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Behavioral and Nutritional Needs of Transgender and Gender Diverse Patients

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Abstract

Transgender and gender diverse (TGD) people experience significant health care disparities, including a higher prevalence of eating disorders (EDs). This study surveyed 55 TGD patients' experiences with disordered eating at a single academic center and their ability to access nutritional, exercise, and mental health services. Most participants reported a desire for but lack of access to these services. Almost 50% expressed concern about having an ED that was untreated. Services were also harder to access for nonbinary people. These results show the need for comprehensive ED programs with special attention to the needs of transgender, nonbinary, and gender-diverse people.

Keywords: eating disorders; mental health needs; nonbinary gender identity; transgender

Introduction

Sexual and gender minorities experience significant health disparities. For members of this community, stigma, prejudice, discrimination, and externalized and internalized transphobia result in minority stress leading to worsened health outcomes.[1] Gender dysphoria is often associated with an increase in body dissatisfaction, which may be a contributing factor to the increased rates of eating disorders (EDs) in transgender and gender diverse (TGD) individuals.[2,3]

A 2012–2013 national epidemiologic survey in the United States showed that sexual and gender minorities experience two to four times the odds of an ED, with a higher lifetime prevalence for anorexia (1.7%), bulimia nervosa (1.3%), and binge ED (2.2%) compared to cisgender, heterosexual adults.[4,5] A large national study of college students ($N = 289{,}024$) compared the rate of self-reported past-year ED diagnosis and past month use of diet pills, vomiting, and/or laxatives. Rates of these were highest among transgender students. Although cisgender sexual minority men and people who identified as unsure of their sexual orientation had higher rates of EDs than cisgender, heterosexual women (odds ratios [ORs]: 1.40–1.54), the rates were close to three times higher for TGD individuals (OR: 4.62, 95% confidence interval: 3.41–6.26).[6]

When addressing EDs there are three important components: (1) Nutrition, (2) Exercise, and (3) Mental health needs, with these three often overlapping. In regard to nutrition, studies have found TGD individuals, particularly youth, are more likely to participate in unhealthy behaviors around meals and weight management, including fasting, skipping meals, or using laxatives.[7] Intentional weight manipulation can help some TGD youth achieve their gender-affirming goals, such as menstrual suppression.[8] Conversely, gender affirming behaviors may pose barriers to positive health behaviors. For example, some TGD people use chest binders, which may inhibit full mobility or deep breathing during exercise.[9–11]

In addition, gender-affirming treatment with either estrogen or testosterone may also lead to weight gain, with higher rates of obesity in the transmasculine population.[12,13] Exercise can then be an important tool to lose weight and maintain physical health, but it can also be a trigger for disordered eating behaviors.[6] In addition, the emphasis of body mass index (BMI) as a marker of "healthy" versus "unhealthy" weight in health care may be experienced as judgmental and

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alienating to many, including TGD individuals. For example, BMI does not consider an increase in muscle mass, which may be experienced by TGD people on testosterone.[14,15] For TGD youth who initiate medical treatment during puberty, this issue is complicated by a lack of clarity about how best to apply and interpret gendered growth charts, which may categorize a person's BMI differently depending on the growth chart used.[16]

Effective programs for adults with a history of ED are limited. Current ED programs focus mostly on heterosexual cisgender females, limiting their applicability and accessibility for TGD patients. In addition, EDs are often linked to underlying mental health issues such as anxiety, depression, or body dysmorphia. Minority stress and internalized transphobia have also been associated with higher rates of disordered eating.[17] Therefore, to understand EDs for TGD people, an assessment of the multidisciplinary needs of this population, in particular nutritional, exercise, and mental health needs, is critical.

Methods

Participants and procedures

The principal investigators form part of the Gender Health Program (GHP) at a large urban academic center. The GHP offers varied services to the community, including case management, behavioral health, and clinical services. The study received institutional review board approval from the University of California, Los Angeles (UCLA). Informed consent was obtained as the study began with an information sheet describing the purpose of the survey and participants had the option to opt in or out based on this description.

