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PATTERN AND CORRELATES OF PERSONALITY DISORDER AND SUBSTANCE USE DISORDER IN THE PRISON COMMUNITY

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ABSTRACT

Background: Studies on comorbidity of personality disorder (PD) and substance use disorders (SUDs) have largely been done on normal and unrestricted environments and on free and unrestricted patients. Illicit drugs are used in prisons despite their highly structured controlled environment. The few studies on the health of prison inmates have indicated high levels of mental disorder, yet no studies have been done on comorbidity of SUDs and PD in the prison community.
Objectives: To determine the prevalence of SUDs and PD in the prison community and the degree of comorbidity between both disorders in this community.
Methods:Prison inmates who met the inclusion criteria were interviewed using (IPDE) International Personality Disorder Examination and Sections 10 and 11of the Schedules for Clinical Assessment in Neuropsychiatry (SCAN). Both instruments are semi structured questionnaires modified to conform to DSM-111-R (Diagnostic and Statistical Manual) and ICD-10 (International Classification of Diseases) classifications. ICD-10 classification was used for the diagnoses. The data was fed into the Statistical Package for Social Sciences (SPSS/PC+) and cross- tabulation of the variables obtained using chi-square and t- test.
Results: The study showed that out of the 213 inmates that consented to the study, (77) 36% had SUDs, and (111) 52% had PD with Borderline/ Impulsive PD Dissocial PD and Anankastic PD having the highest prevalence of comorbidity.
Conclusion: The prison communities harbour inmates with SUD and PD. A strong association has been established between both disorders with a comorbid prevalence rate of 70%. An urgent need for a close medical and psychiatric care is advocated.

Keywords: Prison, Inmates, Substance use disorders, Personality Disorders, Comorbidity, ICD-10.

INTRODUCTION

Although the concept of personality disorder is well established, it is very difficult to define. This is particularly not surprising considering the problems involved in defining normal personality. The definitions by the 5th edition of the Diagnostic and Statistical Manual of Mental Disorders fifth edition (DSM-5) and the International Classification of Diseases (ICD-10) [1], acknowledged by World Health Organization (WHO), provides an in-depth knowledge of the concept and an acceptable definition to the clinicians. [2] The DSM-5 recognises ten basic types of PD and groups them into three different clusters based on descriptive similarities. [3] The ICD-10 recognises eight different types. Both instruments agree with the basic concepts

in the definitions and highlight their behaviours as being ingrained, inflexible, ego syntonic and alloplastic, and tending to represent significant deviations from normal personalities.

Personality disorders are common, affecting 10-15% of normal population and they frequently co-morbid with other psychiatric disorders. Co-morbidity of PD and SUDs is common in clinical practice, a great number of studies suggest that the prevalence of PD is higher among SUDs than general population. [4] Most of the studies have been conducted from a drug treatment and rehabilitation centre using patients receiving treatment for SUDs. Edger et al. [5] assessed 100 patients receiving treatment for SUDs and reported 57% as PD using SCID-11. Krieger et al. [6] evaluated PD among 101 drug abuse inpatients and reported 55.4% PD among them. Most comorbidity studies on PD and SUDs have focused on Borderline PD. In an update review on Borderline and SUDs by Trull et al. [7] out of 10086 patients receiving treatment for SUDs, 2226 (22.1%) had Borderline PD. Studies on comorbidity of PD and SUDs have been done on normal and unrestricted environments and on free and unrestricted patients. No studies on this subject have been done in the prison environment. Surprisingly, there are few systematic studies of the health of prison inmates, but those carried out have indicated high level of mental disorders. In a survey of 300 prisoners, Gunn [8], regarded 27% of the population as requiring psychiatric treatment, he reported 13% as psychopaths, 11% as alcoholics. Among 40 referred prisoners assessed by Makanjuola et al [9], four were diagnosed as antisocial PD, 22 were said to be abusing Cannabis while in prison. Edwards et al. [10] in a review of literature, showed that the prevalence of alcoholism among prisoners range between 10 -56%. Illicit drugs are used in the prison despite their highly structured controlled environment. This study therefore intends to report on the prevalence of SUDs, PD, and their co-morbidity in the prison community.

