths et al., 2018). Findings saw that Facebook, YouTube, Instagram, and Snapchat were the most used. Griffiths et al. (2018) discovered a pattern of small-sized and positive associations

that emerged between “social media use and body dissatisfaction, eating disorder symptoms, and thoughts about using anabolic steroids.” Amongst the social media platforms used, Facebook, Instagram, and Snapchat had the strongest associations. They found that “the associations of social media use with both muscularity dissatisfaction and eating disorder symptoms were stronger for image-centric social media platforms than non-image platforms” (Griffiths et al., 2018). The study also found that previous research suggesting body dissatisfaction and related variables among women can be generalized to sexual minority men. Therefore, additional research with men who identify as LGBTQ+ is needed to explore the distinctions between adaptive and maladaptive social media use in the context of body dissatisfaction, eating disorders, and anabolic steroid use.

Concerned with the relation between sexual orientation, media usage, and eating and body image concerns, Carper, Negy, and Tantleff-Dunn (2010) surveyed a sample of 78 college-aged men. They completed measures of “sexual orientation, eating disorder symptoms, appearance-related anxiety, perceived importance of physical attractiveness, perceptions of media influence, and media exposure” (Carper, 2010). Gay men scored significantly higher on drive for thinness, body dissatisfaction, and body image-related anxiety than their straight counterparts. Perceptions of media influence were higher for gay men and significantly mediated the relation between sexual orientation and eating and body image concerns (Carper, 2010). Sexual orientation had also moderated the relation between perceived media influence and beliefs regarding the importance of physical attractiveness as it was significant for gay men, but not straight men. The current findings suggest that gay men’s increased vulnerability to media influence partially accounts for the relatively high rate of eating pathology observed within this

community (Carper, 2010). This study showed the need for samples from men in racially diverse communities and marginalized identities. Prevention programs and services for those who identify within the LGBTQ+ community and other vulnerable communities was in need as well.

Researchers have started investigating the relationship between social media usage and various psychological wellbeing variables, specifically body image (Saiphoo & Vahedi, 2019). They conducted a quantitative review of cross sectional research with an analysis of 63 independent samples ( $N = 35,552$ ). Using a random-effects model revealed an overall effect size of  $r = 0.169$ ,  $CI [0.131, 0.206]$ , which indicates a small, positive, and significant relationship between social media use and body image (Saiphoo, 2019). Other variables found to be significant moderators of the relationship were type of social media use, body image dimension, country grouping, and age.

### **Treatment and Intervention**

When the discussion of eating disorder treatment arose, there was no general consensus on what was effective both in terms of treatment and intervention of these issues. Therefore, there was a high need to further examine the processes involved in the development of eating disorders in males. Because of the stigmatization and sociocultural perception of eating disorders being a primarily female illness, young men vulnerable to this disorder might fail to recognize their symptoms and/or behaviors of an eating disorder (Räsänen & Hunt, 2013).

Majority of eating disorder assessment tools were developed and validated for women, and weren't specific toward mens' needs. Stanford and Lemberg (2012) developed a preliminary tool, the Eating Disorder Assessment for Men (EDAM) as a male-specific eating disorder

assessment tool. Although their sample size was too small to be applicable to the entire population, a factor analysis of EDAM found four components that were said to be “core diagnostic issues” (Stanford & Lemberg, p. 435): binge eating, muscle dysmorphia, body dissatisfaction and disordered eating. The findings of their study held imperative implications of emerging research and prompted the development and utilization of a valid and reliable male-specific eating disorder assessment tool.

Robinson, Mountford, and Sperlinger (2012) surveyed men who were diagnosed with eating disorders and currently seeking treatment. Themes were found through the qualitative study that discussed and explored participants’ experiences as men who were diagnosed with eating disorders. Some of the themes discovered illustrated issues that were unique to male experience and presentation (e.g., eating disorders being thought of as a female problem); whereas other themes (e.g., eating disorders were seen as a problem and a solution) were similar to female eating disorder literature. The results of the qualitative study reinforced the importance of eating disorder awareness for men, and its impact on male presentation and treatment preferences (Robinson, Mountford, & Sperlinger, 2012). The study also highlighted areas where care for men diagnosed with eating disorders could be improved, including further training for clinicians, raising awareness to reduce the stigma and isolation involved, and providing male-specific care.

Nonetheless, there was a clear need for inclusive treatment and intervention within this population, and there was still a lack in the current measurement available.

## **Discussion**

The goal of this literature review was to assess current peer-reviewed literature published within the last 15 years on social media's influence on eating disorder incidence and risk in young men aged 18-27 as well as bring awareness to the literature gap discovered within this area of research. After a thorough search in various academic journals, 36 articles met the criteria, were summarized in a literature review matrix, and assessed.

