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Satisfaction, Regret, and Harm After Hormone Therapy in Youth From a Multidisciplinary Gender Clinic

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IMPORTANCE Concerns about regret and harm have led to restrictions on transgender and gender-diverse youths' access to testosterone or estrogen therapy (ie, hormone therapy [HT]), while empirical data on decisional regret among those initiating HT as youth remain limited.

OBJECTIVES To examine satisfaction, regret, and perceived harm among individuals who initiated HT as youth and to identify demographic and clinical characteristics associated with regret or harm and current HT status (receiving vs not).

DESIGN, SETTING, AND PARTICIPANTS This cohort study evaluates self-report surveys collected from October 2023 to October 2025 among former patients who initiated HT as youth at a single multidisciplinary gender clinic in the US. Data analysis was conducted from December 2025 to August 2026.

EXPOSURE Initiation of estrogen or testosterone.

MAIN OUTCOMES AND MEASURES Decision Regret Scale (DRS) total score (range, 0-100; higher scores indicate greater regret); item-level satisfaction, regret, and perceived harm; and current HT status. Associations with demographic and clinical characteristics were examined using nonparametric, Welch *t*, Fisher exact, or Pearson χ^2 tests as appropriate, with parametric sensitivity analyses for the DRS total score.

RESULTS Of the 376 participants who initiated HT as youth (112 [29.8%] initiating estrogen and 264 [70.2%] initiating testosterone; current age, 14-28 years; mean [SD] age, 20.9 [2.9] years; time since HT initiation: range, 1.2 months to 10.7 years; mean [SD], 4.9 [2.5] years), 4 were missing DRS scores, all of whom were currently receiving HT. Among the 372 respondents with DRS scores, overall decisional regret was very low (mean [SD] DRS score, 4.3 [14.7]; median [IQR], 0 [0-0]); 360 participants (96.8%) endorsed that receiving HT was the right decision, 10 (2.7%) reported regret, and 7 (1.9%) reported perceived harm. DRS scores were higher among participants not currently receiving HT vs currently receiving HT and among those identifying on the nonbinary vs binary spectrum; parametric sensitivity analyses estimated mean differences of 15.95 points (95% CI, 8.50-23.39) and 6.07 points (95% CI, 2.15-9.99), respectively. Participants not currently receiving HT (65 participants [17.3%]) were more likely than those currently receiving HT (311 [82.7%]) to have received testosterone (odds ratio, 3.58; 95% CI, 1.65-7.78; $P = .001$) and identify on the nonbinary spectrum (odds ratio, 8.88; 95% CI, 4.76-16.58; $P < .001$), were older (mean difference, 1.04 years; 95% CI, 0.45-1.64 years; $P = .001$), and had longer time since initiating HT (mean difference, 1.00 year; 95% CI, 0.48-1.53 years; $P < .001$). Neither regret or harm nor current HT status was associated with age at HT initiation or prepubertal gender diversity.

CONCLUSIONS AND RELEVANCE The findings of this cohort study complement the literature documenting mental health benefits of HT, providing further support for existing standards of care for transgender and gender-diverse youth.

Supplemental content

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Current estimates suggest that approximately 3.3% of 13- to 17-year-olds in the US identify as transgender or gender diverse (TGD).[1] However, only a small proportion receive hormone therapy (HT; ie, testosterone, estrogen), with insurance-based analyses indicating rates below 0.1% of the general youth population.[2] More than a dozen short-term follow-up studies and several large cross-sectional and retrospective studies[3-5] have consistently found improvements in mental health and quality of life among TGD youth receiving HT. Prior research from our clinic found significant reductions in body dissatisfaction, depression, and anxiety and improvement in psychosocial functioning in 2 cohorts of youth 1 year after initiating HT and/or puberty suppression.[6,7]