MATERIALS AND METHODS

This study was conducted in a Nigerian prison, located in Ibadan. Ibadan is the capital of Oyo state, in the South West Region of Nigeria. As at the time of this study, there were over 500 inmates in the prison from all over the country serving various prison jail terms. The inclusion criteria for the study required that, the inmates must consent to the study, they must be in good state of health to participate in the interview process, and must have adequate and good education, enough to understand the questionnaires. To this effect, a minimum of nine years of education was used as the cut-off point.

All inmates who met the inclusion criteria were screened by an independent assessor (a nurse in the prison clinic) with a biographic data questionnaire which also assessed criminal history of inmates. The International Personality Disorder Examination (IPDE) English version was used to assess PD in the inmates. The IPDE is a modification of the PD questionnaire (PDE) [11], to conform to ICD-10 and DSM-111-R classifications. Sections 10 and 11 of the Schedules for Clinical Assessment in Neuropsychiatry (SCAN) [12, 13] were used to assess SUDs in the inmates. All the screened inmates who met the study criteria were interviewed with these instruments. SCAN incorporates the tenth version of PSE [14] and designed by the World Health Organization/ Alcohol, Drug Abuse and Mental Health Administration joint project on standardization of diagnosis and classification (ADAMHA) [15]. It is a semi structured instrument, sufficiently comprehensive to provide ICD-10 and DSM-111-R diagnosis. PD and SUDs were diagnosed using ICD-10 classification in both instruments.

The data was fed into a personal computer, using the Statistical Package for Social Sciences (SPSS-PC+), cross-tabulation of the variables of interest were obtained, using chi-squired (x2) and t-test, $p<0.05$ was chosen as the level of significance.

RESULTS

Two hundred thirteen (213), male inmates participated in the study. No female inmate met the inclusion criteria. Table 1 shows the age distribution of the inmates. The mean age was 28.5 years. One hundred and five (105) (49%) were married. There was a preponderance of low skilled and unskilled workers among the inmates. SUDs were diagnosed using ICD-10 criteria. Table 2 gives a general outline of these diagnoses. Thirty-one (31) inmates had a history of alcohol dependence constituting 14.5% of the sample. Out of the 31 inmates, (22) 70% had ICD-10 diagnosis of PD ($p<0.03$). Twelve (12) inmates (5.6%) had a history of cocaine dependence, 9 of them (75%) had ICD-10 diagnosis of PD ($p<0.01$). Thirteen (13) inmates had the history Heroine dependence, and 8 had PD. Nineteen (19) inmates had Cannabis dependence out of which twelve (12) had PD. The two inmates who had Amphetamine dependence both had PD. Twenty (20) (9.3%) inmates had multiple drug dependence, and accounted for 25% of all the SUDs. ICD-10 showed a significant association with alcohol dependence, 70% of all inmates with SUDs had ICD-10 PD diagnosis ($p<.04$).

Table 3 shows the prevalence of ICD-10 PD. Twenty- one (21) (10%) of inmates had diagnosis of Dissocial PD and 61% of them had SUDs ($p<.001$). 16 inmates had paranoid PD with 8 of them having SUDs. Eleven (11) inmates had dependent PD. 32 (15%) inmates had impulsive PD and showed a strong association with SUDs ($p<0.01$). 14 inmates had Schizoid PD, 21 had Histrionic, 36 had Anankastic, while 12 had Anxious PD. Table 4and figure 1 showthe association between ICD-10 PD and SUDs.

