

Ten years of experience in counseling gender diverse youth in Flanders, Belgium. A clinical overview.

Running title: **Counseling gender diverse youth**

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ABSTRACT

Research on gender variant children and adolescents has stirred debate on the increased amount of referrals, the sex ratio in referrals, the impact of trans care on their psychological well-being, and the amount of children/adolescents who stop treatment. This retrospective study includes the number of referrals, first contacts at the outpatient clinic and the amount of drop-outs between January 1st 2007 to December 31st 2016 from the sole Belgian Pediatric Gender clinic. Emotional and behavioral problems, measured by the Child Behavioral Checklist (CBCL) and the Youth Self-Report (YSR), were screened. The adolescents who ceased the counseling, were contacted for follow-up. We included 235 adolescents, referred to the clinic, and 177 (of 235) who had a first physical appointment with a psychologist. Almost one in four (24.5%) on the YSR and more than half (54.8%) on the CBCL fall within the clinical range on the total problem score. On the YSR, 40.4% reported having suicide thoughts and 32.1% reported self-harm behavior and/or at least one suicide attempt, all in the last six months. Five adolescents committed suicide. According to parents, more difficulties with peers predicts more emotional and behavioral problems ($F(5, 36)=3.539, p=.011$). In this study group, 29 adolescents ceased the counseling, whereof 7 could be traced back in the adult gender clinic after 2016. Results are indicative of the need for mental support for trans youth and their families and moreover, highlight the need for longitudinal follow-up studies.

INTRODUCTION

In the past years, the number of referrals to pediatric gender clinics has increased in many regions (1-6). It has been demonstrated that adolescents who are referred to clinical settings show more emotional and behavioral problems compared to their peers (7). This might mean that gender variant adolescents who do not encounter psychological difficulties are more reluctant in accessing transgender care facilities at an early age. But we also have to acknowledge that access to transgender care facilities is not available everywhere (8, 9).

Research among gender variant adolescents report high incidences of depressive symptoms (12.8-42%), bullying (47-62.5%), self-harming thoughts and behaviors (20.6-46%), suicidal thoughts (27.5-65%), and suicide attempts (9.3-45.2%) (7, 8, 10-18). A lack of social support and acceptance, especially by parents and peers, is linked with these psychological difficulties, and their overall integration in society has an impact on their mental health (19-21). Mental health of gender variant adolescents is clearly linked with supportive environments that allow social transitioning and provide access to transgender care facilities (22, 23).

Research on the well-being of gender variant children and adolescents has lately stirred a debate on this increased amount of referrals, the sex ratio in referrals, the impact of trans care on their psychological well-being, and the amount of children and adolescents who transition or drop-out of treatment (24-26). Few studies contacted the adolescents who were referred to a gender clinic in childhood and evaluated their gender identity and sexual orientation at follow-up (27-31). The intensity of gender dysphoria (GD) in childhood seems to be a predictor of continuing trans care in adolescence (29, 30, 32). Steensma et al. (2011) reported that the interval between 10 and 13 years is crucial: changes in social environment, the anticipated and actual body changes during puberty, and the first experiences of romantic and sexual attraction all influence gender incongruence feelings (31). In this article, after more than a decade of transgender care for children and adolescents in the pediatric clinic at Ghent University Hospital, we want to contribute to this research domain and analyze for the first time the evolutions in referrals and start-ups in our pediatric clinic of adolescent clients (aged 12 - 18 years). Second, we aim to analyze their emotional and behavioral problems, including self-harm behavior and suicidal ideation and attempts as measured by the Child Behavioral Checklist (CBCL) and the Youth Self-Report (YSR) (33, 34). Third, we wish to analyze the current life circumstances, gender and sexual identities, and reasons for ceasing counseling of those adolescents who ceased counseling in our clinic. We deliberately choose to focus on adolescents and not on pre-pubescent children, as there is limited information on gender variant adolescents who, according to Steensma et al. (2011) live in a crucial life phase, and data on children in our clinic is very limited.

METHODS

Sample and procedure

For this retrospective study with a clinical cross-sectional design, an anonymous client database was provided by the Pediatric Gender Clinic at Ghent University Hospital, which is the sole pediatric center in Belgium for gender variant children and adolescents and their families. The client database comprises all adolescents between 12 and 18 years, who were referred to our pediatric clinic between January 1st 2007 and December 31st 2016. These referrals are made by parents, other health care providers, general practitioners and sometimes by the adolescent themselves. Once referred, clients are put on a waiting list and contacted as soon as one of the psychologists of the pediatric team has room to start-up a new client.

Since its opening in 2007, the Pediatric Gender Clinic offered psychological and medical assessment and treatment by a multidisciplinary team (psychologists, psychiatrist, endocrinologists, social workers). The clinical framework has been elaborated throughout the last decade, using the guidelines of the Standards of Care, formulated by the World Professional Association of Transgender health (WPATH) and the guidelines of the Endocrine Society (35, 36). Shared decision making and balanced health care with respect to individual and familial needs are basic fundamentals in this process.

