

# **Emerging trends in eating disorders among sexual** and gender minorities

Jason M. Nagata<sup>a</sup>, Kyle T. Ganson<sup>b</sup>, and S. Bryn Austin<sup>c,d</sup>

## **Purpose of review**

To review the recent literature on eating disorders, disordered eating behaviors (DEB), and body image dissatisfaction among sexual and gender minority populations, including, but not limited to, gay, lesbian, bisexual, and transgender people.

#### Recent findings

Overall, eating disorders, DEB, and body dissatisfaction are common among sexual and gender minority populations. Lifetime prevalence for anorexia nervosa (1.7%), bulimia nervosa (1.3%), and binge-eating disorder (2.2%) diagnoses are higher among sexual minority adults compared with cisgender heterosexual adults in the United States. Lifetime prevalence of eating disorders by self-report of a healthcare provider's diagnosis are 10.5% for transgender men and 8.1% for transgender women in the United States, including anorexia nervosa (4.2 and 4.1%) and bulimia nervosa (3.2 and 2.9%), respectively. DEB may be perpetuated by minority stress and discrimination experienced by these individuals. Body dissatisfaction may be a core stressor experienced by transgender people; gender dysphoria treatment has been shown to increase body satisfaction. A particular clinical challenge in caring for transgender youth with eating disorders is the standard use of growth charts based on sex.

#### Summary

Novel research demonstrates that sexual and gender minorities with eating disorders have unique concerns with regards to disordered eating and body image.

#### Keywords

anorexia nervosa, bulimia nervosa, eating disorders, LGBTQ

#### INTRODUCTION

The purpose of this article is to review recent literature on eating disorders and disordered eating behaviors (DEB) among sexual and gender minority populations. We first review literature in sexual minorities (e.g., gay, lesbian, bisexual), and then in gender minorities (e.g., transgender, gender nonconforming). Eating disorders can affect people of all sexual orientations and gender identities. Eating disorders diagnoses include, but are not limited to, anorexia nervosa, atypical anorexia nervosa, bulimia nervosa, binge eating disorder, other specified feeding or eating disorder, and avoidant/restrictive food intake disorder, according to the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) [1].

Table 1 describes key terms used in this article. Sexual orientation is a multidimensional construct made up of at least three dimensions: sexual identity, attractions to the same or other sexes, and sex/gender of sexual partners [2,3]. A sexual minority is a

person whose sexual orientation differs from the majority of the surrounding society, and can include gay, lesbian, and bisexual identities. Transgender people have a gender identity that differs from their sex assigned at birth, whereas cisgender people have a gender identity or gender expression that matches their sex assigned at birth. For instance, a transgender man identifies and expresses his gender as a

<sup>a</sup>Division of Adolescent and Young Adult Medicine, Department of Pediatrics, University of California, San Francisco, San Francisco, California, USA, <sup>b</sup>Factor-Inwentash Faculty of Social Work, University of Toronto, Toronto, Ontario, Canada, <sup>c</sup>Division of Adolescent and Young Adult Medicine, Boston Children's Hospital and <sup>d</sup>Department of Social and Behavioral Sciences, Harvard T.H. Chan School of Public Health, Boston, Massachusetts, USA

Correspondence to Jason M. Nagata, Division of Adolescent and Young Adult Medicine, Department of Pediatrics, University of California, San Francisco, 550 16th Street, 4th Floor, Box 0110, San Francisco, CA 94158, USA. E-mail: jasonmnagata@gmail.com

**Curr Opin Psychiatry** 2020, 33:562-567

DOI:10.1097/YCO.0000000000000645

# **KEY POINTS**

- Eating disorders, disordered eating behaviors, and body dissatisfaction are more common among sexual minorities compared with heterosexual individuals.
- Body dissatisfaction may be a core stressor experienced by transgender people; gender dysphoria treatment has been shown to increase body satisfaction.
- A particular clinical challenge in caring for transgender youth with eating disorders is the standard use of growth charts based on sex.

man, but was assigned a female sex at birth. A transgender woman identifies and expresses her gender as a woman, but was assigned a male sex at birth [2]. Cisgender refers to an individual whose gender aligns with their sex assigned at birth.

