

**Prevalence of Axis II disorders in a sample of clients
undertaking psychiatric evaluation for sex reassignment surgery**

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Abstract

The aim of the present study is to assess the prevalence of Axis II disorders (DSM-IV-TR) in a sample of clients requesting sex reassignment surgery (SRS), consecutively admitted to a Gender Identity Disorder (GID) psychiatric unit.

Fifty clients self-referred as transsexuals (34 biological males and 16 biological females; mean age=31.74 ± 7.06 years) were assessed through the SCID-II after a preliminary evaluation to exclude current major psychiatric disorders.

Prevalence of any Axis II disorder was 52% (N=26), with no significant differences related to biological sex. The most frequent personality disorders were Cluster B PDs (22% of total sample), followed by Cluster C (12%) and Cluster A PDs (2%). A significant prevalence of NOS PD (16%) was also found.

Our data offers prevalence estimates slightly higher than those found in previous studies and does not provide evidence for any differences in the psychopathological profile and severity between MtF and FtM transsexuals.

Keywords: Surgical sex reassignment; Gender identity disorder; Personality disorders

Introduction

Transsexualism is the extreme end of gender identity disorder (GID) spectrum and is characterized by the pursuit of sex reassignment surgery (SRS). In DSM IV-TR [1], transsexualism is conceptualized as Gender Identity Disorder (GID) which is applicable to subjects with a strong, persistent cross-gender identification and a long-standing discomfort with their sex or sense of inappropriateness in the gender role of that sex.

SRS has proven to be an effective intervention for GID patients. Several follow-up studies report high levels of post-surgical satisfaction [2-5], as well as improvement in the quality of life and the general functioning of patients who undertake it. However, surgical treatments proved not equally effective in all cases, and an estimated 1 to 2% of treated patients express regret for SRS, and a further 1% of patients eventually attempt suicide [2,6].

Dissatisfaction and regret have been reported to be associated with several pre-operative variables including personality disorders (PDs), personal and social instability [3,7].

Although PDs should not be considered an absolute contraindication for gender transition, hormones or surgery [8], it is reasonable to assume that the presence of any Axis II disorders may actually interfere with adaptation to the new post-surgical condition. Bodlund and Kullgren [3], for example, found that any PD diagnosis and a high number of fulfilled Axis II pathological traits were associated with negative post-surgery outcome.

In spite of its potential prognostic relevance, the number of studies investigating prevalence of Axis II disorders in transsexual patients is still unexplainably scarce.

An overview of literature (Table 1) suggests that prevalence rates range between 3 and 66%, with some studies [9] reporting estimates of PDs even inferior to those recently found in large epidemiological samples [10]. Cluster B PDs have been identified as the most frequently diagnosed among Axis II disorders.

Insert Table 1 here

Research available so far does not always make use of standardized measures for the assessment of the psychopathological profiles of SRS candidates, making results across studies non-comparable [2,11] and prevalence estimates considerably varied.

The aim of the present study is to assess Axis II comorbidity on both a categorical and dimensional level in a mixed sample of Male-to-Female (MtF) and Female-to-Male (FtM) clients requesting SRS.

Material and methods

The initial sample included 64 clients consecutively admitted to the Gender Identity Disorder Unit at Niguarda Ca' Granda Hospital in Milan (Italy) between November 2006 and December 2008.

All clients underwent psychiatric clinical interviews to ascertain the fulfilment of DSM-IV-TR criteria for Gender Identity Disorder (GID) and to exclude any current major psychiatric disorders (schizophrenia, schizoaffective, schizophreniform or delusional disorder according to DSM-IV-TR criteria, dementia or organic mental disorders, mental retardation and other cognitive disorders, active substance dependence).

12 patients were excluded from study participation since they did not fulfil the above-mentioned criteria.

All subjects were assessed through the SCID-II [16] by trained, highly-experienced raters. SCID II is a 140-item semi-structured interview designed to provide categorical and dimensional assessment of DSM-IV PDs. The SCID-II interview was preceded by the administration of its self-report screening questionnaire.

After administering the SCID-II, two patients were excluded from participation as the quality of information provided during assessment was not satisfactory to reach a conclusion on the presence/absence of any Axis II disorders.

The final sample included 50 patients: 34 (68% of the total sample) were biological males (MtF), the remaining 16 (32%) were biological females (FtM). This disproportion reflects gender ratio in GID as reported by previous studies [17].

Mean age was 31.74 years (SD= ± 7.06 ys). The majority of patients in the sample (94%) had an occupation at time of assessment; 18 (FtM=1; MtF=17; 36% of the total sample) were already under hormonal treatment, although not necessarily under medical control. 25 patients (50%) had been living as members of the opposite sex during a period of time ranging between a few months to several years.