It can be concluded that social networking sites (i.e., Instagram, Snapchat, etc.) have a negative impact on eating disorder symptoms and behaviors in college-aged men. The studies in this literature provide statistical evidence that show there is a significant correlation between social media usage and eating disorder behaviors.

Another conclusion derived from this literature review is that social media usage has a negative effect on body image, drive for muscularity, self-esteem, and body satisfaction in college-aged men as well as men who are in minority communities (i.e., LGBTQ+).

Treatment and intervention programs for men sorely lack as well. Most are female-specific, and the measures that are male-specific either lack the information needed to be generalizable, underdeveloped as a measurement tool, or had not received the results hypothesized and, therefore, was rejected.

### *Limitations*

This literature review faced various limitations. There were a limited amount of studies that achieved the criteria needed. Most studies that surfaced from the search placed a focus on young women or adolescents. This shows that there is a literature gap involved in this section of research, furthering the need for more research and intervention.

Although the review acknowledges the lack of diversity, most of the studies in the literature review are from W.E.I.R.D. countries. Therefore, it is important to conduct further research in marginalized communities and gain different perspectives.

### *Clinical and Research Implications*

A variety of clinical and research implications were discovered within the literature review and considered for this discussion. As the literature gap within the field of eating disorder research is explored, it is imperative that future clinicians and researchers strive to close the gap. While there is a good amount of correlational research supporting the maladaptive effects of SNS on body image and disordered eating, there is an increased need for more longitudinal and experimental studies on this issue. Men diagnosed with eating disorders that seek treatment face boundaries due to gender bias and the social stereotype that eating disorders are a female-dominated prognosis. Clinicians, when faced with these patients, should understand the underlying biases and problems as they do assessment and develop a treatment plan.

The development of educational and outreach programs about eating disorders and disordered eating need to be considered as well. 106 students from undergraduate psychology courses were sampled (though, not all were psychology majors) and recruited to participate in a study on health beliefs, and completed a questionnaire assessment of their knowledge and beliefs about either anorexia nervosa (AN) and bulimia nervosa (BN) (Hunt & Rothman, 2005). The vast majority believed that restrained eating was a major characteristic of anorexia nervosa and cyclic eating for bulimia nervosa. They also believed that AN and BN stemmed from psychological or social factors rather than biological.

Populations vulnerable to eating disorders and disordered eating behaviors have an increased need to be informed, and educated on the various ways of eating disorder presentation in individuals. Another form of research to be explored is the cognitive schemas of body image in men. It could help clinicians explain how some individuals are capable of disregarding social media messages of attractiveness and, therefore, create ways to effectively confront pressures to meet an often-times unattainable goal of beauty.

The role of social media on eating disorder risk and incidence in men should be further explored and researched. As society begins to turn to remote forms of access and entertainment, there is an increase in activity on social media platforms. The effect this could have on eating disorder incidence and risk in college-aged men is unknown; therefore, further research is needed in order to properly gather resources for a vulnerable population.

### **Conclusion**

The literature review focused to describe the gap found within eating disorder research and literature on social media's effect on eating disorder risk and incidence in college-aged men. 36 peer-reviewed articles were submitted to an abstract matrix and analyzed for the review. While the study faced various limitations in terms of breadth and diversity of literature, it was discovered that social media plays a significant role in how college-aged men viewed themselves and their disordered eating behaviors and further research needs to be conducted to better understand how to better treat this vulnerable population.