#### **FINDINGS**

# Sexual minority individuals and eating disorders

Results from a recent nationally representative study in the United States shows that sexual minority adults had between two to four times greater odds of experiencing a DSM-5 eating disorder diagnosis of anorexia nervosa, bulimia nervosa, or binge-eating disorder compared with cisgender heterosexual

adults [4\*\*]. This study represents one of the first to specifically investigate lifetime prevalence of DSM-5 eating disorder diagnoses among a nationally representative sample of US adults. Overall, lifetime prevalence for anorexia nervosa (1.7%), bulimia nervosa (1.3%), and binge-eating disorder (2.2%) were higher among sexual minority adults compared with cisgender heterosexual adults [4\*\*]. While this study adds important information about the lifetime prevalence of DSM-5 eating disorder diagnoses among sexual minority adults in the United States, the study was unable to report findings separately by gender. Similarly, another study found that sexual minority young adults had higher odds [1.53, 95% confidence interval (CI) 1.02–2.29] of engaging in unhealthy weight control behaviors (e.g., fasting, skipping meals, vomiting, using laxatives, diuretics, or weight loss pills) than their heterosexual counterparts [5]. The following research provides specific information about eating disorders and body dissatisfaction among sexual minority men and women. When appropriate, we have noted which studies in this section explicitly describe the gender status (e.g., cisgender) of their samples.

# Sexual minority boys and men

Overall, research continues to suggest that gay and bisexual adolescent boys and adult men have a greater prevalence and an increased likelihood of eating disorder behaviors. For example, among a national sample of United States adolescents from the Center for Disease Control and Prevention's

#### Table 1. Key terms

Bisexual/Pansexual: A person emotionally, romantically, or sexually attracted to more than one sex, gender, or gender identity, although not necessarily simultaneously or to the same degree

Cisgender: People whose gender identity aligns with the sex assigned at birth

Gay: A person emotionally, romantically, or sexually attracted to members of the same gender. Lesbian or gay may not be the terms used by many younger people or racial/ethnic minorities

Gender dysphoria: Clinically significant discomfort or distress that a person experiences because of a discrepancy between their gender identity and the sex assigned at birth

Gender expression: The many ways people externally show their gender, or are perceived by others, such as the clothing, haircuts, and activities they choose or mannerisms they may possess

Gender identity: A person's internal sense of being man or boy, woman or girl, or sometimes a blend of both or neither. Gender identity does not necessarily correspond to the sex assigned at birth

Lesbian: A woman who is emotionally, romantically, or sexually attracted to other women

LGBTQ: This abbreviation is often used as a stand-alone term to include all sexual and gender minorities. Literally, it stands for lesbian, gay, bisexual, transgender, and queer

Sex: Classification of people as male, female, or intersex based on combinations of physical characteristics (genitalia, gonads, chromosomes, or sex hormone levels). Sex is independent of gender

Sexual orientation: A multidimensional construct made up of at least three dimensions: sexual identity, attractions to the same or other sexes, and sex/gender of sexual partners. Identity, attractions, and sex/gender of sexual partners are not always concordant

Transgender: When gender identity differs from the sex assigned at birth. Being transgender does not imply any specific sexual orientation

Adapted from [2].

(CDC) Youth Risk Behavior Surveillance System (YRBSS), gay adolescent boys had a greater prevalence of fasting (24.8%), diet pill use (15.4%), purging via vomiting or laxative use (17.3%) during the past 30 days at the time of study, and greater lifetime anabolic-androgenic steroid use (13.1%) compared with adolescents who identified as heterosexual, bisexual, or unsure [6]. These results are similar to a sample of adolescents in Minnesota, where researchers found that gay and bisexual boys reported higher rates and greater odds of fasting or skipping meals to lose weight, using diet pills, speed, or other drugs to lose weight, and vomiting on purpose after eating to lose weight compared with their heterosexual peers across three time points (1998, 2004, and 2010) [7]. Similarly, among a sample of adolescents in Connecticut, gay adolescent boys had nearly six-fold higher odds of fasting, vomiting, or taking diet pills to lose weight compared with their heterosexual peers in adjusted models [8].

