A Longitudinal Study on Disordered Eating Among Transgender and Non-Binary Youth

An Pham

A thesis

submitted in partial fulfillment of the

requirements for the degree of

Masters of Public Health

University of Washington

2020

Committee:

Michelle Garrison

Kym Ahrens

Program Authorized to Offer Degree:

Health Services

University of Washington

Abstract

A Longitudinal Study on Disordered Eating Among Transgender and Non-Binary Youth

An Pham

Chair of the Supervisory Committee:

Michelle Garrison

Health Services

Body dissatisfaction is a common factor of gender dysphoria and eating disorders. Previous studies have found a higher risk of eating disorders and disordered eating behaviors among TGNB youth in comparison to their cisgender peers. The aims of this study are to 1) contribute to the growing body of literature describing the prevalence of disordered eating among transgender and non-binary (TGNB) youth, 2) explore differences in disordered eating among gender identities of TGNB youth, and 3) explore longitudinal differences in disordered eating after the initiation of gender-affirming medical care. We recruited TGNB youth between the ages of 8-22 years old from Seattle Children's Gender Clinic to complete surveys at baseline, 3 months, 6 months, and 12 months after establishing care in the multidisciplinary gender-affirming clinic. Surveys assessed disordered eating with questions from the Eating Disorder Examination Questionnaire (EDE-Q). We calculated sociodemographic and prevalence results using descriptive statistics and the association of gender identity and gender-affirming care on disordered eating with multivariate linear regression. The final study included 108 participants with an average age of 15.4 years (SD 2.1). Sixty-two percent of participants identified as transmasculine, 31% transfeminine, and 7% as non-binary/gender fluid. A majority of our participants identified as white

(70%) and enrolled in school (89%). Prevalence results found that a majority of participants demonstrated features of body dissatisfaction with 87% reporting any occurrence of being uncomfortable seeing their body. As for disordered eating behaviors, 15% of participants regularly limited their amount of food to influence their shape/weight and 16% reported regular occurrence of binging eating behaviors. Any occurrence of purging was reported by 7% of participants, laxative use 2%, and excessive exercise 14%. Multivariate linear regression analysis did not show a statistically significant difference in disordered eating when comparing gender identities and did not show a statistically significant difference in disordered eating with gender-affirming care. Our study confirms the presence of disordered eating thoughts and behaviors among TGNB youth, but additional follow-up studies are recommended to determine whether gender-affirming care has a long-term effect on disordered eating.

A Longitudinal Study on Disordered Eating Among Transgender and Non-Binary Youth

Introduction

Transgender and non-binary (TGNB) people experience an incongruence between their gender identity and sex assigned at birth.[1] A study in 2017 estimated that 0.7% of adolescents 13-17 years old and 0.7% of young adults 18-24 years old identify as transgender.[2] When the discord between gender identity and sex assigned at birth causes significant internal distress, TGNB individuals experience gender dysphoria.

Extant Information on Gender dysphoria, Body dissatisfaction, and Eating Disorders

Body dissatisfaction is a common factor that can be present in both persons with gender dysphoria and in those diagnosed with eating disorder diagnoses. When individuals endorse gender dysphoria, they commonly also endorse a dissatisfaction of body shape and/or appearance. This relationship can be affected by both an individual's own perception and society's expectations of their gender identity, particularly as the individual goes through puberty. Specifically, as TGNB adolescents develop secondary sexual characteristics such as changes in voice, hair growth, height, and breast/chest maturation, body dysphoria can intensify as the discordance between gender identity and body shape/characteristics become more pronounced.[1] In eating disorders, specifically anorexia nervosa and bulimia nervosa, body dissatisfaction is associated with a distorted perception of body weight and shape and resulting behaviors to prevent weight gain.[1]

Studies looking at the prevalence and association of disordered eating and gender dysphoria have largely been limited to adults, and there are few studies on adolescents and

