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Original Research Article

Comorbidity pattern of personality disorder and reliability of diagnostic and statistical manual-111-R and international classification of diseases-10 in assessing personality disorders

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ABSTRACT

Background: Comorbidity of personality disorders (PD) is mostly assessed in relation to axis1 disorders in spite of its high prevalence in clinical practice. It's assessment in the prison community, a non-clinical setting, using the diagnostic and statistical manual (DSM-111-R) and the international classification of diseases (ICD-10) may reveal the natural pattern of axis-11 comorbidity and test the reliability of both instruments in assessing PD. Objectives of the study were to determine the pattern of comorbidity of PD in a non-clinical setting and to confirm the reliability of DSM-111-R and ICD-10 in assessing PD.
Methods: Healthy prison inmates who consented to the study were interviewed using international personality disorder examination (IPDE), a semi structured questionnaire modified to conform to DSM-111-R and ICD-10 classifications and approved by World health organization (WHO). The data obtained was fed into the statistical package for social sciences (SPSS/PC+). Cross tabulation of variables using chi-square and t-tests. Agreement between both instruments was examined with kappa.
Results: The study shows that ICD-10 is more likely to diagnose PD than DSM-111-R. Both instruments showed good concordance for schizoid, histrionic, and dependent PD, poor concordance for obsessive and borderline PD and very poor concordance for avoidant PD. The likelihood of having more than one axis-11 disorder is high lightened.
Conclusions: Pattern of PD in the prison has been established. DSM-111-R and ICD-10 have been found reliable in assessing PD except for avoidant PD where they disagreed. The high rate of multiple PD diagnoses in prison inmates calls for functional health care programs in the prisons.

Keywords: Personality disorders, Comorbidity, Concordance, Prison inmates, DSM-111-R, ICD-10

INTRODUCTION

Comorbidity refers to the existence of two or more diseases or conditions in the same individual at the same time.[1] Personality disorders (PD) are very prevalent in clinical settings, but are nearly always assessed as comorbid to other disorders. Patients are rarely admitted into treatment centres based on the diagnosis of PD, even in their various excitement phases. Personality disorder can and should be a principal focus of treatment because the patients are unable to adapt to changes and demands of life. They fail to make optimal social, occupational, and personal decisions leading to severe stress in their lives. Most patients who meet criteria for one PD are entitled to meet the criteria for more, leading to multiple diagnosis. The co-occurrence of PD as reported by Widiger et al revealed an average across four studies to be 2 and 4, meaning that one patient may have two to four diagnoses.[2]

If a patient with one PD could have so much personal and social disruptions in life, what will be the outcome of several diagnoses on one patient.

The pair or combination of specific types may determine the extent of disruptions and degree of stress. Such outcomes and expected disruptions from patients with multiple diagnosis of PD could explain extreme behaviours seen in certain settings and communities. The prison community has been reported to have 31% of its inmates as having PD, and that 70% of those inmates have substance use disorder by Enyidah et al.[3,4] Could the recidivism seen in inmates be related to multiple PD diagnosis in the inmates?

The international personality disorder examination (IPDE) assess individuals for PD, using diagnostic and statistical manual (DSM-111-R) and the international classification of diseases (ICD-10) criteria, which are approved by WHO for assessing PD.[5-7] These instruments are expected to have high concordance rate since they are assessing the same disorders. This opinion is at variance with the findings of Lisa et al.[8] The agreement between these instruments in assessing specific PD has been discussed, using patients from treatment centres at various levels, the results from the prison community will add to this discuss.

METHODS

This study was conducted in a prison community located in Ibadan, Nigeria, from October 1992 to April 1993. This prison has a capacity for two hundred and ninety-four inmates, accommodates inmates from all over the country, serving various prison jail terms. The inclusion criteria for the study were as follows: the inmates must give consent to participate in the study, they must have at least nine years of education to enable them understand the questionnaires which are in English language and they must be in good state of physical and mental health enough to participate in the study. The study was a cross sectional study and interview technique was used.

All inmates who met the inclusion criteria were screened with a biographic data questionnaire. The IPDE English version was used to assess PD in the inmates. The IPDE is a modification of the personality disorder questionnaire (PDE) to conform to ICD-10 and DSM-111-R classification.[9] It is a semi structured questionnaire, with 150 items scored on a three-point scale of 0, 1 and 2. A score of 2 is regarded as a positive score. Diagnosis was done using ICD-10 and DSM-111R criteria.

