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Gender Affirmation Is Associated with Transgender and Gender Nonbinary Youth Mental Health Improvement

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Abstract

Purpose: The present study aimed to evaluate the impact of each domain of gender affirmation (social, legal, and medical/surgical) on the mental health of transgender and gender nonbinary youth.
Methods: Three hundred fifty transgender boys, transgender girls, and gender nonbinary Brazilian youth, from 16 to 24 years old, answered an online survey.
Results: The final sample consisted of 350 youth who participated in this study. A total of 149 (42.64%) youth identified as transgender boys, 85 (24.28%) identified as transgender girls, and 116 (33.14%) identified as gender nonbinary youth. The mean age was 18.61 (95% confidence interval 18.34–18.88) years. Having accessed multiple steps of gender affirmation (social, legal, and medical/surgical) was associated with fewer symptoms of depression and less anxiety. Furthermore, engaging in gender affirmation processes helped youth to develop a sense of pride and positivity about their gender identity and a feeling of being socially accepted.
Conclusion: Enabling transgender and gender nonbinary youth to access gender affirmation processes more easily should be considered as a strategy to reduce depression and anxiety symptoms, as well as to improve gender positivity.

Keywords: gender affirmation, gender confirmation, gender nonbinary, transgender youth, transition

Introduction

As children and adolescents, transgender and gender nonbinary youth face anxiety related to the physical changes of puberty and to the pubertal transformations that they have already experienced.[1] In addition, as social structures are not usually designed to accommodate gender diversity, transgender and gender nonbinary youth experience discrimination directly and indirectly, which may cause economic marginalization[2–4] and social isolation, leading to substance abuse,[5–7] depression,[8] and suicide.[9] Therefore, some transgender and gender nonbinary youth may seek hormone therapy and gender affirmation surgeries to feel more comfortable with their bodies.[10,11]

Gender affirmation refers to the process of being recognized in one's true gender identity.[12–14] It is a multidimensional process that includes, in particular, social, medical, and legal domains.[12–14] The social domain of gender affirmation includes interpersonal and institutional recognition, such as being called by one's chosen name or receiving family support after disclosing one's gender identity.[12,14] The medical process may include hormone therapy and gender affirmation surgeries.[15–18] Voice modification through vocal training and/or voice modification surgery may also be used.[15–18] Finally, the legal domain involves adjusting legal documents such as birth certificates and passports to reflect one's affirmed gender identity.[12,14]

Gender affirmation attenuates the distress and mental health issues associated with gender dysphoria.[19–29] Regarding the social domain of gender affirmation, social support is significantly associated with reductions in suicidal ideation as well as suicide attempt risk among those with suicidal ideation.[20,21] Furthermore, parental support has been shown to improve self-esteem among transgender and gender nonbinary people.[22,23] Considerable evidence has established the importance of medical/surgical gender-affirming care.[19,26–28]

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Puberty-suppressing medication and hormone therapy may be prescribed to adolescents ages 12–16 years and adolescents ages 16–18 years, respectively, to delay the development of secondary sex characteristics and to induce the development of secondary sex characteristics,[15,16] thereby improving psychological functioning over time.[27–29] Hormone therapy has been shown to enhance quality of life and reduce depression symptoms.[27–29] Regarding the legal domain, identity document concordance has been associated with reductions in suicidal ideation and suicide attempts.[20]

Transgender and gender nonbinary youth who have socially transitioned experience fewer mental health problems. Unlike the literature involving transgender adults, current available data on mental health outcomes after transition for transgender and gender nonbinary youth are scarce[30] and studies consist mainly of small samples and case reports. Results from qualitative interviews with five mothers of transgender girls showed positive changes after the girls had socially transitioned.[29] According to their parents, the children went from ''shy and depressed to happy and well-adjusted.''[29] Furthermore, a longitudinal study with 55 young transgender adults who had received puberty suppression and hormone treatment and subsequently underwent gender affirmation surgery showed that their quality of life and happiness were indistinguishable from the general population.[10] A more recent cross-sectional study supported the previously described findings: 73 transgender children after social transition exhibited similar depression rates and only slightly elevated anxiety rates when compared with population averages.[22]

In Brazil, where the present study took place, the public health system has offered hormonal and surgical gender affirmation treatments since 1997[2–4] and, at present, ~20 outpatient clinics offer psychological and endocrinological care to transgender people.[31] Brazil is a vast territory that is divided into five regions: North, Northeast, Central-West, Southeast, and South. Even considering that the Brazil South-Southeast regions are more densely populated, outpatient clinics are not well distributed geographically: at least seven are located in the South-Southeast region.[31] Only three units provide specialized medical care to children and adolescents, and they are all situated in the South-Southeast regions.[31]

Brazilian transgender and gender nonbinary people also face challenges in accessing social and legal domains of gender affirmation.[2–4,31–35] In 2009, in a unanimous and unprecedented decision, the Brazilian Federal Supreme Court allowed a transgender woman to change her name after gender affirmation surgery, obligating other judges across the country to accept the legal process in these situations. Consequently, several judges only agree to a name change after surgery.[31,32,35] However, legal acceptance of a name change varies by state, and some judges allow the change without requiring surgery.[31,32,35,*] Therefore, Brazilian transgender people endure well-documented barriers to accessing medical, social, and legal domains of gender affirmation.[2–4,33,34]

Present study

The present study aimed to evaluate the impact of each domain of gender affirmation (social, legal, and medical) on the mental health of Brazilian transgender and gender nonbinary youth. In particular, the influence of gender affirmation processes on anxiety and depression symptoms, as well as on gender distress and gender positivity feelings, was explored.

Methods

Study sample

Participants were invited to respond to a 1-hour-long questionnaire available online on the Qualtrics platform (Qualtrics, Provo, UT and Seattle, WA). Participants were recruited through Facebook advertisements that appeared to Brazilian youth who were at least 16, and younger than 25 years, who ''liked'' pages or joined groups related to the lesbian, gay, bisexual, transgender, and queer or questioning (LGBTQ+) movement. Recruitment occurred from February to April 2018. A total of 706 adolescents and young adults initiated the survey; however, to assure the quality of the data, participants who did not identify as transgender or gender nonbinary in response to the 2-step method questions (sex assigned at birth and current gender identity) were excluded. In addition, duplicates and discrepant answers (such as ''I'm 200 years old'') were excluded. Finally, 350 participants were included in the data analysis. The Ethical Committee and Research Commission of Universidade Federal do Rio Grande do Sul Psychology Institute approved the project (14221513.4.0000.5334). All participants signed an online ethical consent form.