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## Appendix A

Literature Review Matrix

| Author/<br>Date                          | Theoretical/<br>Conceptual<br>Framework   | Research<br>Question(s)/<br>Hypotheses                    | Methodology   | Analysis &<br>Results  | Conclusions   | Implication<br>s for<br>Future<br>research  | Implications<br>For practice   |
|--|---|---|---|--|---|---|--|
| Aguata,<br>Tantleff-D<br>unn<br><br>2004 | Mass media as<br>a pervasive<br>force in<br>shaping<br>physical<br>appearance<br>and ideals | Effect of<br>media<br>exposure on<br>males' body<br>image | 158 men were<br>exposed to<br>TV ads<br>containing<br>ideal male<br>images or<br>neutral<br>images<br>between TV<br>programs                                | Participants<br>exposed to<br>ideal image<br>Ads became<br>significantly<br>more<br>depressed &<br>higher levels<br>of muscle<br>dissatisfactio<br>n than the<br>neutral ad<br>group | Inconsistent<br>with past<br>research, no<br>dispositional<br>effects were<br>noted<br>that would<br>suggest the<br>influence of<br>schematicity<br>on mood and<br>body image<br>changes                          | future<br>research<br>should aim<br>to identify<br>spe-<br>cific<br>long-term<br>effects of<br>media<br>exposure. | Understandin<br>g more about<br>males'<br>cognitive<br>schemas of<br>body image,<br>for example,<br>may help<br>explain how<br>some<br>individuals<br>are able to<br>disregard<br>media<br>messages of<br>attractiveness<br>and<br>effectively<br>confront the<br>everyday<br>pressures of<br>meeting an<br>unattainable<br>ideal. |
| Holmstrom<br>,<br>2004                   | Body image  | Meta-analysi<br>s on media's<br>effects on<br>body image  | An estimate<br>of overall<br>effect size,<br>trends in the<br>research, and<br>the influence<br>of moderating<br>variables are<br>examined and<br>reported. | Results<br>suggests<br>depictions<br>may have<br>little to no<br>effect on<br>viewers, but<br>images of<br>overweight<br>people have a<br>positive<br>effect on<br>body image        | Increasing<br>the number<br>of subjects by<br>combining<br>studies<br>provides a<br>better overall<br>estimate of<br>the<br>relationship<br>between<br>media and<br>body image.<br>This analysis<br>suggests that | addressing<br>the issue of<br>media<br>saturation<br>of thin<br>images is<br>important.                           | <b>[Didn't<br/>Discuss]</b>  |

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|                             |  |  |  |  | there is a relationship between media and body image, but that relationship is very small.   |  |   |
| Daniel, Bridges, 2009       | Objectification theory                         | Objectification variables would mediate the relationship between internalization of media ideals and the drive for muscularity | An online survey accessing internalization of media ideals, self-objectification, body surveillance, body shame, muscularity drive, and BMI were completed by 244 college-aged males | Path analysis were used to investigate relationships among these variables | Internalization of media ideals was the strongest predictor of the drive for muscularity, followed by BMI, though variables of objectification theory had no impact contrary to hypotheses | Suggest that objectification theory may not be applicable to men as it is currently measured   | <b>[Didn't Discuss]</b>   |
| Cafri, Thompson, 2004       | Accurate measure of body image in men          | A review of which method accurately measures body image in men   | Existing methods of male body image assessment were evaluated  | 3 guidelines were derived for assessing male body image                    | The most effective measures were the Drive for Muscularity Scale, somatomorphic matrix, and a modification to the previously mentioned matrix  | Attempts are underway to revise the measure to improve its' reliability (somatomorphic matrix) | A standard of assessing male body image centered on muscular appearance |
| Hargreaves, Tiggerman, 2009 | Social comparison processes and response cycle | Investigating the role of social comparison processes in men's responses to  | Sample of 104 male university students viewed either 15 TV commercials   | Exposure to muscular-ideal TV commercials led to lower muscle satisfaction | Men high on appearance orientation were most vulnerable and engaged in greater   | Findings provide consistent evidence for a role for media images in                            | <b>[Didn't Discuss]</b>   |

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|                                   |  | images of muscular-ideal male beauty  | w/ ideal male image or 15 nonappearance commercials w/ none                | and physical attractiveness compared to nonappearance commercial group   | upward social comparison to muscular-ideal images which, in turn, predicted changes in body satisfaction  | men's body image  |                         |
| Barlett, Vowels, Saucier.<br>2008 | Meta-Analyses of effect of media image on men's body image | The extent to which pressure from the mass media to conform to the muscular "ideal" male body affects men's self-images | 25 studies contributing 93 effect sizes were included in two meta-analyses | Revealed that pressure from the mass media significantly related to men feeling worse about their own bodies.                                  | Results from both Study 1 and Study 2 suggest that as men felt pressure from the mass media (in correlational and experimental designs) they felt worse about their bodies. | Results showed that pressure from the mass media was related to body satisfaction, body esteem, self-esteem, psychological disorders (e.g., depression), and behavioral outcomes (e.g., excessive exercising) | <b>[Didn't Discuss]</b> |
| Hatoum, Belle<br>2004             | Media consumption, body image                              | The association between media consumption and bodily concerns   | In a sample of 89 college men, they read male-directed magazines           | Reading male-directed magazines was associated with concerns about muscularity and general fitness, beauty product use, and dietary supplement | Men's media exposure was also associated with their standards for women's bodies: the more male-directed magazines a man read and the more movies he saw,                   | Low self-esteem was linked to weight concerns   | <b>[Didn't Discuss]</b> |

