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Socio-demographic characteristics, clinical pattern, and mental health status of gender dysphoria patients in a tertiary care hospital of Bangladesh

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Abstract

Background: Gender dysphoria is characterized by marked incongruence between assigned gender at birth and experienced gender, leading to significant emotional distress affecting mental health, social interactions and overall well-being. In Bangladesh, published data on patients with gender dysphoria remain scarce, and persistent social stigma, discrimination, and barriers to care continue to affect timely help-seeking and access to appropriate psychological support.

Objectives: To determine the socio-demographic characteristics, clinical pattern and mental health status of patients with gender dysphoria.

Methods: This cross-sectional study was conducted at the Department of Endocrinology, Dhaka Medical College Hospital from January to December 2024. Fifty patients with gender dysphoria were enrolled using purposive sampling. Participants underwent detailed assessment including socio-demographic characteristics, clinical pattern evaluation, and mental health status assessment using the validated Bangla version of Depression Anxiety Stress Scale-21 (DASS-21). Data were analyzed using Statistical Package for Social Sciences (SPSS) version 27 (IBM Corp., Armonk, NY).

Results: The mean age was 26.16±9.99 years, with most participants being students (48%) and single (84%). Mean age of onset of gender dysphoria was 13.56±7.38 years, while first consultation occurred at 22.36±7.98 years. Among participants, 66% assigned male at birth identified as female, 96% engaged in cross-dressing, 44% received psychotherapy, 24% underwent hormone therapy, and 14% had gender reassignment surgery. Mental health assessment revealed 78% had depression (ranging from mild to severe), 72% experienced moderate to severe anxiety, and 40% reported suicide attempts.

Conclusions: Gender dysphoria patients in Bangladesh demonstrate significant mental health burden with high rates of depression, anxiety and suicidal behavior. Early recognition and timely multidisciplinary care, with psychotherapy and psychosocial support at its core, are essential to address mental health needs in this vulnerable population. *[J Assoc Clin Endocrinol Diabetol Bangladesh,* July 2026; 5 (2): e88864*]*

Keywords: Gender Dysphoria; Depression; Anxiety; Mental Health; Bangladesh

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Introduction

Gender dysphoria refers to the clinically significant distress arising from a marked incongruence between one's experienced or expressed gender and the gender assigned at birth.[1] Previously termed "gender identity disorder," this condition reflects a persistent discomfort with primary and secondary sex characteristics, accompanied by a strong desire for characteristics aligning with one's experienced gender identity.[2] The psychological burden of gender dysphoria extends beyond individual distress, profoundly affecting interpersonal relationships, occupational functioning, and overall quality of life.[3]

Sex-related characteristics may be understood at several biological levels, including chromosomal or genetic sex, gonadal sex, and phenotypic sex, which includes external genitalia, internal reproductive structures, and secondary sexual characteristics.[1,2] In contrast, gender identity refers to an individual's internal sense of being male, female, or otherwise. These dimensions are related but not always identical, and gender dysphoria refers to the clinically significant distress that may arise when an individual's experienced gender is incongruent with the sex assigned at birth.[1,2]

Determining the true prevalence of gender dysphoria remains challenging due to multiple factors including fear of disclosure, varying case definitions, lack of population-based representative samples, and persistent social stigma.[4] Recent epidemiological studies report a prevalence of 1.1% among adolescents and adults, likely underestimated due to underreporting.[5,6] Traditionally considered rare, diagnoses have increased substantially in recent decades, possibly reflecting both improved awareness and greater social acceptance alongside genuine prevalence increases.[7]

Gender dysphoria symptoms commonly emerge during childhood or early adolescence, though some individuals experience delayed recognition until adulthood.[8,9] The onset or intensification of distress frequently coincides with puberty, when secondary sexual characteristics develop, creating heightened incongruence between physical appearance and gender identity.[10] This developmental period represents an important window for early psychological assessment, psychotherapy and psychosocial support, which may help reduce distress and improve long-term mental health outcomes.[11]

