

Dimensional Approach to Gender Dysphoria in Nigeria: Association with Socio-Demographic and Psycho-Sexual Variables

UN Chikani¹, AI Bisi-Onyemaechi², JU Onu³, O Nduagubam⁴, NR Mbanefo⁵, IO Ohuche¹, PU Chime⁶, JOT Onyia⁷, CF Ogugua⁸, MO Ugege⁹

¹Department of Paediatrics, Division of Paediatric Endocrinology, University of Nigeria Teaching Hospital, Ituku-Ozalla Campus, Enugu, ²Department of Paediatrics, Division of Paediatric Neurology, University of Nigeria Teaching Hospital Ituku-Ozalla Campus, Enugu, ³Department of Mental Health, Nnamdi Azikiwe University, Awka, Anambra State and Honorary Consultant Psychiatrist, Federal Neuropsychiatric Hospital, Enugu, ⁴Department of Paediatrics, Enugu State Teaching Hospital, College of Medicine, Parklane, Enugu, ⁵Department of Paediatrics, Division of Nephrology, University of Nigeria Teaching Hospital, Ituku- Ozalla Campus, Enugu, ⁶Department of Paediatrics, Division of Pulmonology, University of Nigeria Teaching Hospital, Ituku-Ozalla Campus, Enugu, ⁷Department of Paediatrics, Division of Gastroenterology, University of Nigeria, Ituku Ozalla Campus, Enugu, ⁸Department of Paediatrics, Division of Endocrinology, Alex Ekwueme Federal University Teaching Hospital Abakaliki, Abakaliki, Ebonyi, ⁹Department of Paediatrics, College of Health Sciences, Usman Danfodiyo University/Usman Danfodiyo University Teaching, Hospital (UDUTH), Sokoto, Nigeria

Received:
22-Feb-2023;
Revision:
29-Apr-2023;
Accepted:
15-Jun-2023;
Published:
21-Aug-2023

ABSTRACT

Background: Recent changes across the world with respect to gender transitioning of children and adolescents have generated a bio-psycho-socio-cultural discourse among interest groups. **Aim:** This study sought to examine gender dysphoric symptoms among adolescents and young persons in an African population, using a dimensional approach. **Method:** A total of 747 primary/secondary school and university students aged 10–24 years were studied using the 27-item Gender Identity/Gender Dysphoria Questionnaire for Adolescents and Adults (GIDYQ-AA). Participants were divided into early, mid- and late adolescents. The composite and domain scores were calculated using the criteria described by Deogracias, and comparison of the median scores was done using Mann–Whitney U-test and Kruskal–Wallis test as appropriate. Dunnett’s post-hoc test was used for pairwise comparisons. **Results:** The prevalence of self-identified transgender and self-reported non-heterosexuals was 0.9% (95%CI: 0.36–1.92) and 18.6% (15.85–21.59), respectively. The participants as a group scored 4.56 out of a possible 5 on the gender dysphoria scale, indicating less gender dysphoric symptoms in this cohort. However, participants in mid- and late adolescents had significantly lower scores when compared with early adolescents ($P = 0.009$). Self-reported transgender had significantly lower scores in the social ($P = 0.001$) and socio-legal ($P < 0.001$) indicators of the scale. **Conclusion:** The findings of this study, although, preliminary demonstrated less gender dysphoric symptoms in this cohort of Nigerian adolescents and young adults compared to the Western population. Nevertheless, some degree of GD was noticed, revealing that this condition is existent in our society.

KEYWORDS: Dimensions, gender dysphoria, psychosexual, socio-demographic, sub-Saharan Africa

Address for correspondence: Dr. IO Ohuche, Department of Paediatrics, Division of Paediatric Endocrinology, University of Nigeria, Ituku Ozalla Campus, Enugu, Nigeria. E-mail: ijeomaohuche@gmail.com

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

For reprints contact: WKHLRPMedknow_reprints@wolterskluwer.com

How to cite this article: Chikani UN, Bisi-Onyemaechi AI, Onu JU, Nduagubam O, Mbanefo NR, Ohuche IO, *et al.* Dimensional approach to gender dysphoria in Nigeria: Association with socio-demographic and psycho-sexual variables. Niger J Clin Pract 2023;26:1181-91.