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|                          |   |  |  | use to build muscle.   | the more he valued thinness in women.  |  |                         |
| Blond, 2008              | Literature review on exposure to images                   | Review of experimental studies in young men body dissatisfaction correlated with images of attractive muscular men | Impacts on body dissatisfaction were evaluated by calculating and analyzing effect sizes from 15 studies | Effect sizes indicated that exposure to images of idealized male bodies has a small, but statistically significant negative impact on men's body dissatisfaction   | 3 studies suggest that young men who are dissatisfied with their bodies are at increased risk for negative self-evaluations when exposed to idealized images | Research in other cultures to establish if men's body dissatisfaction is generally affected by idealized images or if this is a phenomenon restricted to certain societies | <b>[Didn't Discuss]</b> |
| Dittmar, 2009            | Body image and negative exposure effect                   | Identifying diverse factors that make individuals more or less vulnerable to body perfect ideals in media          | Critical analysis of the evidence base for a causal link between media and body image                    | It presents new findings which support a qualified and complex picture of media effects or influences, highlighting the importance not only of individual differences, but also psychological processes, related to self and identity. |  |  | <b>[Didn't Discuss]</b> |
| Smink, Hoeken, Hoek 2012 | Eating Disorder incidence, prevalence, and mortality rate | Review on the literature of the incidence, prevalence, and mortality   | Used Medline/Pub med, Embase, and PsycINFO databases   | The occurrence of bulimia nervosa might have decreased   | All eating disorders have an elevated mortality risk; anorexia   | Research in diverse, marginalized communities  | <b>[Didn't Discuss]</b> |

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|   |                          | rates of eating disorders   | using several key terms relating to eating disorders and epidemiology   | since the early nineties of the last century.   | nervosa the most striking. Compared with the other eating disorders, binge eating disorder is more common among males and older individuals  |  |   |
| Strother, Lemberg, Stanford, Tuberville, 2012 | Eating disorders in men  | Underdiagnosis, undertreatment, and misunderstandings of eating disorders in men              | Provides a survey of eating disorders in men, highlights the dramatic rise in eating disorders, identifies issues specific to males | Men with eating disorders are currently underdiagnosed, undertreated, and misunderstood by many clinicians who encounter them | Currently, most body image/dissatisfaction assessments tend to place emphasis on feminine ideals and focus on areas of importance for females; as a result, there is an invalid approximation of body image dissatisfaction levels in males due to traditional focus on weight | Further evaluation of the areas of concern for males would likely improve the validity and effectiveness of body image assessment scales for men | Promotion of awareness of these issues is a crucial aspect to advance this field; as awareness may, in turn, promote environments in which men are able to talk about their food and body issues. |
| Eisenberg, Nicklett, Roeder, Kirz<br><br>2011 | Eating disorder symptoms | Examining the prevalence, correlation, persistence, and treatment-seeking related to symptoms | Eating disorder symptoms were measured using the SCOFF screen and adjusted for  | 56% students completed the baseline survey. Among undergraduates, the prevalence of positive                                  | Symptoms of Eds were prevalent and persistent among college students in this study   | Brief screens can identify a large number of students with untreated eating disorders  | <b>[Didn't Discuss]</b>   |

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|                                |  | of eating disorders in college students   | nonresponse using administrative data and a nonresponse survey   | screens was 13.5% for women and 3.6% for men.   |   |   |                         |
| Cash, Theriault, Annis<br>2004 | Body image in an interpersonal context: adult attachment, intimacy fears, and social anxiety | Examine the relationships of specific faces of the multidimensional body image construct to interpersonal anxiety and adult attachment processes for both sexes       | College students completed standardized assessments of dimensions of body image as well as social-evaluative anxiety, fear of romantic intimacy, general adult attachment, and romantic attachment | Significant associations of body image evaluation, investment, and affect with social-evaluative anxiety for both sexes                         | Greater body image dysfunction was linked to less secure general attachment   | the application of interpersonal therapy to body image problems warrants study, given its explicit focus on interpersonal relationships and experiences | <b>[Didn't Discuss]</b> |
| Diggan, McCreary,<br>2004      | Body image, eating disorders, muscularity  | Examined the relationship between consumption of muscle and fitness magazines and/or various indices of pornography and body satisfaction in gay and heterosexual men | Participants completed body satisfaction questionnaires that addressed maladaptive eating attitudes, the drive for muscularity, and social physique anxiety  | Viewing and purchasing muscle and fitness magazines correlated positively with levels of body dissatisfaction for both gay and heterosexual men | As well, the results indicate that gay men are more concerned with thinness than are heterosexual men, as reported by scores on the EAT. On average, non-heterosexuals scored much higher than heterosexuals, which indicated | A larger sample size with a diverse population  | <b>[Didn't Discuss]</b> |