Survey instrument, measures, and data analysis

The study team developed a qualitative 23-question survey about the nutritional and behavioral needs of TGD patients. The survey included variables such as age, ethnicity, being on hormone therapy, and questions about patients' experiences with a history of disordered eating and ability to access nutritional, exercise, and mental health services. The questionnaire was composed primarily of multiple choice and "select all that apply" questions. Please see the survey instrument in the Supplementary Appendix SA1. The platform used for survey development and completion was Qualtrics. The GHP community advisory board reviewed the survey and provided feedback before distribution.

All data were anonymous with no IP addresses or electronic identifiers collected. Inclusion criteria included self-identification as transgender, nonbinary, or another gender expansive identity, and being age 18 or older. The survey was electronically distributed to patients receiving care at UCLA, primarily through the GHP electronic database which includes the e-mail addresses of 1895 patients, as well as postings on social media and the GHP website.

A gift card raffle was available to participants. Upon survey submission, participants could opt to enter the raffle by selecting a link to a second, autonomous survey that collected contact information for entry into the raffle. The contact information was not linked to the survey responses. Participants did not have to complete the entire survey to enter the raffle. At the end of the study, the study team used a random number generator to select the six e-mail addresses as winners. Only those participants who voluntarily entered their e-mail addresses were included in this list. The raffle winners were then e-mailed the codes for a $25 gift card by a nonprincipal investigator who assists with the GHP.

The study was conducted from September 5, 2022 to January 31, 2023. Data was analyzed for descriptive variables using Qualtrics.

Results

Of 60 patients who started the survey, 55 met inclusion criteria and completed the full questionnaire. Table 1 shows participants' demographic characteristics, with most being white and between the ages of 18 and 25. Table 2 shows participants' perspectives on body shape, weight, and access to services. Close to 50% of our study participants self-reported concerns about having an ED, with only 8% having a formal diagnosis. As seen in Table 3, 92% of these participants also reported not receiving treatment. Participants who identified as nonbinary had one of the highest reported rates of suspecting an ED and lowest rates of access to services. Additionally, over one-third of participants who desired nutritional services could not get access to these; less than one-fourth could access exercise services and over half could not access mental health services.

Participants were also asked to provide suggestions for nutritional, exercise, and mental health services, and many highlighted the importance of these:

> "…the basic opportunity to participate in fitness classes, nutrition classes etc. is helpful so people like me don't have to turn to eating junk food and smoking in order to cope with messed up family, personal, and employment situations."

Table 1. Demographic Characteristics of Participants

	Nonbinary or nonconforming *n* = *20* (36%)	Woman or transgender woman *n* = *12* (22%)	Man or transgender man *n* = *20* (37%)	A gender otherwise not listed *n* = *3* (5%)
Age				
18–25	6 (85%)	4 (33%)	10 (50%)	—
26–35	11 (55%)	4 (33%)	6 (30%)	2 (67%)
36–45	1 (5%)	1 (8%)	3 (15%)	1 (33%)
46–55	2 (10%)	3 (25%)	1 (5%)	—
Race				
Black or African American	—	2 (17%)	—	—
White	16 (80%)	6 (50%)	13 (65%)	3 (100%)
Native American or	—	1 (8%)	1 (5%)	—
Indigenous	2 (10%)	1 (8%)	2 (10%)	—
Asian or Pacific Islander	2 (10%)	2 (17%)	4 (20%)	—
Other				
Hispanic or Latinx	4 (20%)	4 (20%)	5 (25%)	—
Have a primary care doctor	20 (100%)	20 (100%)	19 (95%)	3 (100%)
On hormone therapy	14 (70%)	12 (100%)	12 (100%)	2 (67%)

> "I think nutrition-related counseling could be hugely beneficial to many people if it was focused on how to improve general well-being through diet without shaming people for weight or food preferences."

Others highlighted affordability as key to access these services:

> "Affordability is key. My gender transition doesn't necessarily prevent accessing a nutrition class but systemic transphobia and the high costs of transitioning are what make any sort of non-life-threatening healthcare so inaccessible. In other words, I would love nutrition classes to better help me really be present in my body and to support my health but could barely afford to even go to the doctor to get HRT. Socially and medically transitioning is incredibly expensive."