Access this article online

Quick Response Code:



Website: www.njcponline.com

DOI: 10.4103/njcp.njcp_124_23

INTRODUCTION

In 2013, the American Psychiatric Association released the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-V) which changed the category of gender identity disorder (GID) to gender dysphoria (GD).^[1] This shift in nosology according to the work group highlights the thinking that the emphasis should be on ‘distress’ as the clinical problem and not ‘gender nonconformity’.^[2] However, GD as an entity has remained a controversial topical issue generating a lot of bio-psycho-socio-cultural debate among interest groups. One cardinal question pertains to its universality, with some researchers considering it a culture-bound phenomenon.^[3]

GD was traditionally an uncommon diagnosis; however, in the past few decades, the numbers appear to be on the increase. This increase may be probably due to changes in the socio-cultural and legal perspectives to the diagnosis with many now being referred to specialized gender identity clinics. A meta-analysis on the global prevalence of GD in adults, focusing on clinic referrals, suggested a prevalence of 4.6:100,000–6.8:100,000 for transgender women and 2.6:100,000 for transgender men.^[4] Previous studies have examined the burden of GD using a categorical approach (i.e. present or absent).^[3–5] Though this has clinical utility with respect to communication among physicians, it appears to carve nature in the joint. A dimensional approach offers a real-life view of the phenomenon of GD. Unfortunately, there are only few studies in this regard.^[2,6] For example, Zucker *et al.*^[2] reported that GD is a continuum from non-dysphoria to dysphoria. In addition, these studies are skewed toward the Western population with paucity of data across other cultures especially in sub-Saharan Africa. The dearth of data in this region calls for the re-examination of the axiom that GD is a culture-bound syndrome restricted to the Western sub-culture. This has become imperative based on the following reasons: first, there are scientific indications that GD has neurobiological basis and as such should be universally expressed.^[7] Second, rapid westernization and global interchange could lead to what has been described as “peer and social contagion” with consequences of possible spread of behavior across populations. Third, the legislation in some African countries, though seeking to address a legitimate problem with regard to the current Western perception of gender identity and sexual orientation, may unwittingly have consequences for the admittance of GD symptoms. Based on the

foregoing, this study examined the presence of GD symptoms among adolescents and young adults in an African population using a dimensional approach and highlights its association with socio-demographic and psychosexual variables.

MATERIALS AND METHODS

Study design and setting

This was a cross-sectional study carried out in the three local government areas (LGAs) within Enugu metropolis, in South-Eastern Nigeria. The study sites were primary, secondary, and tertiary schools within the metropolis.

Ethical considerations

Ethical approval was obtained from the Health Research and Ethics Committee of the University of Nigeria Teaching Hospital, Ituku-Ozalla Enugu, with reference number NHREC/06/05/2000B. Ethical principles according to the Helsinki Declaration were adhered to. Written informed consent was obtained from the participants. Assent was gotten from all participants who could not give consent based on the restriction of age. Participants with significant gender dysphoric symptoms were counseled to seek appropriate help. Data obtained were encrypted and stored in a file that was accessible only to the researchers, to ensure confidentiality of information. Participants were interviewed individually in a quiet office to ensure confidentiality.

Sample size consideration

The primary outcome was the presence of GD among adolescents and young adults in an African population. A conservative approach was used to estimate the sample size and assumed a minimum of 50% which has the largest variance (and thus would require the largest sample size). To estimate this with a 95% confidence interval of $\pm 5\%$ (45%–55%), a minimum sample size of 264 was arrived at. However, to reach about 50% of the eligible school population, the sample size was optimized to a size of 747.

Sampling method and selection

The participants were selected using a multi-stage sampling method. In the first stage, the three LGAs were selected. In the second stage, two primary and secondary schools and one tertiary institution in each LGA were selected by balloting. A total of 5 schools per LGA and 15 schools in all the LGAs were selected. In the third stage, each school was allocated a quota proportionate to their population. The fourth stage involved allocation of the quota to each eligible class and finally, using the class list, a simple random sampling technique was used to recruit the participants.

Study instrument

The gender identity/gender dysphoria questionnaire for adolescent GIDYQ-AA^[6,8] was used for data collection. The GIDYQ-AA is a 27-item questionnaire rated on a 5-point Likert scale. There are four indicators, namely subjective, social, somatic, and socio-legal. Each indicator has many items, which are summed after appropriate reversed scoring of relevant items. A composite score is generated by adding the whole sum and dividing by 27. Scores closer to 5 indicate less dysphoric symptoms, while those closer to 1 indicate more dysphoria. This questionnaire has acceptable psychometric properties.^[6,8] Previous studies have reported excellent sensitivity (90.4%) at cut-off of 3 in detecting GD in persons with GID and 99.7% specificity in the controls.^[6,8] One study developed a mean total score (Cronbach's alpha = 0.97) that, when compared to heterosexual and non-heterosexual subjects, demonstrated high evidence of discriminant validity for GD.^[6]