Mental health comorbidities demonstrate markedly elevated prevalence within gender dysphoric populations.[12] Depression and anxiety affects 27-63% of gender dysphoric individuals[13,14] The minority stress model provides a theoretical framework for understanding these disparities, positing that chronic exposure to discrimination, prejudice and social stigma generates sustained psychological distress.[15] Gender dysphoric individuals face heightened risks of self-harm, sexual harassment, eating disorders, and substance abuse.[16] Suicide risk represents a particularly grave concern within this population. Studies consistently show a high burden of suicidality among gender dysphoric populations, with pooled lifetime prevalence estimates around 29% for suicide attempts.[17] Multiple factors contribute to this increased risk, including family rejection, social isolation, discrimination, lack of access to appropriate mental health care, and internalized stigma.[18]

Management of gender dysphoria requires careful psychological assessment and a multidisciplinary approach with particular emphasis on psychotherapy, counseling, and psychosocial support. Family understanding, reduction of stigma, and timely mental health intervention are important for reducing emotional distress and improving overall functioning. Such approaches may be especially relevant in resource-constrained settings where specialized services remain limited.

In Bangladesh, gender-diverse people have traditionally occupied a marginalized social position despite legal recognition granted in 2013 and continue to face discrimination in employment, education, healthcare access, and family acceptance.[19] Despite some progress, access to inclusive and appropriate healthcare remains limited. However, substantial gaps remain in understanding the clinical characteristics and mental health needs of gender dysphoric individuals in Bangladesh. To our knowledge, no published study has systematically examined socio-demographic characteristics, clinical pattern, and mental health status of patients with gender dysphoria in Bangladesh. This knowledge gap impedes development of culturally appropriate psychological and psychosocial support services.

The present study was undertaken to address these critical knowledge gaps by providing the first comprehensive assessment of gender dysphoria patients seeking care at a major tertiary care hospital in Bangladesh. Therefore, this study aimed to provide

baseline information on the sociodemographic characteristics, clinical pattern, and mental health status of gender dysphoria patients in a tertiary care hospital, with particular attention to age of onset, age at first consultation. The findings of this study may help clinicians better understand this population and support the development of culturally sensitive psychological and psychosocial services in Bangladesh.

Methods

This cross-sectional study was conducted in the Department of Endocrinology, including both outpatient and inpatient services, at Dhaka Medical College Hospital, Dhaka, Bangladesh, a tertiary care referral center. The study was carried out for a year from January 2024 to December 2024 after approval of the study protocol by the Ethical Review Committee / IRB of Dhaka Medical College, Dhaka, Bangladesh.

The study population comprised patients with gender dysphoria, most of whom were referred from the Department of Psychiatry of the same institution. Participants were enrolled by purposive sampling according to predefined eligibility criteria. Patients of all ages and both genders who sought consultation for gender dysphoria and provided informed written consent, either personally or through a legal guardian, were included in the study. Patients with disorders of sex development, schizophrenia, transvestic disorder, body dysmorphic disorder, borderline personality disorder, or Asperger's syndrome were excluded.

The sample size was calculated using the standard Cochran formula, where Z=1.96 for a 95% confidence level, p=1.1% as the estimated prevalence of gender dysphoria, q=(1-p)=98.9%, and d=5% as the allowable margin of error.[6] The minimum calculated sample size was 17. To improve the reliability of the findings and increase statistical power, a total of 50 participants were ultimately enrolled.

For the purpose of this study, gender dysphoria was defined according to the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5), as a marked incongruence between one's experienced or expressed gender and assigned gender for at least six months. Gender identity was considered as an individual's inner sense of self as male or female, whereas sexual orientation referred to an individual's enduring physical and emotional attraction to another person and was treated as a construct distinct from gender identity. Mental health status was assessed using the validated Bangla version of the Depression Anxiety Stress Scales-21 (DASS-21), a 21-item instrument comprising three subscales for depression, anxiety, and stress, with seven items in each domain.[20] Severity categories were classified as normal, mild, moderate, severe, and extremely severe according to standard DASS-21 scoring criteria.

