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Personality Disorders in Gay, Lesbian, Bisexual and Transgender Chemically Dependent Patients

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Abstract

This study sought to examine personality disorders and their related clinical variables in a sample of gay, lesbian, bisexual and transgender (GLBT) individuals with substance use disorders. Study participants were 145 GLBT patients who were admitted to a residential dual diagnosis chemical dependency treatment program. A total of 136 (93.8%) had at least one personality disorder. The most common personality disorders were borderline (n=93; 64.1%), obsessive-compulsive (n=82; 56.6%), and avoidant (n=71; 49.0%) personality disorders. Preliminary data suggests there is a high prevalence of personality disorders in the GLBT population undergoing chemical dependency treatment.

INTRODUCTION

The co-occurrence of personality disorders and substance use disorders appears common.^{1–3} An epidemiological study of 43,093 individuals found that 28.6% of respondents with a current alcohol use disorder and 47.7% of those with a current drug use disorders had at least one personality disorder.⁴ The most common personality disorders were antisocial (12.3% and 27.7%), obsessive-compulsive (12.1% and 16.9%), and paranoid (10.2% and 18.6%) personality disorders in individuals with alcohol and drug use disorders, respectively.⁴ In Wave 2 of the same community sample (this time with 34,653 U.S. adults), of those with a substance use disorder, 14.1% had co-occurring borderline,⁵ 11.8% had narcissistic,⁶ and 8.2% had schizotypal⁷ personality disorders.

Personality disorders are associated with poorer treatment outcomes for individuals with alcohol or drug use disorders.^{8,9} In addition, certain personality disorders, such as antisocial personality, appear to be a risk factor for multiple substance dependence,¹⁰ high treatment dropout, and poorer treatment outcome.¹¹

Recent research suggests high rates of substance use disorders in gay, lesbian, bisexual and transgender (GLBT) adults.¹² In a large community sample, the rates of past-year substance use disorders were more than twice as high in the GLBT population compared to

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Declaration of Interest

Dr. Grant is Medical Director of the PRIDE Institute but had no role in the PRIDE Executive Committee approving this study. Dr. Grant has received research grants from NIMH, NIDA, National Center for Responsible Gaming and its affiliated Institute for Research on Gambling Disorders, Forest Pharmaceuticals and GlaxoSmithKline. Dr. Grant receives yearly compensation from Springer Publishing for acting as Editor-in-Chief of the Journal of Gambling Studies. Dr. Grant has performed grant reviews for the National Institutes of Health and other agencies; has given academic lectures in grand rounds, has generated books or book chapters for publishers of mental health texts; and has received compensation as a consultant for law offices on issues related to impulse control disorders. Dr. Flynn, Mr. Odlaug, and Ms. Schreiber have no conflicts of interest to report. The authors alone are responsible for the content and writing of this paper.

heterosexual adults (27.6% compared to 10.5%).¹² In addition, the prevalence of any past-year substance use disorder was 25.8% for lesbian women, 24.3% for bisexual women, and 5.8% for heterosexual women. The past-year prevalence rate was 31.4% for gay men, 27.6% for bisexual men, and 15.6% for heterosexual men.¹²

Although the GLBT population appears to experience high rates of substance use disorders, and elevated rates of personality disorders are common among adults with substance use disorders, no empirical studies have assessed personality disorders among GLBT adults with substance use disorders. Recognizing comorbidity with personality disorders is important, as identifying and treating the personality disorder may significantly improve the prognosis of the comorbid substance use disorder.⁹ We hypothesized that personality disorders would be common in GLBT adults with substance use disorders. Based on reports that comorbid personality disorders are associated with more severe psychiatric symptoms and poorer outcomes in substance use disordered patients,⁸ we also hypothesized that comorbidity with a personality disorder would be associated with more severe psychiatric symptoms and a more severe substance use disorder.