Data collection process

At the preliminary of the study, the questionnaire was pre-tested for its understandability using 50 adolescents drawn from primary, secondary, and tertiary schools. It was noted that items of the questionnaire were clearly understood and the internal inconsistency was acceptable (intra-class correlation coefficient, ICC = 0.80). Thereafter, the participants were selected as described above. Eligible participants or their guardians gave consent. Assent was further obtained from participants whose guardians gave consent. All interviews were done in a convenient office within the school to ensure confidentiality of information. First, the socio-demographic and psychosexual questionnaires were administered to ascertain specific socio-demographic and psychosexual characteristics. These questionnaires contained items such as age, gender, self-reported sexual orientation, and identity. The GIDYQ-AA was self-administered in the same office and the questionnaire was collected immediately.

Data analysis

Data were analyzed using SPSS version 22. Descriptive statistics was done for the socio-demographics and psychosexual variables. The composite and domain scores were calculated and were found not to be normally distributed using Shapiro–Wilk test. Comparison of the median scores with socio-demographic and psychosexual variables was done using Mann–Whitney U-test and Kruskal–Wallis test as appropriate. Dunnett's post-hoc test was used for pairwise comparisons. All tests were two-tailed at 95% confidence interval and the *P* value was considered significant if less than <0.05.

RESULTS

There was a slight male preponderance in the study population (51.5%) and half of the participants (50.6%) were in the early adolescent period. The prevalence of self-identified transgender and self-reported non-heterosexuality was 0.9% (95% CI: 0.38, 1.92) and 18.6% (95% CI: 15.85, 21.59), respectively [Table 1]. Participants as a group scored 4.56 out of a possible 5 in almost all the indicators in the GD scale (indicating less gender dysphoric symptoms in this cohort) [Table 2]. The relationship between the GIDYQ-AA score and socio-demographic characteristics is shown in Table 3. The table shows that overall, male participants had significantly lower scores (indicating more gender dysphoric symptoms), when compared with female

Table 1: Socio-demographic and psychosexual profile of the study participants

	Frequency (n)	n=747 Percentage (%)
Sex		
Male	385	51.5
Female	362	48.5
Age (year)(at the last birthday)		
10–14 (early adolescent)	557	74.6
15–17 (middle adolescent)	141	18.9
18–24 (late adolescent)	37	6.5
Ethnicity		
Igbo	706	94.5
Others	41	5.5
Religion		
Christianity	704	94.2
Islam	8	1.1
Others	34	4.6
Educational level		
Primary	68	9.1
Secondary school	391	52.3
Tertiary	288	38.6
Identity		
Man	383	51.3
Woman	357	47.8
Trans-gender	7	0.9
Self-labeled sexual orientation		
Heterosexual	608	81.4
Non-heterosexual	139	18.6

Table 2: Summary of the composite and domain scores of gender dysphoria scale

Gender dysphoria dimensional variables	Median (IQR)
Composite score	4.56 (0.41)
Subjective indicators	4.38 (0.38)
Social indicators	3.73 (0.64)
Somatic indicators	5.00 (0.75)
Socio-legal indicators	4.83 (0.42)

Table 3: The relationship between socio-demographic variables and the scores in the gender dysphoria scale

Variables	Composite scores median (IQR)	P	Subjective indicator median (IQR)	P	Social indicator median (IQR)	P	Somatic indicator median (IQR)	P	Socio-legal indicator median (IQR)	P
Sex		0.17*		0.15*		0.001**		0.27*		<0.001**
Male	4.52 (0.40)		4.38 (0.38)		3.72 (0.55)		5.00 (0.80)		4.67 (0.42)	
Female	4.56 (0.44)		4.38 (0.38)		3.81 (0.64)		5.00 (0.64)		4.96 (0.42)	
Age group		<0.001***		<0.001***		0.004***		0.57		0.004***
^a EA	4.67 (0.41)		4.38 (0.38)		3.91 (0.55)		5.00 (0.38)		5.00 (0.33)	
^b MA	4.52 (0.47)		4.38 (0.46)		3.73 (0.73)		5.00 (0.71)		4.71 (0.48)	
^c LA	4.52 (0.41)		4.38 (0.31)		3.72 (0.64)		5.00 (0.28)		4.83 (0.04)	
Education		0.66		0.45		0.51		0.06		0.18
Primary	4.47 (0.52)		4.38 (0.38)		3.72 (0.73)		5.00 (0.35)		4.83 (0.50)	
Secondary	4.52 (0.44)		4.38 (0.46)		3.72 (0.73)		5.00 (0.35)		4.83 (0.42)	
Tertiary	4.56 (0.37)		4.38 (0.23)		3.72 (0.64)		5.00 (0.43)		4.83 (0.33)	