Table 1: Age distribution of the 213 inmates

Age Range	n=213	% of total
16-20	24	11.26
21-25	68	31.92
26-30	46	21.59
31-35	38	17.84
36-40	23	10.79
41-45	7	3.38
46-50	4	1.8
51-55	2	.93
56-60	1	.46
Total	213	100

Table 2: No of inmates with Substance use disorders (SUDs)

Alcohol/Drugs	n=213	%
Alcohol	31	14.5
Cannabis	19	8.9
Heroine	13	6
Cocaine	12	5.6
Stimulants	2	.9
Total	77	36.1

Where n= total number of inmates

Table 3: Prevalence of ICD-10 Specific Personality Disorders (PD)

Personality Disorders	n=213	%
Dissocial	21	9.8
Paranoid	16	7.5
Dependent	11	5.0
Impulsive	32	15.0
Schizoid	14	6.5
Histrionic	21	9.8
Anankastic	36	16.9
Anxious	12	5.6
Total	111	52

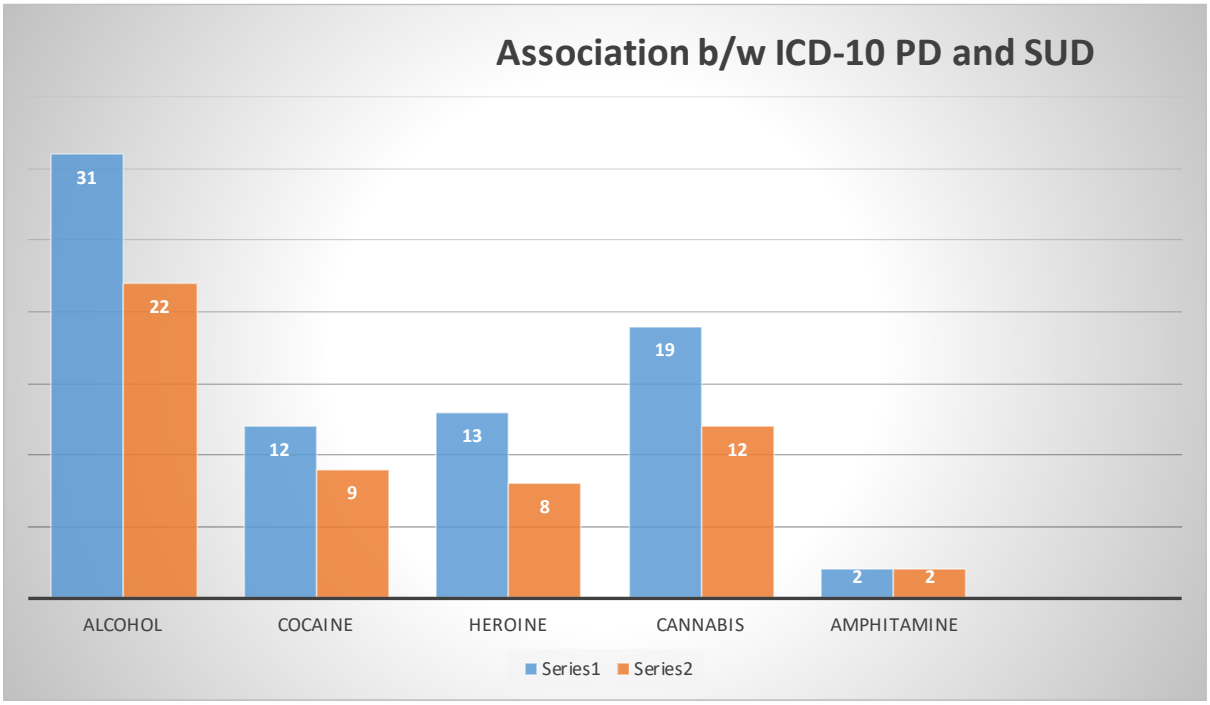
n= total number of inmates

Table 4: Association between ICD-10 PD and SUDs

Drugs	n=213	%	PD	% PD	p-value
Alcohol	31	14.5	22	70	P<0.03
Cocaine	12	5.7	9	75	P<0.01
Heroine	13	6	8	61	
Cannabis	19	8.5	12	63	P,0.03
Stimulants	2	.9	2	100	
Total	77	36	53	70	

n= total number of inmates

Figure 1: Association between ICD-10 Personality Disorder (PD) and Substance Use Disorder (SUD)