Measures

The survey was modeled after the Trans Youth CAN! Project, which is a cohort study that documents sociodemographic (age, race/ethnicity, school, area of residence, and province) and health-related characteristics of Canadian transgender youth and their parents or caregivers.[36] The procedure for cross-cultural adaptation for Brazilian populations was based on Borsa et al.[37] and conducted by a group of health professionals and members of LGBTQ+ communities.[7]

Socioeconomic status. Participants' socioeconomic status (SES) was assessed with the Deprivation Scale. The Deprivation Scale was created by the Trans Youth CAN! Team to evaluate transgender and gender nonbinary youth's access to basic needs. It is composed of five questions inquiring whether, in the last 12 months, participants had access to school supplies (such as a school bag), the Internet, proper seasonal clothing (such as boots), other clothing essentials (such as socks), and reliable transportation. Each question could be answered using a five-point Likert scale ranging from ''never'' (five points) to ''always'' (one point). The score was calculated by the arithmetical mean of the five questions; thus, higher scores represented more deprivation experiences. The Cronbach's alpha coefficient was 0.820.

Gender identity. Gender identity was evaluated by the two-step method.[38,39] Participants answered the question ''what pronouns do you like to use for yourself?'' choosing between ''she/her,'' ''he/him,'' ''something else.'' They then described their own gender through an open-ended question ''what word or words do you use to identify your own gender?'' and answered ''if you had to pick one of the following, would you say that you are …'' selecting between

*In 2018, the Brazilian Federal Supreme Court enabled Brazilian transgender and gender nonbinary people to change their names without undergoing medical procedures or psychological evaluation.

the alternatives ''male or primarily a boy,'' ''female or primarily a girl,'' and ''nonbinary or something other than a male or a female.'' Finally, they were asked to disclose their sex assigned at birth by the question ''What sex were you assigned at birth, on your original birth certificate?'' and the alternatives ''male'' and ''female.'' Participants were excluded exclusively when there was concordance between gender identity and sex at birth. Youth who chose not to disclose their gender identity or their sex assigned at birth, but answered the questions concerning the domains of gender affirmation were included in the study. Accordingly, 15 youth identified as gender nonbinary, included in the analysis, chose not to disclose their sex at birth.

Based on their sex assigned at birth and self-reported gender identities, participants were divided into the following categories: transgender girls, transgender boys, and gender nonbinary youth. Transgender girls included youth assigned male at birth who identified as girls, transgender girls, or as *travestis*. Transgender boys were those assigned female at birth who identified as boys or transgender boys. Finally, gender nonbinary youth encompassed adolescents and young adults who reported having a gender identity outside the binaries of male and female, such as queer, nonbinary, a-gender, and others.

Domains of gender affirmation. We examined three domains of gender affirmation: social, legal, and medical/surgical. Regarding the social domain, participants were asked, by yes-no questions, if they preferred to be called by another name and whether they asked their parents to use another name. Those who asked their parents to use another name were then asked if their mother or father had actually called them by their true names always, sometimes, or never. Furthermore, participants were asked if they expressed their true gender in their day-to-day life. They could choose among the alternatives: all the time, half of the time, and never. Regarding the legal domain, participants who reported the desire to change their name were asked whether they had already legally changed their name or if they were in the process of changing it. Regarding the medical/surgical domain, participants were asked whether they had undergone any medical treatment (including hormone therapy and surgical procedures) and, specifically, the youth who wanted hormone treatment were asked about the waiting time to access this treatment.

Mental health evaluation. The Overall Anxiety Severity and Impairment Scale (OASIS) was used to evaluate anxiety and impairment,[40,41] whereas the Modified Depression Scale (MDS) was used to assess depression symptoms.[42] The OASIS total score ranges from 0 to 20 with a cutoff of 8: individuals with a score higher than 8 are more likely to have an anxiety diagnosis.[41] The MDS total score ranges from 5 to 25 points, with higher scores indicating more depression symptoms.[42] Both the OASIS and MDS have good internal consistency, as shown by Cronbach's alpha coefficients of 0.89 and 0.78, respectively.

The Gender Distress Scale (GDS) is a questionnaire designed by the Trans Youth CAN! Team based on the Utrecht Gender Dysphoria Scale.[43] The GDS contains six questions separated into two groups: distress related to their gendered social lives and distress related to their sexed bodies. All of the questions were designed using a Likert scale to measure positive and negative responses that ranged from one to five points (1 = disagree completely, 2 = disagree somewhat, 3 = neutral, 4 = agree somewhat, and 5 = agree completely). Participants who presented more gender distress mostly agreed with phrases such as ''I feel like I can't trust what my body might do as I get older.''

Finally, the Gender Positivity Scale (GPS) was also developed by the Trans Youth CAN! Team based on focus group input.[36] The GPS contains 12 questions divided into 3 domains: enjoyment or pride in their genders, positivity related to their social lives, and positivity about their bodies. In accordance with the GDS, GPS questions were designed using a Likert scale to measure positive and negative responses that ranged from 1 to 5 (1 = disagree completely, 2 = disagree somewhat, 3 = neutral, 4 = agree somewhat, and 5 = agree completely). Participants with more gender positivity usually agreed with phrases such as ''Being trans or nonbinary is one of the cool things about me.''

Statistical analysis

First, two separate exploratory factor analyses (EFAs) were conducted to investigate the factor structure of the GDS and GPS instruments followed by parallel analyses. Two assessment methods were used to assess the data adequacy for the factor analysis: the Kaiser–Meyer–Olkin (KMO) criterion and Bartlett's test of sphericity. Then, the EFAs were conducted using principal axis factoring and oblimin rotation. Factor loadings above 0.30 were deemed adequate. Confirmatory factor analyses (CFAs) were then performed to test the models obtained in the EFA. The CFAs were performed using the weighted least-squares mean and variance-adjusted estimation method, and the comparative fit index (CFI), Tucker–Lewis Index (TLI), and root mean square error of approximation (RMSEA) fit indices were considered. Values of the CFI and TLI >0.90 and values of the RMSEA <0 .08 were deemed adequate.[44]

SPSS software version 18.0 (SPSS Inc., Chicago, IL, 2009) was used for data management and statistical analyses. First, chi-square and analysis of variance (ANOVA) tests were applied to compare the sociodemographic characteristics of transgender boys, transgender girls, and gender nonbinary youth. When statistically significant, a least significant difference (LSD) *post hoc* test was utilized. Second, Poisson regression and analysis of covariance (ANCOVA), followed by an LSD *post hoc* test, were used to compare gender identity groups controlling for SES. Third, the influence of gender affirmation processes on mental health outcomes, controlling for SES, was assessed by comparing mental health between the groups that had versus had not accessed each gender affirmation process using ANCOVA tests followed by an LSD *post hoc* test.