*Mann–Whitney *U* test (not significant), **Mann–Whitney *U* test (significant), ***Kruskal–Wallis test (significant). ^aEA: Early adolescent (10–14 years of age). ^bMA: Middle adolescent (15–17 years of age). ^cLA: Late adolescent (18–24 years of age). For age group, Dunnett *post hoc* pairwise comparison shows that the difference in composite scores were between mid- and early adolescents ($P=0.009$) and late adolescents and early adolescents ($P=0.004$). This was true for the subjective, social, and socio-legal indicators

Table 4: Association of psychosexual variables and the scores in the gender dysphoria scale

Variables	Composite scores median (IQR)	P	Subjective indicator median (IQR)	P	Social indicator median (IQR)	P	Somatic indicator median (IQR)	P	Socio-legal indicator median (IQR)	P
Orientation		0.53*		0.09*		0.84*		0.17*		0.19*
HS	4.52 (0.41)		4.38 (0.38)		3.73 (0.64)		5.00 (0.65)		4.83 (0.42)	
Non-HS	4.56 (0.56)		4.38 (0.38)		3.72 (0.82)		5.00 (0.75)		4.75 (0.50)	
Sex-labelled identity		0.31		0.32		0.002**		0.31		0.002**
Man	4.52 (0.37)		4.38 (0.38)		3.73 (0.64)		5.00 (0.72)		4.67 (0.42)	
Woman	4.56 (0.44)		4.38 (0.38)		3.82 (0.64)		5.00 (0.45)		5.00 (0.42)	
Transgender	4.56 (0.04)		4.38 (0.77)		3.55 (1.27)				4.67 (1.33)	

*Mann–Whitney *U*-test (not significant), **Kruskal–Wallis test (significant); For sex-labelled Identity, Dunnett Post-Hoc pairwise comparison shows that there was a significant difference between transgender and either man or woman in the social and socio-legal indicators

participants, in the domains of social ($P = 0.001$) and socio-legal ($P < 0.001$) indicators. Furthermore, participants in the mid- and late-adolescent age groups had significantly lower scores on the GD scale when compared with early adolescents ($P = 0.009$). Sexual orientation did not differentiate participants in their scores on the GD scale [Table 4]. However, those who identified themselves as transgender had significantly lower scores in the social indicator and socio-legal indicators when compared with those who said they were either male or female.

DISCUSSION

The study aimed to determine the spectrum of gender dysphoric symptoms among adolescents and young adults in an African population and its relationship with socio-demographic and psychosexual variables. It

is the first study in sub-Saharan Africa to evaluate the presence of the gender dysphoric symptom spectrum among adolescents and young adults using a dimensional approach, to the best of authors' knowledge. The main highlights of the findings of this study are: (1) a prevalence of self-reported transgender of 0.9% among the study participants; (2) there were high scores recorded on the gender dysphoric scale among the study participants, indicating a low prevalence of gender dysphoric symptoms among the study cohort; (3) that males when compared to females had significantly lower scores in the GD scale indicating more gender dysphoric symptoms in the male population; (4) similarly, participants in their mid- and late adolescences had significantly lower scores (i.e. more gender dysphoric symptoms) when compared with participants in early adolescence, and (5) self-identified transgender had

significantly more dysphoric symptoms in the domains of social and socio-legal indicators when compared to those who identified themselves as male or female.

The prevalence of self-reported transgender among the study participants was in keeping with the reports of previous studies of prevalence in the general population (children, adolescents, and adults) which were mainly in the range of 0.5%–1.5%.^[9,10]

The less dysphoric score of 4.56 found in this survey corroborated also with the less dysphoric symptoms reported in some Western studies,^[2,6,9,10] as well as in contrast to some studies among the Dutch^[11] and Scottish^[12] that recorded a higher prevalence. However, in the index study, the low dysphoric symptoms reported underscores the question of whether the prevalence of GD is actually low, or just under-reported because of the fear of stigmatization since a poor understanding of such symptoms may actually lead to stigmatization of affected individuals. This is because a cursory look at the result revealed that participants had shown lower scores (i.e. more dysphoric symptoms) in the social domain indicator which assessed the outward manifestations of personality. This reflects influence of social structures like the family, peer groups, media, and education. In the same vein, although there was a score of 4.56 in the composite domain, respondents had significant dysphoric scores in specific parameters that characterized each domain, suggesting varying degrees of expressivity of GD in some areas at some point in their life. This finding buttresses the fact that GD is a spectrum which requires a dimensional, rather than a categorical approach.