Eating disorder behaviors among sexual minority adolescent boys also occur in the United Kingdom. Calzo et al. [9] found that at age 14 years, gay or bisexual boys had greater past-year prevalence of any purging behavior (2.5%), binge eating (7.5%), and any restricting behavior (22.5%) compared with heterosexual boys. Gay or bisexual boys also endorsed greater body dissatisfaction and pressures to increase muscularity [9"]. Lastly, gay or bisexual boys had greater odds (2.67, 95% CI 1.03, 6.92) of engaging in any dieting, while mostly heterosexual boys (those who identify as primarily attracted to the opposite sex, but are also attracted to their own sex) had greater odds of overeating without the loss of control (1.97, 95% CI 1.07, 3.61) and binge eating (2.52, 95% CI 1.02, 6.27), compared with completely heterosexual boys [9"]. This study shows that eating disorder symptoms are already pronounced among sexual minority boys by age 14 years, and that eating disorder symptoms persisted among the sample at age 16 years.

Sexual minority adult men also experience greater rates of eating disorder behaviors and body dissatisfaction compared with heterosexual men. For example, recent research has shown that cisgender gay men in the United States score relatively high on the Eating Disorder Examination Questionnaire (EDE-Q), a commonly used eating disorder measure. Specifically, 6% of cisgender gay men in the United States scored in the clinically significant range on the EDE-Q restraint subscore, 2% on the eating concern subscore, 11% on the weight concern subscore, 21% on the shape concern subscore, and 4% on the EDE-Q global score [10\*\*]. Importantly, any occurrence of eating disorder behaviors

and attitudes were relatively common among the sample, including 20% engaging in dietary restraint, 11% endorsing objective binge episodes, and 10% engaging in excessive exercise [10<sup>••</sup>]. Among a sample of undergraduate college students, Von Schell et al. [11] found that 28% of gay college men reported subclinical levels of objective binge eating, 8% reported self-induced vomiting, and 21.5 and 14% reported subclinical and clinical excessive exercising, respectively, over the past 28 days. Bisexual college men also experienced similarly high rates of clinical and subclinical eating disorder behaviors, with 10.5% reporting subclinical levels of selfinduced vomiting, 15% reporting clinical levels of excessive exercising, and 30% engaging in objective binge eating behaviors over the past 28 days [11].

It is important to note that eating disorder behaviors among sexual minority men do not occur in isolation. Bell *et al.* [12\*] found that depression, perceived stigma associated with sexual orientation status, and lower self-compassion predicted a positive eating disorder screen, as measured by the Eating Disorder Screen for Primary Care, among cisgender gay men. Furthermore, gay men with eating disorders also report high psychiatric comorbidity, including depression [13]. This research suggests that, among sexual minority men, psychiatric comorbidity may complicate treatment and prognosis.

#### Sexual minority girls and women

Adolescent girls and adult women who identify as lesbian or bisexual are also at risk of eating disorder behaviors. Among a national sample of adolescent girls in the United States from the CDC's YRBSS, lesbian adolescent girls had a greater prevalence of using diet pills (15.3%) and purging via vomiting or laxative use (16.7%) during the past 30 days at the time of the study, and had a greater prevalence of lifetime use of anabolic–androgenic steroids (9.3%) compared with adolescent girls who identify as heterosexual, bisexual, or are unsure. Bisexual adolescent girls had the greatest prevalence of fasting during the past 30 days at the time of study (28.0%) compared with heterosexual, lesbian, and unsure girls [6]. Mostly heterosexual adolescent girls had higher odds (odds ratio 1.76, 95% CI 1.04-2.98) of engaging in muscularity-oriented DEB than exclusively heterosexual adolescent girls [14].