METHODS

Subjects

The study consisted of 145 adult men and women voluntarily admitted to the Pride Institute in Eden Prairie, Minnesota for a 28-day residential chemical dependency treatment. The study was advertised only by a flier on the bulletin board in the facility. No one was solicited for participation. Subjects were allowed to participate after their first week in treatment, thereby ensuring that all subjects were finished with acute withdrawal. Study inclusion criteria were substance use disorder, age 18 or older, and willingness to be interviewed in person; the only exclusion criterion was the inability to read or understand the informed consent. All procedures were approved by the institutional review board of the University of Minnesota and the executive committee of the Pride Institute. After a full explanation of study procedures and an opportunity by subjects to ask questions, written informed consent was obtained. Subjects were given a \$10 gift card to a local department store for participating. All research procedures were undertaken using the principles of the Declaration of Helsinki and the standards of Good Clinical Practice.

Procedures

Of 306 admissions to the Pride Institute during the eight months that this study was conducted, 145 voluntarily agreed to participate in the study. The assessment of personality disorders was done via direct interview by a clinician trained in the administration of the Structured Clinical Interview for DSM-IV Axis II Personality Disorders (SCID-II).¹³ Subjects were characterized as having a personality disorder only if they met full DSM-IV criteria. The SCID-II also assesses depressive and passive-aggressive personality disorders, conditions included in Appendix B of the DSM-IV-TR and defined as “Axes provided for further study.”

Relevant demographic and psychiatric information was obtained through a chart review (Axis I psychiatric diagnoses in each subject’s chart was determined by detailed clinical interview by a board-certified psychiatrist). Psychiatric hospitalizations and suicide attempts were examined as proxies for psychiatric severity. Number of chemical dependency treatments and legal issues due to substance use were used to reflect severity of substance use.

In order to assess differences between personality disorders in this sample, personality disorders were grouped by Cluster as defined by the DSM-IV.¹⁴ These Clusters include

Cluster A (paranoid, schizoid, schizotypal), Cluster B (histrionic, narcissistic, antisocial, borderline) and Cluster C (obsessive-compulsive, avoidant, dependent).

Data Analysis

The percentages of patients meeting criteria for personality disorders and 95% confidence intervals were determined. Between-group differences (those with or without a personality disorder) were tested using the Pearson chi-square and Fisher exact test for categorical variables and 2-tailed independent samples t-tests for continuous variables. Personality disorders were also grouped by DSM-IV Cluster (A, B, C) and compared across groups. For binary dependent variables, logistic regression was performed (listing odds ratio and confidence intervals for each cluster). The logistic regressions were run so that an odds ratio greater than one means that people in the Cluster have higher odds of having the (row variable) condition than people that are not in the Cluster. All tests of hypotheses were performed using a two-sided significance level of .05.

RESULTS

A total of 145 individuals (mean age 34.5 ± 10.1 years; 73.8% male) were included in this study. Of these subjects, 136 (93.8%) reported symptoms consistent with at least one personality disorder. The most common personality disorders were, borderline ($n=93$; 64.1%), obsessive-compulsive ($n=82$; 56.6%), and avoidant ($n=71$; 49.0%) personality disorder (Table 1). In addition, 122 (84.1%) subjects had two or more than personality disorders and 101 (69.7%) subjects had three or more personality disorders.

Patients with and without personality disorders did not significantly differ on demographic variables (Table 2). Patients meeting criteria for at least one personality disorder reported a significantly younger age in presenting for their first chemical dependency treatment (26.6 compared to 35.0 years; $t=-2.287$; $df=104$; $p=.026$). Mental health variables (number of suicide attempts or psychiatric hospitalizations) and other chemical dependency variables (number of treatments, legal issues due to substance use) did not significantly differ between groups.