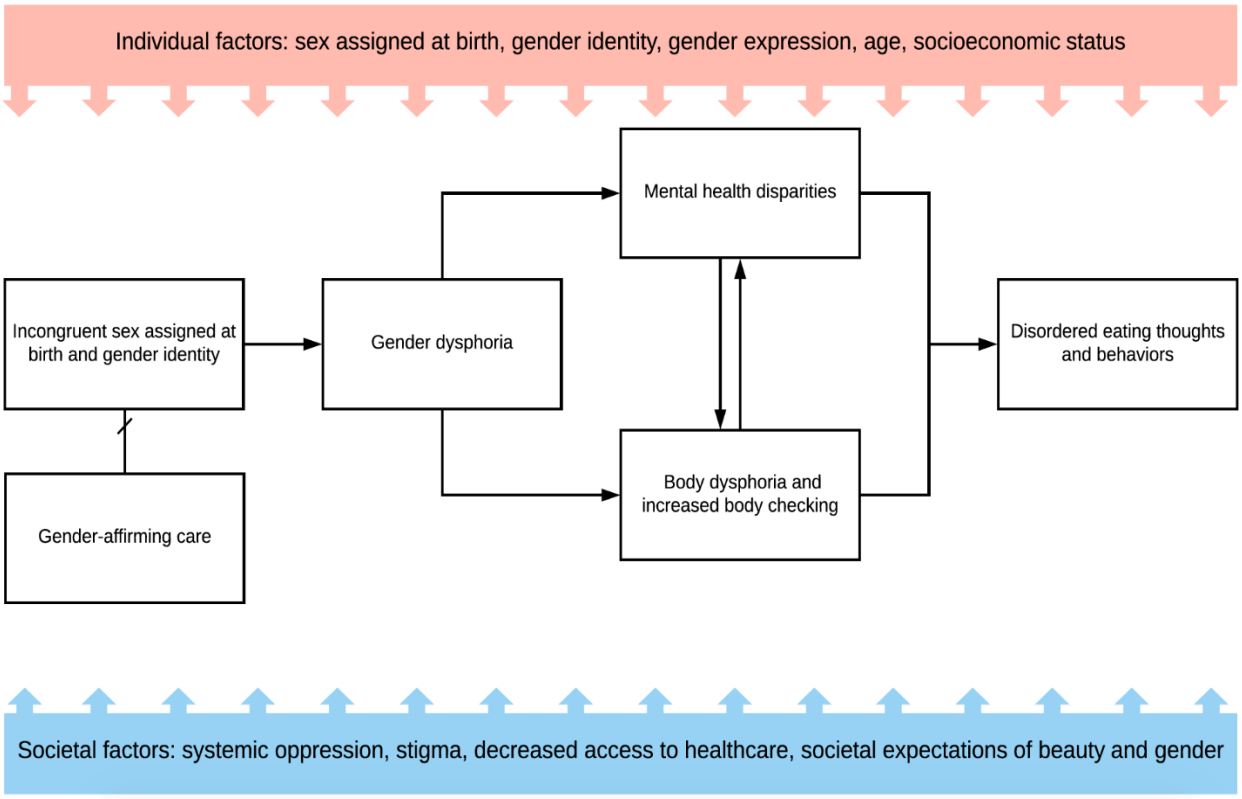
young adults. The prevalence of eating disorders among TGNB youth and young adults, by self-report or medical documentation, ranges from 5-18%.[4-9] In terms of specific disordered eating behaviors, estimates of binge eating behaviors ranged from 29-42%, fasting 10-48%, diet pill use 2-7%, laxative use 2-5%, and purging 2-18%.[5,10,11] One cross-sectional study comparing eating disorder diagnoses and/or disordered eating behaviors in TGNB youth and young adults to their cisgender peers found that TGNB students had 4.62 times higher odds of a self-reported eating disorder diagnosis.[5] In another cross-sectional study, transgender participants had a higher odds of fasting for more than 24 hours.[10] Both of these studies found a higher odds of diet pill and laxative use in transgender participants in comparison to cisgender participants. A third cross-sectional study found statistically significant differences when comparing disordered eating behaviors among gender identities of TGNB youth and young adults. Specifically, 14-18 year old transgender males reported fewer incidences of vomiting to lose weight when compared to non-binary youth. When looking at 19-25 year old participants, fewer non-binary young adults reported fasting to lose weight in comparison to transgender females.[11] These studies show that not only are TGNB adolescents and young adults engaging in eating disorder behaviors, but are also at a higher risk when compared to their cisgender peers.