This previous research indirectly suggests that TGD youth may be satisfied with HT. However, concerns about potential regret and harm have intensified, leading to widespread efforts to prevent minors from accessing HT despite standards of care continuing to support its use.[8,9] While more limited in scope, several initial studies have demonstrated very low levels of regret among youth, consistent with low regret levels documented among TGD adults.[10,11] One of the first major longitudinal studies of youth receiving HT[12] reported that no participants expressed regret regarding puberty suppression or HT an average of 6 years after starting treatment. Three other clinic-based studies of youth have documented regret rates between 0% and 2%.[13-15] These findings are also consistent with a community-based sample of youth who socially transitioned in childhood and later accessed HT. While the rate of regret was slightly higher in this sample (5 of 119 respondents [4.2%]), nearly all respondents (115 of 119 [96.6%]) reported satisfaction with treatment.[16]

Preliminary research also suggests that rates of treatment discontinuation are low for those initiating HT as youth. van der Loos et al[17] reported that only 16 of 720 participants (2.2%) who started puberty suppression as adolescents were no longer receiving HT at median (IQR) follow-up of 3.5 (1.5-6.6) years later for youth assigned female and 2.3 (1.2-4.8) years later for youth assigned male. In another clinic-based sample with median follow-up of 2.7 years, 57 of 1050 participants (5.4%) initiating HT as youth discontinued HT for at least 3 months, although 20 subsequently restarted and 210 were lost to follow-up.[18] In a third sample using a US military insurance database, the 4-year continuation rate for those starting HT as minors was somewhat lower (74%), but it was still higher than for those who started HT as adults (64%).[19] Most studies examining reasons for stopping treatment have been conducted with adults, and findings suggest that stopping treatment is influenced by a range of internal and external factors and thus is not synonymous with regret.[20-22] Given recent increases in external barriers to accessing HT, rates of stopping treatment are likely increasing.

The present study seeks to strengthen the research base regarding TGD youths' experiences with HT, considering the substantial shifts in access to HT and concerns about the well-being of youth receiving this care. Building on our previous work, our first aim was to examine the degree of perceived satisfaction, regret, and harm among youth who initiated HT, including those who were currently receiving HT as well as those who were not. Our second aim was to examine whether demographic and clinical factors were associated with (1) youths' reports of regret or harm and/or (2) current HT status (receiving vs not).

Key Points

Question What degrees of satisfaction, regret, and harm are reported by transgender and gender-diverse participants who initiated testosterone or estrogen therapy (ie, hormone therapy [HT]) as youth, and are these experiences associated with demographic or clinical characteristics?

Findings In this cohort study of 372 participants who received care at a single multidisciplinary clinic, satisfaction with HT was high and regret and harm were rare. Decisional regret was slightly higher among youths not currently receiving HT and those identifying on the nonbinary spectrum, but it remained low in absolute terms.

Meaning Results provide support for existing standards of care rather than broad restrictions on youths' access to HT.

Methods

Participants and Procedure

Participants in this cohort study included former patients who were seen by a US multidisciplinary program for TGD youth and received HT. The process for initiating HT was guided by the World Professional Association for Transgender Health's standards of care, version 7[23] (the current version at the time), and the Endocrine Society's guidelines,[24] which included a semistructured assessment with patients and their parent(s) or guardian(s) conducted by a mental health professional in the program. This assessment visit was designed specifically for patients potentially interested in initiating medical treatment. For patients younger than 18 years, consent for HT was required from all parent(s) or guardian(s) with legal medical decision-making rights in addition to patient assent. Regardless of whether they subsequently initiated medical treatment, patients and parents who participated in the assessment were also approached to provide assent or consent for the clinical information from their medical record to be used for research purposes as part of a study approved by the institutional review board at University of Texas Southwestern Medical Center. Consent from a parent or guardian was required for research participants who were minors (aged <18 years) at the time of assent. Starting October 2023, patients and parents who provided initial assent or consent were reapproached to complete a yearly online research survey as part of a newly funded National Institutes of Health study. Participants could complete the survey from 1 month before to 6 months after the yearly anniversary of their initial assessment. The present study uses data collected from October 2023 to October 2025. Recruitment materials encouraged former patients to participate even if they never started treatment, stopped treatment, and/or were no longer receiving care. While all participants completed an assessment with the program, a

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minority started HT before or after being seen by the program (eg, transferred care after moving). Participants were compensated $45 to $65; changes in compensation aligned with adding new measures. We followed the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) reporting guidelines.[25] Data analysis was conducted from December 2025 to August 2026.