Similar results have been shown in studies of single states in the United States. For example, among adolescent girls in Minnesota, bisexual girls higher high rates of fasting or skipping meals to lose weight, using diet pills, speed, or other drugs to lose weight, or vomiting on purpose after eating to lose weight compared with their heterosexual peers [7].

Bisexual adolescent girls also had greater odds of vomiting on purpose after eating to lose weight compared with heterosexual girls across three time points (1998, 2004, and 2010) [7]. Similar results have been shown among adolescent girls in the United Kingdom. At age 14 years, sexual minority girls had greater past-year prevalence of eating disorder behaviors compared with completely heterosexual girls. Mostly heterosexual (4.5%) and lesbian or bisexual (4%) adolescent girls engaged in any purging behaviors, whereas 17% of lesbian or bisexual girls engaged in binge eating [9]. At age 14 years, mostly heterosexual (49%) and lesbian or bisexual (41%) girls engaged in any dieting. As with sexual minority adolescent boys, eating disorder symptoms persisted at age 16 years [9].

Among a sample of Black-identified and whiteidentified young adult women in the United States from the Pittsburg Girls Study, a longitudinal cohort study starting in 2000–2001, Jones et al. [15] found that women who identify as a sexual minority reported greater body dissatisfaction and had a greater eating pathology as measured by the Eating Attitudes Test (EAT-26) compared with heterosexual women. Results also showed that white sexual minority young adult women had a greater eating disorder symptoms compared with Black sexual minority young adult women, as well as both white and Black heterosexual women [15]. Among a sample of undergraduate college students, Von Schell et al. [11] found that lesbian and bisexual women have high rates of subclinical and clinical DEB. For example, among lesbian women, 15% reported clinical levels of objective binge eating, 15% reported subclinical levels of self-induced vomiting, 10% reported clinical levels of self-induced vomiting, and 17.5% reported subclinical levels of excessive exercising and laxative misuse over the past 28 days. Among bisexual women, 12% reported clinical levels of objective binge eating and 17.5% reported both clinical and subclinical excessive exercising over the past 28 days [11].

Among sexual minority women, the high prevalence of eating disorder behaviors continues into adulthood. Among a sample of 267 sexual and gender minority United States adults, cisgender lesbian women had a greater likelihood of a positive eating disorder screen, as measured by the Eating Disorder Screen for Primary Care, compared with cisgender gay men [12"]. Importantly, depression was a significant predictor of a positive eating disorder screen among lesbian women [12"]. Further, cisgender lesbian women reported dietary restriction (13.5%), objective binge episodes (8.7%), and excessive exercise (5.3%) over the past 28 days [16].

## **Contributing factors**

Minority stress theory has been used to explain the disproportionate rates of eating disorder behaviors and body dissatisfaction among sexual minorities compared with heterosexual individuals. In a systematic review, Mason et al. [17] show that experiences related to gender and sexual orientation, such as minority stress, heterosexism, and sexual objectification, may lead to eating disorder behaviors and body dissatisfaction among sexual minority (e.g., lesbian and bisexual identified) women. Similarly, among gay men, perceived stigma, a major component of minority stress theory, is positively associated with eating disorder behaviors [12<sup>\*</sup>]. Furthermore, sexual minority adult men and women who have experienced discrimination based on their weight at any point in their life had a greater risk of eating disorder behaviors compared with those who did not experience weight discrimination [18]. It appears that the social experiences of sexual minorities are a contributor to eating disorder behaviors and body dissatisfaction among this population.