Conceptual Framework and Models

Hendricks and Testa adapted the Minority Stress Model to create a conceptual framework specifically for transgender and gender non-conforming individuals.[3] This framework describes adverse experiences that are related to gender dysphoria to better understand the unique needs and protective factors among this population. This framework

was created to assist psychologists and their ability to provide thorough and affirming care, and can contribute to scientific knowledge by promoting culturally sensitive, accurate, strengths-based explorations of gender identity and TGNB experiences. This study created a conceptual model to theorize how gender dysphoria leads to disordered eating in TGNB youth. This conceptual model guides inclusion of variables for analysis and interpretation of results.

Figure 1. Conceptual Model



This study aims to contribute to the growing body of literature describing the prevalence of disordered eating among TGNB youth. Additionally, we aim to longitudinally explore differences in disordered eating among gender identities and changes in disordered eating with gender-affirming care in a multidisciplinary gender clinic.

Methods

Participants and Recruitment

Participants were recruited from Seattle Children's Gender Clinic from September 2017 to June 2018 to participate in surveys at baseline, 3 months, 6 months, and 12 months. Eligible participants were those who self-identified as having a discordance of their gender identity and sex assigned at birth, which includes non-binary and gender fluid youth, between the ages of 8-22, English language proficient, and established a new visit appointment during the recruitment period. Parental consent was obtained for participants younger than 18 years of age. All participants provided assent/consent. Seattle Children's Institutional Review Board approved this research prior to initiation of recruitment.

Data Collection

Once recruited, participants received online surveys to complete at baseline and 3, 6, and 12 months after establishing care at Seattle Children's Gender Clinic. The survey included questions on a variety of topics including mental health, bullying, sexual attraction and behaviors, and resilience. Participants completed surveys via an online survey tool (REDCap™; Tennessee, USA). After completing each survey, participants were rewarded with a $20 gift card.

Measures

On the baseline survey, participants answered socio-demographic questions including sex assigned at birth, gender identity, race/ethnicity, and enrollment in school. Gender identity

was assessed with the question, “What is your gender identity?” with the options of transgender male (female to male), transgender female (male to female), male, female, and non-binary or gender fluid. For the purposes of this study, transgender male (female to male) and male were grouped together and transgender female (male to female) and female grouped together to create the gender identity categories of transmasculine and transfeminine, respectively.

In the present study, participants were asked about the initiation of gender-affirming medications at each survey time point including testosterone, estrogen, and pubertal suppression medications. The initiation of gender-affirming medication(s) was coded as a binary variable, 0 if the participant had not started a medication and 1 if they had started at least one medication by the time that the survey was completed.

The outcome, disordered eating thoughts and behaviors, was measured by a modified version of the Eating Disorder Examination Questionnaire (EDE-Q). The EDE-Q is a self-reported questionnaire based on the Eating Disorder Examination interview, a semi-structured interview that is considered the gold standard measure of eating disorder pathology.[12-15] The EDE-Q survey consists of questions on disordered eating thoughts and behaviors in the past 28 days. Prior studies have established community norms including adolescent males and females and clinical samples of males and females with eating disorders for this tool.[16-18] EDE-Q questions either have a Likert scale response or numerical free response. Likert scale questions can be analyzed in two ways and methods for analysis are outlined in the EDE-Q scoring guide. The first type of analysis provides frequency data on individual EDE-Q questions. EDE-Q responses were separated into regular occurrence, present but not regular occurrence, and no

occurrence. The second type of analysis provides information on subscale scores: restraint, eating concern, shape concern, and weight concern. The subscale score is calculated by summing the scores of individual EDE-Q questions within a relevant subscale category and dividing this total by the number of questions that form the subscale. An overall global score is calculated by summing the four subscale scores and dividing that total by the number of subscales. Due to space/timing limitations of the parent survey, which included questions on a variety of mental and physical health topics, we modified the EDE-Q to include 9 of the original 23 Likert scale questions. We specifically included 2-3 questions from each subscale:, 2/5 restraint subscale questions, 2/5 eating concern subscale questions, 3/8 shape concern subscale questions, and 2/5 weight concern subscale questions. Individual questions from subscales were chosen based on clinical consensus between two senior clinicians (Ahrens and Inwards-Breland) and the clinic social worker/intake coordinator (Hayden). We attempted to eliminate primarily overlapping/redundant questions so the breadth of questions were preserved.