Table 3 lists the primary drug categories reported by personality disorder status. There were no significant differences between those with or without personality disorders when examined by substance use. When analyzed by personality disorder cluster, however, those GLBT patients with a Cluster A personality disorder were significantly less likely to be using methamphetamine (Table 4). Those with Cluster A personality disorders were also significantly more likely to have co-occurring PTSD, whereas those with Cluster B disorders were significantly more likely and those with Cluster C personality disorders were significantly less likely to have ADHD (Table 5).

DISCUSSION

In this study, we determined the rate of personality disorders in 145 GLBT individuals with substance use disorders who were admitted to residential treatment at the Pride Institute, a GLBT treatment facility. To our knowledge, this is the first study to report rates of personality disorders in this population and the first to examine clinical correlates of personality disorder comorbidity in substance abusing GLBT patients (e.g., demographic characteristics, mental health severity, chemical dependency treatment history). To our knowledge, this is also a broad sample of GLBT individuals with chemical dependency problems (our study had very broad inclusion/exclusion criteria), which may increase the generalizability of the results.

Approximately 94% of GLBT patients in this study had at least one personality disorder. This rate is notably higher than those reported in a large community sample (28.6% to 47.7%) of individuals with alcohol and drug use disorders.⁴ One explanation is that rates of personality disorders are truly higher among GLBT patients seeking treatment for substance use disorders. Those who voluntarily show up for treatment are very likely to be the ones in most need of help for a variety of problems. This finding suggests that clinicians should carefully screen GLBT patients for a personality disorder as this co-occurring disorder may have treatment implications.

Regarding personality disorders, GLBT subjects with a personality disorder were not more severely ill than subjects without a personality disorder. Although the measures used to assess illness severity were somewhat limited for these analyses, both groups of GLBT subjects had similar rates of psychiatric hospitalizations, suicide attempts, chemical dependency treatment histories, and legal issues. These similarities suggest that the presence of a current personality appears to have had little effect on these measures. One possible explanation for this finding may be that GLBT subjects had such severe psychiatric and chemical dependency symptoms that the presence of a personality disorder appears to have had little effect on these measures. Another explanation might be that our study assessed severity of psychiatric and substance use issues with a limited number of measures that do not reflect the additional mental health or chemical dependency problems experienced by these patients.

The reasons for the elevated rate of personality disorders among GLBT patients in chemical dependency treatment are unclear. One possibility is that unique development issues in GLBT patients give rise to personality disorders. Use of alcohol and drugs may therefore be a means of self-medicating the interpersonal difficulties seen in personality disorders. An alternative hypothesis is that alcohol and drug problems give rise to many of the symptoms which characterize personality disorder (e.g., needing money for drugs results in criminal behavior; drug use results in mood dysregulation). Given the limited scope of this study, however, we cannot ascertain the extent to which either of these hypotheses may apply to these GLBT patients, or the causal relationship between personality disorders and chemical dependency problems. It is also possible that the relationship between sexual orientation, personality disorders, and substance abuse is more complex (e.g., that they all share the same causal factors) or that there is not a causal relationship between them. Further research is needed to explore the reasons for the elevated rates of personality disorders in the GLBT chemically dependent population, including the extent to which personality disorders may contribute to the substance use disorder's development and maintenance.

Regardless of the specific causal relationship between personality disorders and substance use disorders in the GLBT population, the fact that they frequently co-occur raises important clinical issues. Because personality disorder appear common in GLBT individuals with substance use disorders, it is important to screen for personality disorders in these patients. Our results also have treatment implications. Treatment of either the personality disorder or the substance use problem could be complicated or even compromised by the presence of the other untreated condition.¹⁵ Treating one disorder alone may not be effective if a comorbid disorder is exerting a causal or maintaining influence on the treated condition.^{16–18} Furthermore, GLBT subjects with both a personality disorder and a substance use disorder may require more intensive treatment services. For example, the high rates of borderline personality disorder in this sample (64%) would suggest that perhaps dialectical behavioral therapy might be a necessary adjunctive treatment to traditional chemical dependency treatment in this population. To our knowledge, however, no research has been done on the treatment of comorbid personality disorders in GLBT patients with

substance use disorders. Research on effective treatments for GLBT individuals with personality disorders and a substance use disorder is greatly needed.