The study was approved by the Commission for Medical Ethics (CME) of the Ghent University Hospital (BE2017/0697). Due to the retrospective character of the study, informed consent from the adolescents and their parents needed to be obtained to consult their medical files to abstract the CBCL and YSR data, following a drop-in procedure. An invitation was sent out by their (former) psychologist to give consent. Families of adolescents that were known by the team as having committed suicide were not contacted, as their data on the CBCL and YSR is not included in the analysis.

Adolescents who ceased counseling, here referred to as 'drop-outs', were additionally contacted by their previous psychologist in writing to inform them about the aims of the study and were kindly invited to take contact with the researchers for the additional drop-out analysis. According to the CME's decision, we were only allowed to repeat this invitation to take part in this study once. The care

coordinator of our gender identity clinic checked their profiles in the current database of the clinic to determine whether these clients re-entered our care facilities at later age. The research team was provided with the total results, divided in sex assigned at birth (SAAB), but due to ethical guidelines no further information was provided.

Measures

Demographics

The client database contained information on age, SAAB, date of birth, date of referral, date of first appointment, ceased counselling (yes/no) and if yes, date of last consultation.

Emotional and behavioral problems

CBCL and the YSR data on emotional and behavioral problems were used (33, 34, 37, 38). The dependent variables are: (a) the mean total problem score (i.e. the sum of all items rated 0, 1 or 2), (b) the mean score for the internalizing problems, and (c) the mean score for the externalizing problems. *T*-scores and clinical range scores (> 90th percentile; *T*-scores > 63) can be reported for these three scales. The gender related item 110 ("wishes to be of opposite sex") was recoded: the value was set to "0" if it was scored 1 or 2 to avoid any artificial inflation in the calculation of behavioral problems (19, 39, 40). Suicide thoughts, self-harm behavior and suicide attempts were reported by analyzing items 18 ("hurts themselves on purpose or has attempted suicide") and 91 ("talks/thinks about killing themselves") on the YSR. The peer relations scale (PRS) was assessed by items 25 ("does not get along with other kids"), 38 ("gets teased a lot") and 48 ("not liked by other kids"), based on prior research (6, 11, 19, 39, 41). SAAB, age and year at the time of completion of the questionnaire, the scored gender item 110 ("wishes to be of the opposite sex"), and the PRS were used as predictors for the total score of the emotional and behavioral problems.

Drop-out questionnaire

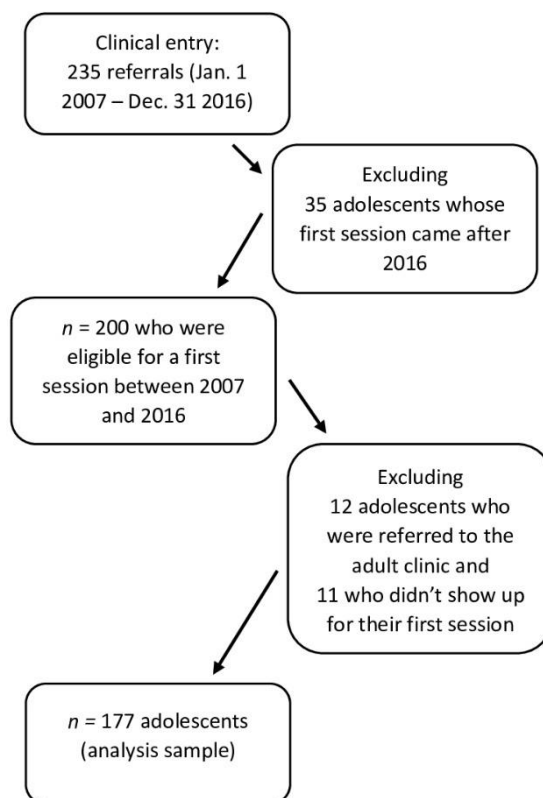
The drop-out questionnaire investigated the reason for ceasing counseling, the current gender identity, gender role, (change in) sexual orientation, and possible experiences with other mental health care services.

Statistical analysis

Analyses were done using IBM SPSS Statistics 24 software. The significance level was set on 5% ($\alpha=.05$). Descriptive data were presented as means \pm standard deviations (SD) or frequencies (%). For continuous data, the paired *t*-test and the Mann-Whitney *U*-test was applied, while Chi-square or Fisher's exact tests were used for categorical data to compare CBCL and YSR scores. To identify predictors of the behavioral and emotional problems on the CBCL and YSR, a multiple linear regression (MLR) was applied.

