Psychiatric Diagnoses Among Transgender and Gender Diverse Patients Compared to Cisgender Patients

Mark Zimmerman, MD[a,*]; Isabel Benjamin, BA[a]; and Craig Seijas-Rodriguez, PhD[b]

ABSTRACT

Background: Sexual and gender minority persons (ie, those reporting sexual orientation other than heterosexual and gender identity other than cisgender, respectively) experience high rates of various forms of psychopathology. However, discussions of sexual minority populations are often focused on aspects of mental health associated with sexual orientation, with relatively less emphasis placed on transgender and gender diverse (TGD) individuals' mental health. No prior studies have compared psychiatric diagnoses between TGD and cisgender patients presenting for psychiatric treatment in a systematic way using semistructured diagnostic interviews assessing a broad range of disorders.

Methods: Between April 2014 and January 2021, we administered semistructured diagnostic interviews for *DSM-IV* disorders to 2,212 psychiatric patients, 69 of whom reported TGD identity (ie, gender identity other than cisgender such as transgender, genderqueer, or nonbinary identity). The patients completed a demographic questionnaire on which they indicated their assigned sex at birth and their current gender identity.

Results: TGD patients had on average more diagnoses than cisgender patients (3.54 ± 1.88 vs 3.04 ± 1.72, $t = 2.37$, $P = .02$). After controlling for age, TGD patients were significantly more likely to be diagnosed with posttraumatic stress disorder and borderline personality disorder than cisgender patients ($P < .05$).

Conclusions: To the best of our knowledge, this is the first study of psychiatric patients using semistructured diagnostic interviews to compare the frequency of psychiatric disorders between cisgender and TGD patients. These results bear implications for creating gender-inclusive treatment facilities. Psychiatry programs interested in qualifying as Safe Zones and treating TGD patients should have or develop expertise in treating posttraumatic stress disorder and borderline personality disorder.

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[a]Department of Psychiatry and Human Behavior, Brown Medical School, and the Department of Psychiatry, Rhode Island Hospital, Providence, Rhode Island

[b]Department of Psychology, University of Michigan, Ann Arbor, Michigan

**Corresponding author:* Mark Zimmerman, MD, 146 West River St, Providence, RI 02904 (mzimmerman@lifespan.org).

Transgender and gender diverse (TGD) individuals (ie, those reporting transgender and gender identities other than cisgender) experience high rates of various forms of psychopathology in general and when compared with cisgender persons.[1–9] However, almost all of the empirical evidence to date has been limited by its reliance on (1) the use of brief, unstructured psychodiagnostic assessment measures and (2) the assessment of a limited constellation of psychiatric symptom domains. The net result is a piecemeal literature wherein each piece of research documents elevations in one—or a few—diagnostic domains. Focusing on one or few psychiatric domains limits a complete understanding of the mental health needs of TGD individuals.

Results from a recent systematic review of 77 articles that focused on the mental health of TGD individuals highlight some of the psychiatric challenges that TGD persons face.[9] Psychosocial health variables assessed across these studies include depressive symptoms, suicidality, substance use, and posttraumatic stress symptoms. Many of the studies did not focus on specific psychiatric diagnoses, instead incorporating assessments of more generalized measures of mental ill-health such as anxiety broadly or psychological distress (see Table 2 in Valentine and Shipherd[9]). Most of the reviewed studies employed self-report measures for the assessment of mental health variables; only 3 utilized a semistructured interview to make psychiatric diagnoses. Reisner and colleagues[10] used the Mini-International Neuropsychiatric Interview (MINI)[11] to diagnose a limited complement of 7 mood, anxiety, and substance use disorders as well as past 30-day suicidality. Nuttbrock and colleagues[12,13] also utilized the MINI but only assessed major depressive episodes.

Among the other studies described as utilizing a structured interview approach, none used a formal clinical interview procedure for the assessment of psychiatric diagnoses. While structured interviews may have been utilized for assessment of other study-related domains, most studies used self- or informant (parent)-report measures to assess psychiatric symptomatology within few diagnostic domains,[2,10,14–19] although some of these measures might have been administered during a study interview. Among the studies that did not utilize self/other-report measures, operationalizations of psychiatric symptoms relied on reports from mental health professionals[20] of past mental health service utilization[2,15,21] or reports of lifetime substance use.[22] Finally, 2 studies did not assess specific psychiatric diagnostic domains.[23,24] More recent studies have similarly adopted this approach of focusing on a limited number of psychiatric conditions based on self-reports of past diagnosis.[25]

Clinical Points

- No prior studies have compared psychiatric diagnoses between transgender and gender diverse (TGD) and cisgender patients presenting for psychiatric treatment in a systematic way using semistructured diagnostic interviews assessing a broad range of disorders.
- TGD patients were significantly more likely to be diagnosed with posttraumatic stress disorder and borderline personality disorder than cisgender patients.
- Psychiatry programs interested in treating TGD patients should have or develop expertise in treating posttraumatic stress disorder and borderline personality disorder.