After obtaining ethical clearance from the Ethical Review Committee of Dhaka Medical College Hospital (Reference no: ERC-DMC/ECC/2023/282; Dated: 31.10.2023), eligible consenting participants seeking consultation for gender dysphoria were recruited irrespective of age and sex. All participants underwent detailed clinical assessment, including evaluation for ambiguous genitalia and disorders of sex development. Written informed consent was obtained from each participant or legal guardian using standard consent and assent forms. Participants were clearly informed about the purpose of the study, their right to refuse participation or decline any question, and their freedom to withdraw at any stage without any effect on their treatment.

Data were collected through face-to-face interviews conducted by the primary researcher in a quiet and comfortable environment to ensure privacy and confidentiality. A pre-structured questionnaire was used to obtain information on socio-demographic variables, including age, sex assigned at birth, occupation, education, marital status, homelessness, smoking status, and alcohol intake. Clinical pattern was assessed as discrete values or binary responses (as appropriate) for variables, including age of onset of gender dysphoria, age at first consultation, gender identity, sexual orientation, cross-dressing behavior, history of psychotherapy, history of gender-affirming hormone therapy, and history of gender reassignment surgery. Mental health variables included depression, anxiety, stress, past suicide attempts, and history of childhood sexual abuse. Depression, anxiety, and stress were assessed using the validated Bangla version of the DASS-21. Suicide attempts and history of childhood abuse were recorded separately from participant history as binary self-reported variables; however, the specific type of abuse, including sexual abuse, and the exact age at occurrence were not documented. Gonadal status, chromosomal sex, phenotypic manifestations, and treatment outcomes were not recorded as separate structured study variables. Before administration of the DASS-21, the researcher explained each item carefully

to ensure that participants understood the questions and could respond accurately. All information was recorded in separate case record forms, and strict confidentiality of personal data was maintained throughout the study.

Following collection, the data were checked, cleaned, and verified for consistency before analysis using the Statistical Package for Social Sciences (SPSS) version 27 (IBM Corp., Armonk, NY). Categorical variables were summarized as frequencies and percentages, whereas continuous variables were expressed as mean ± standard deviation and median with range where appropriate.

The study adhered to standard ethical principles throughout its conduct. Patients and, where appropriate, their relatives or guardians were informed about the scope and limitations of the research, and all data were used solely for scientific purposes without disclosing participant identity. Interviews were conducted at times and locations convenient for the respondents, and the study posed no environmental hazard.

Results

Table I presents the socio-demographic characteristics of the 50 study participants. The age distribution showed highest representation in the 10-19 years (34%) and 20-29 years (34%) groups, with mean age 26.16±9.99 years. Regarding sex assigned at birth, 33 participants (66%) were assigned male and the rest were assigned female. Regarding residence, most of the participants (n=44, 88%) were from urban areas. Most participants were single (84%), non-homeless (88%), non-smokers (72%), and did not consume alcohol (82%). Regarding occupation, students comprised the largest group (48%). Educational attainment was relatively high, with 17 postgraduate participants (34%) constituting the most common category.

Table II summarizes the clinical pattern of the study participants. The mean age of onset of gender dysphoria was 13.56±7.38 years. However, mean age at first consultation was 22.36±7.98 years, revealing a substantial delay of approximately 9 years between symptom onset and healthcare seeking. Regarding gender identity and sexual orientation, 33 biologic male participants (66%) identified themselves as female and were attracted to males (male to male); whereas, 17 biologic female participants (34%) identified themselves as male and were attracted to females (female to female). Cross-dressing was reported by 48 participants (96%). Regarding prior management, 22 (44%) participants had a history of psychotherapy, 12 (24%) had received gender-affirming hormone therapy, and 7(14%) had undergone gender reassignment surgery.