Discussion

TGD individuals are vulnerable to body image concerns and EDs. Our study highlights key contributors, such as lack of access to nutrition, exercise, and mental health services. Participants also pointed to experiences of body shaming and stigma which contributed to their overall well-being.

Prior research has illustrated that nonbinary individuals have higher odds of developing ED, which was consistent with our findings.[10] In our study, this group also reported the highest difficulty accessing mental health and exercise services. Therefore, future research should continue to examine the particular needs of individuals identifying as nonbinary.

In addition, research has shown the benefits of early intervention in halting the development of ED.[11] Readily available access to nutrition, exercise, and mental health services can play a significant role in achieving this goal. Studies have also highlighted that sexual and gender minorities may have specific ED treatment needs.[3] Our study demonstrates TGD individuals desire working with a health care system that is sensitive and tailors care to this community, allowing individuals to feel empowered in their health and leading to improved health outcomes.

Table 2. Participants' Perspectives on Body Shape, Disordered Eating, and Access to Services by Gender Identity

Gender identity	Felt their body shape influenced how they think about themselves	Wish support with weight and/or dietary topics	Looked for nutritional services and found it difficult to access	Looked for mental health counseling and found it difficult to access	Looked for exercise services and found it difficult to access	Ever suspected or been concerned they have or have had an ED
Nonbinary	20 (100%)	10 (50%)	5 (38%)	12 (63%)	11 (50%)	11 (50%)
Woman or transgender woman	10 (83%)	8 (67%)	4 (44%)	6 (40%)	3 (33%)	2 (20%)
Man or transgender man	10 (100%)	14 (70%)	10 (53%)	7 (37%)	8 (42%)	12 (67%)
A gender otherwise not listed	3 (100%)	3 (100%)	2 (67%)	3 (100%)	13 (100%)	2 (67%)
Total	43 (78%)	35 (63%)	21 (38%)	28 (51%)	35 (64%)	27 (49%)

ED, eating disorder.

Table 3. Participants with a Suspected or Diagnosed Eating Disorder and Access to Treatment

	Ever diagnosed by a health professional with an ED	Ever suspected or been concerned they have or have had an ED	Ever received treatment for a suspected or diagnosed ED	Feels would benefit from ED treatment
Yes	4 (8%)	12 (25%)	2 (8%)	6 (21%)
No	48 (92%)	23 (48%)	22 (92%)	22 (79%)
Sometimes	—	13 (27%)	—	
	If Yes to a diagnosis or suspicion of having an ED, type of disorder			
Anorexia		3 (42%)		
Bulimia		2 (29%)		
Binge-eating		2 (29%)		

Limitations

Limitations of our study include a small sample size and a surveyed population that reflects the patient population at our academic medical center: predominantly white, with 98% reporting having a primary care physician. The average age of the participants was also younger than the authors' general clinic population. Likely causes may include a bias toward technologically savvy individuals and access to a smartphone or computer to complete the online survey. Although the study team recognizes the onset of EDs in TGD individuals may start in childhood or adolescence, the team chose to survey only adults due to the complexity of informed consent and concern for emotional harm to youth respondents as a result of participation.

Given that this was an online survey, we were unable to cross reference reported EDs with diagnosed conditions or correlate with BMIs. In addition, participants self-reported having been diagnosed with an ED or having concerns about an undiagnosed ED, which may under- or overestimate diagnosable EDs. The GHP database is comprised of over 1000 participants. Given only 60 of those that were sent the recruitment e-mail started the survey, this raises the possibility of nonresponse and self-selection bias of those who chose to complete it. Given all these factors, we suspect that our study may not accurately report, could underreport, accessibility issues and rates of disordered eating and mental health concerns in this population.

Conclusion

This study illuminates that a comprehensive multidisciplinary program is needed to treat EDs and to promote healthy behaviors for the TGD community. This study also points to the need for future initiatives rooted in cultural humility to guide TGD individuals in their journeys toward holistic well-being. Having a safe space that is affirming both for gender identity and lifestyle management would be a breakthrough for the health of this population.