Finally, a new variable unifying the variables ''legally changed your name'' (as 1 = yes or 0 = no), ''expressing their true gender'' (as 2 = always, 1 = part time, 0 = never), and ''underwent any medical treatment'' (0 = no and 1 = yes) was designed to assess (and better illustrate) whether having accessed more steps of the gender affirmation process had more influence on mental health. For example, youth who always expressed their true gender, had legally changed their name, and underwent any surgical or hormonal treatment would sum four points, whereas youth who only changed their name and lived part-time expressing their

true gender would sum two points. Differences among the five groups (had not accessed gender affirmation processes, accessed one, two, three, or four steps of gender affirmation) were assessed using the ANCOVA test followed by an LSD *post hoc* test. In all phases, the OASIS, the MDS, the GDS, and the GPS were assessed as continuous variables.

Results

CFA and internal consistency

The models obtained in the EFA for the GDS and the GPS were tested through CFA. The models found in the EFA are described further in the Supplementary Data. The bifactor structure for the GDS presented acceptable data fit indices (RMSEA = 0.078; 90% confidence interval, CI [0.067—.090]; CFI = 0.927; TLI = 0.913), whereas the bifactor structure for the GPS presented marginally acceptable fit for one of the indices (RMSEA = 0.121; 90% CI [0.103–0.140]) but acceptable fit for the two other indices (CFI = 0.965; TLI = 0.952). Therefore, our results demonstrated that the bifactor structure was adequate, in general, for our context.

Cronbach's alpha coefficients were calculated to investigate the internal consistency of the factor scores. Factor scores were calculated as the simple arithmetic means of the scores of the items that compose each factor. Cronbach's alpha coefficient of the score for the GDS indicated high internal consistency ($\alpha = 0.78$). Similarly, the coefficient of the GPS was $\alpha = 0.82$.

Differences among gender identity groups

General characteristics. Three hundred fifty participants answered the survey. Although only participants who reached the end of the survey were included in the present study ($n = 350$), the adolescents could skip questions; thus, the sample size varied depending on the question. Among them, 149 (42.64%) youth identified as transgender boys, 85 (24.28%) identified as transgender girls, and 116 (33.14%) as gender nonbinary youth. As shown in Table 1, age differed significantly among the groups, $F(2,330) = 6.45$, $p = 0.002$, $\eta_p^2 = 0.04$. An LSD *post hoc* test showed that the mean age of the transgender girls was significantly higher than the mean age of the transgender boys ($p = 0.021$) and that of the gender nonbinary youth ($p < 0.001$). Gender nonbinary youth assigned male at birth and those assigned female at birth did not differ in general characteristics, in accessing the three domains of gender affirmation, and in mental health outcomes, as shown in Supplementary Tables S1–S3.

To verify whether the amount of time and organization needed to complete the entire survey selected transgender and gender nonbinary youth with specific characteristics, such as less anxiety, ANOVA tests and linear regressions were applied to compare the percentage of the questionnaire that each participant answered (ranging from 21% to 100%) and general characteristics, accessing the domains of gender affirmation, and mental health outcomes. Only the GDS was associated with survey dropout, $F(1,326) = 11.55$, $p = 0.001$, $R^2 = 0.034$. These results are presented in Supplementary Tables S4–S6.

Gender affirmation. As shown in Table 2, when controlling for SES, having undergone any hormonal or surgical treatment was less common among gender nonbinary youth than among transgender girls ($p < 0.001$) and transgender boys ($p = 0.001$). Having already accessed hormone therapy was more common among transgender girls than it was among transgender boys and gender nonbinary youth ($p = 0.046$).

Mental health outcomes. As shown in Table 3, gender distress, $F(2,323) = 3.15$, $p = 0.014$, $\eta_p^2 = 0.019$, and gender positivity, $F(2,298) = 4.03$, $p = 0.019$, $\eta_p^2 = 0.027$, differed among the groups. An LSD *post hoc* test demonstrated that transgender boys exhibited more gender distress than did gender nonbinary youth ($p = 0.013$), whereas transgender girls showed more gender positivity than did transgender boys ($p = 0.012$). Using the OASIS cutoff,[41] 67.9% (95% CI 62.30–73.52) of transgender and gender nonbinary youth had a high risk of receiving an anxiety diagnosis.

Gender affirmation and mental health outcomes

Social domain. As shown in Table 4, transgender and gender nonbinary youth who preferred to be called by another name exhibited fewer depression symptoms, $F(1,177) = 3.89$, $p = 0.050$, $\eta_p^2 = 0.022$, but more gender distress, $F(1,275) = 5.41$, $p = 0.021$, $\eta_p^2 = 0.019$, than youth who indicated that they did not prefer to be called by another name. Among those who preferred to be called by another name, having their fathers use their true name was associated with exhibiting fewer depression symptoms, $F(2,79) = 4.22$, $p = 0.018$, $\eta_p^2 = 0.10$. An LSD *post hoc* test showed that youth whose fathers always used their true name reported fewer depression symptoms ($p = 0.005$) than those whose fathers never used their true name. A similar result was found for mothers using their true name: youth whose mothers used their true name had less anxiety, $F(2,107) = 4.86$, $p = 0.010$, $\eta_p^2 = 0.086$, and fewer depression symptoms, $F(2,115) = 5.70$, $p = 0.004$, $\eta_p^2 = 0.093$, than those whose mothers did not use their true name. After an LSD *post hoc* test, the statistically significant impact on anxiety ($p = 0.003$) and depression ($p = 0.001$) symptoms was between those whose mothers always and never used their children's true name.

Having their mothers use their true name was also associated with reporting more gender positivity, $F(2,166) = 8.01$, $p < 0.001$, $\eta_p^2 = 0.090$. An LSD *post hoc* test showed that transgender and gender nonbinary youth whose mothers always used their true name exhibited more gender positivity than youth whose mothers used their true names sometimes ($p = 0.002$) or never ($p < 0.001$). Finally, never being able to express their true gender identities was associated with presenting more anxiety, $F(2,178) = 3.40$, $p = 0.036$, $\eta_p^2 = 0.051$, when compared with ($p = 0.012$) being able to express their true gender identities all of the time. In addition, gender expression was associated with depression symptoms, $F(2,188) = 5.11$, $p = 0.007$, $\eta_p^2 = 0.053$: youth never able to express their true gender identities showed more depression symptoms when compared with youth who expressed their true gender identities half of the time ($p = 0.009$) or all of the time ($p = 0.002$).