In our study, males showed significantly higher gender dysphoric symptoms than females which conforms with some previous studies.^[9,11,13] However, some recent reports showed a shift in sex ratio in favor of females.^[9,14,15] This was not the case in our study, which may be due to more societal acceptance/tolerance of male transgender behaviors than females. In addition to male chauvinism that predominates the African setting, making males more likely to be expressive than females.

Regarding the association between GD and age, the index study found that mid- and late adolescents had significantly higher dysphoric symptoms when compared with early adolescents. Contrary to the expected, adolescents in mid- and late groups had lower scores, which is suggestive of more dysphoric symptoms. The reason could be that adolescents in these age groups could assert themselves more than the adolescents in the early stage and perhaps could comprehend their inner feelings and interpret them appropriately. That is why

in 2020, following the ruling from the United Kingdom High court, teenagers are not allowed to take decisions on transitioning to the opposite sex as a result of their GD until 18 years of age, because of the emotional liability/confusion noticed during puberty. Young people cannot understand the implications of initiating puberty blockers, cross-sex hormones, and surgeries. Unfortunately, the said judgment was upturned in 2022.^[16]

Self-identified transgenders had significantly more dysphoric symptoms in the domains of social and socio-legal indicators when compared to those who identified themselves as male or female. This is in line with the expected outcome, since the questionnaire is a more objective way of assessing the self-reported feelings of being a transgender. However, why it was limited to the social and socio-legal indicators is unclear. The possible explanation could be due to the fact that the social indicators are actually an external manifestation of their inner feelings. In contrast, Deogracias *et al.*^[6] and Shield *et al.*^[10] reported no significant GD among the self-identified transgender group. Deogracias further inferred that it could be that almost all of their participants were content with their gender identity as men or as women because the GIDYQ questionnaire was scaled to measure the degree of GD in a comparable manner across sex. In line with this, Shield *et al.*^[10] questioned the possibility of their participants' misunderstanding the questions and advocated for a more dimensional approach.

Despite the strengths of this study, one potential drawback is that participants were interviewed about such a delicate subject in a school setting. The participants may have responded in a way that was socially desirable as a result. There may therefore be some underestimation of the prevalence of gender dysphoric symptoms among the study population owing to this limitation.

In conclusion, the findings of this study, although, preliminary, demonstrated less gender dysphoric symptoms among a cohort of adolescents and young adults in south-Eastern Nigeria, when compared to the Western population. Nevertheless, some degree of GD was noticed in some participants revealing that it is still existent, with perhaps limited expressivity hindered by stigma, ignorance or a lack of specific clinics to attend to their needs.

RECOMMENDATIONS

The findings of this study show that though GD is not very common in our environment, there are still levels of expressivity, especially in mid- and late adolescence. The authors therefore recommend a high index of

suspicion of this condition especially in the evaluation and management of children in the mid- and late adolescence period of development. In addition, the dimensional approach used in this study is recommended for subsequent studies on GD, in order to give a true burden of this condition which has varied expressivity.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