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|  |  |   |  |   | poorer eating attitudes and a greater desire to be thin.   |  |                         |
| Berg, Paxton, Keery, Wall, Guo, Neumark-Sztainer, 2007 | Body dissatisfaction and body comparison | Examined the role of media body comparison as a mediator of the relationships between psychological factors and sociocultural pressures to be thin and body dissatisfaction in both females and males | Participants from diverse background completed a self-report questionnaire. Path analysis was used to test a cross-sectional model in which media body comparison mediated the impact of self-esteem, depressive mood, parent dieting environment, friend dieting, TV exposure, magazine message exposure, weight teasing and body mass index (BMI) on body dissatisfaction. | In females, media body comparison partially or fully mediated relationships between self-esteem, depressive mood, friend dieting, magazine message exposure and BMI, and body dissatisfaction. In males, media body comparison was not a significant predictor of body dissatisfaction. | the present research provides a platform from which to further explore the nature of body comparison in young adults, especially in males. | The need to further examine processes that are involved in the development of body dissatisfaction in males. | <b>[Didn't Discuss]</b> |

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| Olivardia, Pope Jr., Borowiecki III, Cohane, 2004 | Muscularity, self-esteem, depression, eating disorder symptoms | Examined body image and associated psychological traits in college men       | The comprehensive battery of measures included a novel computerized test of body image perception, the Somatomorphic Matrix, in which subjects could navigate through a range of body images, spanning a wide range of body fat and muscularity, to answer various questions posed by the computer. | contemporarily American men display substantial body dissatisfaction and that this dissatisfaction is closely associated with depression, measures of eating pathology, use of performance-enhancing substances, and low self-esteem. | The SMM generally confirmed the hypotheses that American college men would exhibit substantial levels of body dissatisfaction. As predicted, the men perceived themselves to be slightly fatter than their actual body fat measurement, although, contrary to prediction, the men perceived themselves to be slightly more muscular than their measured muscularity. | there is a large and perhaps widening gulf between body reality and body ideal in contemporary young American men.     | <b>[Didn't Discuss]</b> |
| Holland, Tiggerman, 2015                          | Body image and disordered eating                               | Literature review on mass media effects on body image and disordered eating. | A systematic search for peer-reviewed articles on SNS use and body image and eating disorders resulted in 20 studies meeting specific   | As a whole, these articles demonstrated that use of SNSs is associated with body image and disordered eating. Specific SNS  | A small number of studies also addressed underlying processes and found that appearance-based social comparison mediated the   | although there is a good deal of correlational research supporting the maladaptive effect of SNS use on body image and | <b>[Didn't Discuss]</b> |

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|  |   |   | inclusion criteria.   | activities, such as viewing and uploading photos and seeking negative feedback via status updates, were identified as particularly problematic.   | relationship between SNS use and body image and eating concerns. Gender was not found to be a moderating factor.   | disordered eating, more longitudinal and experimental studies are needed.   |                         |
| Sidani, Shensa, Hoffman, Hanmer, Primack, 2016 | Eating disorder etiology and social media usage | Examine the association between social media use and eating concerns in a large, nationally representative sample of young adults | Cross-sectional survey w/ 1,765 young adults aged 19 to 32 years. Random selection. | participants in the highest quartiles for social media volume and frequency had significantly greater odds of having eating concerns (adjusted odds ratio 2.18, 95% CI 1.50 to 3.17 and adjusted odds ratio 2.55, 95% CI 1.72 to 3.78, respectively). There were significant positive overall linear associations between the social media use variables and eating concerns ( $P < 0.001$ ). | Results indicate a strong and consistent assoc. between social media use and eating concerns in a nationally rep. sample of young adults; it was apparent whether social media use was measured as volume or frequency | Examine more closely the influence of specific characteristics of social media use, including content-related and contextual features | <b>[Didn't Discuss]</b> |