Legal domain. Transgender and gender nonbinary youth who legally changed their names had less anxiety, $F(1,112) = 6.25$, $p = 0.014$, $\eta_p^2 = 0.054$, and fewer depression symptoms, $F(1,116) = 4.78$, $p = 0.031$, $\eta_p^2 = 0.041$, compared

Table 1. Differences in Characteristics Among Transgender Boys, Transgender Girls, and Gender Nonbinary Youth

	Total			*Transgender boys*			*Transgender girls*			*Gender nonbinary youth*[a]			
Characteristics	N	*M*	*95% CI*	N	*M*	*95% CI*	N	*M*	*95% CI*	N	*M*	*95% CI*	p
Age	350	18.61	18.34–18.88	149	18.58	18.17–18.98	85	19.39[b]	18.75–20.03	116	18.08	17.68–18.48	**0.002**[c]
	N	%	*95% CI*	N	%	*95% CI*	N	%	*95% CI*	N	%	*95% CI*	
Race/ethnicity	266			109			73			84			0.166[d]
White	155	58.27	52.34–64.20	69	63.30	54.25–72.35	36	49.32	37.85–60.78	50	59.52	49.03–70.02	
Nonwhite	111	41.73	35.80–47.66	40	36.70	27.65–45.75	37	50.68	39.22–62.15	34	40.48	29.98–50.97	
School	350			149			85			116			0.807[d]
Studying	221	63.14	58.09–68.20	92	61.74	53.94–69.55	53	62.35	52.05–72.65	76	65.52	56.87–74.17	
Not studying	129	36.86	31.80–41.91	57	38.26	30.45–46.06	32	37.65	27.35–47.95	40	34.48	25.83–43.13	
Area of residence	350			149			105			96			**0.033**[d]
City	270	77.14	72.74–81.54	106	71.14	63.87–78.42	93	88.57	82.49–94.66	71	73.96	65.18–82.74	
Suburbs or rural areas	80	22.86	18.46–27.26	43	28.86	21.58–36.13	12	11.43	5.34–17.51	25	26.04	17.26–34.82	
Brazil region	343			145			84			114			0.211[d]
North, Northeast, and Central-West	96	27.99	23.24–32.74	34	23.45	16.55–30.34	24	28.57	18.91–38.23	38	33.33	24.68–41.99	
Southeast and South	247	72.01	67.26–76.76	111	76.55	69.66–83.45	60	71.43	61.77–81.09	76	66.67	58.01–75.32	

Bold values represent $p < 0.05$.

[a]Gender nonbinary youth included youth assigned male at birth and those assigned female at birth.

[b]An LSD *post hoc* test showed that the mean age of the transgender girls was significantly higher than the mean age of the transgender boys ($p = 0.021$) and that of the gender nonbinary youth $p \leq 0.05$.

[c]ANOVA was applied to compare means among transgender boys, transgender girls, and gender nonbinary youth.

[d]Chi-square was used to compare frequencies among transgender boys, transgender girls, and gender nonbinary youth.

ANOVA, analysis of variance; CI, confidence interval; LSD, least significant difference; M, mean.

Table 2. Differences Among Transgender Boys, Transgender Girls, and Gender Nonbinary Youth in Access to Domains of Gender Affirmation

	Total			*Transgender boys*			*Transgender girls*			*Gender nonbinary youth*[a]			
Domains of gender affirmation	N	%	*95% CI*	N	%	*95% CI*	N	%	*95% CI*	N	%	*95% CI*	p
Social													
Preferred to be called by another name	326	100.00		144	100.00		79	100.00		103	100.00		0.317
Yes	262	80.37	76.06–84.68	123	85.42	79.65–91.18	69	87.34	80.01–94.67	70	67.96	58.95–76.97	
No	64	19.63	15.32–23.94	21	14.58	8.82–20.35	10	12.66	5.33–19.99	33	32.04	23.03–41.05	
Their biological father actually uses their true name[b]	135	100.00		67	100.00		39	100.00		29	100.00		0.659
Always	19	14.07	8.21–19.94	9	13.43	5.27–21.60	7	17.95	5.90–29.99	3	10.34	0.74–21.43	
Sometimes	36	26.67	19.21–34.13	19	28.36	17.57–39.15	12	30.77	16.28–45.25	5	17.24	3.49–30.99	
Never	80	59.26	50.97–67.55	39	58.21	46.40–70.02	20	51.28	35.59–66.97	21	72.41	56.15–88.68	
Their biological mother actually uses their true name[b]	178	100.00		85	100.00		51	100.00		42	100.00		0.234
Always	39	21.91	15.83–27.99	13	15.29	7.64–22.95	20	39.22	25.82–52.62	6	14.29	3.70–24.87	
Sometimes	58	32.58	25.70–39.47	29	34.12	24.04–44.20	13	25.49	13.53–37.45	16	38.10	23.41–52.78	
Never	81	45.51	38.19–52.82	43	50.59	39.96–61.22	18	35.29	22.18–48.41	20	47.62	32.51–62.72	
Expressed their true gender in their day-to-day life	349			149	100.00		85	100.00		115	100.00		0.117
All of the time	158	48.70	40.05–50.49	77	51.68	43.65–59.70	49	57.65	47.14–68.15	32	27.83	19.64–36.02	
Half of the time	135	36.40	33.57–43.79	58	38.93	31.10–46.76	21	24.71	15.54–33.87	56	48.70	39.56–57.83	
Never	56	15.00	12.20–19.90	14	9.40	4.71–14.08	15	17.65	9.54–25.75	27	23.48	15.73–31.23	
Legal													
Legally changed their name	212	100.00		92	100.00		62	100.00		58	100.00		0.086
Yes	33	15.57	10.69–20.45	21	22.83	14.25–31.40	8	12.90	4.56–21.25	4	6.90	0.38–13.42	
No or in process	179	84.43	79.55–89.31	71	77.17	68.60–85.75	54	87.10	78.75–95.44	54	93.10	86.58–99.62	
Medical/surgical													
Had undergone any hormonal or surgical treatment	319	100.00		140	100.00		77	100.00		102	100.00		**<0.001**
Yes	82	25.71	20.91–30.50	37	26.43	19.12–33.73	39	50.65	39.48–61.82	6	5.88	1.32–10.45	
No	237	74.29	69.50–79.09	103	73.57	66.27–80.88	38	49.35	38.18–60.52	96	94.12	89.55–98.68	
Among youth who wanted hormone therapy	166	100.00		83	100.00		58	100.00		25	100.00		**0.046**
Have already accessed hormone therapy	82	49.40	41.79–57.00	37	44.58	33.88–55.27	39	67.24	55.16–79.32	6	24.00	7.26–40.74	
Wanted, but still waiting to access hormone therapy	84	50.60	43.00–58.21	46	55.42	44.73–66.12	19	32.76	20.68–44.84	19	76.00	59.26–92.74	