Table-I: Socio-demographic characteristics of the study participants (n=50)

Characteristics	Frequency (n=50)	Percentage (%)
Age groups (years)		
10-19	17	34.0
20-29	17	34.0
30-39	10	20.0
40-49	5	10.0
50-59	1	2.0
Mean ± SD	26.16 ± 9.99	-
Median (Range)	25.50 (12-55)	-
Sex assigned at birth		
Male	33	66.0
Female	17	34.0
Residence		
Urban	44	88.0
Rural	6	12.0
Marital status		
Single	42	84.0
Married	8	16.0
Homelessness		
No	44	88.0
Yes	6	12.0
Smoking status		
Non-smoker	36	72.0
Current smoker	14	28.0
Alcohol intake		
No	41	82.0
Yes	9	18.0
Occupation		
Student	24	48.0
Service	14	28.0
Unemployed	5	10.0
Business	4	8.0
Housewife	2	4.0
Dancer	1	2.0
Educational qualification		
Postgraduate	17	34.0
HSC	9	18.0
Graduate	7	14.0
Class 6-10	7	14.0
Illiterate	6	12.0
SSC	3	6.0
Class 1-5	1	2.0

Data presented as frequency and percentage over the columns for categorical variables.

Table III presents the mental health assessment findings. DASS-21-based assessment showed that 78% of participants had depression ranging from mild to severe, 72% had moderate to severe anxiety, and 68% had mild to moderate stress. In addition, 40% of participants reported a history of suicide attempts and 26% reported a history of childhood abuse.

Table-II: Clinical pattern of the study participants (n=50)

Clinical pattern	Frequency (n=50)	Percentage (%)
Age of onset of gender dysphoria		
Mean ± SD (years)	13.56 ± 7.38	-
Age at first consultation		
Mean ± SD (years)	22.36 ± 7.98	-
Gender identity		
Male (biologic female)	17	34.0
Female (biologic male)	33	66.0
Sexual orientation		
Attracted to males (male to male)	33	66.0
Attracted to females (female to female)	17	34.0
Cross-dressing practices	48	96.0
History of psychotherapy	22	44.0
History of gender-affirming hormone therapy	12	24.0
History of gender reassignment surgery	7	14.0

Data presented as frequency and percentage over the columns for categorical variables while, mean±standard deviation (SD) was used to present quantitative variables. Sexual orientation was recorded as attraction to males or females, independent of sex assigned at birth.

Table-III: DASS-21 parameters and other mental health status of the study participants

Mental Health Parameter		Frequency (n=50)	Percentage (%)
	Depression		
	Normal	11	22.0
	Mild	16	32.0
	Moderate	14	28.0
	Severe	9	18.0
DASS-21 parameters	**Anxiety**		
	Normal	5	10.0
	Mild	9	18.0
	Moderate	23	46.0
	Severe	13	26.0
	Stress		
	Normal	16	32.0
	Mild	24	48.0
	Moderate	10	20.0
	Severe	0	0.0
Mental health parameters from history	**History of suicide attempts**		
	No	30	60.0
	Yes	20	40.0
	History of childhood abuse		
	No	37	74.0
	Yes	13	26.0

Data presented as frequency and percentage over the columns for categorical variables. DASS-21 scoring: Each of the three subscales (Depression, Anxiety, and Stress) contains 7 items scored from 0 to 3. Subscale scores were summed and multiplied by 2 to obtain final scores. Severity categories were: Depression: normal 0-9, mild 10-13, moderate 14-20, severe 21-27, extremely severe 28+; Anxiety: normal 0-7, mild 8-9, moderate 10-14, severe 15-19, extremely severe 20+; Stress: normal 0-14, mild 15-18, moderate 19-25, severe 26-33, extremely severe 34+.

