

# Internalized transphobia and body image concerns: a cross-sectional comparison of transgender and gender diverse individuals before and after gender-affirming therapy

Paolo Meneguzzo<sup>1,2</sup>, Laura Vozzi<sup>1</sup>, Michela Biscaro<sup>1</sup>, Daniele Zuccaretti<sup>1</sup>, Elena Tenconi<sup>1,2</sup>, Angela Favaro<sup>1,2</sup>

<sup>1</sup> Department of Neuroscience, University of Padova, Padova, Italy; <sup>2</sup> Padova Neuroscience Center, University of Padova, Padova, Italy

## Summary

**Objectives.** Transgender and gender-diverse (TGD) individuals often face significant psychological challenges due to body dissatisfaction resulting from gender incongruence. Gender-affirming hormone therapy (GAHT) is recognized to improve overall well-being, but its impact on body dissatisfaction and the risk of eating disorders (ED) is less clear. The primary objective of this study was to examine the combined effects of gender-affirming hormone therapy (GAHT) and internalized transphobia (IT) on concerns about body image and the risk of eating disorders among transgender and gender-diverse individuals.

**Methods.** This cross-sectional study investigates the effects of GAHT and internalized transphobia (IT) on body image concerns and ED risk among 79 TGD individuals. Participants were divided into two groups: those who had not started GAHT (GAHT-, n = 49) and those who had been on GAHT for at least one year (GAHT+, n = 30). Body uneasiness and ED risk were assessed using the Body Uneasiness Test (BUT) and the SCOFF questionnaire, respectively.

**Results.** The results revealed greater body anxiety and ED risk in the GAHT- group, suggesting that GAHT may alleviate body dissatisfaction. Additionally, IT significantly influenced body image concerns, particularly weight phobia and body image dissatisfaction. The effects between GAHT and IT were significant, highlighting that people experiencing high IT and lacking GAHT face amplified body uneasiness.

**Conclusions.** These findings suggest that while GAHT can mitigate some distress, psychological interventions targeting IT are essential to fully address body image concerns and ED risk in TGD individuals. The study underscores the need for a holistic approach that combines medical and psychological care for this population.

**Keywords:** transgender, body image, eating disorders, gender-affirming hormone therapy, internalized transphobia

## Correspondence

**Paolo Meneguzzo**

E-mail: paolo.meneguzzo@unipd.it

## How to cite this article:

Meneguzzo P, Vozzi L, Biscaro M, et al. Internalized transphobia and body image concerns: a cross-sectional comparison of transgender and gender diverse individuals before and after gender-affirming therapy. Italian Journal of Psychiatry 2024;10:112-117; <https://doi.org/10.36180/2421-4469-2024-646>

This is an open access article distributed in accordance with the CC-BY-NC-ND (Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International) license. The article can be used by giving appropriate credit and mentioning the license, but only for non-commercial purposes and only in the original version. For further information: <https://creativecommons.org/licenses/by-nc-nd/4.0/deed.en>



Open Access

© Copyright by Pacini Editore Srl

## INTRODUCTION

Transgender and gender-diverse (TGD) individuals face unique psychological and physical difficulties due to the incongruence between their experienced gender identity and their physical appearance<sup>1</sup>. This gender incongruence often leads to body dissatisfaction, a major source of distress that can affect mental health and overall well-being<sup>2</sup>. Many TGD individuals pursue gender-affirming pathways, such as hormone therapy and surgical interventions, to align their bodies to their gen-

der identity<sup>3,4</sup>. These interventions have shown a substantial benefit in improving the general well-being of TGD individuals; however, the findings were less conclusive concerning body image, likely due to factors related to objectification and internalization of beauty standards<sup>5,6</sup>. Gender-affirming hormone therapy (GAHT), in particular, has been shown to reduce body-related distress by facilitating physical changes that align with one's gender identity. However, despite the potential benefits, the relationship between GAHT and psychological outcomes, including body dissatisfaction and risk of eating disorders (ED), remains underexplored<sup>7</sup>.

Body dissatisfaction is a well-known risk factor for the development of eating disorders, and TGD individuals are believed to be at higher risk for EDs than their cisgender counterparts<sup>6,8</sup>. The pressures associated with conforming to societal expectations of appearance, coupled with the internal conflict arising from gender incongruence, can exacerbate unhealthy eating behaviors and distorted body image<sup>8,9</sup>. Additionally, internalized transphobia (IT)—the internalization of negative societal views toward one's gender identity—can further compound these issues<sup>10,11</sup>. Internalized transphobia has been associated with higher levels of psychological distress, including concerns about body image, and may amplify the risk of developing disordered eating behaviors in TGD individuals<sup>9,12</sup>.