Poisson regression was applied to compare transgender boys, transgender girls, and gender nonbinary youth controlling for SES. Percentages and 95% CIs were not adjusted for SES. Bold values represent $p \leq 0.05$.

[a]Gender nonbinary youth included youth assigned male at birth and those assigned female at birth.

[b]Exclusively youth who reported having contact with their fathers or mothers, wanting to be called by another name, and asking their parents to call them by another name were included.

SES, socioeconomic status.

Table 3. Differences Among Transgender Boys, Transgender Girls, and Gender Nonbinary Youth in Mental Health Outcomes

Mental health outcomes	*Total*			*Transgender boys*			*Transgender girls*			*Gender nonbinary youth*[a]			
	N	*M*	*95% CI*	N	*M*	*95% CI*	N	*M*	*95% CI*	N	*M*	*95% CI*	p
OASIS	187	10.10	9.34–10.85	86	9.78	8.69–10.87	41	10.17	8.54–11.80	60	10.50	9.07–11.93	0.611
MDS	195	17.28	16.69–17.88	90	17.44	16.63–18.25	42	16.69	15.24–18.14	63	17.44	16.34–18.55	0.551
GDS	326	4.04	3.97–4.11	138	4.14	4.05–4.23	79	4.00	3.83–4.18	109	3.94	3.80–4.60	**0.014**[b]
GPS	333	3.34	3.25–3.42	140	3.20	3.08–3.32	79	3.51	3.34–3.68	114	3.39	3.23–3.54	**0.019**[b]

An ANCOVA test was applied to compare transgender boys, transgender girls, and gender nonbinary youth controlling for SES. Means and 95% CIs were not adjusted for SES. Bold values represent $p \leq 0.05$.

[a]Gender nonbinary youth included youth assigned male at birth and those assigned female at birth.

[b]An LSD *post hoc* test found that transgender boys exhibited more gender distress than did gender nonbinary youth ($p = 0.013$), whereas transgender girls demonstrated more gender positivity than did transgender boys ($p = 0.012$).

ANCOVA, analysis of covariance; GDS, Gender Distress Scale; GPS, Gender Positivity Scale; MDS, Modified Depression Scale; OASIS, Overall Anxiety Severity and Impairment Scale.

with those who had not legally changed their name or were in the process of changing their name (e.g., collecting the necessary documentation for each identity document).

Medical/surgical domain. Having undergone any hormonal or surgical treatment was associated with less anxiety, $F(1,169) = 10.61$, $p = 0.001$, $\eta_p^2 = 0.060$, and with fewer depression symptoms, $F(1,178) = 21.31$, $p < 0.001$, $\eta_p^2 = 0.109$. In addition, transgender and gender nonbinary youth who had already accessed hormone therapy had less anxiety, $F(1,94) = 7.83$, $p = 0.006$, $\eta_p^2 = 0.079$, fewer depression symptoms, $F(1,98) = 13.39$, $p < 0.001$, $\eta_p^2 = 0.124$, and more gender positivity, $F(1,144) = 4.22$, $p = 0.042$, $\eta_p^2 = 0.029$, compared with those who were still waiting to access hormone treatment.

Multiple steps of gender affirmation. Even when controlling for SES, having accessed multiple gender affirmation processes was associated with less anxiety, $F(4,105) = 4.16$, $p = 0.004$, $\eta_p^2 = 0.144$, and fewer depression symptoms, $F(4,108) = 4.167$, $p = 0.004$, $\eta_p^2 = 0.140$. An LSD *post hoc* test showed that anxiety differed significantly between youth who had not accessed any gender affirmation processes (12.37, 95% CI 9.03–15.71) and those who had accessed three (7.94, 95% CI 6.29–9.58, $p = 0.020$) or four steps of the gender affirmation process (7.56, 95% CI 4.75–10.38, $p = 0.031$). Anxiety symptoms also differed between youth who had accessed one (12.26, 95% CI 10.30–14.23) and three ($p = 0.001$) or four ($p = 0.008$) gender affirmation steps.

An LSD *post hoc* test indicated that depression symptoms were higher among youth who had not accessed any gender affirmation processes (20.48, 95% CI 17.66–23.31) compared with youth who had accessed two (17.03, 95% CI 15.61–18.45, $p = 0.032$), three (15.35, 95% CI 13.99–16.70, $p = 0.002$), or four (14.95, 95% CI 12.56–17.33, $p = 0.004$) steps of the gender affirmation process (legally changed their name, always expresses their true gender, and underwent any medical/surgical treatment). Furthermore, depression symptoms also varied significantly between youth who accessed one (18.17, 95% CI 16.55–19.80) and three ($p = 0.009$) or four ($p = 0.029$) steps of the gender affirmation process. Gender distress and gender positivity did not differ among the groups.

Discussion

This study pioneers the evaluation of domains of gender affirmation (social, legal, and medical) and their impact on transgender and gender nonbinary youths' anxiety and depression symptoms. In addition, the study is notable for considering gender distress and gender positivity as mental health outcomes that may be affected by gender affirmation processes. A significant number of participants in this study identified as gender nonbinary. Gender is seen as a spectrum that goes beyond the binary of man and woman.[15,45,46] Nonbinary youth, thus, identify as belonging to a third gender, or encompassing more than one gender, or not having a gender at all.[15,45,46] Current literature confirms the effectiveness of medical gender affirmation among transgender youth who identify within binary populations,[10,11] but there is little published in this area with nonbinary people.[45]

Historically, only transgender individuals with a binary identity who sought both hormone and surgical treatments (named full gender affirmation treatment) were eligible to receive gender-affirming care.[47] However, according to current guidelines, this is no longer the case.[15] For example, among 360 transgender adults receiving hormonal and surgical gender affirmation treatments at an outpatient clinic in the Netherlands, 97 (26.9%) chose hormonal or surgical procedures (named partial treatment) mainly to avoid adverse health effects.[47] Although gender nonbinary youth had undergone medical treatment less often than the transgender girls and boys in the current study, gender nonbinary youth are represented among adolescents and young adults seeking hormonal and surgical gender affirmation treatments.[45] Gender nonbinary youth may avoid the health care system as it does not, at present, meet their specific needs by, for example, providing goal-focused therapy.[45] Both transgender and gender nonbinary people may seek full or partial treatment alternatives; thus, health providers should adapt to fulfill the specific health care needs of these individuals.