While the results from the extant literature document the mental health needs of TGD individuals, their restricted scope in terms of assessed diagnostic domains is a limitation. First, only assessing symptoms/disorders along 1 or few diagnostic domains precludes a complete understanding of the psychiatric needs of TGD persons. Previous literature has outlined the importance of comprehensive, structured, assessments.[26,27] Second, the use of self-report measures limits diagnostic precision. For example, patients presenting with depressive symptoms in response to a particular stressor might be more appropriately diagnosed with an adjustment disorder with depressed mood, rather than a depressive disorder. Third, a focus on a limited set of diagnostic constructs obscures information about severity that might be gleaned from a more comprehensive assessment of multiple diagnostic domains.

The goal of the current study, therefore, was to compare the diagnostic profiles of a sample of TGD and cisgender patients who presented for treatment at 1 naturalistic, clinically acute setting: a partial hospital program. As part of the Methods to Improve Diagnostic Assessment and Services (MIDAS) program, we sought to answer the following questions: (1) Are there differences in diagnostic comorbidity between TGD and cisgender partial hospital patients? and (2) Are there specific psychiatric diagnoses that are more common among TGD than cisgender patients? Together, the answers to these questions will provide additional information about the psychiatric needs of TGD patients in clinical settings.

METHODS

The Rhode Island MIDAS project represents an integration of research methodology into clinical practice. The present study was conducted in the Rhode Island Hospital Department of Psychiatry partial hospital program (PHP), a 5-day-per-week intensive treatment program. The Rhode Island Hospital institutional review committee approved the research protocol, and all patients provided informed, written consent.

The current study utilized data from 2,212 patients who were referred for treatment in the PHP between April 2014 and January 2021, 69 of whom reported TGD identity on a demographic questionnaire (ie, gender identity other than cisgender such as transgender, genderqueer, or nonbinary identity). During the study, the demographic questionnaire was modified to enable patients to indicate their assigned sex at birth as well as their current gender identity. Prior to 2018, the study's collection of demographic information conflated natal sex with gender identity, with patients reporting "male," "female," or "other" (with space to write in to what "other" referred) in a single category defined as sex. In 2018, a reformed data collection process included "transgender," "genderqueer," and "androgynous" as possible identifiers for the singular sex category. A second reformation in December 2018 divided natal sex and gender identity into 2 distinct categories.

Patients were interviewed by a diagnostic rater who administered the Structured Clinical Interview for *DSM-IV* (SCID)[28] and the borderline personality disorder section of the Structured Interview for *DSM-IV* Personality Disorders (SIDP-IV).[29] The diagnostic interviewers included PhD-level psychologists and research assistants with college degrees in the social or biological sciences. Research assistants received 3 to 4 months of training during which they observed at least 20 interviews, and they were observed and supervised in their administration of more than 20 evaluations. Psychologists only observed 5 interviews; however, they, too, were observed and supervised in their administration of 15 to 20 evaluations. At the end of the training period, the raters demonstrated exact, or near exact, agreement with a senior diagnostician on 5 consecutive evaluations.

The PHP transitioned to a virtual format in March 2020 because of the COVID-19 pandemic. We had previously established diagnostic reliability for interviews conducted in person. As part of our transition to telehealth, we collected reliability information on a random sample of 50 patients interviewed over Zoom. Due to small sample sizes, we examined the eating, psychotic, somatoform, and impulse control disorders at the category level rather than the individual disorder level. For disorders diagnosed in at least 2 patients by at least 1 of the 2 raters the κ coefficients were major depressive disorder ($\kappa = 1.0$), persistent depressive disorder ($\kappa = 0.88$), bipolar disorder ($\kappa = 0.94$), panic disorder ($\kappa = 1.0$), social phobia ($\kappa = 0.96$), obsessive-compulsive disorder ($\kappa = 0.91$), specific phobia ($\kappa = 1.0$), generalized anxiety disorder ($\kappa = 1.0$), posttraumatic stress disorder ($\kappa = 0.88$), alcohol use disorder ($\kappa = 1.0$), drug use disorder ($\kappa = 1.0$), any eating disorder ($\kappa = 0.88$), any impulse control disorder ($\kappa = 0.83$), adjustment disorder ($\kappa = 1.0$), any somatoform disorder ($\kappa = 0.85$), and borderline personality disorder ($\kappa = 0.94$).