This study has several limitations. Notably, we based personality disorder diagnoses on subject report only and did not obtain collateral information. We also interviewed subjects one week after admission, and although acute withdrawal was complete, prolonged withdrawal may have been present and have affected their response to questions. Another limitation is that it is unclear how generalizable our results are to GLBT individuals with substance use disorders in the community who may not necessitate or desire residential chemical dependency treatment. Given the extremely high prevalence of personality disorders found in this sample, it raises the question of whether the current criteria for these disorders are too liberal for this patient population. Perhaps a dimensional approach to personality disorders may be more appropriate in this population. Finally, although psychiatric disorders were based on detailed clinical assessments done at the treatment facility, no structured clinical interviews were used for these diagnoses. Therefore, certain co-occurring disorders may have been under- or over-reported depending upon the quality of the assessment.

In conclusion, these results suggest that personality disorders may be quite common in GLBT patients with substance use disorders. Additional research on this topic is needed, including larger prevalence studies, studies of clinical correlates of personality disorders in this population, and studies that may shed light on the relationship between sexual orientation, personality pathology, and substance use (e.g., prospective studies and studies of etiology and pathophysiology). Follow-up studies on chemically dependent GLBT individuals would be useful to verify our findings. Treatment studies are also greatly needed to identify efficacious treatments for GLBT patients with both personality disorders and a substance use disorder.

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Table 1

Rates of Personality Disorders in 145 GLBT Patients in Chemical Dependency Treatment*

Personality Disorder	N (%)	95% C.I. Low, High
None	9 (6.2)	3.1, 11.8
Cluster A		
Paranoid	52 (35.9)	28.2, 44.3
Schizotypal	6 (4.1)	1.7, 9.2
Schizoid	14 (9.7)	5.6, 16.0
Cluster B		
Histrionic	26 (17.9)	12.3, 25.4
Narcissistic	63 (43.4)	35.3, 51.9
Borderline	93 (64.1)	55.7, 71.8
Antisocial	64 (44.1)	36.0, 52.6
Cluster C		
Avoidant	71 (49.0)	40.6, 57.4
Dependent	25 (17.2)	11.7, 24.6
Obsessive-Compulsive	82 (56.6)	48.1, 64.7
Supplemental Personality Disorders		
Passive-Aggressive	42 (29.0)	21.9, 37.2
Depressive	51 (35.2)	27.6, 43.6

* Subjects may have had more than one personality disorder

Table 2

Demographic comparison of no personality disorders vs. at least one personality disorder

Demographic/Clinical Variable	No personality disorders (n=9)	At least one personality disorder (n=136)	Statistic	df	p-value
Age					
Mean ($\pm$ SD), years	44.4 (16.2)	33.9 (9.3)	-1.936t	8.355	0.087
Gender, n (%)					
Female	1 (11.1)	26 (19.1)	f	n/a	0.849
Male	8 (88.9)	99 (72.8)			
Transgender	0 (0)	11 (8.1)			
Sexual orientation, n (%)					
Gay/Lesbian	9 (100)	115 (84.6)	f	n/a	1.0
Bisexual	0 (0)	10 (7.4)			
Transgender	0 (0)	11 (8.1)			
Education, n (%)					
<High school	0 (0)	21 (15.4)	f	n/a	0.532
High school/GED grad	2 (22.2)	30 (22.1)			
At least some college	7 (77.8)	85 (62.5)			
Race/ethnicity, n (%)					
Caucasian	6 (66.7)	97 (71.3)	f	n/a	0.214
African American	1 (11.1)	17 (12.5)			
Latino/Hispanic	2 (22.2)	4 (2.9)			
Asian	0 (0)	1 (0.7)			
Native American	0 (0)	6 (4.4)			
Other	0 (0)	11 (8.1)			
Relationship status, n (%)					
Single/Dating	8 (88.9)	104 (76.5)	f	n/a	0.722
Partner/Married	1 (11.1)	30 (22.1)			
Separated/Divorced/Widowed	0 (0)	2 (1.5)			