In our study, most gender affirmation processes were significantly associated with presenting less anxiety and depression symptoms. Accessing medical, social, and legal domains of gender affirmation enables transgender and gender nonbinary youth to improve their social integration, to enhance their sense of belonging, and to reduce their marginalized social position. Considering the high prevalence of

Table 4. Gender Affirmation and Mental Health Outcomes

	Mental health															
	OASIS				*MDS*				*GDS*				*GPS*			
Gender affirmation	N	*M*	*95% CI*	p	N	*M*	*95% CI*	p	N	*M*	*95% CI*	p	N	*M*	*95% CI*	p
Social																
Preferred to be called by another name	170			0.249	180			**0.050**	278			**0.021**	282			0.336
Yes	139	10.05	9.21–10.90		147	17.14	16.47–17.80		223	4.12	4.04–4.20		227	3.24	3.18–3.38	
No	31	11.21	9.42–12.99		33	18.69	17.29–20.10		55	3.90	3.74–4.07		55	3.40	3.19–3.60	
Their biological father actually uses their true name[a]	75			0.092	79			**0.018**[b]	120			0.273	125			0.320
Always	14	7.21	4.42–10.00		14	14.33	12.05–16.61		18	3.88	3.55–4.20		19	3.54	3.22–3.86	
Sometimes	18	9.57	7.10–12.04		20	17.00	15.09–18.90		30	3.94	3.69–4.19		31	3.30	3.05–3.55	
Never	43	10.76	9.18–12.35		45	18.12	16.85–19.39		72	4.12	3.96–4.28		75	3.26	3.11–3.42	
Their biological mother actually uses their true name[a]	107			**0.010**[b]	115			**0.004**[b]	160			0.153	166			**<0.001**[c]
Always	26	7.37	5.41–9.32		25	14.92	13.35–16.49		35	3.87	3.65–4.09		37	3.68	3.47–3.89	
Sometimes	26	8.94	6.99–10.89		30	16.86	15.43–18.28		52	4.11	3.93–4.29		53	3.23	3.05–3.41	
Never	55	10.98	9.64–12.32		60	18.10	17.09–19.11		73	4.11	3.96–4.26		76	3.17	3.02–3.32	
Expressed their true gender in their day-to-day life	178			**0.036**[d]	188			**0.007**[e]	293			0.066	298			0.346
All of the time	87	9.23	8.17–10.30		88	16.74	15.88–17.59		132	4.10	3.99–4.21		135	3.36	3.23–3.49	
Half of the time	63	10.38	9.12–11.63		68	17.05	16.08–18.03		111	3.94	3.81–4.06		114	3.38	3.24–3.52	
Never	28	12.00	10.13–13.89		32	19.38	17.96–20.81		50	4.16	3.98–4.34		49	3.19	2.97–3.41	
Legal																
Legally changed their name	112			**0.014**	116			**0.031**	175			0.396	181			0.715
Yes	17	7.17	4.84–9.53		17	14.78	12.85–16.71		25	4.17	3.93–4.13		27	3.35	3.11–3.60	
No or in process	95	10.40	9.41–11.39		99	17.09	16.29–17.89		150	4.06	3.96–4.16		154	3.30	3.20–3.41	
Medical/surgical																
Had undergone any hormonal or surgical treatment	169			**0.001**	178			**<0.001**	276			0.184	281			0.975
Yes	45	8.03	6.59–9.49		50	15.63	14.06–16.27		75	4.13	3.99–4.28		73	3.36	3.18–3.54	
No	124	10.84	9.97–11.71		128	18.21	17.52–18.90		201	4.02	3.93–4.12		208	3.35	3.25–3.46	
Among youth who wanted hormone therapy	94			**0.006**	98			**<0.001**	146			0.710	144			**0.042**
Have already accessed hormone therapy	45	7.97	6.47–9.48		50	15.12	14.10–16.14		75	4.13	4.00–4.27		73	3.36	3.23–3.50	
Wanted, but still waiting to access hormone therapy	49	10.92	9.48–12.36		48	17.81	16.77–18.86		71	4.17	4.03–4.31		71	3.16	3.02–3.30	

An ANCOVA test was applied to compare groups controlling for SES, and when statistically significant, followed by an LSD *post hoc* test. Means and 95% CIs were adjusted for SES. Bold values represent $p \leq 0.05$.

[a]Exclusively youth who reported having contact with their fathers or mothers, wanting to be called by another name, and asking their parents to call them by another name were included.

[b]The statistically significant difference was between always and never.

[c]The statistically significant difference was between always and sometimes, as well as between always and never.

[d]The statistically significant difference was between all of the time and never.

[e]The statistically significant difference was between half of the time and never, as well as between all of the time and never.

depression and anxiety among transgender youth,[48] reducing barriers to accessing domains of gender affirmation is essential.

A qualitative study with 65 North American transgender youth and caregivers reported 6 main barriers to accessing gender-affirming care: limited availability of pediatric physicians trained in gender-affirming health care; inconsistent use of youths' chosen names and pronouns; uncoordinated care; lack of physician awareness of the available professional guidelines to treat transgender and gender nonbinary youth; scarce and late access to hormone therapy; and health care coverage rejections.[49] As described previously, Brazilian transgender and gender nonbinary individuals face similar barriers to accessing medical care.[2,3,33] The Endocrine Society,[16] the American Academy of Pediatrics,[17] the American Academy of Child and Adolescent Psychiatry,[18] and the World Professional Association for Transgender Health[15] guidelines are clear and succinct protocols that should be taught in medical schools and applied in daily care.