Series1: SUD Series 2: PD

DISCUSSION

Comorbidity of personality disorder and substance use disorder is common in clinical practice. Most studies on these two disorders have been carried out from drug treatment and

rehabilitation centres. The prison environment provides a unique setting outside the treatment centres, it also provides a secluded and restricted environmentexpected to house people with both disorders. The IPDE and section 10 and 11 of SCAN were used to assess PD and SUDs respectively. Both instruments are structured to conform to ICD-10 diagnosis of these disorders. Earlier studies in the prisons have studied drug related problems amongst inmates Gunn (1977) and antisocial PD [16], no studies have yet reported on the comorbidity of these two disorders amongst prison inmates. This study reports that 36.1% (77) of the inmates had SUDs. Expectedly, this is higher than the prevalence of 10-18% of the general population, but in keeping with 34% reported by Fazel S. et al. (2016) on a large sample of prisoners on parole. In Nigeria, it has been speculated that prisoners abuse drugs, but Makanjuola et al. (1981), confirmed the rampant abuse of drugs in a Nigerian prison among referred prison inmates. About 51% (111) of inmates had ICD-10 diagnosis of PD.

This is obviously higher than the expected average of 15% from the general population. Out of the 77 inmates with SUD, (53) 70% of them had PD. This is in keeping with, even though higher than the 55.4% reported by Krieger et al. (2016), from their 101 patients receiving treatment for SUDs in Brazil. Chandler RK et al [17] reported 73% of PD in their sample of inmates receiving treatment for SUD, this is in keeping with the finding of this study in spite of the stringent inclusion criteria on education qualification. They further posited that treating SUD offenders provide a unique opportunity to decrease SUDs and reduce associated criminal behaviour.

This study reveals 31 inmates 14.5% as having history of Alcohol dependence out of which 22 inmates (70) had PD ($p<0.01$). Twelve (12) inmates had cocaine dependence out of which 9 had PD ($p<0.03$). Cannabis was the most abused drug with a marginal trend towards a significant association, 19 inmates showed dependence out of which 12 (63%) had PD ($p<0.03$). On the whole ICD-10 PD showed a significant association with SUD ($p<0.04$). The review article by Goretti S et al. [18] reported that PD in cluster B of DSM-5 classification tend to abuse illegal drugs, while Cluster C PD were identified more with Alcohol. The bulk of inmates associated with Alcohol dependence in this study, had impulsive PD. Considering Impulsive PD as the counterpart of DSM-5 Borderline PD, several researches have been done on its co-morbidity with SUDs. Sansone RA et al [19] reported 44.3% of patients receiving treatment for SUD as borderline PD. Most of the inmates who abused cocaine and heroine in this study, had Dissocial PD and Anankastic PD. This is in agreement with Goretti S et al who finally submitted that 'Good deal of the problems accompanying SUDs come from dysfunctional pattern of behaviour from PD'.

CONCLUSION

The prison communities established as correctional institutions, with maximum protection, harbours inmates with substance use disorders. This study showed that at least 36% of inmates of the prison have SUDs, and about 52% have PD. A strong association was established between SUD and PD. 70% of all the inmates with SUDs had PD. A community that has about 32% of its inmates as Impulsive/Borderline PD, 16% as paranoid PD, and 36% as Anankastic PD with high prevalence of comorbidity with SUDs, undoubtedly requires close medical and psychiatric services. Borderline patients in this setting as revealed by this study would therefore be under great neglect as they do not receive treatment of any sorts. Drug education is the most common and effective service provided to prison inmates with SUDs. This setting therefore provides a unique opportunity to intervene and break the cycle of SUDs and crime.

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CONSENT
Consent was given by all the relevant authorities and the inmates who participated in the study.

CONFLICT OF INTEREST
No competing interest

ETHICAL APPROVAL
Ethical approval was given by the hospital ethical committee

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