



Adolescent health brief

Eating Disorder Screening in Transgender Youth

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A B S T R A C T

Purpose: Body dissatisfaction in transgender youth (TY) may increase the risk for eating disorders. This is the first study using the Eating Disorders Examination Questionnaire (EDE-Q) to assess for eating disorder psychopathology in TY.

Methods: Youth aged 13–22 years ($n = 106$) presenting to a gender clinic from January 2018 to January 2019 completed the EDE-Q and answered questions on weight manipulation for gender-affirming purposes.

Results: Respondents identified as transmasculine (61%), transfeminine (28%), or nonbinary (11%). Mean age was 16.5 years (standard deviation = 2.0), mean weight was 119.9% median body mass index (standard deviation = 32.9), and 32% were on hormonal therapy. Of the participants, 15% had elevated EDE-Q scores. Most (63%) disclosed weight manipulation for gender-affirming purposes, with 11% of assigned females doing so for menstrual suppression. These behaviors had poor concordance with elevated EDE-Q scores ($\kappa = .137$ and $.148$).

Conclusions: Disordered eating behaviors are relatively common among TY. Further studies are needed to validate the EDE-Q in TY and establish meaningful cutoff score values.

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IMPLICATIONS AND
CONTRIBUTION

In a clinical sample, many transgender youth (63%) engaged in intentional weight manipulation for gender-affirming purposes. Although only a small proportion (15%) showed significant eating disorder psychopathology, this rate is higher than expected. This study highlights the potential need for eating disorder screening among transgender youth presenting for clinical care.

Eating disorders (EDs) are prevalent in adolescents [1,2], and body dissatisfaction is a risk factor for the development of an ED [3]. Transgender youth (TY) experience body dissatisfaction from having a body that is not aligned with their gender identity and may be particularly vulnerable to disordered eating [4,5]. Although this area has been explored among transgender adults [4,6], no study to date has examined the use of a well-validated ED questionnaire to assess TY for ED psychopathology. The aim of our study was to assess the frequency of intentional weight manipulation behaviors for gender-affirming purposes and evaluate ED psychopathology in a sample of TY presenting to a gender clinic using the Eating Disorders Examination Questionnaire (EDE-Q) [7].

Conflicts of interest: The authors have no conflicts of interest to disclose.

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Methods

Participants

All patients aged 13 to 22 years ($n = 107$) who presented to an academic multidisciplinary gender clinic from January 2018 through January 2019 for gender-affirming medical care completed our survey as part of their clinic visit, with one patient declining. This protocol was reviewed and exempted by the Stanford Institutional Review Board.

Procedure

Participants were administered the EDE-Q via REDCap during their gender clinic visit. They also completed additional questions about hormonal therapy and frequency of intentional weight manipulation for gender-affirming purposes. The EDE-Q

Table 1
Participant characteristics

Gender identity	n (%)	Age, y, mean \pm SD	%mBMI, mean \pm SD	Hormonal treatment, n (%)		
				GnRHa	Testosterone	Estrogen
Transmasculine	64 (61)	16.3 \pm 1.9	125.7 \pm 31.9	4 (6)	22 (34)	—
Transfeminine	30 (28)	16.9 \pm 2.2	109.9 \pm 32.2	1 (3)	—	8 (27)
Nonbinary	12 (11)	16.5 \pm 2.3	113.4 \pm 35.7	0	2 (17)	0
Total	106 (100)	16.5 \pm 2.0	119.9 \pm 32.9	Any treatment: 34 (32)		

%mBMI = percentage median body mass index based on assigned sex at birth; GnRHa = gonadotropin-releasing hormone agonist; SD = standard deviation.

was scored on site. Participants with elevated scores had their primary care providers informed of potential risk for an underlying ED with resources for a formal ED evaluation.

Measures

The EDE-Q is a widely used, well-validated, self-report measure assessing for ED psychopathology [8]. Its global score has shown to correlate well with the Eating Disorder Examination interview, considered the gold standard measure of ED psychopathology [8]. The EDE-Q consists of 28 questions and provides four subscale scores, ranging from 0 to 6: restraint, eating concerns, weight concerns, and shape concerns. A global score is calculated from the average of those four subscales. Standard population norms were used for score interpretation [7]. Similar to other adolescent studies, scores >1 standard deviation (SD) above the mean were considered elevated [9]. Two additional questions assessing the frequency of intentional weight manipulation behaviors for gender-affirming purposes were developed and included in the survey. Percentage median body mass index (%mBMI) was based on assigned sex at birth and calculated as current BMI divided by median BMI for age \times 100%.