REFERENCES

1. American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders. 5th ed. Washington DC: American Psychiatric Association; 2013.
2. Zucker KJ, Cohen-Kettenis PT, Drescher J, Meyer-Bahlburg HF, Pfäfflin F, Womack WM. Memo outlining evidence for change for gender identity disorder in the DSM-5. *Arch Sex Behav* 2013;42:901-14.
3. Litman L. Parent reports of adolescents and young adults perceived to show signs of a rapid onset of gender dysphoria. *PLoS One* 2018;14:e0214157. doi: 10.1371/journal.pone.0202330.
4. Arcelus J, Bouman WP, Van Den Noortgate W, Claes L, Witcomb G, Fernandez-Aranda F. Systematic review and meta-analysis of prevalence studies in transsexualism. *Eur Psychiatry* 2015;30:807-15.
5. Cohen-Kettenis PT, van Goozen SH. Sex reassignment of adolescent and transsexuals: A follow-up study. *J Am Acad Child Adolesc Psychiatry* 1997;36:263-71.
6. Deogracias JJ, Johnson LL, Heino FL, Meyer-Bahlburg SJ, Kessler JM, Schober JM, *et al.* The gender identity/genderdysphoria questionnaire for adolescents and adults. *J Sex Res* 2007;44:370-9.
7. Guillamon A, Junque C, Go'mez-Gil E. A review of the status of brain research in transsexualism. *Arch Sex Behav* 2016;45:1615-48.
8. Singh D, Deogracias JJ, Johnson LL, Bradley SJ, Kibblewhite SJ, Owen-Anderson A, *et al.* The gender identity/gender dysphoria questionnaire for adolescents and adults: Further validity evidence. *J Sex Res* 2010;47:49-58.
9. Kenneth J. Zucker KJ. Epidermiology of gender dysphoria and trans gender identity. *Sex Health* 2017;14:404-11.
10. Shields JP, Cohen R, Glassman JR, Whitaker K, Franks H, Bertolini I. Estimating population size and demographic characteristics of lesbian, gay, bisexual, and transgender youth in middle school. *J Adolesc Health* 2013;52:248-5.
11. Kuyper L, Wijzen C. Gender identities and gender dysphoria in the Netherlands. *Arch Sex Behav* 2014;43:377-85.
12. Wilson P, Sharp C, Carr S. The prevalence of gender dysphoria in Scotland: A primary care study. *Br J Gen Pract* 1999;49:991-2.
13. Wood H, Sasaki S, Bradley SJ, Singh D, Fantus S, Owen-Anderson A, *et al.* Patterns of referral to a gender identity service for children and adolescents (1976–2011): Age, sex ratio, and sexual orientation. *J Sex Marital Ther* 2013;39:1-6. doi: 10.1371/journal.pone.0202330.
14. Wasserman L, Ames M, Fitzsimmons CL, Leef JH, Lishak V, Reim E, *et al.* Evidence for an altered sex ratio in clinic-referred adolescents with gender dysphoria. *J Sex Med* 2015;12:756-63.
15. Kaltiala-Heino R, Sumia M, Työlajärvi M, Lindberg N. Two years of gender identity service for minors: Overrepresentation of natal girls with severe problems in adolescent development. *Child Adolesc Psychiatry Ment Health* 2015;9:9. doi: 10.1186/s13034-015-0042-y.
16. Robinson M. Landmark puberty blockers ruling will NOT be challenged at Supreme Court: Children under 16 who have gender dysphoria can continue to be given life changing drugs with GP's consent. Mail Online. 11:22 GMT, 6 May 2022 | updated: 11:25 GMT, 6 May 2022. Available form:<https://www.dailymail.co.uk/news/article-10789019/Landmark-puberty-blockers-ruling-NOT-challenged-Supreme-Court.html>. [Last accessed on 2023 Jul 25].

PART A

Disclaimer: The researchers do not belong to any group or movement. Information obtained is purely for academic purposes and scientific merit. The authors have no conflict of interest to declare

Questionnaire on the prevalence of gender dysphoria in our setting SE Nigeria

BIODTA

Biologic sex:.....

Age@in years).....

Ethnicity :

Religion; catholics, pentecostal, musulim atheist.....

Addresss-.....

Educational status.: Secondary school ,undergraduate(year 1,2,3,4,5,6),

Self labelled gender identity: man, woman , trans gender.....

Self labelled sexual orientation:

Exclusively heterosexual (straight)

Bisexual

Exclusively homosexual

Asexual unlabeled: questioning or unsure

Others

Female Version [Response options are Always, Often, Sometimes, Rarely, or Never].

01. In the past 12 months, have you felt satisfied being a woman? Always, Often, Sometimes, Rarely, or Never]

02. In the past 12 months, have you felt uncertain about your gender, that is, feeling somewhere in between a woman and a man? Always, Often, Sometimes, Rarely, or Never]

03. In the past 12 months, have you felt pressured by others to be a woman, although you don't really feel like one? Always, Often, Sometimes, Rarely, or Never].

04. In the past 12 months, have you felt, unlike most women, that you have to work at being a woman? Always, Often, Sometimes, Rarely, or Never].

05. In the past 12 months, have you felt that you were not a real woman? Always, Often, Sometimes, Rarely, or Never].

06. In the past 12 months, have you felt, given who you really are (e.g., what you like to do, how you act with other people), that it would be better for you to live as a man rather than as a woman? Always, Often, Sometimes, Rarely, or Never]

07. In the past 12 months, have you had dreams? If NO, skip to Question 8.

If YES, Have you been in your dreams?

If NO, skip to Question 8.

If YES, In the past 12 months, have you had

dreams in which you were a man? Always, Often, Sometimes, Rarely, or Never].

08. In the past 12 months, have you felt unhappy about being a woman? Always, Often, Sometimes, Rarely, or Never].

09. In the past 12 months, have you felt uncertain about yourself, at times feeling more like a man and at times feeling more like a woman? Always, Often, Sometimes, Rarely, or Never].

10. In the past 12 months, have you felt more like a man than like a woman? Always, Often, Sometimes, Rarely, or Never].

11. In the past 12 months, have you felt that you did not have anything in common with either men or women? Always, Often, Sometimes, Rarely, or Never].