Demographic/Clinical Variable	No personality disorders (n=9)	At least one personality disorder (n=136)	Statistic	df	p-value
Employment status, n (%)					
Employed FT/PT	3 (33.3)	30 (22.1)	f	n/a	0.85
Unemployed	6 (66.7)	95 (69.9)			
Retired	0 (0)	1 (0.7)			
On disability	0 (0)	10 (7.4)			
Suicide Attempts: Mean ($\pm$ SD)	0.96 (1.40)	0.67 (1.32)	-0.802z	n/a	0.423
Psychiatric Hospitalizations: Mean ($\pm$ SD)	1.7 (4.69)	1.0 (1.58)	-0.505z	n/a	0.614
Number of Previous Chemical Dependency Treatments: Mean ($\pm$ SD)	2.5 (3.3)	1.0 (1.6)	-1.842z	n/a	0.065
Age at First Chemical Dependency Treatment: Mean ($\pm$ SD)	35.0 (10.6)	26.6 (7.9)	-2.287t	104	0.024
Legal Issues Due to Substance Use, n (%)	4 (44.4)	78 (57.4)	f	n/a	0.502

Statistic: t=t-test; z=Mann-Whitney Test (Z statistic); c=Chi-Square; f=Fisher's Exact Test

Table 3

At least one personality disorder vs. no personality disorder(s) relative to substance use disorder

Substance Use Disorder	No personality disorder (n=9)	At least one personality disorder (n=136)	p-value
Alcohol	8 (88.9)	109 (80.1)	1.0
Cannabis	6 (66.7)	48 (35.3)	0.078
Cocaine	4 (44.4)	51 (37.5)	0.731
Opiates	2 (22.2)	6 (4.4)	0.079
Methamphetamine	3 (33.3)	49 (36.0)	1.0
Ecstasy	0 (0)	9 (6.6)	1.0
Gamma Hydroxy Butyrate (GHB)	0 (0)	12 (8.8)	1.0

All values are n (%)

Statistical test: Fisher's exact test

Table 4

Personality disorder cluster prevalence based on substance of abuse/dependence.

Substance Use Disorder	Cluster A disorders (n=60)	Cluster B disorders (n=120)	Cluster C disorders (n=110)	Clus. A p-value	Clus. B p-value	Clus. C p-value	Omnibus Test of Model Coefficients	Cluster A: Odds Ratio (95% CI)	Cluster B: Odds Ratio (95% CI)	Cluster C: Odds Ratio (95% CI)
Alcohol	49 (81.7)	96 (80.0)	88 (80.0)	0.762	0.714	0.818	0.360c, df=3, p=.948	1.140 (0.489, 2.661)	0.792 (0.228, 2.754)	0.882 (0.302, 2.572)
Cannabis	23 (38.3)	44 (36.7)	38 (34.5)	0.749	0.894	0.243	1.519c, df=3, p=.678	1.119 (0.561, 2.231)	1.068 (0.407, 2.805)	0.606 (0.262, 1.405)
Cocaine,	24 (40.0)	46 (38.3)	42 (38.2)	0.680	0.868	0.994	0.219c, df=3, p=.974	1.155 (0.583, 2.286)	1.086 (0.411, 2.867)	1.003 (0.428, 2.352)
Opiates	1 (1.7)	6 (5.0)	5 (4.5)	0.136	0.870	0.528	3.937c, df=3, p=.268	0.198 (0.024, 1.663)	0.859 (0.138, 5.324)	0.592 (0.116, 3.014)
Methamphetamine	16 (26.7)	43 (35.8)	42 (38.2)	0.046	0.743	0.219	5.427c, df=3, p=.143	0.478 (0.232, 0.987)	0.847 (0.313, 2.289)	1.770 (0.712, 4.401)
Ecstasy	6 (10.0)	9 (7.5)	8 (7.3)	0.145	excluded*	0.412	3.316, df=2, p=.191	2.906 (0.693, 12.176)	excluded*	2.434 (0.290, 20.429)
Gamma Hydroxy Butyrate (GHB)	3 (5.0)	10 (8.3)	11 (10.0)	0.211	0.657	0.166	4.198c, df=3, p=.241	0.419 (0.107, 1.639)	0.679 (0.123, 3.748)	4.721 (0.525, 42.447)