## Transgender people

Although transgender people are underrepresented in eating disorder research, a small but growing literature indicates that transgender people may uniquely experience body image dissatisfaction and eating disorders [19]. Gender norms and sociocultural body image ideals of femininity and masculinity can influence eating disorders among transgender people in unique ways [20]. Traditional masculine body ideals are associated with muscularity whereas traditional feminine body image ideals are associated with thinness [21]. A perceived mismatch with one's own body and sociocultural body ideals may lead to body dissatisfaction. Body dissatisfaction may be a core stressor experienced by transgender people; gender dysphoria treatment has been shown to increase body satisfaction [22]. DEB in transgender men and transmasculine individuals may be partially due to the desire to suppress menstruation and secondary female sex characteristics in gender-affirmed transgender men [23]. Specific social standards, such as thinness, may lead to a drive for weight loss in transgender women, which may also manifest in eating disorders pathology [24]. In parallel, transgender women may use weight loss to repress secondary male characteristics [22]. Furthermore, social stigma and minimal social support may exacerbate DEB for transgender people [25]. Disordered eating in transgender people may also be related to objectification theory, which states that one internalizes an observer's perspective as a primary view of one's physical self [25]. Finally, gender minority stress, or discrimination targeting gender minority status, may contribute to disordered eating among transgender people [25].

Risk factors for eating disorders among transgender people include high body dissatisfaction, perfectionism, anxiety symptoms, and low self-esteem [22]. Transgender people with eating disorders may present clinically with complex psychiatric comorbidity and an increased risk for self-harm [26]. A particular clinical challenge in caring for transgender youth with eating disorders is the standard use of growth curves based on sex; providers may consider consulting growth curves for both the young person's birth-assigned sex and gender identity to establish appropriate treatment goal weights [26,27<sup>\*</sup>]. Finally, though one Massachusetts-based study found that gender nonconforming individuals assigned a female sex at birth appear to have a heightened lifetime risk of eating disorders relative to transgender women [24], there is limited clinical guidance for eating disorders in this understudied population.

## Transgender men

Transgender men may desire a masculine-appearing build and engage in muscle-enhancing behaviors, such as bodybuilding [28]. Transgender men may experience dissatisfaction with several body features such as genitalia, body hair, body shape, facial features, and extremities [29]. Young adult transgender men have been shown to report high rates of binge eating (35%), fasting (34%), and vomiting (7%) [30]. Transmasculine individuals (those identifying among the masculine spectrum and assigned female sex at birth) demonstrated clinically significant eating disorder levels on the EAT-26 [31]. A US-based study that administered the EDE-Q to 312 adult transgender men found that they reported any occurrence of dietary restraint (25.0%), objective binge episodes (11.2%), excessive exercise (8.0%), and self-induced vomiting (1.6%) [32]. Among transgender men, the highest of the four EDE-Q subscales were shape concerns and weight concerns [32]. In this sample, 10.6% of transgender men reported being told by a healthcare provider they had an eating disorder, including anorexia nervosa (4.2%) and bulimia nervosa (3.2%) [32].

#### Transgender women

A US-based study administering the EDE-Q to 172 transgender women found that they reported any occurrence of dietary restraint (27.9%), objective binge episodes (12.8%), excessive exercise (8.1%), and self-induced vomiting (1.7%) [32]. Among transgender women, the highest of the four EDE-

Q subscales were shape concerns and weight concerns [32]. In this sample, 8.1% of transgender women reported being told by a healthcare provider they had an eating disorder, including anorexia nervosa (4.1%) and bulimia nervosa (2.9%) [32].

#### CONCLUSION

Novel research demonstrates that sexual and gender minorities with eating disorders have unique concerns with regards to disordered eating and body image. Research informing clinical guidance is especially important to ensure that sexual and gender minorities are receiving adequate and affirming treatment. Current treatment protocols should be updated to be more inclusive (e.g., sexbased growth charts may need adjusting to apply to transgender individuals). Future research could develop individualized screening, treatment guidance, and interventions to improve health outcomes in underserved sexual and gender minority populations, explore multiple dimensions of sexual orientation (e.g., attraction and gender/sex of partners), as well as address the uniqueness of intersectional identities among these populations.

