

ASSESSING THE INCIDENCE RATES OF SUBSTANCE USE DISORDERS AMONG THOSE WITH ANTISOCIAL AND BORDERLINE PERSONALITY DISORDERS IN RURAL SETTINGS

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Abstract. Background. Studies regarding the correlation between Antisocial Personality Disorder (ASPD) and Borderline Personality Disorder (BPD) diagnoses and Substance Use Disorders (SUDs) have focused on substances used (Chapman, Cellucci, 2007; Skodol, Oldham, Gallahey, 1999; Trull, Waudby, Sher, 2004; Sher, Trull, 2002), or behaviors that predict a SUD. Few studies have addressed the rates of cannabis and amphetamine abuse (Skodol, et al. 1999; Regier, et al. 1990), involved inpatient psychiatric populations (Trull, et al. 2004; Rounsaville, et al., 1998), or focused on rural populations. **Purpose.** This study compares ASPD and BPD diagnoses and abuse rates, including amphetamine and cannabis use, in a rural setting. **Methods and Results.** Archival data on diagnosis and abuse rates were compared for patients in an inpatient psychiatric facility in a rural community in the United States diagnosed with BPD or ASPD. Use rates were significantly higher for the ASPD group than the BPD group for all substances, with over half with ASPD (54.76 %) abusing cannabis compared with about 20 % (19.77 %) of those with BPD. Almost one third (30.95 %) with ASPD abused amphetamines compared to 13.56 % of those with BPD. The incidence of alcohol use in the ASPD group was three times higher than in previous studies on non-rural populations. **Conclusions.** Practitioners in rural settings should assess for both cannabis and amphetamine use as they often accompany alcohol use. A psycho-educational focus on preventing future SUDs for ASPD individuals who are not currently co-morbidly diagnosed may be indicated.

Keywords: Addiction, Dual Diagnosis, Antisocial, Borderline.

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Assessing the Incidence Rates of Substance Use Disorders Among Those With Antisocial and Borderline Personality Disorders in Rural Settings.

The available research on the correlation between Antisocial Personality Disorder (ASPD) and Borderline Personality Disorder (BPD) diagnoses and Substance Use Disorders (SUDs) is extensive. The majority of studies have focused on substances being abused (Chapman, Celucci, 2007; Skodol, Oldham, Gallaher, 1999; Trull, Waudby, Sher, 2004; Sher, Trull, 2002), or behaviors associated with the personality disorder (e.g. impulsivity) that predict a SUD. For example, Regier, et al. (1990) found that 83.6 % of individuals with ASPD also met criteria for a SUD. Similar studies have found that, among selected personality disorders, ASPD had the highest association with both alcohol use and drug use disorders (Grant et al., 2006; Helzer, Pryzbeck, 1988). With regard to specific drugs being abused, Compton, Conway, Stinson, Colliver, and Grant (2005) found that individuals with ASPD had a 30.3 % concurrence rate of alcohol use disorders and a 10.3 % concurrence rate of other drug use disorders. Kleinman, et al. (1990) reported that among cocaine abusers, 21 % met criteria for an ASPD diagnosis, and Regier, et al. (1990) reported a cannabis abuse rate of 14.7 % among individuals with this personality disorder diagnosis. Grella, Joshi, and Hser (2003) found that among cocaine-dependent bi-gender individuals seeking treatment, 47.2 % of males and 34.3 % of females were diagnosed with ASPD. Additionally, Havens, et al. (2007) discovered that among injection drug users 22.8 % of those sampled met criteria for an ASPD diagnosis. Yet another study (Ball, 2004; Rounsaville, et al., 1998) found that with cocaine, opiate, and alcohol-dependent outpatients and inpatients, 46 % of the sample met the criteria for ASPD.

Although those diagnosed with ASPD have higher rates of SUDs than BPD, those diagnosed with BPD still have high rates of SUDs (Hatzitskos, Soldatos, Kokkevi, Stefanis, 1999). In fact, it has been determined that being diagnosed with BPD is a significant predictor of SUDs (Feske, Tarter, Kirisci, Pilkonis, 2006; Skodol, et al., 1999). Dulit, Fyer, Haas, Sullivan, and Frances (1990) reported a 67 % concurrence rate between SUDs and a BPD diagnosis, with the most frequent parallels with alcohol and hypnotic-sedatives. Ball (2004) found that among individuals from outpatient and inpatient facilities with opiate, cocaine, and alcohol-

dependent issues, 30 % were diagnosed with BPD. Among cocaine abusers, Kleinman, et al. (1990) reported that 18 % met criteria for BPD. A study by Skodol, et al. (1999) reported that alcohol and cannabis abuse rates were seven times more likely in individuals who were diagnosed with BPD.