In addition to facing barriers to accessing hormonal and surgical gender affirmation treatments, transgender and gender nonbinary youth experience difficulties using their true names and pronouns due to interpersonal and institutional reasons.[21] In response to a legislation vacuum, some Brazilian institutions acted to guarantee transgender and gender nonbinary youth the right to use their true names without having to change their legal documents. For example, a transgender girl is able to use her true name at school through a ''social name'' identity card. However, the ''social name'' identity card does not have legal value; therefore, she continues to experience humiliating situations due to carrying documents that are not concordant with her gender identity and expression.[32] Social and legal gender affirmation are critically important to the mental health of transgender and gender nonbinary youth and should be more accessible. The change to and recognition of their true name is a critical element of transgender and gender nonbinary youth identities that reduces their sense of marginalization and promotes social inclusion.[21,22]

Gender positivity was associated with social and medical domains of gender affirmation in our study, specifically having their mothers use their true name and accessing hormone therapy. Higher scores on the GPS represent a sense of pride in participants' gender identities, greater feelings of social acceptance, and fewer body image-related problems. Accordingly, advancement in the process of gender affirmation has been shown to improve self-esteem as well as increase social support.[23]

It is noteworthy that transgender girls demonstrated more gender positivity than did transgender boys. Furthermore, transgender boys exhibited more gender distress than did gender nonbinary youth. During puberty, transgender boys may experience more difficulties dealing with sexual characteristics, such as hiding menstruation and breasts, while finding it harder to develop typically male features using testosterone, which is accessible only through medical recommendation.[50] Conversely, transgender girls can access informal gender affirmation procedures easily by buying hormonal contraceptives in regular pharmacies or by undergoing breast augmentation in clandestine clinics that are, unfortunately, a reality in Brazil.[2,3]

Limitations

The present study has some limitations. First, despite including a considerable transgender and gender nonbinary youth sample compared with previous studies, a convenience sample was used, and youth outside of Southern Brazil were underrepresented. Second, the cross-sectional design prevents assumptions about causality. Finally, the sample was composed of transgender and gender nonbinary youth with access to the Internet, and thus, more marginalized populations may not have had the opportunity to join this study. Therefore, the sample is not representative of all Brazilian transgender and gender nonbinary youth, and generalizations should be made cautiously.

Conclusions

Health professionals should consider enabling transgender and gender nonbinary youth to access social, legal, and medical/surgical gender affirmation (GA) more easily as a strategy to manage depression and anxiety symptoms. In addition to attenuating deleterious mental health outcomes, accessing specific gender affirmation processes was associated with pride and positivity about their gender identity and a feeling of being socially accepted. This is, indeed, how transgender and gender nonbinary youth should be able to feel.

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Supplementary Material

Supplementary Data
Supplementary Table S1
Supplementary Table S2
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References

1. McGuire JK, Doty JL, Catalpa JM, Ola C: Body image in transgender young people: Findings from a qualitative, community based study. Body Image 2016;18:96–107.
2. Costa AB, da Rosa Filho HT, Pase PF, et al.: Healthcare needs of and access barriers for Brazilian transgender and gender diverse people. J Immigr Minor Health 2018;20: 115–123.
3. Costa AB, Fontanari AMV, Catelan RF, et al.: HIV-related healthcare needs and access barriers for Brazilian