Analysis

We used Stata Statistical Software: Release 16 (StataCorp LLC., College Station TX, USA) for statistical analyses. Sample sociodemographic characteristics, prevalence of baseline EDE-Q survey questions, and baseline global and subscale EDE-Q scores are presented by descriptive statistics. For global and subscale scores, community norms were used for reference, but we did not statistically compare the scores of our sample to community norms. Missing data occurred when a participant did not provide an answer to an EDE-Q question on their survey. If

this occurred, the global and subscale scores were still calculated. All participants answered at least 8/9 EDE-Q Likert scale questions.

For exploratory analysis, we utilized linear regression to analyze the effect of identity (assigned sex at birth, gender identity, gender expression), gender-affirming medications, and time after establishing care in a multidisciplinary clinic on EDE-Q global and eating/restraint subscale scores. Covariates included in the final multivariate linear regression model were chosen from a conceptual model, Figure 1, generated from previous literature on disordered eating among TGNB people: gender identity, gender-affirming medications, age, and time. As our primary objective was to determine between group effects, we modeled the individual subject as a random effect to take into account the non-independence of repeated assessments within individuals across time. Gender identity is a static variable and gender-affirming medications, age, and time after establishing care in a gender clinic are time-varying variables. A p-value of <0.05 was considered significant.

Results

The sample included 108 participants with an average age of 15.4 years (standard deviation 2.1). Almost two-thirds (62%) of participants identified as having a transmasculine gender identity, 31% transfeminine, and 7% non-binary or gender fluid. Most youth in our sample identified as white (70%) or multiracial (19%) and most were currently enrolled in school (89%). Table 1 provides full participant socio-demographic characteristics.

Table 1. Participant Demographics

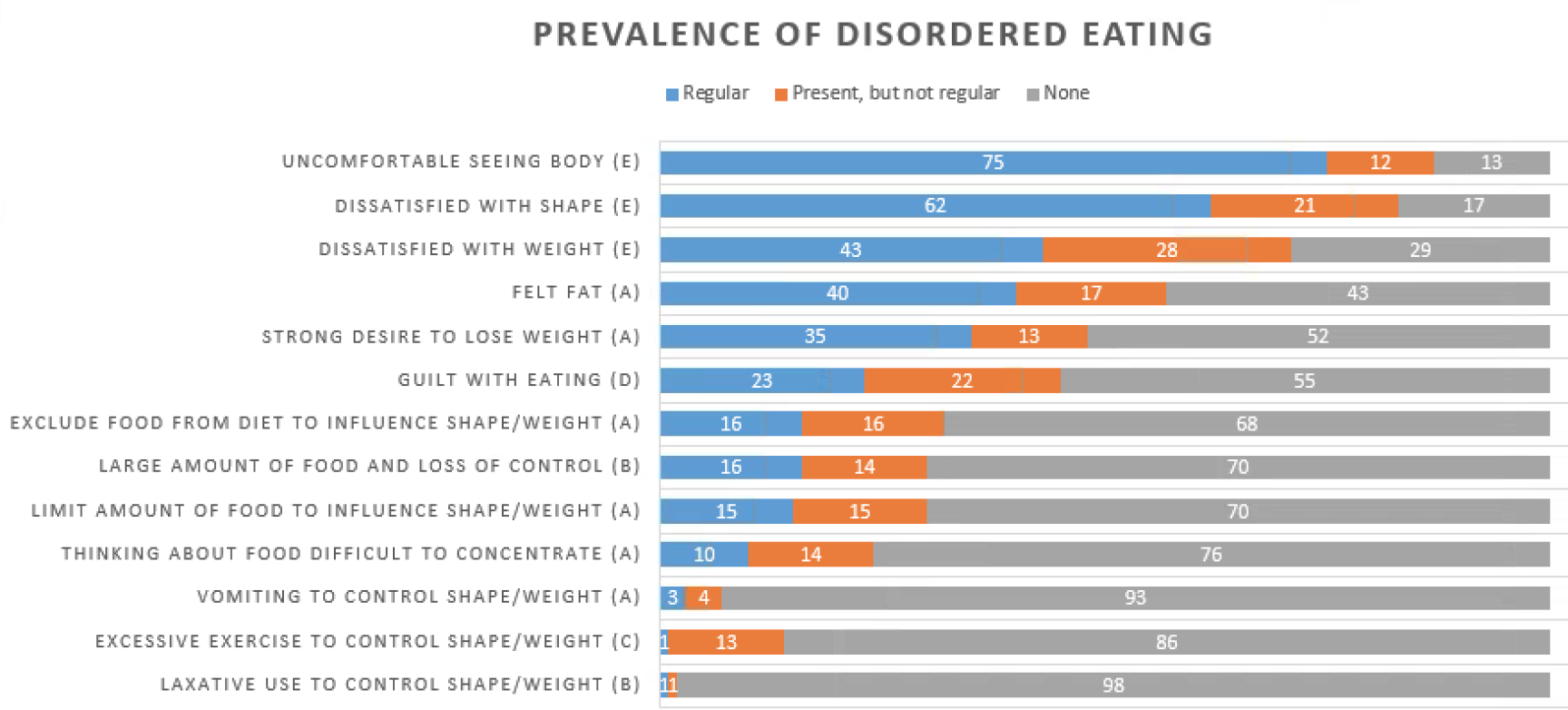
	%
Age – mean (SD)	15.4 (2.1)
- ≤ 13 years old	15
- 14-16 years old	53
- ≥ 17 years old	32
Assigned sex at birth	
- Female	65
- Male	35
Gender identity	
- Transmasculine	62
- Transfeminine	31
- Non-binary/gender fluid	7
Race/ethnicity	
- African-American or Black	3
- Asian	3
- Latina or Latino	4
- Multiracial	19
- Native American/American Indian/Alaskan Native/Native Hawaiian	1
- Pacific Islander	0
- White or Caucasian	70
Enrolled in school	89
Type of school	
- Home or online school	8
- Private or charter K-12	8
- Public K-12	74
- Public or private college or university	5