Only a few studies have focused on the rates of cannabis and amphetamine use among individuals diagnosed with ASPD and BPD (Skodol et al., 1999; Regier, et al. 1990), or on inpatient psychiatric populations (Trull, et al., 2004; Rounsaville, et al., 1998). No studies have focused on Mid-Western rural populations in the United States. To address this gap in the literature, this study seeks to more conclusively understand the relationship in a rural, inpatient psychiatric population, between a diagnosis of BPD or ASPD and abuse rates in six substance areas; alcohol, multi-substance, amphetamine, cannabis, pill and other. This study extends existing research by focusing on a rural population as well as by including amphetamine and cannabis use.

It was hypothesized that overall SUD rates in the rural population would be similar to those in the existing research on non-rural populations in that rates for all substance categories would be higher for those diagnosed with ASPD than for those diagnosed with BPD (Hatzitskos, et al., 1999; Mills, Teesson, Darke, 2004; Rounsaville, et al., 1998). It was further hypothesized that the prevalence by substance for both groups would show alcohol use rated the highest, followed by multi-substance, amphetamine, cannabis, other, and prescription pills. Because of the availability of materials in a rural setting with which to make amphetamines, it was hypothesized that high rates of amphetamine use would be found.

DEFINITION OF TERMS

Multi-substance: For the purpose of this study, multi-substance was defined as having a diagnosis of a SUD with two or more substances, excluding nicotine or caffeine as diagnosable substances.

Rural: The U.S. Census Bureau defines rural as any population that cannot be classified as urbanized areas, urbanized clusters or metropolitan areas. A metropolitan area has a population of greater than 50,000 people, urban area and urban clusters fall in similar categories and must

have a population between 2,500 and 50,000 or more, and have population densities of 1,000 people or more per square mile with adjacent population densities of 500 or more people per square mile (U.S. Census Bureau, n.d.).

Substance Use Disorder (SUD): The Diagnostic and Statistical Manual-IV, Text Revision (DSM-IV-TR) (American Psychiatric Association, 2000) criteria for SUDs were used. SUDs are divided into two distinct categories; Substance Abuse (SA) and Substance Dependence (SD). Both are composed of “a maladaptive pattern of substance use, leading to clinically significant impairment or distress . . . occurring within a 12-month period.” (American Psychiatric Association, 2000, p. 192). For the purpose of this study, a diagnosis of either SA or SD was considered a SUD. The minimum diagnosis of SA is “having one or more of the following: (a) recurrent substance use resulting in a failure to fulfill major role obligations at work, school, or home, (b) recurrent substance use in situations in which it is physically hazardous, (c) recurrent substance related legal problems, or (d) continued substance use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of the substance” (p. 192). Since SA is clinically less severe, it was the minimal diagnosis. Individuals with SD were automatically included under the heading because those with a SD diagnosis already qualified for SA.

METHOD

Participants

Participants ($n = 219$) in this study were patients admitted between 2005 and 2008 to a free-standing inpatient psychiatric facility located in the rural Midwestern community in the United States who were diagnosed with either BPD or ASPD. Forty-two of the participants were diagnosed with an ASPD and 177 with BPD. Almost all of the participants resided in rural areas (ASPD, 81.40 %; BPD, 93.79 %).

Instrumentation

Archival data related to participants' diagnosis and substance use were obtained from the rural inpatient psychiatric facility. Instrumentation

used to identify the diagnosis of personality disorders included the Millon Clinical Multiaxial Inventory-III, the Beck Depression Inventory and the Minnesota Multiphasic Personality Inventory-2. Besides these formal assessments, a compilation of the patient's history and current symptoms was used to identify patterns or past maladaptive behaviors that would help with the diagnosis of BPD or ASPD. The Substance Abuse Subtle Screening Inventory-3 (SASSI-3) was used to identify substance use disorders. In addition to the SASSI-3, a semi-structured interview was used to identify past and current trends in substance use.