RESULTS

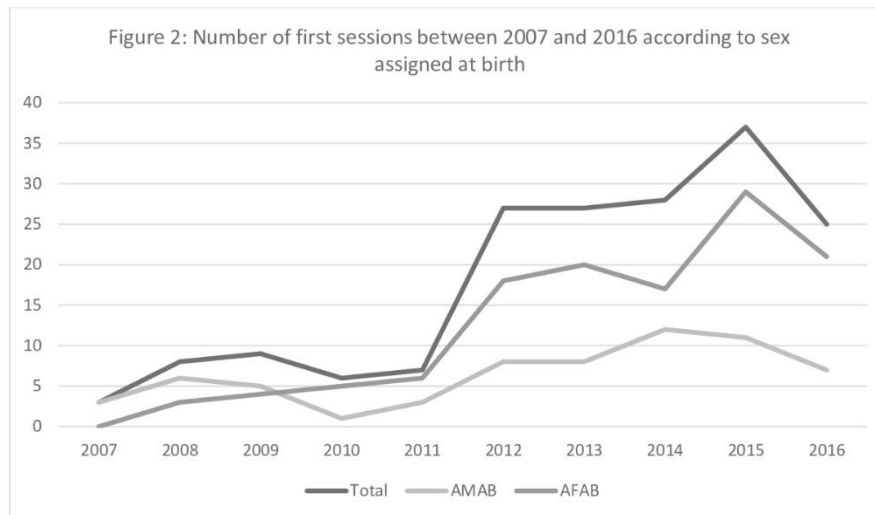
Figure 1: Selection of the sample group



Between January 1st 2007 and December 31st 2016, 235 adolescents between 12 and 18 years old were referred to the Pediatric Gender Clinic. Out of this group, 35 adolescents had a first consultation after December 31st 2016, and were therefore excluded. From the 200 remaining referrals, 12 participants were directed to the adult gender team since they reached age of majority by the time of their first

appointment, and 11 never showed up at their first appointment. This resulted in a sample of 177 participants aged 12-18 years who had at least one physical contact session with a psychologist at the pediatric clinic. The sampling is also shown in Figure 1. Of all 177 participants, we are aware of five (2.8%) adolescents who committed suicide.

Demographics



AMAB: assigned male at birth
AFAB: assigned female at birth

The mean age at first consultation was 15.01 years ($SD=1.42$). From 2010 onwards, there were significantly more assigned female at birth (AFAB) clients than male assigned at birth (AMAB) clients ($\chi^2=8.125, p=.004$), but the overall assigned sex at birth ratio is 1:1.77 (AMAB:AFAB). The total number of new intakes increased throughout the last ten years, with under ten intakes yearly before 2011, and over 25 after 2011. Figure 2 shows the number of first sessions between 2007 and 2016 according to SAAB.

Emotional and behavioral problems

Fifty-nine adolescents and their parents gave consent to use the data from the CBCL and YSR questionnaires, which resulted in 42 CBCL's and 52 YSR's. The CBCL's were completed by the mother (73.2%), by the father (22%) or by others, e.g. by grandparents (4.9%). According to the Shapiro-Wilk test, a normal distribution of all scores was found, except for the external scores on the YSR

($D(52)=.887, p<.001$), for the external scores on the CBCL ($D(42)=.931, p=.014$), and for the T -scores of the CBCL total problem scores ($D(42)=.947, p=.049$).

Internalizing and externalizing problems

Table 1: Scores of emotional and behavioral problems for the three scales on the CBCL and YSR

	N	Age			Total problem score				
		M	SD		M	SD	Mean T-score (SD)	95% CI	Clinical Range (%)
CBCL	42	14,70	1,54		50,36	28,48	61,98 (9,89)	57.804; 64.696	54,8
AMAB	22	14,71	1,54		49,73	26,04	62,18 (8,82)	57.288; 66.156	54,4
AFAB	20	14,69	1,59		51,05	31,62	61,75 (11,36)	55.030; 66.526	55,0
YSR	52	15,04	1,64		53,38	22,37	58,43 (8,09)	55.541; 60.403	24,5
AMAB	22	14,87	1,88		53,82	18,27	57,23 (6,88)	52.784; 59.549	18,2
AFAB	30	15,18	1,46		59,90	24,85	59,29 (8,86)	56.153; 63.402	30,0

CBCL: Child Behavior Checklist

YSR: Youth Self Report

AMAB: assigned male at birth

AFAB: assigned female at birth

Table 1: Scores of emotional and behavioral problems for the three scales on the CBCL and YSR

Internalizing problem score					Externalizing problem score				
M	SD	Mean T-score (SD)	95% CI	Clinical Range (%)	M	SD	Mean T-score (SD)	95% CI	Clinical Range (%)
15,98	9,66	62,24	(10,4 58.221; 65.	52,4	13,33	9,60	58,29	(10,1 54.196; 61.	38,1
14,73	9,47	61,23	(10,0 56.195; 66.	50,0	13,68	9,00	59,27	(8,66 54.271; 63.	36,4
17,35	9,93	63,35	(11,0 56.780; 67.	55,0	12,95	10,44	57,20	(11,6 50.819; 62.	40,0
19,35	9,26	59,13	(9,32 55.792; 62.	28,8	13,40	8,52	54,87	(9,36 50.963; 56.	13,5
18,36	8,27	58,18	(8,27 52.845; 61.	27,3	11,68	7,65	52,68	(9,58 47.301; 57.	13,6
20,07	10,00	59,83	(10,1 55.855; 65.	30,0	14,67	9,02	56,47	(9,02 52.211; 58.	13,3