Measures

For treatments started prior to the participants' last visit with the program, start dates documented in medical records were used. Self-report was used for any additional start and stop dates and participants' current gender and sexual orientation identities. Participants' assigned sex, race, and ethnicity were obtained from medical records when self-report was not available. Prepubertal onset of gender diversity was assessed by 3 yes vs no items completed by the clinician indicating the presence of gender nonconformity, physical dysphoria, and/or a stated gender identity different than assigned sex prior to puberty onset. Patients' self-reported age at which they first identified with the gender identity reported at the initial assessment (hereafter termed *age at first identification*) was also obtained from the assessment note.

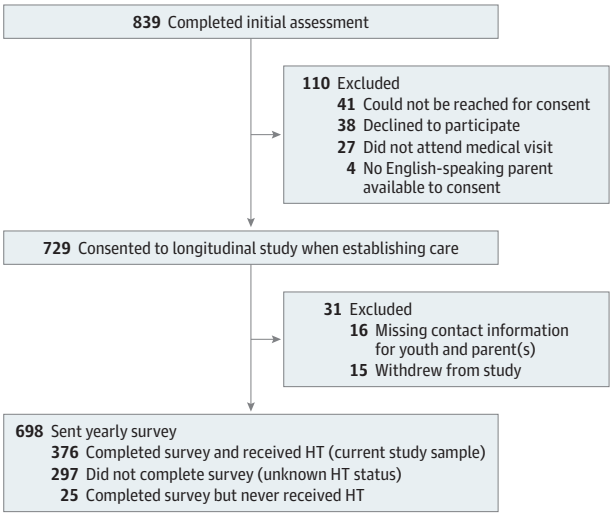
Participants completed the Decision Regret Scale (DRS), a 5-item measure with 5 response options prompting respondents to "reflect on your decision to start estrogen/testosterone therapy."[26] Total scores range from 0 to 100; higher scores indicate higher levels of decisional regret. For participants with multiple versions of the survey, the most recent version was used. However, all participants who agreed or strongly agreed that they experienced regret or harm on any version of the survey were included in analyses examining the subgroup of participants who reported regret or harm. Starting in October 2024, if a participant reported that they agreed or strongly agreed that they experienced regret or harm, they were prompted to describe their experiences in an open-ended text box.

Statistical Analysis

To characterize the sample, we compared patients who consented vs those who were not reached or who declined participation by age at initial assessment and assigned sex and ethnicity (Hispanic or Latino vs not Hispanic or Latino). Among those who consented, we also tested for differences between those who completed vs did not complete the survey by the same characteristics, prepubertal onset of gender diversity, and age at first identification.

To characterize each participant's perception of satisfaction, regret, and harm, we examined total scores on the DRS and responses on individual items reflecting the participant's perceptions of whether they made the right decision, experienced regret, and were harmed by the treatment. We also examined whether assigned sex, current gender identity (dichotomized into binary vs nonbinary spectrum, excluding cisgender), prepubertal onset of gender diversity, age at first identification, age at HT initiation, current age, and time since initiating HT were associated with (1) DRS scores, (2) whether participants ever reported regret or harm, and (3) HT status (receiving vs not). Qualitative responses were grouped into themes based on consensus between coauthors.

Figure 1. Participant Flow Diagram



HT indicates hormone therapy.

Given DRS scores showed substantial positive skew (4.7), kurtosis (23.9), and a pronounced floor effect (median [IQR], 0 [0-0]), nonparametric analyses were selected as a conservative primary approach. Spearman rank-order correlations examined associations between DRS scores and continuous variables, and Mann-Whitney *U* tests compared DRS score distributions across dichotomized variables, with effect sizes (*r*) computed from the standardized test statistic. Parametric analyses using Pearson correlations and Welch *t* test were also conducted as sensitivity analyses. Demographic and clinical characteristics were compared by regret or harm and current HT status using Welch *t* tests or Mann-Whitney *U* tests for markedly nonnormal continuous variables and Fisher exact or Pearson χ^2 tests for categorical variables, as appropriate. Effect estimates and 95% CIs were reported when applicable.