Modified EDE-Q descriptive statistics in Figure 1 provide the prevalence of disordered eating thoughts and behaviors in the past 28 days among a sample of TGNB youth. A majority of participants demonstrated features of body dysphoria: 83% reported any occurrence of dissatisfaction with their shape and 87% reported any occurrence of being uncomfortable seeing their body, with 75% reporting regularly feeling uncomfortable seeing their body. We

found that 59% of all participants regularly demonstrated both of these features of body dysphoria. In consideration of a specific body shape, participants were asked about concerns with being overweight. Thirty nine percent of participants regularly felt fat and 35% regularly experienced a strong desire to lose weight. As for disordered eating behaviors, 15% regularly limited their amount of food to influence shape/weight and 16% regularly excluded food from their diet to influence shape/weight. Eating a large amount of food and feeling a loss of control, a feature of binge eating, was a regular occurrence for 16% of participants. Any occurrence of purging was 7%, laxative use 2%, and excessive exercise 14%. None of the participants engaged in all three behaviors of purging, laxative use, and excessive exercise.

Table 2 provides global and subscale EDE-Q scores for study participants as well as the previously published community norms for adolescent girls, adolescent boys, and adult women and men with eating disorders.[15-17] The mean global score for all TGNB participants was higher than both the community sample of adolescent girls and adolescent boys and lower than both the clinical samples of women with eating disorders and men with eating disorders. For the subscales, both restraint and eating concern scores for participants were lower than adolescent girls, women with eating disorders, and men with eating disorders, but higher than adolescent boys. Both weight concern and shape concern subscale scores for participants were higher than adolescent girls and boys. Additionally, shape concern subscale score was higher than men with eating disorders.