This study was approved by the Institutional Review Board. All patients signed a written informed consent after a complete description of the study.

Results

26 patients (52% of the total sample) were assigned an Axis II diagnosis. Two patients (7.7% of the sample with PDs) received more than one Axis II diagnoses. Among patients with any PDs, 6 (23%) were FtM and 20 (77%) were MtF; therefore, 37.5% of FtM patients and 58.8% of MtF were assigned a PD diagnosis. Prevalence rates of an Axis II diagnosis showed no differences between MtF and FtM samples (continuity-corrected $\chi^2 = 1.220$; $df=1$; $p>0.05$).

Axis II diagnoses are summarized in Table 2.

Insert Table 2 here

The most frequently diagnosed disorders were Cluster B PDs, narcissistic PD in particular, followed by histrionic and borderline PDs. Any Cluster C diagnosis was formulated for 12% of the total sample with the highest prevalence for obsessive-compulsive PD. Cluster A disorders were quite rare in the sample, while NOS PD was assessed in 16% of patients. Given the absence of any Depressive and Passive-aggressive PD diagnoses, the NOS PD diagnosis was formulated only for patients exhibiting features of more than one of the officially recognized diagnostic categories.

Group comparisons of Axis II comorbidity showed no significant differences in prevalence of any PD diagnoses with regard to biological sex (Table 2), hormonal treatment status (assessed only in the MtF sample because of small FtM sample size) or age (assessed only in the MtF sample, cut-off=32 ys).

Switching from a categorical to a dimensional perspective, a comparison was carried out between MtF and FtM patients on the number of PD criteria endorsed (regardless of a formal Axis II diagnosis) showing no significant differences (Mann-Whitney's U test=214; $p>0.05$).

Given the high prevalence of NOS PD diagnoses, a further analysis was carried out in order to investigate the personality traits most frequently endorsed in the MtF sample with that diagnosis (N=7) (Table 3).

Insert Table 3 here

As shown in Table 3, Cluster B pathological traits are still the most frequent, in particular borderline and narcissistic, followed by obsessive-compulsive, histrionic and paranoid traits.

Discussion

A relevant prevalence rate of Axis II disorders emerged, slightly higher than what was found in previous studies based on DSM-IV-oriented structured clinical interviews [11].

As prevalence of PDs has been estimated around 15% in large epidemiological studies [10], it may be argued that transsexual clients are more prone than the general population to develop a PD. Yet, the complex relationship between the development of PDs and gender concerns is still far from being clearly disentangled. Although PDs and GID may be independent conditions, sometimes it might be difficult to establish whether GID symptoms might be better explained by PDs (e.g. identity disturbance in borderline personality disorder) or to ascertain the clinical relevance of PD symptoms in GID clients (e.g. ideas of reference [13]). Moreover, as the onset of both disorders can be traced back to adolescence/early adulthood, it might be argued that the PD may evolve as a dysfunctional way of coping with gender dysphoria [8].

The most frequent diagnoses assessed in our sample were Cluster B PDs followed, in order of relevance, by Cluster C and Cluster A PDs. Cluster B PDs' traits were also among the most frequently endorsed in MtF patients with a NOS PD

diagnosis. The high prevalence of Cluster B PDs and traits is in line with previous research [11,14,15] and calls for the need for a careful assessment of SRS candidates, since some of their features (i.e. identity instability, impulsivity) as mentioned above may be connected to transgender concerns and therefore be clinically relevant for eligibility and readiness to SRS.

Among Cluster B disorders, the most frequent diagnosis was narcissistic PD (NPD). We could find no support for this finding in previous studies, as prevalence of specific Axis II diagnostic entities had not been reported in most recent research [11,15]. Yet, this finding might be connected to the fact that some NPD diagnostic criteria (i.e. preoccupation with fantasies of unlimited beauty and the need for excessive admiration) are frequently endorsed in GID clients.

A relevant prevalence of NOS PD was also found in the sample. Although it has been documented that prevalence rates of this diagnostic category may range between 8 and 13% in clinical samples [18], we hypothesize that this result may partially reflect an artefact induced by the peculiarities of the therapeutic relationship with transsexual patients. It's been reported that GID clients often perceive the assessment process as a hurdle that must be cleared in order to achieve their goals rather than as a useful and helpful clinical tool [8]. This may induce SRS candidates to be reticent during assessment and to acknowledge only a moderate number of pathological traits, denying the presence and clinical relevance of more overt psychopathological manifestations.