Results

Participants who consented to the initial study did not differ in age at initial assessment, assigned sex, or ethnicity from those who did not (eg, declined, not reached). However, among those who initially consented, those assigned male and those who experienced physical dysphoria prior to puberty were less likely to complete the current survey. No other differences were found between these groups. **Figure 1** provides a flowchart of participant inclusion. **Table 1** and **Table 2** provide information on participant demographic and clinical characteristics separated by current HT status and ever experiencing regret or harm from receiving HT. Within the study sample of 376 participants who initiated HT as youth (112 [29.8%] initiating estrogen and 264 [70.2%] initiating testosterone), participants' current age ranged from 14 to 28 years (mean [SD] age, 20.9 [2.9] years); 344 participants (91.7%) started HT at age 17 years

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Table 1. Demographic Characteristics

Characteristic	No. (%)[a]				
	Total sample (N = 376)	Currently receiving HT (n = 311)	Not currently receiving HT (n = 65)	No regret or harm (n = 359)	Regret or harm present (n = 13)
Sex assigned at birth					
Female	264 (70.2)	207 (66.6)	57 (87.7)	254 (70.8)	8 (61.5)
Male	112 (29.8)	104 (33.4)	8 (12.3)	105 (29.2)	5 (38.5)
Race					
American Indian or Alaska Native	11 (2.9)	9 (2.9)	2 (3.2)	10 (2.8)	1 (7.7)
Asian	23 (6.2)	21 (6.8)	2 (3.2)	22 (6.2)	1 (7.7)
Black or African American	12 (3.2)	11 (3.5)	1 (1.6)	12 (3.4)	0
White	349 (93.6)	290 (93.5)	59 (93.7)	335 (94.1)	10 (76.9)
Ethnicity					
Hispanic or Latino	75 (19.9)	56 (18.0)	19 (29.2)	72 (20.1)	3 (23.1)
Not Hispanic or Latino	301 (80.1)	255 (82.0)	46 (70.8)	287 (79.9)	10 (76.9)
Current gender identity[b]					
Male spectrum[c]	222 (60.7)	191 (63.0)	31 (49.2)	219 (62.8)	1 (7.7)
Female spectrum[d]	98 (26.8)	93 (30.7)	5 (7.9)	94 (26.9)	2 (15.4)
Nonbinary	47 (12.9)	26 (8.6)	21 (33.9)	44 (12.6)	3 (25.0)
Gender fluid or gender flux	11 (2.9)	9 (3.0)	2 (3.2)	10 (2.9)	1 (8.3)
Something else	28 (7.7)	15 (5.0)	13 (21.0)	28 (8.0)	0
Cisgender male[e]	3 (0.8)	1 (0.3)	2 (3.2)	1 (0.3)	2 (15.4)
Cisgender female[e]	5 (1.4)	0	5 (7.9)	0	5 (38.5)
Current gender identity, dichotomized and excluding cisgender					
Binary spectrum[f]	283 (79.1)	260 (86.1)	23 (41.1)	277 (79.6)	2 (33.3)
Nonbinary spectrum	75 (20.9)	42 (13.9)	33 (58.9)	71 (20.4)	4 (66.7)
Current sexual orientation[b]					
Heterosexual or straight	48 (13.0)	42 (13.8)	6 (9.2)	42 (11.9)	4 (30.8)
Bisexual	126 (34.1)	105 (34.4)	21 (32.3)	122 (34.6)	3 (23.1)
Pansexual	38 (10.3)	34 (11.1)	4 (6.2)	38 (10.8)	0
Gay or homosexual	64 (17.3)	53 (17.4)	11 (16.9)	63 (17.8)	0
Lesbian	29 (7.8)	26 (8.5)	3 (4.6)	29 (8.2)	0
Queer	47 (12.7)	37 (12.1)	10 (15.4)	47 (13.3)	0
Asexual spectrum	45 (12.2)	38 (12.5)	7 (10.8)	43 (12.2)	2 (15.4)
Something else or unlabeled	19 (5.1)	13 (4.3)	6 (9.2)	16 (4.5)	3 (23.1)

Abbreviation: HT, hormone therapy.

[a] Percentages are in relation to the total number of participants in each subgroup with data available for each item.

[b] Participants could identify with more than 1 identity.