Data Analyses

All analyses were conducted using SPSS (version 25). *T* tests were used to compare the TGD and cisgender patients on continuously distributed variables. Categorical variables were compared using the χ^2 test of proportional differences. Odds ratios with 95% confidence intervals were computed to compare the odds of psychiatric disorders in the TGD

and cisgender patients after controlling for demographic differences between the groups. Where zeros did not allow for the computation of the odds ratio, 0.5 was added to each cell of the 2 × 2 table and the odds ratio was then computed.[30]

RESULTS

The 2,212 patients included 1,461 (66.0%) cisgender female, 682 (30.8%) cisgender male, and 69 (3.1%) TGD individuals. The patients ranged in age from 18 to 80 years (mean = 36.7, SD = 14.4). Approximately one-quarter of the patients were married (23.5%, n = 519); the remainder were single (44.9%, n = 996), divorced (12.0%, n = 265), separated (3.6%, n = 79), widowed (1.9%, n = 41), or living with someone as if in a marital relationship (14.1%, n = 312). Nearly one-third of the patients completed a 4-year university degree (31.8%, n = 704). The majority of the sample identified as White (73.2%; n = 1,621). A minority of patients identified as Black (6.7%, n = 149), Hispanic (10.7%, n = 237), Asian (2.7% n = 60), or from another or a combination of racial/ethnic backgrounds (6.6%, n = 145).

There was no difference between the cisgender and TGD groups in race or education (Table 1). The TGD patients were significantly younger than the cisgender patients and significantly more likely to have never been married (Table 1).

The average number of current diagnoses in the sample was 3.05 (SD=1.73). TGD patients had on average more diagnoses than cisgender patients (3.54 ± 1.88 vs 3.04 ± 1.72, $t = 2.37$, $P = .02$). The most common diagnoses in the sample were major depressive disorder and generalized anxiety disorder (Table 2). After controlling for age, TGD patients were significantly more likely to be diagnosed with posttraumatic stress disorder and borderline personality disorder than cisgender patients (Table 2).

Table 1. Demographic Characteristics of Patients With Cisgender and Transgender and Gender Diverse (TGD) Identities

	Cisgender (n = 2,143)	TGD (n = 69)	Statistic	*P* value
Race, % (n)			$\chi^2 = 0.03$	NS
White	73.4 (1,571)	72.5 (50)		
Black	6.7 (144)	7.2 (5)		
Hispanic	10.7 (231)	8.7 (6)		
Asian	2.7 (58)	2.9 (2)		
Not listed	6.4 (139)	8.7 (6)		
Education, % (n)			$\chi^2 = 1.11$	NS
Less than high school graduate	5.5 (117)	7.2 (5)		
High school graduate or GED	20.1 (427)	17.4 (12)		
Some college	42.3 (900)	39.1 (27)		
College graduate	32.1 (680)	36.2 (25)		
Marital status, % (n)			$\chi^2 = 14.72$	.012
Married	23.9 (511)	11.6 (8)		
Living together	13.9 (299)	18.8 (13)		
Widowed	1.9 (41)	0.0 (0)		
Separated	3.6 (78)	1.4 (1)		
Divorced	12.2 (261)	5.8 (4)		
Never married	44.4 (953)	62.3 (43)		
Age, mean (SD), y	37.1 (14.4)	26.7 (7.8)	$t = 5.94$	.000

Abbreviations: GED = general educational development, NS = nonsignificant.