Procedure

Participants were given an ID number to ensure confidentiality. The following data were gathered for each participant: ASPD or BPD diagnosis, other Axis I diagnosis, substance use disorder diagnosis, the specific substances abused (alcohol, multi-substance, amphetamines, cannabis, prescription pills, or other), age at admission, gender, ethnicity, and size of community of residence.

Results

As was hypothesized, the percentage of those diagnosed with substance abuse was significantly higher in the ASPD group (85.71 %) than in BPD group (47.46 %), $\chi^2(1, N = 219) = 18.542, p < .05$. This follows the pattern seen in the research for non-rural populations; however, the percentage of those abusing alcohol and cannabis in this study of a rural population is three times as high as in existing studies. The comparison of patterns of abuse by substance between the two groups, shown in Table 1, indicated the incidence of use by those diagnosed with ASPD was significantly higher than by those diagnosed with BDP across all abused substances. In fact, the usage rates for the ASPD group were twice as high for all substances except prescription pills, which were abused at three times the rate as the BPD group. The hypothesis regarding the order of incidence of substances abused was not supported, cannabis abuse and the "other" category were more prevalent than amphetamine abuse in both groups. However, it is interesting to note that approximately one in three of the ASPD group and one in ten of the BPD group abused amphetamines.

Table 1. Comparison of Substances Abused by Those Diagnosed with Antisocial Personality Disorder and Borderline Personality Disorder

Substance type	% abusing Borderline (N = 177)	% abusing Antisocial (N = 42)	χ^2
Alcohol	35.03	71.43	16.998*
Multiple	27.12	61.90	16.838*
Cannabis	19.77	54.76	19.583*
Other	18.64	35.71	4.825*
Amphetamine	13.56	30.95	6.128*
Pills	3.95	14.29	4.770*

* $p < .05$

The percentage of individuals diagnosed with ASPD abusing substances, by substance type, is summarized in Table 2. The difference among the percentages was significant, $\chi^2(5, N = 42) = 52.382, p < .05$. Alcohol was the most often abused substance (71.43 %) and prescription pills were the least abused substance (14.29 %). Over half (54.76 %) abused cannabis and almost one third (30.95 %) abused amphetamines.

Table 2. Percentage With Antisocial Personality Disorder Abusing Substances by Substance Type

Type of Substance	N	Number Abusing	% Abusing
Alcohol	42	30	71.43
Multiple	42	26	61.90
Cannabis	42	23	54.76
Amphetamine	42	13	30.95
Pills	42	6	14.29
Other	42	15	35.71

Note. The difference among the six percentages was significant, Cochran test showed $\chi^2(5, N = 42) = 52.382, p < .05$.

The percentage of individuals diagnosed with BPD abusing substances, by substance type, is summarized in Table 3. The difference among the percentages was significant, $\chi^2(5, N = 177) = 95.938, p < .05$. Alcohol was the most often abused substance (35.03 %) and pills were the least abused substance (3.95 %). Almost 20% of this group abused cannabis (19.77 %) while approximately 14 % abused amphetamines (13.56 %).

Table 3. Percentage of Those Diagnosed With Borderline Personality Disorder Abusing Substances by Substance Type

Type of Substance	N	Number Abusing	% Abusing
Alcohol	177	62	35.03
Multiple	177	48	27.12
Cannabis	177	35	19.77
Amphetamine	177	24	13.56
Pills	177	7	3.95
Other	177	33	18.64

Note. The difference among the six percentages was significant, Cochran test showed $\chi^2(5, N = 177) = 95.938, p < .05$.

DISCUSSION

The first hypothesis was upheld, SUD rates in a rural setting for all substance categories were higher for those diagnosed with ASPD than for those diagnosed with BPD. It is important to note that although the usage rates for all substances for the BPD group echoed rates in existing studies, the incidence of alcohol abuse in the ASPD group is approximately three times higher than in previous studies on non-rural specific populations. The rate of cannabis abuse was also dramatically larger than seen previously. Because the incidence of both alcohol and cannabis use in this rural population was found to be so high among the ASPD group, therapists in rural settings may want to prioritize a psycho-educational focus on preventing future SUDs for individuals who are not currently co-morbidly diagnosed.