Table 1 shows all the results of the CBCL and YSR problem scores. For all YSR scales, except the externalizing scale of the AMAB, there are significant (non-overlapping 95% confidence intervals) deviations of *T*-scores from the Dutch norm population ($M=10$, $SD=10$). 24.5% of the adolescents report a total problem score within the clinical group ($>90^{\text{th}}$ percentile) ($T\text{-score} > 63$), 28.8% reports internalizing problems and 13.5% externalizing problems.

In the total study group, adolescents scored significantly higher on the YSR internalizing problem score compared to the externalizing problem score ($t(51)=2.986$, $p=.004$). This was also the case for AMAB adolescents ($t(21)=2.320$, $p=.030$), but not for the AFAB group ($t(29)=1.888$, $p=.069$). No significant difference was found when the total, internalizing and externalizing problem scores were compared between the two gender groups.

Twenty-one adolescents (40.4%) reported having suicide thoughts and 17 (32.1%) reported self-harm behavior and/or at least one suicide attempt in the last six months.

On the CBCL, there are significant (non-overlapping 95% confidence intervals) deviations of *T*-scores from the Dutch norm population ($M=10$, $SD=10$) for all the scales. According to parental reports, 54.8% adolescents report a total problem score, and 52.4% a internalizing problem score (within the clinical range ($>90^{\text{th}}$ percentile; $T\text{-score} > 63$), while 38.1% falls within the clinical group for the externalizing problem score.

Parental reports demonstrated that the adolescents scored significantly higher on the internalizing problem score compared to the externalizing problem score ($t(41)=2.670$, $p=.011$). The internalizing problem score was significantly higher than the externalizing problem score ($t(19)=2.703$, $p=.014$) for the AFAB sample. In the AMAB sample, no significant effect was found ($t(21)=1.043$, $p=.309$). Not unlike the self-reports, no significant difference was seen between the two gender groups when the total, internalizing and externalizing problem scores were compared.

Peer relations

The Cronbach's alpha for the PRS is for the CBCL .80 and for the YSR .50. Because of the low Cronbach's alpha for the PRS from the YSR, no further analyses were performed (42). MLR analysis was conducted

with five predictors: SAAB, age and year at the time of completion of the questionnaire, the scored gender item 110 (“wishes to be of the opposite sex”), and the PRS. The dependent variable was the CBCL total problem score, each without the three PRS items. The analysis showed an effect of the PRS on the CBCL total problem score ($F(5, 36)=3.539, p=.011$). This means that adolescents who have difficulties with their peers report a higher CBCL total problem score. Table 2 and 3 show the detailed MLR.

Table 2: Model Summary of the Multiple Linear Regression analysis for variables predicting the CBCL total problem score (without the PRS items) (n = 42)

Model	R	R ²	Adjusted R ²	SE of the estimate	R ² change
1 ^a	.033	.001	-.024	27.979	.001
2 ^b	.166	.028	-.022	27.957	.028
3 ^c	.168	.028	-.049	28.315	.028
4 ^d	.203	.041	-.063	28.503	.041
5 ^e	.574	.330	.236	24.162	.330

a. Predictors: (constant), sex assigned at birth

b. Predictors: (constant), sex assigned at birth, year of completion CBCL

c. Predictors: (constant), sex assigned at birth, year of completion CBCL, age at time of CBCL completion

d. Predictors: (constant), sex assigned at birth, year of completion CBCL, age at time of CBCL completion, CBCL gender item 110

e. Predictors: (constant), sex assigned at birth, year of completion CBCL, age at time of CBCL completion, CBCL gender item 110, CBCL PRS

CBCL: Child Behavior Checklist

PRS: Peer Relation Scale

Table 3: Summary of Multiple Linear Regression analysis for variables predicting the CBCL total problem score (without the PRS items) ($n = 42$)

Variable	B	SE B	β	t	p	95% CI
Sex assigned at birth	9.350	7.839	.171	1.193	.241	-6.6548; 25.247
Year of completion CBCL	-2.895	2.081	-.214	-1.391	.173	-7.115; 1.326
Age at time of CBCL completion	4.614	2.824	.258	1.634	.111	-1.113; 10.341
CBCL gender item 110	11.614	7.990	.206	1.454	.155	-4.590; 27.818
CBCL PRS	9.937	2.525	.598	3.936	.000	4.816; 15.058