## **Acknowledgements**

*The authors thank Sam Benabou for editorial assistance.* 

#### Financial support and sponsorship

J.M.N. was a participant in the Pediatric Scientist Development Program, funded by the American Academy of Pediatrics and the American Pediatric Society, and a recipient of the American Heart Association Career Development Award (CDA34760281). S.B.A. is supported by training grants T71-MC-00009 and T76-MC-00001 from the Maternal and Child Health Bureau, Health Resources and Services Administration, US Department of Health and Human Services.

#### **Conflicts of interest**

There are no conflicts of interest.

# REFERENCES AND RECOMMENDED READING

Papers of particular interest, published within the annual period of review, have been highlighted as:

- of special interest
- ■■ of outstanding interest
- American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders. 5th ed. Arlington, VA: American Psychiatric Publishing; 2013.
- Hunt L, Vennat M, Waters JH. Health and wellness for LGBTQ. Advances in Pediatrics 2018; 65:41 – 54.
- 3. Institute of Medicine. The health of lesbian, gay, bisexual, and transgender people: building a foundation for better understanding. Washington, DC: The National Academies Press; 2011; Available from: https://www.nap.edu/catalog/13128/the-health-of-lesbian-gay-bisexual-and-transgender-people-building. [Accessed Aug 19, 2020]

4. Kamody RC, Grilo CM, Udo T. Disparities in DSM-5 defined eating disorders by sexual orientation among U.S. adults. Int J Eat Disord 2020; 53:278–287.

The study provides lifetime prevalence rates of eating disorder diagnoses by sexual orientation among a nationally representative sample of US adults.

- Nagata JM, Garber AK, Tabler JL, et al. Prevalence and correlates of disordered eating behaviors among young adults with overweight or obesity. J Gen Intern Med 2018; 33:1337–1343.
- Calzo JP, Turner BC, Marro R, Phillips GL. Alcohol use and disordered eating in a US sample of heterosexual and sexual minority adolescents. J Am Acad Child Adolesc Psychiatry 2019; 58:200–210.
- Watson RJ, Adjei J, Saewyc E, et al. Trends and disparities in disordered eating among heterosexual and sexual minority adolescents. Int J Eat Disord 2017; 50:22–31.
- Zullig KJ, Matthews-Ewald MR, Valois RF. Relationship between disordered eating and self-identified sexual minority youth in a sample of public high school adolescents. Eat Weight Disord 2019; 24:565–573.
- 9. Calzo JP, Austin SB, Micali N. Sexual orientation disparities in eating disorder symptoms among adolescent boys and girls in the UK. Eur Child Adolesc

Psychiatry 2018; 27:1483-1490.
The study fills a knowledge gap on the associations between eating disorder symptoms and sexual orientation at two time points among adolescents in the United Kingdom.

- Nagata JM, Capriotti MR, Murray SB, et al. Community norms for the Eating
   Disorder Examination Questionnaire among cisgender gay men. Eur Eat
- Disord Rev J Eat Disord Assoc 2020; 28:92–101.

  The study provides norm scores on the commonly used Eating Disorder Examination Questionnaire among a community sample of gay men. This allows clinicians and researchers to effectively measure eating disorders among gay men.
- Von Schell A, Ohrt TK, Bruening AB, Perez M. Rates of disordered eating behaviors across sexual minority undergraduate men and women. Psychol Sex Orientat Gend Divers 2018; 5:352–359.
- 12. Bell K, Rieger E, Hirsch JK. Eating disorder symptoms and proneness in gay
   men, lesbian women, and transgender and nonconforming adults: compara-
- tive levels and a proposed mediational model. Front Psychol 2019; 9:1–13. The study provides important new knowledge on the risk and protective factors

The study provides important new knowledge on the risk and protective factors associated with eating disorder symptoms among gay men, lesbian women, and transgender and nonconforming adults.