Finally, no differences emerged in the prevalence of any PDs or in the mean number of PD diagnostic criteria endorsed by MtF and FtM transsexuals. This result is at variance with most previous studies suggesting that MtF transsexuals are generally characterized by a more severe psychopathological profile, a higher number of borderline traits, and therefore subject to a less favourable prognosis [12,19] when compared to FtM.

The present study suffers from several methodological limitations.

First of all, the sample under investigation can not be considered *sic et simpliciter* representative for all transsexual clients, but rather for transsexual clients requesting SRS according to the International Standards of Care for Gender Identity Disorders [20]. As an unknown percentage of clients with gender issues might never undertake any psychiatric assessment [8,11], those seeking psychiatric counselling may be characterized by a more severe psychopathological profile and by higher rates of Axis II comorbidity.

Secondly, it has been suggested [8] that during the initial evaluation of transsexual clients, any psychiatric diagnosis should be considered tentative and to be confirmed during the course of treatment. This might be particularly true for PDs that usually take more time to assess than the initial diagnostic evaluation allows.

In spite of these limitations, our study supports the need for a thorough assessment of PDs in SRS candidates as they may be linked to gender concerns and be of prognostic relevance.

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Table 1 - Overview of previous studies focusing on prevalence of PDs in transsexual patients

Author(s), date	Sample size	Assessment method	DSM version	Prevalence of PDs	Main results	Sample characteristics
Levine, 1980 (12)	N=51	Clin. Interv.	III	66%		Patients requesting SRS
Bodlund et al., 1993 (13)	N=19	Clin. Interv.	III-R	37%	Mainly Cluster B or C PDs.	Transsexuals (DSM-III-R)
Bodlund and Armelius, 1994 (14)	N=18	SCID screen	III-R	33.3%	Cluster B (22.2%), C (11.1%), Cluster A (N=0).	Transsexuals (DSM-III-R)
Cole et al., 1997 (9)	N=435	Clin. Interv.	III-R	4% MtF 3% FtM	Schizoid and borderline PDs most frequent diagnoses.	Patients requesting SRS
Haraldsen and Dahl, 2000 (15)	N=86	SCID II	IV	19.8%	Cluster A: 5.8%, Cluster B: 8.1% Cluster C: 5.8%, NOS: 0.	Mixed sample, pre- and post-SRS
Hepp et al., 2005 (11)	N=31	SCID II	IV	42%	Cluster A: 16.1%, Cluster B: 22.6%, Cluster C: 19.4%, NOS PD: 6.5%.	GID (DSM IV)

Table 2 - Axis II diagnoses

Axis II disorders	FtM (N=16)	MtF (N=34)	Total (N=50)	Continuity- corrected χ^2
Avoidant PD	0	2 (5.9%)	2 (4%)	0.047; df=1; NS
Dependent PD	1 (6.3%)	0	1 (2%)	0.152; df=1; NS
Obsessive-compulsive PD	2 (12.5%)	1 (2.9%)	3 (6%)	0.475; df=1; NS
Any Cluster C PD	3 (18.8%)	3 (8.8%)	6 (12%)	0.293; df=1; NS
Paranoid PD	0	0	0	
Schizoid PD	0	1 (2.9%)	1 (2%)	0.001; df=1; NS
Schizotypal PD	0	0	0	
Any Cluster A PD	0	1 (2.9%)	1 (2%)	0.001; df=1; NS
Histrionic PD	0	4 (11.8%)	4 (8%)	0.760; df=1; NS
Narcissistic PD	2 (12.5%)	4 (11.8%)	6 (12%)	0.001; df=1; NS
Borderline PD	0	3 (8.8%)	3 (6%)	0.345; df=1; NS
Antisocial PD	0	0	0	
Any Cluster B PD	2 (12.5%)	9 (26.5%)	11 (22%)	0.557; df=1; NS
NOS PD	1 (6.3%)	7 (20.6%)	8 (16%)	0.768; df=1; NS
Depressive PD	0	0	0	
Passive-aggressive PD	0	0	0	

Table 3 - Axis II criteria distribution in MtF patients with a NOS PD diagnosis (N=7)

	Min	Max	Mean number	Std. Dev.
Obs.-compulsive traits	0	3	1.43	0.976
Pass.aggressive traits	0	1	0.14	0.378
Depressive traits	0	2	0.43	0.787
Paranoid traits	0	3	1.14	1.069
Schizotypal traits	0	2	0.57	0.787
Schizoid traits	0	1	0.29	0.488
Histrionic traits	0	3	1.29	0.951
Narcissistic traits	0	4	1.57	1.512
Borderline traits	0	3	2.00	1.155