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| Hunt, Rothman, 2005                 | Eating disorders, mental models                        | Assessment of mental models of anorexia/bulimia nervosa   | 106 students from lower-level psych classes were sampled, though majority weren't psych majors. They were recruited for a study on health beliefs, and randomly assigned to complete a questionnaire assessing their knowledge and beliefs about either AN or BN in small group sessions | The analytic approach tested for differences in responses as a function of eating disorder and participant gender; used ANOVA to examine the use of different types of info and log-linear analysis to evaluate the use of specific categorical items | Vast majority of students believed that the primary characteristic of AN is restrained eating and the primary of BN is cyclic eating. They believed AN and BN are more likely to stem from psychological or social factors than from bio factors. | Research in diverse, marginalized populations that typically aren't in research | Indicate a need for additional education on eating disorders, particularly among populations likely to encounter them (high school, college). |
| Gigi, Bachner-Melman, Lev-Ari, 2016 | Disordered eating, social messages, sexual orientation | Hypothesized that disturbed body image and eating attitudes in gay and bisexual men would be partially explained by susceptibility to social messages | 260 men bet. 18-35 y/o participated in the study. They completed measures of disordered eating, body image, internalization of attitudes toward appearance, and concern for appropriateness.   | Gay and bisexual men reported higher levels of disordered eating and dissatisfaction w/ their bodies than het. Men. Gay and bi men were more susceptible than het men to social messages, and reported being significantly more                       | Results provide support for the hypothesis that sensitivity to social messages about appearance explains, partially, the link bet sexual orientation and disordered eating in men   | <b>[Didn't Discuss]</b>   | <b>[Didn't Discuss]</b>   |

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|                               |   |  |   | influenced than het men by ads focusing on physical appearance   |  |  |                         |
| Kim, Chock, 2016              | Social comparison theory                        | Examine the relationships between young men and women's social media use and body image attitudes            | Cross-sectional survey where 186 participants were randomly sampled.  | Results of this study indicated that simple exposure (time spent on social media) was not related to body image concerns. Online social grooming behaviors, such as viewing and commenting on peer's profiles, however, were significantly correlated with the drive for thinness for both female and male participants. | The results of this study contribute the relatively small number of studies examining the relationships between social media and body image concerns. Given the growing use of social media sites, particularly by young adults, it has become increasingly important to develop an understanding of how these relationships work. | Future research needs to investigate the differences between these two types of body image concerns and their relationship to social grooming behaviors. | <b>[Didn't Discuss]</b> |
| Bardone-Cone, Cass, Ford 2008 | Biopsychosocial factors in body dissatisfaction | This study examined biopsychosocial factors related to body dissatisfaction in young men within multivariate | Male (n = 111) and female (n = 236) undergraduate students filled out self-report questionnaires assessing body mass index (BMI), | Perceived pressure from the media was consistently related to body dissatisfaction in men whereas multiple   | Findings indicate that applying a biopsychosocial framework to the study of body dissatisfaction in men is useful and  | <b>[Didn't Discuss]</b>  | <b>[Didn't Discuss]</b> |

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|                           |   | and moderator contexts  | media influence, a history of weight-related teasing, and socially prescribed perfectionism, along with various indices of body dissatisfaction. | biopsychosocial variables accounted for body dissatisfaction in women. Socially prescribed perfectionism and a history of weight teasing each moderated the relationship between BMI and male body dissatisfaction, identifying men low in body dissatisfaction. | suggest the need for including other factors, such as male peers and sports involvement, in understanding contributors to male body image.                |   |                         |
| Fardouly, Vartanian, 2015 | Literary review on social media usage and body image concerns | An overview of research on social media and body image concerns in young adults | Correlational, experimental, appearance comparisons, and longitudinal studies were analyzed  | Correlational studies consistently show that social media usage (particularly Facebook) is associated with body image concerns among young women and men, and longitudinal studies suggest that this association may strengthen over time.                       | Further longitudinal and experimental research is needed to determine which aspects of social media are most detrimental to people's body image concerns. | Diverse population and on other SNS platforms (i.e., Instagram) | <b>[Didn't Discuss]</b> |

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|                                       |  |   |   | Furthermore, appearance comparisons play a role in the relationship between social media and body image. Experimental studies, however, suggest that brief exposure to one's own Facebook account does not negatively impact young women's appearance concerns. |  |  |                         |
| Griffiths, Murray, Krug, McLean, 2018 | Social media, Body image, Eating disorder symptoms | If social media's association with body image dissatisfaction and eating disorder symptoms can be generalized to minority men | A nationwide sample of 2,733 sexual minority men completed an online survey advertised to Australian and New Zealand users of a popular dating app. Participants answered questions about how frequently they used 11 different social media platforms in | A pattern of small-sized and positive associations emerged between social media use and body dissatisfaction, eating disorder symptoms, and thoughts about using anabolic steroids. Facebook, Instagram, and Snapchat evidenced                                 | Previously documented associations of social media use with body dissatisfaction and related variables among women and girls appear to generalize to sexual minority men. Social media platforms that more centrally involve imagery may | Additional research with sexual minority men is needed to elucidate the distinctions between adaptive and maladaptive social media use in the context of body dissatisfaction, eating disorders, and anabolic steroid use. | <b>[Didn't Discuss]</b> |