- Tabler JT, Schmitz R, Geist C, Nagata JM. Does it get better? Change in depressive symptoms from late-adolescence to early-adulthood, disordered eating behaviors, and sexual identity. J Gay Lesbian Ment Health 2019; 23:221-243.
- Nagata JM, Murray SB, Bibbins-Domingo K, et al. Predictors of muscularityoriented disordered eating in US young adults: a prospective cohort study. Int J Eat Disord 2019; 52:1380–1388.
- Jones CL, Fowle JL, Ilyumzhinova R, et al. The relationship between body mass index, body dissatisfaction, and eating pathology in sexual minority women. Int J Eat Disord 2019; 52:730-734.
- 16. Nagata JM, Murray SB, Flentje A, et al. Eating disorder attitudes and disordered eating behaviors as measured by the Eating Disorder Examination Questionnaire (EDE-Q) among cisgender lesbian women. Body Image 2020; 34:215–220.

- 17. Mason TB, Lewis RJ, Heron KE. Disordered eating and body image concerns
- among sexual minority women: a systematic review and testable model.
   Psychol Sex Orientat Gend Divers 2018; 5:397-422.

The systematic review provides a detailed outline of correlates of disordered eating and body image concerns among sexual minority women, as well as proposes a model for disordered eating among this population.

- 18. Gordon AR, Kenney EL, Haines J, et al. Weight-based discrimination and disordered eating behaviors among U.S. sexual minority adolescents and young adults. In: SAHM 2018 Annual Meeting; Platform Research Presentation I: Understanding Risk. 2018.
- Nagata JM, Ganson KT, Murray SB. Eating disorders in adolescent boys and young men: an update. Curr Opin Pediatr 2020; 32:476–481.
- Weber AM, Cislaghi B, Meausoone V, et al. How gender norms shape health: insights from global survey data. Lancet 2019; 393:2455-2468.
- Nagata JM, Domingue BW, Darmstadt GL, et al. Gender norms and weight control behaviors in U.S. adolescents: a prospective cohort study (1994– 2002). J Adolesc Health 2020; 66(1S):S34–S41.
- Jones BA, Haycraft E, Bouman WP, et al. Risk factors for eating disorder psychopathology within the treatment seeking transgender population: the role of cross-sex hormone treatment. Eur Eat Disord Rev 2018; 26:120–128.
- Avila JT, Golden NH, Aye T. Eating disorder screening in transgender youth. J Adolesc Health 2019; 65:815–817.
- Diemer EW, White Hughto JM, Gordon AR, et al. Beyond the binary: differences in eating disorder prevalence by gender identity in a transgender sample. Transgender Health 2018; 3:17–23.
- 25. Brewster ME, Velez BL, Breslow AS, Geiger EF. Unpacking body image
- concerns and disordered eating for transgender women: the roles of sexual objectification and minority stress. J Couns Psychol 2019; 66:131-142.

Examines body image concerns in transgender women using objectification theory and minority stress theory.

- Donaldson AA, Hall A, Neukirch J, et al. Multidisciplinary care considerations for gender nonconforming adolescents with eating disorders: a case series. Int J Eat Disord 2018; 51:475–479.
- 27. Kidd KM, Sequeira GM, Dhar CP, et al. Gendered body mass index percentile
- charts and transgender youth: making the case to change charts. Transgender Health 2019; 4:297-299.

The article uses two cases to assert that clinicians should consider the use of both male and female growth charts for transgender youth.

- 28. Farber R. 'Transing' fitness and remapping transgender male masculinity in online message boards. J Gend Stud 2017; 26:254–268.
- Becker I, Nieder TO, Cerwenka S, et al. Body image in young gender dysphoric adults: a European Multi-Center Study. Arch Sex Behav 2016; 45:559-574.
- Watson RJ, Veale JF, Saewyc EM. Disordered eating behaviors among transgender youth: probability profiles from risk and protective factors. Int J Eat Disord 2017; 50:515-522.
- Testa RJ, Rider GN, Haug NA, Balsam KF. Gender confirming medical interventions and eating disorder symptoms among transgender individuals. Health Psychol 2017; 36:927–936.
- Nagata JM, Murray SB, Compte EJ, et al. Community norms for the Eating Disorder Examination Questionnaire (EDE-Q) among transgender men and women. Eat Behav 2020; 37:101381.