[c] Includes male, FTM (ie, female to male), transmasculine, demiboy (excluding cisgender male).

[d] Includes female, MTF (ie, male to female), transfeminine, demigirl (excluding cisgender female).

[e] Includes all participants who identified exclusively with the gender associated with their assigned sex regardless of whether they explicitly used the term *cisgender*.

[f] Includes only participants who identified exclusively with a male- or female-spectrum identity.

or younger, 27 (7.2%) at age 18 years, and 4 (1.1%) at age 19 years. Time since initiating HT ranged from 1.2 months to 10.7 years (mean [SD], 4.9 [2.5] years); 311 participants (82.7%) were receiving HT at the time of the survey and 65 participants (17.3%) were not. Of note, 4 of the 376 total participants were missing DRS scores, all of whom were currently receiving HT.

The mean (SD) DRS score for the full sample was 4.3 (14.7); the median (IQR) score was 0 (0-0). DRS score distributions did not differ significantly between those who had ever received testosterone (median [IQR], 0 [0-0]; n = 262 with DRS scores) and those who had ever received estrogen (median [IQR], 0 [0-0]; n = 110 with DRS scores). However, participants currently receiving HT reported lower DRS scores than participants no longer receiving HT (median [IQR], 0 [0-0] vs 0 [0-27.5], respectively; $P < .001$; $r = 0.31$). Participants identifying on the binary gender spectrum also reported lower scores than those identifying on the nonbinary spectrum (median [IQR], 0 [0-0] vs 0 [0-5], respectively; $P < .001$; $r = 0.27$). Parametric sensitivity analyses were consistent with these findings, with mean differences of 15.95 points (95% CI, 8.50-23.39) for participants no longer vs currently receiving HT and 6.07 points (95% CI, 2.15-9.99) for participants identifying on the nonbinary vs binary spectrum. Total DRS scores were not significantly associated with any other characteristics.

In their most recent survey, 96.8% of participants (n = 360) agreed with the DRS item, "It was the right decision." The distribution of responses is presented in **Figure 2**. Conversely, only 2.7% (n = 10) agreed that they regretted the decision to receive HT and 1.9% (n = 7) agreed that they experienced harm (all of whom also indicated regret). The respective figures were 96.6% (n = 253), 2.3% (n = 6), and 1.9% (n = 5) for those who received testosterone and 97.3% (n = 107), 3.6% (n = 4), and

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Table 2. Clinical Characteristics

Characteristic	Total sample	Currently receiving HT	Not currently receiving HT	No regret or harm	Regret or harm present
Mean (SD), y					
Current age	20.9 (2.9)	20.8 (3.0)	21.8 (2.0)	20.9 (2.9)	21.8 (2.2)
Age at first identification	10.9 (3.4)	10.8 (3.4)	11.1 (2.6)	10.9 (3.4)	11.6 (2.1)
Age at initiating HT	16.0 (1.4)	16.0 (1.4)	16.1 (1.3)	16.1 (1.2)	15.8 (1.2)
Time since starting HT	4.9 (2.5)	4.7 (2.5)	5.7 (1.8)	4.9 (2.5)	6.0 (2.0)
Time since stopping HT	NA	NA	2.5 (1.7)	NA	3.1 (1.5)
No. (%)[a]					
Prepubertal gender nonconformity	294 (84.2)	246 (85.7)	48 (77.4)	280 (84.1)	11 (84.6)
Prepubertal physical gender dysphoria	95 (27.5)	79 (27.6)	16 (26.7)	92 (28.0)	3 (23.1)
Prepubertal stated identity different from assigned sex	77 (21.6)	62 (21.0)	15 (24.2)	70 (20.6)	5 (38.5)

Abbreviation: HT, hormone therapy.

[a] Percentages are in relation to the total number of participants in each subgroup with data available for each item.

1.8% (n = 2) for those who received estrogen. **Table 3** reports the distribution of responses on these items separated by current HT status. An additional 3 participants reported regret (n = 2) or harm (n = 1) on a previous survey but not on their most recent survey. All participants who reported experiencing regret or harm on any survey were no longer receiving HT, except for 1 participant who may have misread the response options for the DRS (ie, agreed with both positively and negatively worded items). Compared with those who did not report regret or harm, participants who ever reported regret or harm (n = 13) did not differ significantly on any of the characteristics examined.