Table 2. Current *DSM-IV* Diagnoses in Patients With Cisgender and Transgender and Gender Diverse (TGD) Identities

	Cisgender (n = 2,143)	TGD (n = 69)	OR (95% CI)[a]
Mood disorders, % (n)			
Major depressive disorder	59.0 (1,264)	46.4 (32)	0.62 (0.38–1.01)
Persistent depressive disorder	14.9 (320)	23.2 (16)	1.76 (0.99–3.15)
Bipolar I disorder	6.4 (137)	5.8 (4)	0.94 (0.34–2.64)
Bipolar II disorder	4.1 (88)	5.8 (4)	1.17 (0.42–3.32)
Anxiety disorders, % (n)			
Panic disorder	25.6 (549)	30.4 (21)	1.18 (0.70–2.00)
Agoraphobia without panic	2.7 (57)	0 (0)	0.51 (0.70–3.76)
Social phobia	30.3 (650)	40.6 (28)	1.27 (0.77–2.08)
Specific phobia	9.1 (195)	14.5 (10)	1.64 (0.82–3.27)
Posttraumatic stress disorder	28.1 (602)	42.0 (29)	1.82 (1.11–2.98)*
Generalized anxiety disorder	52.4 (1,123)	56.5 (39)	1.06 (0.65–1.72)
Obsessive-compulsive disorder	7.2 (155)	13.0 (9)	1.69 (0.82–3.50)
Substance use disorders, % (n)			
Alcohol abuse/dependence	8.7 (187)	4.3 (3)	0.45 (0.14–1.43)
Drug abuse/dependence	12.3 (264)	15.9 (11)	0.94 (0.48–1.83)
Any eating disorder, % (n)	5.1 (109)	5.8 (4)	1.01 (0.36–2.86)
Any psychotic disorder, % (n)	2.3 (50)	1.4 (1)	0.62 (0.08–4.60)
Any somatoform disorder, % (n)	5.0 (108)	4.3 (3)	0.83 (0.25–2.69)
Any impulse control disorder, % (n)	4.2 (90)	1.4 (1)	0.35 (0.05–2.57)
Adjustment disorders, % (n)	7.4 (158)	5.8 (4)	0.87 (0.31–2.45)
Borderline personality disorder, % (n)	18.8 (402)	36.2 (25)	1.87 (1.12–3.11)*

[a]Odds ratios controlling for age.
*$P < .05$.

DISCUSSION

The current study compared the psychodiagnostic profiles of TGD and cisgender patients in 1 acute, naturalistic setting. To the best of our knowledge, this is the first study to comprehensively assess TGD psychiatric patients using semistructured diagnostic interviews. When compared with cisgender patients, TGD patients presented with significantly higher psychiatric comorbidity. That is, the average number of psychiatric diagnoses assigned to TGD patients exceeded that assigned to cisgender patients. In addition, TGD patients were more frequently diagnosed with posttraumatic stress disorder and borderline personality disorder than cisgender patients. These results bear implications for future research on TGD psychiatric disparities, as well as for working with TGD populations in naturalistic clinical settings.

Community-based epidemiologic studies have found that TGD individuals have elevated prevalence rates of mood, anxiety, and substance use disorders compared to the general population.[7–10,31,32] Similarly, high rates of psychiatric disorders have been found in TGD patients presenting in primary care.[1] The present study was conducted in a partial hospital program where illness severity and diagnostic comorbidity are generally greater than in outpatient and community settings. The mean number of diagnoses in the present sample (3.1) was greater than the mean reported in our outpatient sample (1.9) using the same diagnostic procedures.[33] In the present study, we found

that mood and anxiety disorders were the most frequent diagnoses in TGD patients. The prevalence of these disorders did not differ from that among cisgender patients, in whom mood and anxiety disorders were highly prevalent as well. The results from this study correspond with other evidence demonstrating that TGD populations in health care settings present for treatment with notable diagnostic similarities to cisgender patients. For example, results comparing TGD and cisgender patients presenting for treatment at one community health center demonstrated no differences in substance abuse.[4]

The elevated prevalence of psychiatric disorders among TGD individuals is attributed, on a population level, to minority stress experiences[34–37] faced by TGD individuals. As Tan and colleagues[36] describe, cisnormativity (ie, an assumption that it is "normal" for one's gender identity to reflect the binary physical sex assigned at birth) is endemic to society. As a result of this, TGD individuals face systemic exclusion and denigration, thereby creating additional social stress unique to TGD individuals. Such stressors may be distal—external events experienced by people with minoritized identities, such as discrimination and victimization—or proximal—internal perceptions and appraisals of stress that are propagated by distal stressors, such as expectations of rejection and internalized transphobia. Minority stressors compound general life stress with net detriment to TGD, and other minoritized, populations (for a description of how minority stress undermines sexual minority individuals' psychosocial health, see Hatzenbuehler[38]). Given that TGD individuals face high levels of discrimination[39,40] and that the experience of discriminatory events predicts posttraumatic stress symptoms beyond the experience of prior traumas,[10] our finding of elevated posttraumatic stress disorder diagnosis among the TGD sample in these data is unsurprising.