All values n (%); c=Chi-square

Cluster A: paranoid, schizoid, schizotypal; Cluster B: antisocial, borderline, narcissistic, histrionic; Cluster C: avoidant, dependent, obsessive-compulsive;

* cluster B excluded (odds ratio denominator = zero). All 9 ecstasy users are in Cluster B. A simple Chi-square of cluster B by ecstasy is not significant p=.157.

Table 5

Personality disorder cluster prevalence based on psychiatric comorbidity.

Current Psychiatric Disorders	Cluster A disorders (n=60)	Cluster B disorders (n=120)	Cluster C disorders (n=110)	Clus. A p-value	Clus. B p-value	Clus. C p-value	Omnibus Test of Model Coefficients	Cluster A: Odds Ratio (95% CI)	Cluster B: Odds Ratio (95% CI)	Cluster C: Odds Ratio (95% CI)
Depressive disorder	37 (61.7)	76 (63.3)	67 (60.9)	0.836	0.486	0.319	1.188c, df=3, p=.756	0.930 (0.467, 1.851)	1.411 (0.536, 3.719)	0.637 (0.263, 1.545)
Bipolar disorder	12 (20.0)	24 (20.0)	21 (19.1)	0.676	0.211	0.931	2.552c, df=3, p=.466	1.202 (0.507, 2.847)	2.757 (0.562, 13.517)	1.051 (0.341, 3.247)
Anxiety disorder	31 (51.7)	59 (49.2)	56 (50.9)	0.484	0.782	0.248	2.631c, df=3, p=.452	1.270 (0.650, 2.481)	1.144 (0.441, 2.969)	1.644 (0.707, 3.821)
PTSD	18 (30.0)	29 (24.2)	25 (22.7)	0.049	0.122	0.910	7.769c, df=3, p=.051	2.275 (1.003, 5.161)	3.510 (0.715, 17.218)	0.940 (0.322, 2.744)
OCD	4 (6.7)	6 (5.0)	5 (4.5)	0.388	0.770	0.653	0.952c, df=3, p=.813	1.976 (0.421, 9.261)	1.417 (0.136, 14.727)	0.657 (0.103, 4.094)
Eating disorder	7 (11.7)	15 (12.5)	13 (11.8)	0.951	0.508	0.845	0.483c, df=3, p=.923	0.968 (0.344, 2.722)	1.743 (0.336, 9.038)	0.881 (0.246, 3.152)
ADHD	12 (20.0)	27 (22.5)	19 (17.3)	0.880	0.022	0.032	10.379c, df=3, p=.016	1.069 (0.449, 2.544)	12.075 (1.431, 101.909)	0.332 (0.121, 0.909)

All values n (%); c=Chi-square; PTSD=post-traumatic stress disorder; OCD=obsessive compulsive disorder, ADHD=attention deficit hyperactivity disorder

Depressive disorder=Major depressive disorder, dysthymia, depression NOS

Bipolar disorder=Bipolar I or II

Anxiety disorder=Generalized anxiety disorder, panic disorder, social phobia, anxiety disorder NOS

Eating disorder=anorexia nervosa, bulimia nervosa