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|                |   |   | <p>addition to questions about their dating app use, body image, eating disorder symptoms, and anabolic steroids. Facebook, Youtube, Instagram, and Snapchat were the most frequently used social media platforms</p> | <p>the strongest associations. The associations of social media use with both muscularity dissatisfaction and eating disorder symptoms were stronger for image-centric social media platforms (e.g., Instagram) than non-image centric platforms (e.g., Wordpress); no differences were observed for body fat dissatisfaction, height dissatisfaction, or thoughts about using anabolic steroids.</p> | <p>be of greater concern than non image centric platforms.</p>   |  |                         |
| Sanftner, 2011 | Psychosocial risks for eating disorders | This study examined health-related quality of life in relation to psychosocial variables associated | A sample of 266 women and 114 men from a Midwestern university completed questionnaire s asking about   | Results revealed that women reported significantly higher levels of psychosocial risk variables   | comparisons between a generic and an eating disorder-specific quality of life scale revealed that the eating | future research exploring the relationship between body dissatisfaction and quality of life more | <b>[Didn't Discuss]</b> |

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|  |                         | with eating disorders.   | both generic and eating disorder-specific health-related quality of life, as well as body dissatisfaction, objectified body consciousness, internalization of sociocultural ideals, and restrained eating. | than men. In addition, for women, all but one of the psychosocial risk variables was found to be associated with lower quality of life.   | disorder-specific scale had higher sensitivity for use in a college student population. These results suggest that women who are at higher risk for developing an eating disorder suffer from lower quality of life, and that eating disorder-specific quality of life scales are useful in understanding women and men in a general population. | thoroughly is needed.   |                                     |
| Murray, Nagata, Griffiths, Calzo, Brown, Mitchison, Blashill, Mond<br>2017 | Eating disorders in men | Provides an overview of the history of male EDs and synthesizes current evidence relating to the unique characteristics of male presentations across the diagnostic spectrum of disordered eating. | <i>[Didn't really say their methodology]</i>   | Further, males are significantly more likely to be diagnosed with a residual "other ED" diagnosis, further demonstrating the lack of applicability of the current classifications schemes to males. | The perception that EDs occur solely or primarily among females, and the consequent exclusion of males from ED research for much of the past five decades has rendered key gaps in our understanding   | <b>[Didn't Discuss]</b> | Having a better diagnostic criteria |

|                       |                        |  |  |  |   |  |                         |
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|                       |                        |  |  |  | g of the clinical presentation and management of ED in males, along with gaps in our understanding of issues relating to classification and assessment. |  |                         |
| Saiphoo, Vahedi, 2019 | Body image             | researchers have started to investigate the relationship between social media use and various psychological wellbeing variables. | Quantitative review of cross sectional research, An analysis of sixty-three independent samples (N = 36,552) | using a random-effects model revealed an overall effect size of $r = 0.169$ , CI [0.131, 0.206], indicating a small, positive, and significant relationship between social media use and body image disturbance. | Type of social media use, body image dimension, country grouping, and age were all found to be significant moderators of this relationship.             | <b>[Didn't Discuss]</b>  | <b>[Didn't Discuss]</b> |
| Kukk, Akkerman, 2017  | Emotions, binge eating | Investigated the associations between emotional fluctuations and regulation difficulties in predicting binge eating and          | Experience sampling method with 97 women and 61 men  | Among women, fluctuations in negative emotion, emotion regulation difficulties, etc., predicted binge eating. Among men, trait   | Overeating did not associate with aforementioned aspects. Results suggest that fluctuations in negative emotions should be studied in the               | A longer period of time to do the study, possibly with less methods that disrupt daily life. | <b>[Didn't Discuss]</b> |

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|                                   |  | overeating episodes   |   | impulsivity and fluctuations in negative emotion predicted binge eating  | context of emotion regulation difficulties.   |  |  |
| Carper, Negy, Tantleff-Dunn, 2010 | Media influence, body image, eating concerns, sexual orientation | Explored the relation between sexual orientation, media usage, eating and body image concerns | 78 college men completed measures of sexual orientation, eating disorder symptoms, appearance-related anxiety, perceived importance of physical attractiveness, perceptions of media influence, and media exposure. | Gay men scored significantly higher on drive for thinness, body dissatisfaction, and body image-related anxiety than their straight counterparts. Additionally, perceptions of media influence were higher for gay men, and significantly mediated the relation between sexual orientation and eating and body image concerns. | sexual orientation also moderated the relation between perceived media influence and beliefs regarding the importance of physical attractiveness, as this relation was significant for gay men, but not straight men. The current findings suggest that gay men's increased vulnerability to media influence partially accounts for the relatively high rate of eating pathology observed in this population. | Samples from men in racially diverse communities | Prevention program/services for those within the LGBTQ/ other vulnerable communities |
| Schoen, Brock, Hannon,            | Gender bias, Eating disorders                                    | Examined perceptions of eating  | 237 undergraduate students went   | Multilevel modeling showed that  | Gender bias about eating disorders  | <b>[Didn't Discuss]</b>                          | Eating disorder outreach and   |