Discussion

This study represents the first comprehensive investigation of socio-demographic characteristics, clinical patterns, and mental health status among gender dysphoria patients in Bangladesh. Our findings reveal substantial mental health burden and significant delays in accessing care. These results have important implications for healthcare service development and policy formulation in Bangladesh.

Most of the participants in the present study were young adults. This age distribution aligns with international literature showing that individuals typically seek specialized clinical or mental health support during late adolescence and early adulthood.[7,8] The predominance of students and single individuals reflects the young age of our cohort and suggests that many participants were still establishing their educational and social foundations when seeking care. Although population-based studies have reported lower educational attainment among gender-diverse adults, current study participants showed relatively high educational attainment, with nearly half having completed at least graduate-level education, possibly reflecting selection bias toward individuals with greater health literacy and access to tertiary care.[21]

The mean age of onset coincided with early adolescence, and on the verge of puberty. Most international literature document that most individuals first experience gender dysphoria between ages 6-7 years, with intensification during puberty.[10] The distinction between chromosomal, gonadal, and phenotypic sex on one hand and gender identity on the other is important for understanding that gender dysphoria is centered on distress from incongruence, rather than being explained solely by any single biological characteristic. The emergence and intensification of gender dysphoria symptoms during puberty reflects distress associated with developing secondary sexual characteristics incongruent with gender identity.[22]

A critical finding was the substantial delay of approximately 9-years between the onset of gender dysphoria and pursuit of first medical consultation, which generally occurred near the end of the second decade of life. The delay could result from significant barriers to accessing appropriate mental health care and psychosocial support in Bangladesh. These barriers likely include social stigma, family rejection, lack of awareness about available services, financial constraints, and fear of discrimination.[19] Khatchadourian et al. reported median age at first presentation of 16.6±2.2 years in a Canadian cohort, which was considerably younger than our findings.[9] This disparity likely reflects differences in healthcare accessibility, social acceptance, and cultural context between developed and developing countries. These findings highlight the need to reduce barriers to care and promote earlier psychological assessment and support in Bangladesh.[11]

Regarding gender identity, two-thirds of the participants assigned male at birth identified as female, while the remaining participants who were assigned female at birth identified as male. This pattern of distribution differs from some Western studies that describe more balanced or, in some cases, reversed patterns.[7] Sexual orientation data showed 66% attracted to males and 34% attracted to females, demonstrating the distinction between gender identity and sexual orientation. Cross-dressing was nearly universal in the participants, consistent with cross-dressing being a common manifestation of gender incongruence and desire for gender expression compatible with gender identity. Cross-dressing alone should not be regarded as evidence of gender dysphoria, although clothing and appearance may serve as important forms of gender expression in some individuals with gender dysphoria.[23]

Access to clinical and psychological support in our cohort was limited, with fewer than half having received psychotherapy. Although gender reassignment surgery is not legally recognized in Bangladesh, some participants reported prior surgical procedures; the access pathways and guidance for which remain unclear and warrant investigation. These relatively low rates likely reflect multiple factors including religious boundaries, limited availability of specialized services, financial barriers, social stigma, and family opposition. International guidelines recommend psychological support as first-line intervention for all gender dysphoric individuals.[24,25] The finding that more than half of the study participants had never received psychotherapy despite seeking care at a tertiary center highlights important gaps in mental health service provision and the need for timely psychological assessment, psychotherapy, and psychosocial support.

Psychiatric conditions prevailed among the study population, with almost three-quarter experiencing moderate to severe anxiety symptoms and nearly half of the participants with moderate to severe depression. This finding aligns with studies reporting anxiety prevalence of 27-63% and depression prevalence of 33-50% in gender dysphoric populations, particularly in those ≤30 years of age.[13,14] The minority stress model suggests that hypervigilance regarding potential discrimination,

concealment efforts, and internalized stigma contribute to heightened anxiety among gender minority individuals.[15] In the Bangladeshi context, where social acceptance of gender diversity remains limited, chronic stress from navigating a largely hostile social environment is likely to exacerbate anxiety symptoms.