Despite growing awareness of these risks, research investigating the interplay between body dissatisfaction, internalized transphobia, and eating disorder risk in TGD populations is still limited. In particular, it remains unclear how these factors evolve across different stages of the gender-affirming process, such as before and after beginning GAHT<sup>8</sup>. Understanding how GAHT and internalized transphobia influence body image concerns and the risk of eating disorders is crucial for tailoring interventions that address the mental health needs of this population.

The primary aim of this study was to examine the impact of GAHT and internalized transphobia (IT) on body image concerns and the risk of eating disorders among TGD individuals. Specifically, we sought to (1) compare body uneasiness and ED risk between individuals at different stages of their gender-affirming pathways, (2) assess the influence of IT on body dissatisfaction and ED risk, and (3) explore the interaction between IT and GAHT in shaping body image experiences. By doing so, this study aimed to provide a more comprehensive understanding of the psychological challenges faced by TGD individuals, informing both medical and psychological interventions.

## MATERIALS AND METHODS

This study is a cross-sectional analysis of data from TGD individuals at different stages of their gender-affirming pathways. Participants were recruited from the Regional Center for Gender Incongruence of Padua University-Hospital (Padova, Italy). The inclusion criteria required participants to have gender variance, including both gender incongruence

(as per ICD-11 criteria) and non-binary gender identities. The exclusion criteria were being under 18 years of age and having a certified cognitive deficit.

All participants agreed to participate in the study and signed an informed consent. The protocol (6011/AO/24) was approved by the Comitato Etico Territoriale Area Centro-Est Veneto (CET-ACEV).

### Collected data

All participants were evaluated by a trained psychiatrist for inclusion and exclusion criteria. Demographic data, including age, weight, height, and years of education, were collected as part of the clinical routine. The presence or absence of a specific GATH was also evaluated, considering the participants' medical history. Only individuals without a previous history of any GATH were included in the GATH- group. All participants reported having undergone (or currently undergoing) affirmative psychotherapy.

Additionally, all participants completed a psychological evaluation composed of several questionnaires. The SCOFF questionnaire, a globally used screening tool for assessing the risk of eating disorders, was administered<sup>13</sup>. Both the five-item and seven-item versions were used to explore differences or convergence in this specific population. Items 6 (*"Are you satisfied with your eating patterns?"*) and 7 (*"Do you ever eat in secret?"*) have shown a specific reliability in people with bulimia nervosa<sup>13</sup>. Each question is scored as either "yes" or "no," with each "yes" response scoring 1 point. A score of 2 or more out of 5 indicates a likely case of an eating disorder, warranting further evaluation.

Body Uneasiness Test (BUT) form A was used to assess body concerns and bodily experiences<sup>14</sup>. It consists of 34 items, scored on a 5-point scale, with higher scores indicating greater concerns. The test comprises five subscales: weight phobia (WP), body image concern (BIC), avoidance (A), compulsive self-monitoring (CSM) and depersonalization (D).

Lastly, the IT subscale of the Gender Minority Stress and Resilience (GMSR) measure was administered<sup>15</sup>. It consists of eight items, scored on a 5-point scale, with higher scores indicating greater internalized concerns.

### Statistical Approach

The statistical analyses were conducted to assess differences between groups and evaluate the relationships among variables of interest while considering the study's objectives. The normality of continuous variables was tested using the Shapiro-Wilk test, ensuring the appropriate choice of parametric or nonparametric statistical methods. Given that many variables were not normally distributed, nonparametric tests were applied where necessary. For group comparisons, Mann-Whitney U tests were used to compare continuous demographic and psychological variables (e.g., BUT subscales) between the GAHT- and GAHT+ groups, as this test does not assume normality. Hedges' *g* was calculated to provide a measure of effect size, offering insight

into the magnitude of group differences. This was chosen over Cohen's *d* due to potential differences in group sizes. Chi-square tests were applied to categorical variables (e.g., SCOFF results) to determine whether distributions differed significantly between groups. A Multivariate Analysis of Variance (MANOVA) was employed to evaluate the simultaneous effects of IT and GAHT on multiple subscales of the BUT. MANOVA was selected because it controls for Type I error inflation when analyzing multiple related dependent variables and allows for the exploration of interaction effects. Effect sizes for the MANOVA results were reported using  $\eta^2$ , with values ranging from 0.34 to 0.63, indicating large effects. To examine the relationship between the duration of GAHT and psychological outcomes, multiple linear regression analyses were conducted for each BUT subscale and IT. The independent variable was the duration of GAHT, measured in years. This analysis was chosen to determine whether longer exposure to GAHT is associated with lower levels of body uneasiness and internalized transphobia, thereby addressing a key study Objective. Linear regression assumptions, including linearity, independence of errors, homoscedasticity, and

multicollinearity, were verified to ensure valid results. The significance level was set at  $p < 0.05$ . All statistical analyses were performed using SPSS, version 25.