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Authors' Contributions

D.D.: Conceptualization and design of study, methodology, data curation, project administration, writing original draft, and review and editing. E.H.K.: Methodology, data curation, writing original draft, and review and editing. K.W.: Methodology, data curation, writing—review and editing. A.K.W.: Methodology, funding acquisition, writing—review and editing.

Author Disclosure Statement

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Supplementary Material

Supplementary Appendix SA1

References

1. Meyer IH. Prejudice, social stress, and mental health in lesbian, gay, and bisexual populations: Conceptual issues and research evidence. Psychol Bull 2003;129(5):674–697; doi: 10.1037/0033-2909.129.5.674
2. Hepp U, Milos G. Gender identity disorder and eating disorders. Int J Eat Disord 2002;32(4):473–478; doi: 10.1002/eat.10090
3. Nagata JM, Ganson KT, Austin SB. Emerging trends in eating disorders among sexual and gender minorities. Curr Opin Psychiatry 2020;33(6): 562–567; doi: 10.1097/YCO.0000000000000645
4. American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders: DSM-5, 5th ed. American Psychiatric Association: Washington, DC; 2013.
5. 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(2): 278–287; doi: 10.1002/eat.23193
6. Diemer EW, Grant JD, Munn-Chernoff MA, et al. Gender identity, sexual orientation, and eating-related pathology in a national sample of college students. J Adolesc Health 2015;57(2):144–149; doi: 10.1016/j.jadohealth.2015.03.003
7. 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(8):1337–1343; doi: 10.1007/s11606-018-4465-z

8. Avila JT, Golden NH, Aye T. Eating disorder screening in transgender youth. J Adolesc Health 2019;65(6):815–817; doi: 10.1016/j.jadohealth.2019.06.011
9. Jarrett BA, Corbet AL, Gardner IH, et al. Chest binding and care seeking among transmasculine adults: A cross-sectional study. Transgend Health 2018;3(1):170–178; https://doi.org/10.1089/trgh.2018.0017
10. Diemer EW, White Hughto JM, Gordon AR, et al. Beyond the binary: Differences in eating disorder prevalence by gender identity in a transgender sample. Transgend Health 2018;3(1):17–23; doi: 10.1089/trgh.2017.0043
11. Kamody RC, Yonkers K, Pluhar EI, et al. Disordered eating among transmasculine youth: Considerations through a developmental lens. LGBT Health 2020;7(4):170–173; doi: 10.1089/lgbt.2019.0354
12. Defreyne J, Van de Bruaene LDL, Rietzschel E, et al. Effects of gender-affirming hormones on lipid, metabolic, and cardiac surrogate blood markers in transgender persons. Clin Chem 2019;65(1):119–134; doi: 10.1373/clinchem.2018.288241
13. Kyinn M, Banks K, Leemaqz SY, et al. Weight gain and obesity rates in transgender and gender-diverse adults before and during hormone therapy. Int J Obes (Lond) 2021;45(12):2562–2569; doi: 10.1038/s41366-021-00935-x
14. Rozga M, Linsenmeyer W, Cantwell Wood J, et al. Hormone therapy, health outcomes and the role of nutrition in transgender individuals: A scoping review. Clin Nutr ESPEN. 2020;40:42–56; doi: 10.1016/j.clnesp.2020.08.011
15. Gutin I. In BMI We Trust: Reframing the body mass index as a measure of health. Soc Theory Health 2018;16(3):256–271; doi: 10.1057/s41285-017-0055-0
16. Kidd KM, Sequeira GM, Dhar CP, et al. Gendered body mass index percentile charts and transgender youth: Making the case to change charts. Transgend Health 2019;4(1):297–299; doi: 10.1089/trgh.2019.0016
17. Uniacke B, Glasofer D, Devlin M, et al. Predictors of eating-related psychopathology in transgender and gender nonbinary individuals. Eat Behav 2021;42:101527; doi: 10.1016/j.eatbeh.2021.101527

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Abbreviations Used

BMI = body mass index
ED = eating disorder
GHP = Gender Health Program
OR = odds ratio
TGD = transgender and gender diverse
UCLA = University of California, Los Angeles