CBCL: Child Behavior Checklist

PRS: Peer Relation Scale

Drop-out

In the sample of 177 adolescents clients aged 12-18 years who started counseling between 2007-2016, 29 (16.4%) ceased the counseling at the pediatric gender clinic, with significantly more AMAB adolescents ($n = 19$) compared to AFAB adolescents ($n = 10$; $\chi^2=12.950$, $p<.001$). Taking the strict drop-in guidelines from the CME into account, it is possible that clients could not be reached to answer the drop-out questionnaire. Only four of the clients who ceased counseling responded that they were willing to answer the drop-out questionnaire. Two of them preferred to submit a written answer and not to be contacted by phone, two persons agreed to be contacted by phone. However, we did not succeed in reaching them. Consequently, only two completed questionnaires were obtained. Additionally, it is worth mentioning that three parents contacted the child psychiatrist by phone after having received the invitation letter for participation in this study. They informed us that their child did not want to participate in the study and that they preferred not to be contacted again in the future because of the sensitive nature of the topic. From the remaining 22 former clients we received no response. An analysis performed by the care coordinator of our clinic, showed that seven (20%) of the 29 clients who ceased counseling, re-entered in the adult gender clinic in our hospital after 2016. Of those seven, three were AMAB and four AFAB clients.

Since the questionnaires were anonymous, we decided to refer to these participants as 'they/them' when speaking of them individually. The adolescents did not always report their gender identity. One of the adolescents informed us that they ceased the counseling because there was no need for it anymore. They lived on in their SAAB without experiencing any problems with regard to their gender identity. Their sexual orientation changed from "I didn't know when I started the counseling" to "attracted to both males and females". The other participant wrote to us saying that they stopped the counseling because they realized "they could be who they were", without any medical changes. They identified as gender fluid and expressed themselves as male for two reasons: it didn't feel wrong and to avoid any reactions. They described it as if their own gender became unimportant. Their sexual orientation did not change during/after the counseling. After ceasing the counseling in our center, they

started mental health counseling for depression, anxiety, self-harm, suicide thoughts and suicide attempts.

DISCUSSION

Not unlike other gender clinics, the gender clinic in Ghent has witnessed an increase in applicants in the last years (1-4). This might be explained by: (a) the increased visibility of transgender people in the media, (b) the availability of information on the internet and (c) the increased awareness of the counseling and medical treatment for adolescents (43, 44). A recent Belgian study found that the average age of self-realization is 12.7 years throughout different generations, but the coming-out age has dropped significantly from 33,2 years in the generation born between 1965-1970, to 27,7 years in the generation born between 1971-1985, to 17,5 for those born between 1986-2000 (45). This decreased coming-out age explains why an increase in the pediatric clinics can be noted.

Between 2010 and 2016, significantly more AFAB than AMAB adolescents were referred to our clinic. This trend was also seen in Amsterdam, London and Toronto (3, 5, 6). A first explanation is that puberty starts earlier for AFAB than for AMAB adolescents, which might result in an earlier impact of the emotional problems they experience around their gender (3). But if this was the case, one could expect more AMAB minors to be referred to the clinic as age increases, which isn't the case (5). Another possible reasoning is that AMAB adolescents can experience more stigmatization when outing themselves, resulting in holding back their coming out or even in deciding not to do so (39).

For our sample group, the total and internalizing problem scores for both gender groups on the CBCL and YSR, and the externalizing problem scores for both the gender groups on the CBCL, as well as the AFAB group on the YSR are elevated compared to the Dutch norm group (37, 38). This adds to previous research suggesting that gender variant adolescents report more behavioral and emotional problems than their peers (7). In Flanders, the Dutch norm group is used when comparing *T*-scores for the CBCL and YSR.

In this study no differences were found in internalizing or externalizing behaviors between AFAB and AMAB adolescents in the CBCL and the YSR total problem scores. This deviates from the results

reported in the comparative study between the four clinics: the Netherlands, the UK, Belgium and Switzerland. In that study, the authors found that AMAB adolescents score significantly higher on the YSR internalizing problems score than AFAB adolescents, whereas AFAB adolescents scored significantly higher on the CBCL total and externalizing problem score compared to AMAB adolescents (39, 40). Not unlike the findings reported by Canadian, Dutch and English researchers, we found higher internalizing problem scores compared to externalizing problems scores for AMAB adolescents on the YSR (19, 40). The discrepancy between our study and the above mentioned results might be explained by the low number of participants in our study. The PRS was already calculated in earlier research and was shown to be a predictor of the total problem score of the CBCL and the YSR (19). In this study, we found the PRS only as a predictor for the CBCL total problem score.