## RESULTS

### Descriptive statistics

A total of 79 TGD individuals participated in the study. Of these, 41 were assigned male at birth and 38 were assigned female. For the study, the participants were divided into two subgroups: those who had not yet begun gender-affirming hormone therapy (GAHT-) and those who had been on GAHT for at least one year (GAHT+). The GAHT- group consisted of 49 individuals, while the GAHT+ group included 30 individuals, with no significant difference in the distribution of sex assigned at birth between the groups ( $\chi^2(1) = 0.440$ ,  $p = 0.507$ ). No significant differences were observed between the groups in age or body mass index (BMI). However, notable differences emerged in body uneasiness and internalized transphobia, with the GAHT- group reporting higher scores in both areas. See Table 1 for further details.

**TABLE I.** Demographic and clinical details of participants.

	GAHT- n = 49	GAHT+ n = 30	W	p  g
Age, years	27.94 9.75	31.53 11.23	579.50	0.117 0.212
BMI, kg/m <sup>2</sup>	23.10 5.40	23.99 5.09	646.00	0.371 0.121
Sex assigned at birth (%)	F = 25 (51%) M = 24 (49%)	F = 13 (43%) M = 17 (57%)	0.44 <sup>#</sup>	0.507
Duration of the GAHT, years	-	8.27 8.68 [1.00 - 35.00]		
SCOFF5	1.65 1.36	1.53 1.28	775.00	0.679 0.054
SCOFF7	2.51 1.52	2.20 1.47	808.00	0.454 0.099
WP	2.97 0.96	1.99 1.33	1050.00	0.001 0.429
BIC	3.50 2.12	2.12 1.45	1135.50	< 0.001 0.545
A	2.26 1.32	1.32 1.51	1036.50	0.002 0.410
CSM	2.00 1.41	1.41 1.21	1036.50	0.002 0.410
D	2.54 1.28	1.28 1.30	1149.50	< 0.001 0.564
IT	14.63 11.60	11.60 4.44	939.00	0.042 0.273

*Means and standard deviations are reported for each variable. #: chi-squared. GAHT: gender-affirming hormone therapy; WP: weight phobia; BIC: body image concerns; A: avoidance; CSM: compulsive self-monitoring; D: depersonalization; IT: internalized transphobia.*

### SCOFF versions comparison

Two versions of the SCOFF questionnaire were used to evaluate the presence of a risk for ED. The SCOFF5 was positive in 15 out of 49 individuals in the GAHT- group (30.6%) and in 6 out of 30 individuals in the GAHT+ group (20.0%). Using SCOFF7, the number of people with a significant risk of ED was 24 (49.0%) in the GAHT- group and 15 (50.0%) in the GAHT+ group. The two tests showed significantly different distributions:  $\chi^2(1) = 29.337, p < 0.001$ .

### Duration of the GAHT

We conducted a series of multiple regressions to examine the relationship between the duration of GAHT and body uneasiness and internalized transphobia. The analysis revealed significant negative regression coefficients for Body Image Concerns ( $B = -0.07, p = 0.021, R^2 = 0.15$ ), Depersonalization ( $B = -0.06, p = 0.040, R^2 = 0.11$ ), Avoidance ( $B = -0.06, p = 0.045, R^2 = 0.11$ ), and Internalized Transphobia ( $B = -0.22, p = 0.020, R^2 = 0.15$ ). However, the coefficients for Compulsive Self-Monitoring ( $B = -0.04, p = 0.087$ ) and Weight Phobia ( $B = -0.05, p = 0.071$ ) were not statistically significant.