Analysis

Cronbach's alpha was used to evaluate the internal consistency of the EDE-Q subscale scores. Kruskal–Wallis H test was used to compare age, weight, and EDE-Q scores among all gender identity groups, with further post-hoc pairwise comparisons using Dunn's procedure with a Bonferroni correction for multiple comparisons. Mann–Whitney U test was used to compare differences in age and weight between two independent groups. Chi-square and Fisher's exact tests were used to compare proportions. Cohen's kappa (κ) was calculated to measure concordance between measuring systems. All statistical analyses were conducted using SPSS v24.0

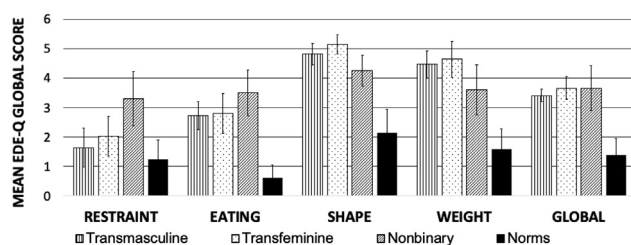


Figure 1. EDE-Q scores (mean \pm SD) scores for participants with elevated global scores. EDE-Q = Eating Disorder Examination Questionnaire; SD = standard deviation.

(IBM Corp., Armonk, NY) with two-tailed tests and statistical significance (alpha) level set at p value $< .05$.

Results

A total of 106 participants completed the survey, with 61% identifying as transmasculine, 28% transfeminine, and 11% nonbinary (Table 1). Mean age was 16.5 years (SD = 2.0) with mean weight of 119.9 %mBMI (SD = 32.9). Highest weight was found in the transmasculine group (125.7 %mBMI, SD = 31.9), and lowest among transfeminine (109.9 %mBMI, SD = 32.2) with a statistically significant difference ($H(2) = 8.423$, $p = .015$). Almost one-third of respondents were on gender-affirming hormones at the time of survey, most of whom were transmasculine.

Cronbach's alpha for each EDE-Q subscale was $>.70$. Mean EDE-Q subscale and global scores for all gender identity groups were within population norms. However, 16 participants (15%) had elevated global scores, with 44% of them ($n = 7$) on hormonal therapy. For these participants, mean scores were elevated across all subscales except for restraint (Figure 1). Individuals with elevated EDE-Q global scores had higher median weight (160.0 %mBMI vs. 107.9 %mBMI, 95% confidence interval, 29.3–62.4; $U = 202$, $z = 4.571$, $p < .001$), but no significant difference was observed in regards to age ($U = 770$, $z = .441$, $p = .659$), gender identity ($p = .926$), or hormonal therapy status ($p = .278$).

Sixty-four (63%) of 101 respondents disclosed intentional weight manipulation for purposes of aligning their body with gender identity, with no difference detected across gender identity groups ($p = .387$) or hormonal therapy status ($p = .227$). No concordance was observed with elevated EDE-Q global scores ($\kappa = .137$).

Of the 66 assigned females at birth who answered the question, 11% ($n = 7$) reported intentional weight manipulation to avoid or stop menstrual periods, all of whom were transmasculine. Four of the 7 (57%) were on hormonal therapy. No concordance was observed with elevated EDE-Q global scores ($\kappa = .148$).

Discussion

The proportion of youth with elevated EDE-Q global scores (15%) was particularly high but consistent with reports among transgender college students [10]. However, a high EDE-Q score does not necessarily make a diagnosis of an ED, and a formal psychiatric assessment is required.

Intentional weight manipulation for gender-affirming purposes was not associated with elevated EDE-Q scores or gender identity. Intentional weight manipulation for menstrual suppression was not common in assigned females (11%) and did not

identify respondents with high EDE-Q scores. Yet, these weight manipulation behaviors, if persistent over time, could increase the risk for developing an ED. Longitudinal studies could help determine such risk.

Limitations of this study include the lack of EDE-Q norms for TY. Existing norms are based on studies conducted in adolescent and young adult females [7]. In addition, a psychiatric evaluation was not performed to confirm or refute an ED. Such an assessment could also help determine meaningful EDE-Q cutoff scores for TY. Finally, this was a descriptive, cross-sectional study that is not positioned to establish causality between ED psychopathology and gender-affirming hormonal treatment.

In conclusion, 63% of TY engaged in intentional weight manipulation for gender-affirming purposes. Although a small proportion showed significant ED psychopathology, this rate is higher than expected. Further studies are needed to validate the EDE-Q in TY, establish meaningful cutoff scores, and explore the relationship between gender-affirming hormonal treatment and disordered eating.

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