Borderline personality disorder was also diagnosed significantly more frequently in TGD patients. Other studies have reported elevated rates of borderline personality disorder in TGD individuals seeking gender affirming treatment.[41,42] As previously noted, many TGD individuals experience abuse, bullying, assaults, and other forms of aggression as well as microaggressions while growing up. Such invalidating environments are a risk factor for the development of borderline personality disorder.[43–46] While the prevalence of borderline personality disorder was elevated in TGD patients, it should be noted that the majority of TGD patients were not so diagnosed. Thus, clinicians should not assume that TGD patients are likely to have borderline personality disorder. This is particularly noteworthy given historically pejorative ways of describing TGD individuals and that, in some cases, gender diverse experiences have been equated with borderline personality disorder symptomatology/diagnosis.[47,48]

It is also noteworthy that some diagnostic criteria for borderline personality disorder overlap with TGD-specific experiences. One of the diagnostic criteria for borderline personality disorder is identity disturbance. However, given the denigration of gender diverse identities, some identity disturbance would be expected among TGD individuals. TGD individuals experience elevated rates of suicidal ideation and attempts,[15,49] which corresponds with the borderline personality disorder criterion of recurrent suicidal behavior. One limitation of the current study is that we were unable to explore criterion-level endorsement disparities across gender identity groups. Emerging research also suggests that clinical providers might be more apt to diagnose borderline personality disorder among cisgender sexual minority patients when compared with cisgender heterosexual patients, regardless of differences in personality domains that underlie the borderline diagnosis.[50] Perhaps the diagnostic raters were more inclined to pathologize behavior in TGD patients than in cisgender patients. Arguing against this, however, is the high reliability in administering a semistructured interview to diagnose borderline personality disorder. Investigation of potential criterion-related associations between borderline personality disorder diagnosis and gender identity and the role that provider bias might play in this diagnosis both represent fruitful avenues for future research.

The current study possesses several limitations that are worth highlighting. First, this and most studies of TGD populations lack explicit attention to, and measurement of, minority stressors. Second, these data came from a single clinical setting, thereby limiting potential generalizability of these findings. Replication of the results in samples with different demographic characteristics is warranted. It will also be important to replicate these findings in samples of differing clinical severity, like outpatient settings. Third, while we assessed many psychiatric diagnoses in the current study, emerging research highlights the utility of adopting transdiagnostic approaches to further understanding psychiatric disparities and their associations with environmental stressors among gender (and sexual) minority populations.[51] Fourth, while the overall sample size in the study was large, the size of the TGD group was modest. Moreover, we collapsed the different TGD identities into a single group due to the small sample sizes. Future research should examine whether differences in self-identification within the TGD group is associated with different diagnostic profiles. Similarly, due to small sample sizes, we were unable to examine how the intersections of sexual and gender minority status might be related to psychiatric diagnosis. Last, due to the conflation of sex assigned at birth with gender identity in the earlier version of the demographic questionnaire, it is possible that estimates of TGD patients are an undercount. This emphasizes the importance of appropriate assessment of constructs like sex assigned at birth distinct from gender identity.

The Rhode Island Hospital PHP does not specialize in the treatment of TGD patients and does not have a TGD-specific program. Therefore, it is entirely possible that some selection effect might influence the nature of TGD clients who present to such a program. However, because the site is not specifically devoted to treatment of gender diverse

patients, these results might be particularly applicable to general treatment settings. That is, the results of the present study suggest that, apart from being familiar with affirming forms of psychosocial treatment for TGD populations, psychiatric practices interested in qualifying as Safe Zones and treating TGD patients should also have or develop expertise in treating posttraumatic stress disorder and borderline personality disorder.

In conclusion, compared to that of cisgender psychiatric patients, the diagnostic profile of TGD patients was similar with regard to mood, anxiety, substance use, eating, somatoform, psychotic, impulse control, and adjustment disorders. However, posttraumatic stress disorder and borderline personality disorder—disorders associated with acute and/or persistent abuse, trauma, and discrimination—were more prevalent in TGD patients than cisgender patients. These results have implications for creating gender-inclusive treatment facilities and highlight the importance of routinely screening for, and possession of clinical expertise for treating, these disorder domains in clinical settings.

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