Figure 2. Prevalence of Disordered Eating Thoughts and Behaviors



Regular occurrence of disordered eating thought or behavior described as (a) at least 13 days out of the past 28 days; (b) on average at least once per week in the past 28 days; (c) on average at least five times per week in the past 28 days; (d) at least half the times a participant ate; (e) more than “slightly” over the past 28 days

Table 2. EDE-Q Scores

	Study Participants				Other Samples			
	All TGNB	Transmasc	Transfem	Non-binary	Adolescent girls	Adolescent boys	Adult women with ED	Adult men with ED
	n = 108	n = 67	n = 33	n = 8	General population sample of 1,134 females 12-18 years old enrolled in school	General population sample of 530 males 12-18 years old enrolled in school	Clinical sample of 1,487 adult females admitted to a residential or partial hospitalization eating disorder program	Clinical sample of 386 adult males admitted to a residential or partial hospitalization eating disorder program
EDE-Q Score	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
Restraint	0.72 (0.18)	0.96 (0.23)	1.11 (0.37)	0.79 (0.42)	1.48 (1.57)	0.54 (0.97)	3.61 (1.82)	2.72 (1.90)
Eating concern	1.09 (0.22)	1.30 (0.23)	0.74 (0.25)	0.50 (0.29)	1.21 (1.38)	0.40 (0.72)	3.48 (1.47)	2.58 (1.64)
Weight concern	2.61 (0.38)	2.82 (0.34)	1.74 (0.37)	1.93 (0.70)	2.20 (1.82)	0.67 (1.05)	4.20 (1.62)	3.14 (1.87)
Shape concern	3.78 (0.27)	3.84 (0.26)	3.14 (0.31)	3.52 (0.56)	2.45 (1.88)	0.81 (1.18)	4.68 (1.51)	3.66 (1.88)
Global Score	2.00 (0.17)	2.23 (0.22)	1.68 (0.28)	1.68 (0.37)	1.84 (1.54)	0.61 (0.86)	4.00 (1.44)	3.01 (1.63)

Results of the multivariate linear regression model are in Table 3. In multivariate linear regression analysis, gender identity, the initiation of gender-affirming medications, and time after establishing care in a multidisciplinary gender clinic were not significantly associated with higher global scores or a combination eating concern and restraint subscale scores. Although not statistically significant, multivariate linear regression analysis does show a possible trend of higher global scores in transmasculine youth in comparison to transfeminine youth (p-value = 0.11).

Table 3. Multivariate Linear Regression Result

	Global		Eating concern and restraint	
	Beta co-efficient (95% CI)	p-value	Beta co-efficient (95% CI)	p-value
Gender identity				
- Transfeminine	(reference)		(reference)	
- Transmasculine	0.47 (-0.11, 1.10)	0.11	0.21 (-0.34, 0.76)	0.45
- Non-binary	-0.12 (-0.88, 0.64)	0.75	-0.13 (-0.92, 0.65)	0.74
Gender affirming medication*	0.01 (-0.26, 0.27)	0.96	0.04 (-0.26, 0.35)	0.77
Time after establishing care in gender clinic	0.01 (-0.03, 0.02)	0.54	-0.00 (-0.03, 0.03)	0.92

All regressions control for age

*medications include pubertal blockers, estrogen, and testosterone

Discussion

This study implemented a modified version of a validated eating disorder screening tool to 1) describe disordered eating thoughts and behaviors in a sample of 108 TGNB youth and 2) explore trends in disordered eating between gender identities after establishing care in a multidisciplinary gender-affirming clinic.

Prevalence results show that TGNB youth are experiencing thoughts of body dissatisfaction, a common feature of gender dysphoria, but are also specifically experiencing concerns of being overweight with 56.5% of participants reporting any occurrence of feeling fat and 48.1% having a strong desire to lose weight. In addition, TGNB youth are not only endorsing concerning thoughts regarding their weight, but are also endorsing disordered eating behaviors that range from features of restrictive eating to binge eating. Although the prevalence of each behavior varied, similar to previous studies, we found that TGNB youth are engaging in purging behaviors including vomiting, laxative use, and excessive exercise to control their shape or weight. Prevalence data confirms the importance of screening TGNB youth by discussing their relationship to food, exercise, and their body.