### Interaction IT and GAHT on BUT

The MANOVA explored the effects of IT and GAHT on the subscales of BUT. The results revealed a significant effect of IT on the combined dependent variables, Wilks'  $\Lambda = 0.06, F = 1.55, p = 0.004$ , indicating that IT significantly influences the WP, BIC, and D. Specifically, the effect of IT was significant for WP,  $F(21, 78) = 2.28, p < 0.001, \eta^2 = 0.63$ ; for BIC,  $F(21, 78) = 3.01, p = 0.001, \eta^2 = 0.58$ ; and for D,  $F(21, 78) = 3.02, p = 0.001, \eta^2 = 0.058$ .

When considering both IT and GAHT, we found significant effects on WP, BIC, A, and D. The interaction between IT and GAHT was significant for WP,  $F(10, 78) = 3.01, p = 0.005, \eta^2 = 0.40$ ; for BIC,  $F(10, 78) = 2.83, p = 0.008, \eta^2 = 0.38$ ; for A,  $F(10, 78) = 2.65, p = 0.012, \eta^2 = 0.37$ ; and for D,  $F(10, 78) = 2.40, p = 0.022, \eta^2 = 0.34$ .

## DISCUSSION

The present study provides valuable insights into body image concerns, internalized transphobia, and the risk of eating disorders among TGD individuals at different stages of their gender-affirming pathways. Our results underscore the complexity of the relationship between GAHT, internalized transphobia, and psychological constructs related to body image and eating disorders.

One of the key findings is the significant difference in body uneasiness between individuals who had not yet begun GAHT and those who had been on GAHT for at least one year. The GAHT- group reported significantly higher scores on body uneasiness, suggesting that GAHT may play a crucial role in reducing body dissatisfaction<sup>7,10</sup>. These results align with previous research, which has shown that hormone therapy can improve body image and overall mental health in TGD individuals<sup>16</sup>. This highlights the importance of providing access

to GAHT as a means of mitigating body-related distress in this population. However, it is important to recognize that GAHT alone may not fully resolve body image concerns, as individuals in the GAHT+ group still exhibited some degree of uneasiness. Indeed, our analysis of the relationship between the duration of GAHT and body uneasiness revealed that longer exposure to hormone therapy was associated with significantly lower scores on body image concerns, depersonalization, avoidance, and internalized transphobia. These findings highlight the potential of GAHT to alleviate psychological distress related to body dissatisfaction and stigma. However, the lack of significant associations between compulsive self-monitoring and weight phobia suggests that certain aspects of body image concerns may persist despite affirming psychotherapy and hormonal intervention.

Internalized transphobia emerged as a significant factor influencing body image concerns, particularly on the weight phobia, body image concern, and depersonalization subscales of the BUT<sup>10</sup>. This finding is consistent with the theory that internalized transphobia, which reflects the internalization of negative societal attitudes toward gender diversity, exacerbates feelings of discomfort with one's body<sup>12</sup>. High levels of internalized transphobia may reinforce the disconnect between an individual's gender identity and their physical appearance, particularly for those who have not yet undergone medical or hormonal interventions. The significant effect of internalized transphobia on multiple subscales suggests that addressing internalized stigma should be a key component of psychological interventions for TGD individuals, particularly in conjunction with medical treatments.

Our findings revealed a significant prevalence of ED risk within the study population, as measured by the SCOFF questionnaire<sup>17,18</sup>. Interestingly, the five-item version suggested a lower prevalence of ED risk in the GAHT+ group compared to the GAHT- group, while the seven-item version indicated a more consistent ED risk across both groups. This discrepancy may stem from the SCOFF5's greater focus on restrictive eating behaviors, which may not be as predominant in TGD populations. In contrast, SCOFF7, by including additional questions that likely capture a broader spectrum of disordered eating behaviors—such as emotional eating, overeating, and binge/purge eating—may be more attuned to patterns beyond pure restriction and underweight<sup>19,20</sup>. The SCOFF7's enhanced sensitivity is especially relevant in TGD individuals, where disordered eating often intersects with complex emotional and body-related experiences. The higher risk of ED observed in the GAHT- group may be related to greater body dissatisfaction before the onset of GAHT, emphasizing the potential of GAHT to alleviate some body-related distress<sup>8</sup>. The consistent ED risk detected by the SCOFF7 across both groups suggests that more nuanced screening tools are needed to effectively capture the diverse eating behaviors in TGD individuals<sup>6</sup>, regardless of GAHT status.