Of all 177 participants, five (2.8%) adolescents are known to have committed suicide. According to the Agency of Care and Health in Flanders, in 2017 there were 0.9 suicides in the age group 10-14 years old and 7.2 suicides in the age group 15-19 years old per 100,000 inhabitants (46). According to the Health Behavior of School-aged Children study, 13% of the boys and 22.1% of the girls (between 13 and 18 years old) had suicide thoughts on multiple occasions in 2018 (47). This study also reports that 8% of the boys and 20.8% of the girls between 13 and 18 years old ever had intentionally harmed themselves (47). In our sample, the numbers were higher: 40.4% mentioned having suicidal thoughts in the last six months and 32.1% reported self-harming behavior or suicide attempts. In summary, Flemish transgender adolescents seem to be more at risk for self-harm behavior, suicide thoughts and attempts than their cisgender peers, which is in line with international published data (7, 15-18).

Literature regarding drop-out numbers is scarce. Earlier, Dutch research focused on children referred to gender clinics and reported drop-out numbers between 43% and 88% in pre-pubertal children (27, 29-32). In our sample of adolescents, we found a drop-out of less than one in five (16.4%). According to the study of Steensma et al., the period between the ages of 10 and 13 years seems to be crucial in deciding if children continue the counseling at a gender clinic (11). This time interval usually coincides with puberty, the life stage characterized by the development of secondary sex characteristics, which

affects the body intensely and at which point discomfort and/or dysphoria may increase. This might explain why we found a lower drop-out number in our group of adolescents. We observed a similarity with previous drop-out studies: in both the results of Steensma et al. as in ours, significantly more AMAB patients ceased the counseling (29). The underlying reasons remain unclear, but stigmatization when presenting in a (more) female expression or identity might be one explanation (39). Lastly, we like to note that in 2015, Steensma and Cohen-Kettenis reported that five adults (3.3%) of their child sample group ($n = 150$) re-emerged in the adult clinic (28), this seems comparable to our results where seven of the 172 adolescents (4%) did so. This number is probably an underestimation, since adult trans care is possible in many other places in our country, in contrast with care for trans minors, and we were unable to track down all drop-outs.

Due to a poor overall response, which might be influenced by the strict ethical guidelines that prevented multiple efforts of getting in touch with previous clients, we did not succeed in gathering useful information on the current life circumstances and gender and sexual identities of those who ceased counseling after intake. Hypothetically, one might assume that these adolescents needed time to further explore their gender identity before taking any medical steps, or did not feel comfortable in the protocol that is used in our center. It can also be possible that their gender identity evolved and no further intervention was desired. Other plausible explanations can involve factors such as the impact of parental, family or peer reactions that perhaps made it difficult to proceed with transition. In conclusion, research looking at drop-out numbers seems highly relevant, but longitudinal follow-up studies are needed to obtain correct interpretations.

Besides the strengths, this study also has some limitations. The study power for the measurement of emotional and behavioral well-being is rather small: only 59 adolescents gave consent to participate. Our hypothesis is that for many adolescents the study procedure might be too complicated. Perhaps they were not motivated to complete the consent form to use questionnaires that were filled in years ago. The rather small number of participants influences the results. Consequently, our conclusions should be carefully interpreted or compared to other research findings.

In Belgium, the pediatric gender clinic in Ghent is the only pediatric clinic that offers gender affirming care. Consequently, waiting lists are unacceptable long. Access to gender affirming care is crucial, and waiting list are linked with mental health, as has been reported in an earlier Belgian study (45). The high numbers of suicide ideation and attempts urge to meticulous and repeatedly screening of the mental health condition. This finding, alongside other CBCL and YSR results, show us that at least a portion of the Flemish trans youth is very vulnerable. Care providers working with trans youth should be aware of this vulnerability. Training in trans care for youth care providers is crucial, and together with the elaboration of an adequate treatment program, this is a main task for the future.

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CONFLICT OF INTEREST

There is no conflict of interests.

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REFERENCES

1. Handler T, Hojilla JC, Varghese R, Wellenstein W, Satre DD, Zaritsky E. Trends in referrals to a pediatric transgender clinic. *Pediatrics*. 2019;144(5):e20191368.
2. Spack NP, Edwards-Leeper L, Feldman HA, Leibowitz S, Mandel F, Diamond DA, et al. Children and adolescents with gender identity disorder referred to a pediatric medical center. *Pediatrics*. 2012;129(3):ped. 2011-0907.
3. Aitken M, Steensma TD, Blanchard R, VanderLaan DP, Wood H, Fuentes A, et al. Evidence for an altered sex ratio in clinic-referred adolescents with gender dysphoria. *The Journal of Sexual Medicine*. 2015;12(3):756-63.
4. Chen M, Fuqua J, Eugster EA. Characteristics of referrals for gender dysphoria over a 13-year period. *J Adolesc Health*. 2016;58(3):369-71.
5. de Graaf NM, Giovanardi G, Zitz C, Carmichael P. Sex ratio in children and adolescents referred to the Gender Identity Development Service in the UK (2009–2016). *Arch Sex Behav*. 2018;47(5):1301-4.
6. Arnoldussen M, Steensma TD, Popma A, van der Miesen AIR, Twisk JWR, de Vries ALC. Re-evaluation of the Dutch approach: Are recently referred transgender youth different compared to earlier referrals? *Eur Child Adolesc Psychiatry*. 2019.