The global and subscale scores of the modified EDE-Q provide standardized results that can be compared to community norms. With the intersection of gender dysphoria and body dysphoria, the mean shape concern subscale for TGNB youth is higher than adolescent girls, adolescent boys, and men with eating disorders. The mean global score of TGNB youth is higher than adolescent girls and boys, but lower than samples of women and men with eating disorders. Although this study implemented a modified EDE-Q survey, the results are consistent with previous studies on adults with transgender individuals scoring lower than individuals with eating disorders, but exhibiting greater disordered eating thoughts and behaviors in comparison to cisgender controls.[19, 20]

When comparing EDE-Q scores among gender identities using multivariate linear regression after controlling for age, initiation of gender-affirming medications, and time, we saw a non-significant trend indicating that transmasculine youth may have higher global scores

than transfeminine youth. If true, this may be due to factors that are unique to their gender identity and/or sex assigned at birth. Transmasculine youth may feel pressure to change their habits to conform to societal expectations of masculinity including exercising to become more muscular and restricting to minimize curves. In a matched control study of adults by Witcomb et al., cisgender females and transgender males reported higher levels of body dissatisfaction in comparison to cisgender males and transfemales. [19] The study hypothesizes that transgender males continue to be influenced by cultural aspects of being female due to their assigned sex at birth.[18] While our study cannot conclude that transmasculine youth are higher risk of disordered eating in comparison to transfeminine youth, this potential trend supports the importance of future research with larger samples of TGNB youth. If results of future studies statistically confirm this trend, screening and management of disordered eating can be tailored to TGNB individuals that are assigned female at birth.

There was no significant difference in EDE-Q global or eating/restraint subscale scores when comparing participants before and after initiation of gender-affirming medications or with time after establishing care in a gender-affirming clinic. This may be due to the limited time frame of the study. Participants completed the first survey at baseline and the last survey approximately 12 months later. Participants that started gender-affirming medications later during those 12 months may not have experienced enough time between surveys to capture any changes in disordered eating thoughts or behaviors.

Although this longitudinal study contributes to a small, but growing body of literature on disordered eating among TGNB youth, this study is not without limitations. Generalizability is difficult given the homogenous sample size of mostly white (70.1%) and gender binary (92.6%)

youth. With a small number of non-binary and gender fluid youth, there may be insufficient power to determine true effect differences between gender identities. Additionally, all participants were recruited from Seattle Children's Gender Clinic and thus, receiving gender-affirming care at a clinic that also provides expertise in other adolescent medicine topics including eating disorders. Participants are, therefore, more likely to be supported in their affirmed gender by their parents at a younger age and screened and treated for eating disorders in comparison to the general population of TGNB youth. Although this study controls for age, this study does not assess the effects of pubertal development on disordered eating. TGNB youth may experience increasing levels of body dysphoria associated with the development of secondary sexual characteristics, and future studies can integrate tools such as Petersen's Pubertal Developmental Scale to better assess this.[21] Lastly, a shortened version of the EDE-Q was implemented for this study. The modified EDE-Q has not been validated. Therefore, comparisons between TGNB youth and other groups in global and subscale scores should be made cautiously.

Future longitudinal research should endeavor to include large samples of youth to capture a diversity of race, ethnicity, gender identity, and support around affirmed gender, and should control for broader groups of demographic and psychosocial characteristics. If cisgender youth are additionally recruited, future studies can also explore differences in disordered eating thoughts and behaviors between TGNB and cisgender youth as well as youth assigned female at birth and youth assigned male at birth. There are currently no clinical guidelines around disordered eating in TGNB youth. Current and future research can inform the establishment of standards of care for effective screening and management of eating disorders in TGNB youth.