Finally, the interaction between internalized transphobia and GAHT had a significant impact on body uneasiness sub-

scales—weight phobia, body image concerns, and depersonalization—with avoidance emerging as a particularly significant subscale that emerged only in this interaction. Avoidance behaviors, such as withdrawing from social situations or avoiding mirrors, could serve as a way to minimize exposure to triggers of dysphoria, but may ultimately reinforce negative body image and further isolate individuals from support. These findings might indicate that the combination of internalized stigma and lack of medical affirmation contributes to increased body-related distress. Individuals who have not undergone GAHT and experience high levels of internalized transphobia may face a double burden of dysphoria and societal stigma, intensifying their body image concerns<sup>8</sup>. On the contrary, those who have undergone GAHT but still experience high internalized transphobia may continue to struggle with residual body-related distress despite hormonal intervention. These results underscore the need for a comprehensive approach that addresses both medical and psychological aspects of gender transition<sup>4,10</sup>.

### Clinical Implications

This study has several clinical implications. First, the findings highlight—once again—the importance of access to GAHT for TGD individuals, as hormone therapy appears to alleviate body-related distress and reduce the risk of EDs. Second, psychological interventions targeting internalized transphobia, such as affirming psychotherapy and support groups, should be prioritized along with medical treatments to help people improve their psychological well-being. Third, ED screening tools such as the SCOFF should be carefully selected and adapted for TGD populations, given the differences observed in this study between the five-item and seven-item versions.

### Limitations

Several limitations to this study must be acknowledged. The cross-sectional design does not allow causal inferences while allowing the identification of possible differences between groups at different affirmative stages, and longitudinal studies are needed to assess the long-term effects of GAHT and internalized transphobia on body image and ED risk. Additionally, the relatively small sample size, particularly in the GAHT+ group, may limit the generalizability of the findings. Future studies should aim to include larger and more diverse sam-

ples of TGD individuals to understand the nuances of these relationships better.

### CONCLUSION

This study adds to the growing body of research on the psychological well-being of TGD individuals by demonstrating the significant roles of GAHT duration and internalized transphobia in shaping body image concerns and the risk of EDs. The findings highlight that while GAHT can alleviate some aspects of body uneasiness, persistent concerns may remain, particularly in individuals with high levels of internalized transphobia. Additionally, the differential outcomes of the SCOFF questionnaires emphasize the need for more nuanced ED screening tools tailored to the experiences of TGD populations. A holistic approach that integrates both medical and psychological interventions, including efforts to reduce internalized stigma, is essential for addressing the unique challenges faced by TGD individuals throughout their gender-affirming journeys.

### Acknowledgments

The authors thank the Gender Incongruence Interdisciplinary Group (GIIG) at Padua University-Hospital, Padova, Italy.

### Conflict of interest statement

The authors declare that they have no conflict of interest in this study.

### Funding

This research did not receive a specific grant from any funding agency in the public, commercial, or non-profit sectors.

### Ethical consideration

The study was conducted according to the Declaration of Helsinki and the National legislation. Informed consent was obtained from all participants involved in the study, both to participate and to publish. The protocol (6011/AO/24) was approved by the Comitato Etico Territoriale Area Centro-Est Veneto (CET-ACEV).

### Authors' contribution

P.M., L.V., M.B., and D.Z. collected the data and wrote the first draft. E.T. and A.F. supervised the investigation and reviewed and edited the manuscript. All authors contributed to and approved the final manuscript.

### References

- Macdonald V, Verster A, Mello MB, et al. The World Health Organization's work and recommendations for improving the health of trans and gender diverse people. *J Int AIDS Soc.* 2022;25:e26004. <https://doi.org/10.1002/jia2.26004>
- Winter S, Diamond M, Green J, et al. Transgender people: health at the margins of society. *The Lancet.* 2016;388(10042):390-400. [https://doi.org/10.1016/S0140-6736\(16\)00683-8](https://doi.org/10.1016/S0140-6736(16)00683-8)
- Baker KE, Wilson LM, Sharma R, Dukhanin V, McArthur K, Robinson KA. Hormone therapy, mental health, and quality of life among transgender people: a systematic review. *J Endocr Soc.* 2021;5(4):bvab011. <https://doi.org/10.1210/jendso/bvab011>
- Coleman E, Radix AE, Bouman WP, et al. Standards of Care for the Health of Transgender and Gender Diverse People, Version 8. *Int J Transgend Health.* 2022;23(S1):S1-S259. <https://doi.org/10.1080/26895269.2022.2100644>
- 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(2):131. <https://psycnet.apa.org/doi/10.1037/cou0000333>