12. In the past 12 months, have you been bothered by seeing yourself identified as female or having to check the box "F" for female on official forms

(e.g., employment applications, driver's license, passport)? Always, Often, Sometimes, Rarely, or Never].

13. In the past 12 months, have you felt comfortable when using women's restrooms in public places? Always, Often, Sometimes, Rarely, or Never].

14. In the past 12 months, have strangers treated you as a man? Always, Often, Sometimes, Rarely, or Never]
15. In the past 12 months, at home, have people you know, such as friends or relatives, treated you as a man? Always, Often, Sometimes, Rarely, or Never].
16. In the past 12 months, have you had the wish or desire to be a man? Always, Often, Sometimes, Rarely, or Never].
17. In the past 12 months, at home, have you dressed and acted as a man? Always, Often, Sometimes, Rarely, or Never].
18. In the past 12 months, at parties or at other social gatherings, have you presented yourself as a man? Always, Often, Sometimes, Rarely, or Never]
19. In the past 12 months, at work or at school, have you presented yourself as a man? Always, Often, Sometimes, Rarely, or Never].
20. In the past 12 months, have you disliked your body because it is female (e.g., having breasts or having a vagina)? Always, Often, Sometimes, Rarely, or Never].
21. In the past 12 months, have you wished to have hormone treatment to change your body into a man's? Always, Often, Sometimes, Rarely, or Never]
22. In the past 12 months, have you wished to have an operation to change your body into a man's (e.g., to have your breasts removed or to have a penis made)? Always, Often, Sometimes, Rarely, or Never]
23. In the past 12 months, have you made an effort to change your legal sex (e.g., on a driver's licence or credit card)? Always, Often, Sometimes, Rarely, or Never].
24. In the past 12 months, have you thought of yourself as a "hermaphrodite" or an "intersex" rather than as a man or woman Always, Often, Sometimes, Rarely, or Never]
25. In the past 12 months, have you thought of yourself as a "transgendered person"? Always, Often, Sometimes, Rarely, or Never]
26. In the past 12 months, have you thought of yourself as a man? Always, Often, Sometimes, Rarely, or Never]
27. In the past 12 months, have you thought of yourself as a woman? Always, Often, Sometimes, Rarely, or Never].

PART A

Disclaimer: The researchers do not belong to any group or movement. Information obtained is purely for academic purposes and scientific merit. The authors have no conflict of interest to declare
Questionnaire on the prevalence of gender dysphoria in our setting SE Nigeria

BIODTA

Biologic sex:.....

Age (in years).....

Ethnicity :

Religion; catholic, pentecostal, muslim, atheist.....

Address-.....

Educational status: Secondary school, undergraduate (year 1, 2, 3, 4, 5, 6),

Self labelled gender identity: man, woman, trans gender.....

Self labelled sexual orientation

Exclusively heterosexual (straight)

Bisexual.....

Exclusively homosexual.....

Asexual unlabeled: questioning or unsure

Others

Male Version

01. In the past 12 months, have you felt satisfied being a man? Always, Often, Sometimes, Rarely, or Never]
02. In the past 12 months, have you felt uncertain about your gender, that is, feeling somewhere in between a man

and a woman? Always, Often, Sometimes, Rarely, or Never]