References

1. American Psychiatric Association (2013). Diagnostic and statistical manual of mental disorders (5th edition). Arlington, VA: American Psychiatric Publishing. OR APA. Diagnostic and statistical manual of mental disorders. 5th ed. Arlington: American Psychiatric Publishing; 2013.
2. Herman, J. L., Flores, A. R., Brown, T. N., Wilson, B. D., & Conron, K. J. (2017). Age of individuals who identify as transgender in the United States. *Los Angeles, CA: The Williams Institute*.
3. Hendricks, M., & Testa, R. (2012). A Conceptual Framework for Clinical Work With Transgender and Gender Nonconforming Clients: An Adaptation of the Minority Stress Model. *Professional Psychology: Research and Practice*, *43*(5), 460-467.
4. Khatchadourian K, Amed S, Metzger DL. Clinical management of youth with gender dysphoria in Vancouver. J Pediatr. 2014;164:906–11.
5. Diemer, E. W., Grant, J. D., Munn-Chernoff, M. A., Patterson, D., & Duncan, A. E. (2015). Gender identity, sexual orientation, and eating-related pathology in a national sample of college students. Journal of Adolescent Health, 57(2), 144–149.
6. Feder S, Isserlin L, Seale E, Hammond N, Norris M. Exploring the association between eating disorders and gender dysphoria in youth. Eat Disord. 2017;25:310–7.
7. Nahata L, Quinn GP, Caltabellotta NM, Tishelman AC. Mental health concerns and insurance denials among transgender adolescents. LGBT health. 2017;4(3):188–93.
8. Peterson CM, Matthews A, Copps-Smith E, Conard LA. Suicidality, self-harm, and body dissatisfaction in transgender adolescents and emerging adults with gender dysphoria. Suicide Life Threat Behav. 2017;47(4):475–82.
9. Duffy ME, Henkel KE, Joiner TE. Prevalence of self-injurious thoughts and behaviors in transgender individuals with eating disorders: a national study. J Adolesc Health. 2019;64(4):461–6.
10. Guss, C. E., Williams, D. N., Reisner, S. L., Austin, S. B., & Katz-Wise, S. L. (2017). Disordered weight management behaviors, nonprescription steroid use, and weight perception in transgender youth. Journal of Adolescent Health, 60(1), 17–22.
11. Watson, R. J., Veale, J. F., & Saewyc, E. M. (2016). Disordered eating behaviors among transgender youth: Probability profiles from risk and protective factors. International Journal of Eating Disorders, 50(5), 515–522.
12. Cooper Z & Fairburn CG. The Eating Disorder Examination: a semi-structured interview for the assessment of the specific psychopathology of eating disorders. *International Journal of Eating Disorders* 1987; 6: 1-8.
13. Fairburn CG & Cooper Z. The Eating Disorder Examination (twelfth edition). In: CG Fairburn & GT Wilson (eds.). *Binge Eating: Nature, Assessment and Treatment*. (pp. 317-360). New York: Guilford Press, 1993.
14. Fairburn CG, Cooper Z, O'Connor M. Eating Disorder Examination (16.0D). In Fairburn CG. *Cognitive Behavior Therapy and Eating Disorders*. New York: Guilford Press, 2008.
15. Fairburn CG, Beglin SJ. Eating Disorder Examination Questionnaire (6.0). In Fairburn CG. *Cognitive Behavior Therapy and Eating Disorders*. New York: Guilford Press, 2008.

16. Mond J, Hall A, Bentley C, Harrison C, Gratwick-Sarll K, Lewis V. Eating-disordered behavior in adolescent boys: Eating disorder examination questionnaire norms. *International Journal of Eating Disorders*. 2014;47(4):335-341. doi:10.1002/eat.22237
17. Jennings KM, Phillips KE. Eating Disorder Examination–Questionnaire (EDE–Q): Norms for Clinical Sample of Female Adolescents with Anorexia Nervosa. *Archives of Psychiatric Nursing*. 2017;31(6):578-581. doi:10.1016/j.apnu.2017.08.002
18. Jennings KM, Phillips KE. Eating Disorder Examination–Questionnaire (EDE–Q): Norms for a Clinical Sample of Males. *Archives of Psychiatric Nursing*. 2017;31(1):73-76. doi:10.1016/j.apnu.2016.08.004
19. Witcomb GL, Bouman WP, Brewin N, Richards C, Fernandez-Aranda F, Arcelus J. Body Image Dissatisfaction and Eating-Related Psychopathology in Trans Individuals: A Matched Control Study. European Eating Disorders Review. 2015;23(4):287-293. doi:10.1002/erv.2362
20. Vocks S, Stahn C, Loenser K, Legenbauer T. Eating and Body Image Disturbances in Male-to-Female and Female-to-Male Transsexuals. Archives of Sexual Behavior. 2009;38(3):364-377. doi:10.1007/s10508-008-9424-z
21. Koopman-Verhoeff, M., Gredvig-Ardito, C., Barker, D., Saletin, J., & Carskadon, M. (2020). Classifying Pubertal Development Using Child and Parent Report: Comparing the Pubertal Development Scales to Tanner Staging. Journal of Adolescent Health, 66(5), 597-602