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| 2019                      |                                   | disorders in their peers                    | through vignettes                                      | female characters received stronger endorsements of eating pathology than male characters for similar symptom presentations . College men were more likely than college women to rate female characters as having eating disorders.   | affected men and women differently in this study  |   | prevention work on college campuses needs to be both gender-inclusive and gender-sensitive.  |
| Stanford, Lemberg<br>2012 | eating disorder etiology/symptoms | examining experiences with help-seeking men | a qualitative interview study with 78 men and 30 women | A binary logistical regression was used to investigate whether the Eating Disorder Assessment for Men (EDAM) total score was able to discriminate between men with eating disorders and men without eating disorders. The EDAM total score was developed to predict one's risk of | To ensure proper diagnosis and to facilitate more efficacious treatment of men, the present study examined the preliminary Eating Disorder Assessment for Men (EDAM) to determine the extent to which the EDAM predicted eating disorders in males and to evaluate the factors most | This instrument has potential to become a valid eating disorder tool for males; however, to be effective, it requires further research. | Further development of the EDAM and continued research on men with eating disorders will help to ensure proper assessment and diagnosis, and will lead to more comprehensive and efficacious treatment of men with eating disorders. |

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|   |                         |   |   | <p>having an eating disorder. Logistic regression was conducted to assess if it could significantly predict an eating disorder in males. The omnibus test of model coefficients resulted in <math>\chi^2 = 36.026</math>, <math>df = 1</math>, <math>N = 78</math>, <math>p &lt; .001</math>. The model was significant 432 S. C. Stanford and R. Lemberg at predicting an eating disorder correctly at an overall percentage of 82.1% of the men.</p> | <p>specific to men with eating disorders.</p>  |  |  |
| <p>Robinson, Mountford, Sperlinger 2012</p> | <p>eating disorders</p> | <p>aimed to explore experiences of men currently using eating disorder services</p> | <p>Eight men from two eating disorder services were interviewed about their experiences of seeking and receiving treatment. Two</p> | <p>Two superordinate themes emerged from Interpretative Phenomenological Analysis: (1) difficulty seeing self as having an eating</p>  | <p>Difficulty admitting the eating disorder may link with eating disorder psychopathology as well as gender-specific issues.</p> | <p>The results reinforced the importance of individual formulation when considering a male service-user's maleness and its impact on</p> | <p>The findings also demonstrate the need to raise awareness of EDs in men: among professionals to facilitate detection, within society to</p> |

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|                     |   |  |   | disorder; and (2) experiences of treatment: how important is gender? The underlying themes varied in their specificity to men, with some echoing findings from the female eating disorder literature   |   | his ED presentation and treatment preferences  | decrease men's fears of a negative response and among the men themselves to assist in the process of admitting that there is a problem.  |
| Hunt, Räisänen 2014 | gender constructions, eating disorder etiology/symptoms | To understand how young men recognise eating disorder (ED) symptoms and decide to seek help, and to examine their experiences of initial contacts with primary care. | 10 men aged 16–25 years with various EDs including anorexia nervosa and bulimia nervosa | The widespread perception of EDs as uniquely or predominantly a female problem led to an initial failure by young men to recognise their behaviours as symptoms of an ED. Many presented late in their illness trajectory when ED behaviours and symptoms were entrenched, and some felt | Although increasingly common in young men, widespread cultural constructions of EDs as a 'women's illness' mean that men may fail to recognise ED symptoms until disordered behaviours become entrenched and less tractable to intervention | Until information resources are made more appropriate for men with EDs, health service providers need to be particularly sensitive to men's needs in relation to an illness so strongly associated with women. Raising awareness of EDs more widely in society is also crucial to help men (and women) | Findings from this study highlight these stark differences between men and women and emphasize the need to cultivate a clinical community willing to advocate for accessible, gender-specific eating disorder treatment for men. |

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|  |  |  |  | that opportunities to recognise their illness had been missed because of others' lack of awareness of EDs in men. |  | to recognise and seek help before their symptoms and behaviours become intractable. |  |
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