This study does establish a baseline for future research regarding amphetamine and cannabis use rates within both ASPD and BPD populations in rural settings. Although there is no comparison data for amphetamine use, a usage rate of over 30% for those diagnosed with ASPD and 10% for BPD indicates that abuse of these substances may be prevalent in rural populations. Practitioners working with these populations in rural settings should be aware that both cannabis and amphetamine use often accompany alcohol use and should assess accordingly.

Limitations of this study include the following. First, the population for this study was limited to one inpatient population. Further studies

that sampled inpatient populations in rural settings across a broader geographic area could confirm whether these results can be generalized to other rural areas of the country. Replicating the study with outpatient populations could also provide an interesting comparison regarding substance use by diagnosis in rural settings. Second, this study did not identify the reasons for the high cannabis and alcohol abuse rates within the ASPD population. If additional studies confirm higher abuse rates in rural settings then it seems it would be important to try to determine contributing factors.

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KAIMO VIETOVĖSE GYVENANČIŲ ASMENŲ, KURIEMS DIAGNOZUOTAS ASOCIALAUS ARBA RIBINIO TIPO ASMENYBĖS SUTRIKIMAS, PROBLEMINIS NARKOTINIŲ MEDŽIAGŲ VARTOJIMAS

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Santrauka. Problema. Dauguma tyrimų, kuriuose nagrinėjamos asocialaus tipo asmenybės sutrikimo (ATAS), ribinio tipo asmenybės sutrikimo (RTAS) ir probleminio narkotinių medžiagų vartojimo sąsajos, didžiausią dėmesį kreipia į tai, kokios medžiagos

vartojamos (Chapman, Cellucci, 2007; Skodol, Oldham, Gallaher, 1999; Trull, Waudby, Sher, 2004; Sher, Trull, 2002), arba siekia atskleisti elgesį, kuris numato narkotinių medžiagų vartojimą. Tačiau tik keliuose tyrimuose plačiau buvo nagrinėjamas piktnaudžiavimas kanapėmis ir amfetaminu (Skodol et al. 1999; Regier, et al. 1990), įtraukiami psichiatrijos stacionaruose besigydantys asmenys (Trull, et al. 2004; Rounsaville, et al., 1998), ar susitelkiama į kaimo vietovę. **Tyrimo tikslas.** Atskleisti asocialaus ir ribinio tipo asmenų, gyvenančių kaimo vietovėse, asmenybės sutrikimų sąsajas su probleminiu narkotinių medžiagų vartojimu, įskaitant ir kanapių produktus bei amfetaminą. **Metodika.** Tyrime analizuojami vieno JAV kaimo bendruomenės psichiatrinų paslaugų stacionaro archyviniai duomenys apie asmenybės sutrikimų diagnozes ir probleminio narkotinių medžiagų vartojimą. **Rezultatai.** Asmenų, kuriems buvo diagnozuotas ATAS, grupėje probleminio narkotinių medžiagų vartojimo paplitimas buvo reikšmingai didesnis, nei RTAS asmenų grupėje. ATAS asmenų grupėje piktnaudžiauta kanapėmis dvigubai daugiau (54,76 %), palyginti su RTAS grupe (19,77 %). Maždaug trečdalis ATAS grupės asmenų piktnaudžiavo amfetaminu (30,95 %), RTAS grupėje tokių asmenų buvo 13,56 %. Probleminio alkoholio vartojimo rodikliai ATAS asmenų grupėje buvo tris kartus didesni, nei nurodoma ankstesniuose tyrimuose, atliktuose ne kaimo vietovėse. **Išvados.** Psichikos sveikatos specialistai, dirbantys kaimo vietovėse, turėtų vertinti ir kanapių bei amfetamino vartojimą, kadangi dažnai šiomis medžiagomis piktnaudžiuojama vartojant alkoholį. Tyrimo rezultatai skatina daryti prielaidą: asmenims, kuriems diagnozuotas ATAS, bet nediagnozuotas probleminis alkoholio vartojimas, būtų naudinga psichoedukacija, galinti padėti išvengti komorbidiškumo.

Pagrindiniai žodžiai: priklausomybė, dviguba diagnozė, asocialus, ribinis.

Received: 24 06 2010

Accepted: 10 10 2010