transgender and gender diverse people. AIDS Behav 2018; 22:2534–2542.
4. Fontanari AMV, Rovaris DL, Costa AB, et al.: Childhood maltreatment linked with a deterioration of psychosocial outcomes in adult life for southern Brazilian transgender women. J Immigr Minor Health 2018;20:33–43.
5. Day JK, Fish JN, Perez-Brumer A, et al.: Transgender youth substance use disparities: Results from a population-based sample. J Adolesc Health 2017;61:729–735.
6. Hotton AL, Garofalo R, Kuhns LM, Johnson AK: Substance use as a mediator of the relationship between life stress and sexual risk among young transgender women. AIDS Educ Prev 2013;25:62–71.
7. Fontanari AMV, Pase PF, Churchill S, et al.: Dealing with gender-related and general stress: Substance use among Brazilian transgender youth. Addict Behav Rep 2019;9:100166.
8. Reisner SL, Vetters R, Leclerc M, et al.: Mental health of transgender youth in care at an adolescent urban community health center: A matched retrospective cohort study. J Adolesc Health 2015;56:274–279.
9. Nuttbrock L, Hwahng S, Bockting W, et al.: Psychiatric impact of gender-related abuse across the life course of male-to-female transgender persons. J Sex Res 2010;47:12–23.
10. de Vries AL, McGuire JK, Steensma TD, et al.: Young adult psychological outcome after puberty suppression and gender reassignment. Pediatrics 2014;134:696–704.
11. Cohen-Kettenis PT, Schagen SE, Steensma TD, et al.: Puberty suppression in a gender-dysphoric adolescent: A 22-year follow-up. Arch Sex Behav 2011;40:843–847.
12. Reisner SL, Radix A, Deutsch MB: Integrated and gender-affirming transgender clinical care and research. J Acquir Immune Defic Syndr 2016;72(Suppl 3):S235–S242.
13. Sevelius JM: Gender affirmation: A framework for conceptualizing risk behavior among transgender women of color. Sex Roles 2013;68:675–689.
14. Scheim AI, Bauer GR: Sex and gender diversity among transgender persons in Ontario, Canada: Results from a respondent-driven sampling survey. J Sex Res 2015;52: 1–14.
15. Coleman E, Bockting W, Botzer M, et al.: Standards of care for the health of transsexual, transgender, and gender-nonconforming people, version 7. Int J Transgend 2012; 13:165–232.
16. Hembree WC, Cohen-Kettenis P, Delemarre-van De Waal HA, et al.: Endocrine treatment of transsexual persons: An Endocrine Society clinical practice guideline. J Clin Endocrinol Metab 2009;94:3132–3154.
17. Committee on Adolescence: Office-based care for lesbian, gay, bisexual, transgender, and questioning youth. Pediatrics 2013;132:198–203.
18. Adelson SL; American Academy of Child and Adolescent Psychiatry (AACAP) Committee on Quality Issues (CQI): Practice parameter on gay, lesbian, or bisexual orientation, gender nonconformity, and gender discordance in children and adolescents. J Am Acad Child Adolesc Psychiatry 2012;51:957–974.
19. Glynn TR, Gamarel KE, Kahler CW, et al.: The role of gender affirmation in psychological well-being among transgender women. Psychol Sex Orientat Gend Divers 2016;3: 336–344.
20. Bauer GR, Scheim AI, Pyne J, et al.: Intervenable factors associated with suicide risk in transgender persons: A respondent driven sampling study in Ontario, Canada. BMC Public Health 2015;15:525.
21. Russell ST, Pollitt AM, Li G, Grossman AH: Chosen name use is linked to reduced depressive symptoms, suicidal ideation, and suicidal behavior among transgender youth. J Adolesc Health 2018;63:503–505.
22. Olson KR, Durwood L, DeMeules M, McLaughlin KA: Mental health of transgender children who are supported in their identities. Pediatrics 2016;137:e20153223.
23. Seibel BL, Silva BB, Fontanari AMV, et al.: The impact of the parental support on risk factors in the process of gender affirmation of transgender and gender diverse people. Front Psychol 2018;9:1969.
24. Vance SR Jr: The importance of getting the name right for transgender and other gender expansive youth. J Adolesc Health 2018;63:379–380.
25. Rafferty J; Committee on Psychosocial Aspects of Child and Family Health; Committee on Adolescence; Section on Lesbian, Gay, Bisexual, and Transgender Health and Wellness. Ensuring comprehensive care and support for transgender and gender-diverse children and adolescents. Pediatrics 2018;142:e20182162.
26. Cardoso da Silva D, Schwarz K, Fontanari AM, et al.: WHOQOL-100 before and after sex reassignment surgery in Brazilian male-to-female transsexual individuals. J Sex Med 2016;13:988–993.
27. Heylens G, Verroken C, De Cock S, et al.: Effects of different steps in gender reassignment therapy on psychopathology: A prospective study of persons with a gender identity disorder. J Sex Med 2014;11:119–126.
28. Gorin-Lazard A, Baumstarck K, Boyer L, et al.: Hormonal therapy is associated with better self-esteem, mood, and quality of life in transsexuals. J Nerv Ment Dis 2013;201: 996–1000.
29. Kuvalanka KA, Weiner JL, Mahan D: Child, family, and community transformations: Findings from interviews with mothers of transgender girls. J GLBT Fam Stud 2014;10:354–379.
30. Olson-Kennedy J, Cohen-Kettenis PT, Kreukels BP, et al.: Research priorities for gender nonconforming/transgender youth: Gender identity development and biopsychosocial outcomes. Curr Opin Endocrinol Diabetes Obes 2016;23:172–179.
31. Schwach K, Figueiredo R, Wolfe BM, et al.: Social name change of transgender people: Gender identity beyond biology. Bagoas 2017;17:318–339.
32. Bento B: Nome social para pessoas trans: cidadania precária e gambiarra legal [Social name for trans people: Precarious citizenship and legal ''gambiarra'']. Contemporânea 2014; 4:165–182.
33. Lobato MIR, Saadeh A, Cordeiro DM, et al.: Gender incongruence of childhood diagnosis and its impact on Brazilian healthcare access. Arch Sex Behav 2017;46:2511.
34. Fontanari AMV, Zanella GI, Feijó M, et al.: HIV-related care for transgender people: A systematic review of studies from around the world. Soc Sci Med 2019;230:280–294.
35. Brasil: Federal Court of Justice. Case ADI/4275. [Rapporteur Min Marco Aurélio]. Constitutionality Control, Constitutional Guarantees [Supremo Tribunal Federal. Processo ADI/4275. Relator Min Marco Aurélio. Controle de Constitucionalidade, Garantias Constitucionais]. Available at http://redir.stf.jus.br/estfvisualizadorpub/jsp/consultarprocessoeletronico/ConsultarProcessoEletronico.jsf?seqobjetoincidente=2691371 Accessed February 16, 2020.
36. The Trans Youth CAN! Research Team. Trans Youth CAN! Available at https://transyouthcan.ca Accessed February 16, 2020.

37. Borsa JC, Damásio BF, Bandeira DR: Cross-cultural adaptation and validation of psychological instruments: Some considerations. Paidéia 2012;22:423–432.
38. Sausa LA, Sevelius J, Keatley J, et al.: Recommendations for inclusive data collection of trans people in HIV prevention, care & services. San Francisco, CA: University of California, 2009. Available at https://prevention.ucsf.edu/transhealth/education/data-recs-long Accessed January 20, 2019.
39. Bauer GR, Braimoh J, Scheim AI, Dharma C: Transgender-inclusive measures of sex/gender for population surveys: Mixed-methods evaluation and recommendations. PLoS One 2017;12:e0178043.
40. Campbell-Sills L, Norman SB, Craske MG, et al.: Validation of a brief measure of anxiety-related severity and impairment: The Overall Anxiety Severity and Impairment Scale (OASIS). J Affect Disord 2009;112:92–101.
41. Norman SB, Campbell-Sills L, Hitchcock CA, et al.: Psychometrics of a brief measure of anxiety to detect severity and impairment: The Overall Anxiety Severity and Impairment Scale (OASIS). J Psychiatr Res 2011;45:262–268.
42. Dunn EC, Avenue H, Green JG: The Modified Depression Scale (MDS): A brief, no-cost assessment tool to estimate the level of depressive symptoms in students and schools. School Ment Health 2012;4:34–45.
43. Cohen-Kettenis PT, van Goozen SH: Sex reassignment of adolescent transsexuals: A follow-up study. J Am Acad Child Adolesc Psychiatry 1997;36:263–271.
44. Holgado-Tello FP, Chacón-Moscoso S, Barbero-García I, Vila-Abad E: Polychoric versus Pearson correlations in exploratory and confirmatory factor analysis of ordinal variables. Qual Quant 2010;44:153–166.
45. Bass M, Gonzalez LJ, Colip L, et al.: Rethinking gender: The nonbinary approach. Am J Health Syst Pharm 2018;75:1821–1823.
46. Richards C, Bouman WP, Seal L, et al.: Non-binary or genderqueer genders. Int Rev Psychiatry 2016;28:95–102.
47. Beek TF, Kreukels BP, Cohen-Kettenis PT, Steensma TD: Partial treatment requests and underlying motives of applicants for gender affirming interventions. J Sex Med 2015;12:2201–2205.
48. Olson J, Schrager SM, Belzer M, et al.: Baseline physiologic and psychosocial characteristics of transgender youth seeking care for gender dysphoria. J Adolesc Health 2015;57:374–380.
49. Gridley SJ, Crouch JM, Evans Y, et al.: Youth and caregiver perspectives on barriers to gender-affirming health care for transgender youth. J Adolesc Health 2016;59:254–261.
50. Cosyns M, Van Borsel J, Wierckx K, et al.: Voice in female-to-male transsexual persons after long-term androgen therapy. Laryngoscope 2014;124:1409–1414.

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