- <sup>6</sup> Meneguzzo P, Zuccaretti D, Tenconi E, Favaro A. Transgender body image: Weight dissatisfaction, objectification & identity - Complex interplay explored via matched group. *Int J Clin Health Psychol*. 2024;24(1). <https://doi.org/10.1016/j.ijchp.2024.100441>
- <sup>7</sup> Rasmussen SM, Dalgaard MK, Roloff M, et al. Eating disorder symptomatology among transgender individuals: a systematic review and meta-analysis. *J Eat Disord*. 2023;11(1):84. <https://doi.org/10.1186/s40337-023-00806-y>
- <sup>8</sup> Brewer G, Hanson L, Caswell N. Body image and eating behavior in transgender men and women: the importance of stage of gender affirmation. *Bulletin of Applied Transgender Studies*. 2022;1(1-2):71-95. <https://doi.org/10.57814/xzh3-ze38>
- <sup>9</sup> Heiden-Rootes K, Linsenmeyer W, Levine S, Oliveras M, Joseph M. A scoping review of the research literature on eating and body image for transgender and non-binary adults. *J Eat Disord*. 2023;11(1):111. <https://doi.org/10.1186/s40337-023-00828-6>
- <sup>10</sup> Castellini G, Rossi E, Cassioli E, et al. Internalized transphobia predicts worse longitudinal trend of body uneasiness in transgender persons treated with gender affirming hormone therapy: a 1-year follow-up study. *J Sex Med*. 2023;20(3):388-397. <https://doi.org/10.1093/jsxmed/qdac036>
- <sup>11</sup> Conn BM, Chen D, Olson-Kennedy J, et al. High internalized transphobia and low gender identity pride are associated with depression symptoms among transgender and gender-diverse youth. *J Adolesc Health*. 2023;72(6):877-884. <https://doi.org/10.1016/j.jadohealth.2023.02.036>
- <sup>12</sup> Garro M, Novara C, Di Napoli G, et al. The role of internalized transphobia, loneliness, and social support in the psychological well-being of a group of Italian transgender and gender non-conforming youths. *Healthcare (Basel)*. 2022;10(11):2282. <https://doi.org/10.3390/healthcare10112282>
- <sup>13</sup> Luck AJ, MorganLuck JF, Reid F, et al. The SCOFF questionnaire and clinical interview for eating disorders in general practice: comparative study. *BMJ*. 2002;325(7367):755-756. <https://doi.org/10.1136/bmj.325.7367.755>
- <sup>14</sup> Cuzzolaro M, Vetrone G, Marano G, et al. The Body Uneasiness Test (BUT): Development and validation of a new body image assessment scale. *Eating and Weight Disorders*. 2006;11(1):1-13. <https://doi.org/10.1007/BF03327738>
- <sup>15</sup> Hidalgo MA, Petras H, Chen D, Chodzen G. The Gender Minority Stress and Resilience Measure: Psychometric Validity of an Adolescent Extension. *Clin Pract Pediatr Psychol*. 2019;7(3):278. <https://doi.org/10.1037/cpp0000297>
- <sup>16</sup> Grannis C, Mattson WI, Leibowitz SF, et al. Expanding upon the relationship between gender-affirming hormone therapy, neural connectivity, mental health, and body image dissatisfaction. *Psychoneuroendocrinology*. 2023;156:106319. <https://doi.org/10.1016/j.psyneuen.2023.106319>
- <sup>17</sup> Jones BA, Haycraft E, Bouman WP, Brewin N, Claes L, Arcelus J. Risk factors for eating disorder psychopathology within the treatment seeking transgender population: The role of cross-sex hormone treatment. *Eur Eat Disord Rev*. 2018 Mar;26(2):120-128. <https://doi.org/10.1002/erv.2576>
- <sup>18</sup> Simone M, Hazzard VM, Askew AJ, Tebbe EA, Lipson SK, Pisetsky EM. Variability in eating disorder risk and diagnosis in transgender and gender diverse college students. *Ann Epidemiol*. 2022;70:53-60. <https://doi.org/10.1016/j.annepidem.2022.04.007>
- <sup>19</sup> Tavalacci MP, Gillibert A, Zhu Soubise A, Grigioni S, Déchelotte P. Screening four broad categories of eating disorders: Suitability of a clinical algorithm adapted from the SCOFF questionnaire. *BMC Psychiatry*. 2019;19:1-7. <https://doi.org/10.1186/s12888-019-2338-6>
- <sup>20</sup> Luck AJ, MorganLuck JF, Reid F, et al. The SCOFF questionnaire and clinical interview for eating disorders in general practice: comparative study. *BMJ*. 2002;325(7367):755-756. <https://doi.org/10.1136/bmj.325.7367.755>