7. Shiffman M, VanderLaan DP, Wood H, Hughes SK, Owen-Anderson A, Lumley MM, et al. Behavioral and emotional problems as a function of peer relationships in adolescents with gender dysphoria: A comparison with clinical and nonclinical controls. *Psychology of Sexual Orientation and Gender Diversity*. 2016;3(1):27.
8. Holt V, Skagerberg E, Dunsford M. Young people with features of gender dysphoria: Demographics and associated difficulties. *Clin Child Psychol Psychiatry*. 2016;21(1):108-18.
9. T'Sjoen G. AJ, de Vries A.L.C., Fisscher, A.D., Nieder T.O., Özer M., Motmans J. ESSM Position Statement: Assessment and hormonal management in adolescent and adult trans people, with attention for sexual function and satisfaction. *J Sex Med*. 2019.
10. Olson J, Schrager SM, Belzer M, Simons LK, Clark LF. Baseline physiologic and psychosocial characteristics of transgender youth seeking care for gender dysphoria. *J Adolesc Health*. 2015;57(4):374-80.
11. Aitken M, VanderLaan DP, Wasserman L, Stojanovski S, Zucker KJ. Self-harm and suicidality in children referred for gender dysphoria. *J Am Acad Child Adolesc Psychiatry*. 2016;55(6):513-20.
12. Arcelus J, Claes L, Witcomb GL, Marshall E, Bouman WP. Risk factors for non-suicidal self-injury among trans youth. *The journal of sexual medicine*. 2016;13(3):402-12.
13. 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.
14. Khatchadourian K, Amed S, Metzger DL. Clinical management of youth with gender dysphoria in Vancouver. *The Journal of Pediatrics*. 2014;164(4):906-11.
15. Veale JF, Watson RJ, Peter T, Saewyc EM. Mental health disparities among Canadian transgender youth. *J Adolesc Health*. 2017;60(1):44-9.
16. de Graaf NM, Steensma TD, Carmichael P, VanderLaan DP, Aitken M, Cohen-Kettenis PT, et al. Suicidality in clinic-referred transgender adolescents. *Eur Child Adolesc Psychiatry*. 2020:1-17.
17. de Vries AL, Doreleijers TA, Steensma TD, Cohen-Kettenis PT. Psychiatric comorbidity in gender dysphoric adolescents. *Journal of Child Psychology and Psychiatry*. 2011;52(11):1195-202.
18. Clark TC, Lucassen MF, Bullen P, Denny SJ, Fleming TM, Robinson EM, et al. The health and well-being of transgender high school students: results from the New Zealand adolescent health survey (Youth'12). *J Adolesc Health*. 2014;55(1):93-9.
19. de Vries AL, Steensma TD, Cohen-Kettenis PT, VanderLaan DP, Zucker KJ. Poor peer relations predict parent-and self-reported behavioral and emotional problems of adolescents with gender dysphoria: a cross-national, cross-clinic comparative analysis. *European child & adolescent psychiatry*. 2016;25(6):579-88.
20. Fuller KA, Riggs DW. Family support and discrimination and their relationship to psychological distress and resilience amongst transgender people. *International Journal of Transgenderism*. 2018;19(4):379-88.
21. Riggs DW, Bartholomaeus C, Sansfaçon AP. 'If they didn't support me, I most likely wouldn't be here': Transgender young people and their parents negotiating medical treatment in Australia. *International Journal of Transgender Health*. 2020;21(1):3-15.
22. Olson KR, Durwood L, DeMeules M, McLaughlin KA. Mental health of transgender children who are supported in their identities. *Pediatrics*. 2016;137(3):pediatrics. 2015-3223.
23. de Vries AL, McGuire JK, Steensma TD, Wagenaar EC, Doreleijers TA, Cohen-Kettenis PT. Young adult psychological outcome after puberty suppression and gender reassignment. *Pediatrics*. 2014;134(4):696-704.
24. Steensma TD, Cohen-Kettenis PT. A critical commentary on "A critical commentary on follow-up studies and "desistance" theories about transgender and gender non-conforming children". *International Journal of Transgenderism*. 2018;19(2):225-30.
25. Temple Newhook J, Pyne J, Winters K, Feder S, Holmes C, Tosh J, et al. A critical commentary on follow-up studies and "desistance" theories about transgender and gender-nonconforming children. *International Journal of Transgenderism*. 2018:1-13.