A particularly concerning finding from the current study is that 4 in 10 participants had a history of attempting suicide, and this is consistent with international literature reporting lifetime suicide attempt rates of 22-43% among gender dysphoric individuals in Europe and North America and 31-50% across India.[26] However, this rate far exceeds pooled prevalence of 4.25% for suicide attempts in general population in Bangladesh.[27] Previous literature suggests that discrimination, stigma, poor social acceptance, lack of family support, and barriers to accessing gender-affirming and mental health care can substantially worsen psychological distress among gender-diverse individuals.[18,28] The high childhood abuse rate (1 in 4) in our cohort may also contribute to suicide risk, as childhood abuse is associated with increased suicidality in adulthood.[29] However, religion, family environment, social acceptance, and sexual abuse were not specifically assessed, so these factors could not be evaluated directly and should be interpreted as possible contextual contributors rather than confirmed causes in this study.

This study has several strengths. It is the first comprehensive assessment of gender dysphoria patients in Bangladesh, providing crucial baseline data for healthcare planning. The use of validated instruments (DASS-21) for mental health assessment enhances reliability. The inclusion of diverse participants across age ranges, educational backgrounds, and treatment experiences provides a relatively comprehensive picture of gender dysphoria presentations in Bangladesh.

This study has several limitations. First, it was a cross-sectional hospital-based study conducted at a single tertiary center using purposive sampling; therefore, the findings may not be generalizable to all individuals with gender dysphoria in Bangladesh. Second, the sample size was relatively small which may have limited the precision of the estimates. Third, since participants were recruited from those seeking medical care, the sample may over-represent individuals with greater psychological distress or better access to specialized services, the mental health burden observed in this study may be higher than in the wider community of people with gender dysphoria. Fourth, several potentially relevant and sensitive socio-demographic, clinical and psychosocial variables, including religion, socioeconomic status, gonadal status, chromosomal sex, detailed phenotypic manifestations, location of prior gender reassignment surgery, outcome of prior management; family environment, social acceptance, subtype and age of onset of childhood abuse were not assessed in detail. Finally, the cross-sectional design precluded causal inference regarding the relationship between clinical or psychosocial factors and mental health outcomes.

Programs should be taken to educate families and communities about gender dysphoria which can facilitate better understanding and reduce social isolation, leading to improved mental health outcomes. Future research should prioritize identifying underlying causes and contributing factors to this condition, with the goal of enabling earlier recognition and potential prevention.

Conclusions

This study found that patients with gender dysphoria had distinct sociodemographic and clinical characteristics together with a considerable mental health burden, including a concerning prevalence of suicide attempts. The interval between onset of gender dysphoria and first consultation suggests delayed help-seeking. Early psychological assessment, psychotherapy, and psychosocial support may play an important role in addressing distress in this population. These findings highlight the need for early recognition, timely access to mental healthcare and further research to better understand the mental health in individuals with gender dysphoria.

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Conflict of interest

The authors declare that they have no conflicts of interest.

Disclosure of generative AI ad AI assisted technologies

During the preparation of this work, the authors used ChatGPT in order to improve readability and language. After using this tool/service, the authors reviewed and edited the content as needed and take full responsibility for the content of the published article.

Ethical approval

The protocol was approved by IRB of Dhaka Medical College, Dhaka, Bangladesh (Reference no: ERC-DMC/ECC/2023/282; Dated: 31.10.2023).

Data Availability

The data supporting the findings of this study are available from the corresponding author upon reasonable request.

Author contributions

Conceptualization: MMRS, MFH, MSa, IP.

Methodology: MMRS, SS, JA, RNM, MEK, MFH, AA, MSa, IP.

Investigation/Data Collection: MMRS, SS, JA, RNM, MEK, KMIR, MHK, ASB.

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