Nine participants provided qualitative reports of regret or harm, which generally fell under the following 3 broad categories: (1) HT-related changes were no longer desired (eg, facial or body hair, voice deepening, breast growth) (n = 6); (2) adverse effects of HT (eg, vaginal atrophy, emotional lability attributed to HT, possible fertility impairment) (n = 4); and (3) self-perception of not having been adequately prepared to make an informed decision about HT due to age or maturity, mental health difficulties, and/or lack of support from therapists and/or parents (n = 7).

Compared with those currently receiving HT, participants no longer receiving HT were more likely to have received testosterone (66.6% vs 87.7%, respectively; OR, 3.58; 95% CI, 1.65-7.78; $P = .001$) and to identify with a nonbinary-spectrum gender identity (13.9% vs 58.9%, respectively; OR, 8.88; 95% CI, 4.76-16.58; $P < .001$); were older at the time of survey (mean difference, 1.04 years; 95% CI, 0.45-1.64 years; $P = .001$); and had experienced a longer duration since starting HT (mean difference, 1.00 year; 95% CI, 0.48-1.53 years; $P < .001$).

Discussion

Consistent with existing studies of TGD youth and adults,[12-16] participants in this study reported high levels of satisfaction and very low levels of regret and harm related to their decision to receive HT a mean of 4.9 years after initiating treatment. Although DRS scores were statistically higher among participants not currently receiving HT and those identifying on the nonbinary spectrum, absolute levels of decisional regret in these groups were low, with the vast majority still reporting satisfaction and lack of regret or harm. Notably, the mean regret score of 4.3 in the current sample was substantially lower than the mean DRS score of 16.5 reported in a meta-analysis of studies using the DRS in a variety of patient populations, which itself was characterized as reflecting low regret.[27]

Few demographic or clinical characteristics were associated with regret or harm. Consistent with findings by Olson et al,[16] time since initiating HT was not associated with regret, although longer time since initiating HT and older age at the time of the survey were associated with an increased likelihood of not currently receiving HT. The small number of participants reporting regret or harm likely limited the detection of associations. Some initial studies with adult samples have identified differences in experiences of regret and/or stopping treatment by age, assigned sex, and other characteristics, while others have reported inconsistent findings, highlighting the possible heterogeneity of these experiences.[22,28]

Notably, prepubertal gender diversity was not associated with regret or harm. Early influential studies from the Amsterdam clinic (Center of Expertise on Gender Dysphoria, VU University Medical Center) exclusively included youth with childhood-onset gender dysphoria,[12,17] and Olson et al[16] similarly focused on youth who socially transitioned in childhood. Concerns have emerged that youth without childhood-onset gender dysphoria—now more common in contemporary clinic populations—may be at greater risk for regret.[29] The present findings do not provide support for this hypothesis during the period examined. Likewise, although youth assigned female were overrepresented among those receiving HT, this demographic imbalance did not correspond to higher rates of regret or harm in the current sample.

The study's overall response rate was comparable to the 3- to 5-year response rates reported in reviews of studies that used patient registries to collect self-reported outcome data[30] and higher than response rates observed in many outpatient patient-experience surveys conducted across a variety of populations, particularly those administered online.[31] Youth assigned male and those who experienced physical dysphoria

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Figure 2. Bar Graph of Participants' Responses to the Survey Item "It Was the Right Decision"

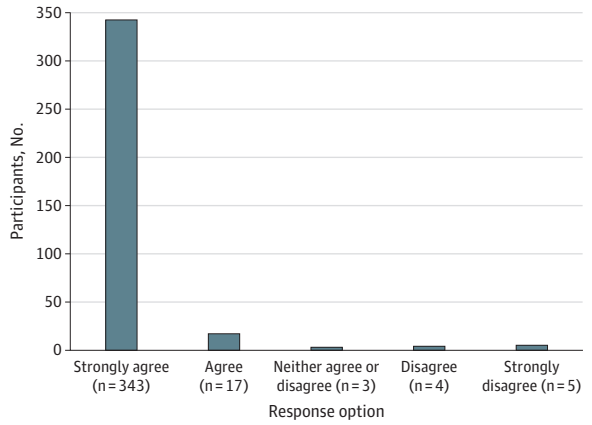

Table 3. Responses on Individual Decision Regret Scale (DRS) Items No. (%)