26. Zucker KJ. The myth of persistence: Response to "A critical commentary on follow-up studies and 'desistance' theories about transgender and gender non-conforming children" by Temple Newhook et al. (2018). *International Journal of Transgenderism*. 2018;1-15.
27. Drummond KD, Bradley SJ, Peterson-Badali M, Zucker KJ. A follow-up study of girls with gender identity disorder. *Dev Psychol*. 2008;44(1):34-45.
28. Steensma TD, Cohen-Kettenis PT. More than two developmental pathways in children with gender dysphoria? *J Am Acad Child Adolesc Psychiatry*. 2015;54(2):147-8.
29. Steensma TD, McGuire JK, Kreukels BP, Beekman AJ, Cohen-Kettenis PT. Factors associated with desistance and persistence of childhood gender dysphoria: a quantitative follow-up study. *J Am Acad Child Adolesc Psychiatry*. 2013;52(6):582-90.
30. Wallien MS, Cohen-Kettenis PT. Psychosexual outcome of gender-dysphoric children. *J Am Acad Child Adolesc Psychiatry*. 2008;47(12):1413-23.
31. Steensma TD, Biemond R, de Boer F, Cohen-Kettenis PT. Desisting and persisting gender dysphoria after childhood: A qualitative follow-up study. *Clin Child Psychol Psychiatry*. 2011;16(4):499-516.
32. Singh D. A follow-up study of boys with gender identity disorder. In: Toronto Uo, editor. 2012.
33. Achenbach TM, Edelbrock CS. Manual for the Child Behavior Checklist: And revised child behavior profile: University of Vermont, Department of Psychiatry; 1983.
34. Achenbach TM. Manual for the youth self-report and 1991 profile: Department of Psychiatry, University of Vermont Burlington; 1991.
35. Coleman E, Bockting W, Botzer M, Cohen-Kettenis P, DeCuypere G, Feldman J, et al. Standards of care for the health of transsexual, transgender, and gender-nonconforming people. 7 ed: World Professional Association for Transgender Health; 2012.
36. Hembree WC, Cohen-Kettenis PT, Gooren L, Hannema SE, Meyer WJ, Murad MH, et al. Endocrine treatment of gender-dysphoric/gender-incongruent persons: An endocrine society* clinical practice guideline. *The Journal of Clinical Endocrinology & Metabolism*. 2017;102(11):3869-903.
37. Verhulst F, Van der Ende J, Koot H. Handleiding voor de Youth Self-Report (YSR)[Manual for the Youth Self-Report (YSR)]. Sophia Children's Hospital, Rotterdam. 1997.
38. Verhulst FC. Praktische handleiding voor de CBCL (Child Behavior Checklist): van Gorp; 1990.
39. de Graaf NM, Cohen-Kettenis PT, Carmichael P, de Vries ALC, Dhondt K, Laridaen J, et al. Psychological functioning in adolescents referred to specialist gender identity clinics across Europe: a clinical comparison study between four clinics. *Eur Child Adolesc Psychiatry*. 2017.
40. Skagerberg E, Davidson S, Carmichael P. Internalizing and externalizing behaviors in a group of young people with gender dysphoria. *International Journal of Transgenderism*. 2013;14(3):105-12.
41. Zucker KJ, Bradley SJ, Sanikhani M. Sex differences in referral rates of children with gender identity disorder: Some hypotheses. *J Abnorm Child Psychol*. 1997;25(3):217-27.
42. Field A. Discovering statistics using IBM SPSS statistics. 4 ed. London: SAGE Publications Ltd; 2013.
43. Cohen-Kettenis PT, Steensma TD, de Vries AL. Treatment of adolescents with gender dysphoria in The Netherlands. *Child and Adolescent Psychiatric Clinics*. 2011;20(4):689-700.
44. Zucker KJ, Bradley SJ, Owen-Anderson A, Singh D, Blanchard R, Bain J. Puberty-blocking hormonal therapy for adolescents with gender identity disorder: A descriptive clinical study. *Journal of Gay & Lesbian Mental Health*. 2010;15(1):58-82.
45. Motmans J, Defreyne J, Wyverkens E. Being transgender in Belgium. Ten years later. Brussel: Institute for the equality of women and men; 2018.
46. Zelfdoding per leeftijdsgroep [Online publication] [Internet]. 2017 [cited 25 February 2021]. Available from: <http://www.zorg-en-gezondheid.be/cijfers/>.
47. Dierckens M, De Clercq, B. & Deforche B. Studie Jongeren en Gezondheid, Deel 3: gezondheid en welzijn – Mentale en subjectieve gezondheid [Factsheet]. Ghent University; 2019.

FIGURE AND TABLE LEGENDS

Figure 1: Selection of the sample group

Figure 2: Number of first sessions between 2007 and 2016 according to sex assigned at birth

Table 1: Scores of emotional and behavioral problems for the three scales on the CBCL and YSR

Table 2: Model Summary of the Multiple Linear Regression analysis for variables predicting the CBCL total problem score (without the PRS items) ($n = 42$)

Table 3: Summary of Multiple Linear Regression analysis for variables predicting the CBCL total problem score (without the PRS items) ($n = 42$)