03. In the past 12 months, have you felt pressured by mothers to be a man, although you don't really feel like one? Always, Often, Sometimes, Rarely, or Never]
04. In the past 12 months, have you felt, unlike most men, that you have to work at being a man? Always, Often, Sometimes, Rarely, or Never]
05. In the past 12 months, have you felt that you were not a real man? Always, Often, Sometimes, Rarely, or Never]
06. In the past 12 months, have you felt, given who you really are (e.g., what you like to do, how you act with other people), that it would be better for you to live as a woman rather than as a man? Always, Often, Sometimes, Rarely, or Never]
07. In the past 12 months, have you had dreams?
If NO, skip to Question 8.
If YES, Have you been in your dreams?
If NO, skip to Question 8.
If YES, In the past 12 months, have you had dreams in which you were a woman? Always, Often, Sometimes, Rarely, or Never]
08. In the past 12 months, have you felt unhappy about being a man? Always, Often, Sometimes, Rarely, or Never]
09. In the past 12 months, have you felt uncertain about yourself, at times feeling more like a woman and at times feeling more like a man? Always, Often, Sometimes, Rarely, or Never]
10. In the past 12 months, have you felt more like a woman than like a man? Always, Often, Sometimes, Rarely, or Never]
11. In the past 12 months, have you felt that you did not have anything in common with either women or men? Always, Often, Sometimes, Rarely, or Never]
12. In the past 12 months, have you been bothered by seeing yourself identified as male or having to check the box "M" for male on official forms (e.g., employment applications, driver's license, passport)? Always, Often, Sometimes, Rarely, or Never]
13. In the past 12 months, have you felt comfortable when using men's restrooms in public places? Always, Often, Sometimes, Rarely, or Never]
14. In the past 12 months, have strangers treated you as a woman? Always, Often, Sometimes, Rarely, or Never]
15. In the past 12 months, at home, have people you know, such as friends or relatives, treated you as a woman? Always, Often, Sometimes, Rarely, or Never]
16. In the past 12 months, have you had the wish or desire to be a woman? Always, Often, Sometimes, Rarely, or Never]
17. In the past 12 months, at home, have you dressed and acted as a woman? Always, Often, Sometimes, Rarely, or Never]
18. In the past 12 months, at parties or at other social gatherings, have you presented yourself as a woman? Always, Often, Sometimes, Rarely, or Never]
19. In the past 12 months, at work or at school, have you presented yourself as a woman? Always, Often, Sometimes, Rarely, or Never]
20. In the past 12 months, have you disliked your body because it is male (e.g., having a penis or having hair on your chest, arms and legs)? Always, Often, Sometimes, Rarely, or Never]
21. In the past 12 months, have you wished to have hormone treatment to change your body into a woman's? Always, Often, Sometimes, Rarely, or Never]
22. In the past 12 months, have you wished to have an operation to change your body into a woman's (e.g., to have your penis removed or to have a vagina made)? Always, Often, Sometimes, Rarely, or Never]

23. In the past 12 months, have you made an effort to change your legal sex (e.g., on a driver's licence or credit card)? Always, Often, Sometimes, Rarely, or Never]
24. In the past 12 months, have you thought of yourself as a “hermaphrodite” or an “intersex” rather than as a man or woman? Always, Often, Sometimes, Rarely, or Never]
25. In the past 12 months, have you thought of yourself as a “transgendered person”? Always, Often, Sometimes, Rarely, or Never]
26. In the past 12 months, have you thought of yourself as a woman? Always, Often, Sometimes, Rarely, or Never]
27. In the past 12 months, have you thought of yourself as a man?
Always, Often, Sometimes, Rarely, or Never]

PART A

Disclaimer: The researchers do not belong to any group or movement. Information obtained is purely for academic purposes and scientific merit. The authors have no conflict of interest to declare
Questionnaire on the prevalence of gender dysphoria in our setting SE Nigeria

BIODTA

Biologic sex:.....
 Age (in years).....
 Ethnicity :
 Religion; catholics, pentecostal, muslim, atheist.....
 Address.....
 Educational status.: Secondary school, undergraduate (year 1,2,3,4,5,6),
 Self labelled gender identity: man, woman, trans gender.....
 Self labelled sexual orientation
 Exclusively heterosexual (straight)
 Bisexual.....
 Exclusively homosexual.....
 Asexual unlabeled: questioning or unsure
 Others

PART B

Questionnaire for children less than 10 years

To be filled by the caregiver and the child

- Gender dysphoria, or gender identity disorder, is a diagnosis used to describe children who exhibit a strong desire to be of the other gender. Take this self-assessment to see if your child could benefit from seeing a mental health professional.
- Could your child have gender dysphoria?
- Below is a list of questions that relate to life experiences common among children diagnosed with gender dysphoria—formerly known as gender identity disorder. Please read each question carefully and indicate whether your child has expressed these thoughts or exhibited these behaviors for at least the past 6 months
- *FOR CHILDREN 2-10 YEARS – The parents are to be interviewed*
- *Your privacy is important to us. All results are completely anonymous.*
- Has your child repeatedly stated a desire to be, or an instance that he or she is, a member of the opposite sex? Yes/No
- Does your son ask to be dressed in female attire and resist wearing typical male clothing, or does your daughter asked to be dressed in male attire and resist wearing typical female clothing? Yes/No
- When your child plays make-believe games, does he or she show a strong preference for playing cross-gender roles? Yes/No
- Does your child enjoy playing with toys, games, or activities stereotypically used by the other gender? Yes/No
- Are most of the children that your child plays with members of the opposite sex? Yes/No
- Does your child often express a strong dislike for his or her sexual anatomy? Yes/No

- Does your child tell you that he or she wishes he/she had the primary (e.g. penis or vagina) or secondary (e.g. facial hair or breasts) sex characteristics of the opposite sex? Yes/No
- Is your child experiencing significant distress or impairment in social, school, or other important areas of functioning? Yes/No