DRS item response options	Currently receiving HT (n = 307)	Not currently receiving HT (n = 65)
"It was the right decision"		
Strongly agree	298 (97.1)	45 (69.2)
Agree	8 (2.6)	9 (13.8)
Neither agree nor disagree	1 (0.3)	2 (3.1)
Disagree	0	4 (6.2)
Strongly disagree	0	5 (7.7)
"I regret the choice that was made"		
Strongly agree	1 (0.3)	4 (6.2)
Agree	0	5 (7.7)
Neither agree nor disagree	2 (0.7)	3 (4.6)
Disagree	7 (2.3)	7 (10.8)
Strongly disagree	297 (96.7)	46 (70.8)
"The choice did me a lot of harm"		
Strongly agree	1 (0.3)	5 (7.7)
Agree	0	1 (1.5)
Neither agree nor disagree	0	5 (7.7)
Disagree	18 (5.9)	7 (10.8)
Strongly disagree	288 (93.8)	47 (72.3)

Abbreviation: HT, hormone therapy.

in childhood were less likely to complete the survey, although these characteristics were not associated with regret or harm and no other differences were observed between those who consented or completed the survey vs those who did not.

Prior work indicates that youths' participation in research is associated with factors such as altruism, trust, and perceived risk in addition to logistical considerations (eg, convenience, time).[32,33] Given the current sociopolitical climate, some may have perceived participation as risky, contributing to lower response rates. This climate also may have motivated participation among individuals with particularly strong views either in support of or in opposition to youths' ability to access HT. The study was conducted by clinicians who provided care in the clinic from which participants were recruited, which may have increased trust and reduced perceived risk for some but deterred others from participating.

The multidisciplinary approach used by the clinic was consistent with standards of care for the provision of HT,[8,23] which include an initial assessment process and ongoing psychosocial support (although no ongoing therapy requirement). This approach may reduce factors associated with regret identified in the general literature on medical decision-making, which include higher decisional conflict (ie, uncertainty and difficulty weighing options), unmet information needs, misalignment between patient values, expectations, and outcomes, and lower quality of patient-clinician communication.[27,34] However, qualitative responses from the small subset of participants who reported regret or harm suggest that breakdowns in these decision-making processes can still occur. They highlight the need for clinicians to consistently reinforce that treatment can be paused or discontinued at any time, while providing ongoing support for youths' ability to communicate their preferences and concerns and remain connected with family members and mental health professionals who can support ongoing decision-making around HT.

Limitations

This study has several limitations. While the study assessed satisfaction with the decision to initiate HT, it did not examine satisfaction with the specific effects of HT. Although characteristics of participants no longer receiving HT were examined, reasons for discontinuation were not. Further, several participants reported ambivalent feelings toward HT (ie, neither agreeing nor disagreeing). Research has started to examine these treatment experiences and trajectories in greater depth among TGD adults[28,35]; however, additional research specific to TGD youth is needed to support clinicians in providing developmentally informed and individualized care. All participants in this study received care at a single clinic; consistent with other multidisciplinary gender clinics, the sample was predominantly White, which may also limit generalizability.[13,17,18]

Conclusions

This cohort study represents the largest study to date to specifically examine satisfaction, regret, and harm among TGD youth who received HT and one of the few studies of TGD youth with follow-up extending beyond the short-term window typical of research focused on mental health outcomes associated with HT.[5,6,36] The findings also have important implications for clinical care and policy. Namely, the results provide further support for the existing standards of care, do not support efforts to categorically restrict or ban access to HT for TGD youth, and caution against making assumptions about treatment satisfaction, regret, or harm based on demographic or clinical characteristics. Continued longitudinal assessment will further strengthen the evidence base to help ensure that care for TGD youth remains individualized, responsive, and grounded in empirical data.

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Author Contributions: Dr Kuper had full access to all of the data in the study and takes responsibility for the integrity of the data and the accuracy of the data analysis.
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