Analysis of the study was done using the statistical package for social sciences, (SPSS/PC+). Cross tabulation of the variables of interest were obtained using chi-square and t-tests, p value<0.05 was chosen as level of significance for the study. Agreement between both diagnostic criteria was examined with use of Kappa, a chance corrected statistics by Cohen.[10]

RESULTS

Two hundred and thirteen (213) inmates, all males, met the study inclusion criteria and participated in the study. The female inmates did not meet the study criteria. The mean age of inmates was 28.5 years. Forty nine percent of the sample were unmarried. Most of the inmates were low skilled workers. Because of the study inclusion criteria, educational level of inmates appeared fairly well distributed.

Table 1: Prevalence of DSM-111-R and ICD-10 PD.

Personality disorder	DSM-111-R (n=213)	ICD-10
Antisocial/dissocial	20	21
Paranoid	16	16
Dependent	4	11
Borderline/impulsive	19	32
Schizoid	10	14
Histrionic	12	21
Obsessive/anankastic	3	36
Avoidant/anxious	4	12
Schizotypal	0	NA
Narcissistic	10	NA
Passive aggressive	8	NA
Total	65	111

n=total number of inmates

Tables 3 and 4 shows comorbidity pattern of DSM-111-R and ICD-10 PD respectively.

Table 2: Concordance between DSM-111-R and ICD-10 PD diagnoses.

Personality disorders	DSM-111-R/ICD-10 (n=213)	% DSM-111-R	% ICD-10	P-values	k-values
Antisocial	13	65	56	<0.01	0.53
Paranoid	9	56	56	<0.01	0.55
Dependent	4	100	36	<0.01	0.56
Borderline	6	31	18.8	<0.01	0.26
Schizoid	9	90	64	<0.01	0.67
Histrionic	10	83	51	<0.01	0.64
Obsessive	3	100	8	<0.02	021
Avoidant/anxious	0			<0.8	0.08

n=total number of inmates

Table 3: Co-occurrence of DSM-111-R PD (n=213).

Variables	Anti-social	Para-noid	Depen-dent	Border line	Schi-zoid	Narci-ssistic	Hist-rionic	Obse-ssive	Passive-aggres	Avoi-dant
Antisocial		*30 +.003	25 .117	25 .015	0 .576	41 .001	23 .007	0 .548	25 .096	40 .030
Paranoid	*24 +.003		0 .818	25 .007	0 .686	41 .002	11 .957	0 1.00	33 .001	40 .010
Dependent	*8 +.945	0 .818		12.5 .049	0 1.00	25 .006	23.5 .004	0 1.00	0 1.00	0 .049
Borderline	*24 +.385	30 .007	37 .009		0 .981	33 .006	17.6 .526	0 1.00	8.3 1.00	20 .10
Schizoid	*0 +.557	0 1.00	0 1.00	0 .276		0 .999	0 .783	0 1.00	0 .992	20 .003
Narcissistic	*20 +.000	25 .000	37 .000	16 .000	0 .990		35 .000	0 1.00	33 .001	60 .000
Histrionic	*16 +.072	10 .957	50 .000	12 1.00	0 1.00	50 .000		0 1,00	8.3 1.00	20 .004
Obsessive	*0 +1.00	0 1.00	0 1.00	0 1.00	0 1.00	0 1.00	0 1.00		0 1.00	20 .002
Passiveaggres	*12 +.096	20 .001	0 1.00	4.2 1.00	0 .999	33 .000	5.9 1.00	0 1.00		20 .002
Avoidant	*8 +.031	10 .071	12.5 .038	4.2 .400	10 .077	25 .000	5.9 .806	33 .000	8.3 .613	

n= total number of inmates, *co-occurrence defined as the number of inmates with both disorders, +significant level (p values)

Table 4: Co-occurrence of ICD-10 PD (n=213).

Variables	Dissocial	Paranoid	Dependent	Impulsive	Schizoid	Histrionic	Anankastic	Anxious
Dissocial		*35 .000	4 .542	28 .000	0 .33	14 .059	0 .055	15 .061
Paranoid	*43.5 +.000		45 .000	33.3 .000	6.3 .750	37 .000	3 .372	21 .056
Impulsive	*47.8 +.000	46 .000	25 .074		0 .936	33.3 .026	18.4 .073	10.5 .086
Schizoid	*0 +.345	3.6 .472	8.3 .743	0 .132		7.4 .890	10.5 .515	5.3 .789
Histrionic	*17.4 +.345	35 .000	37 .000	23 .013	23 .013		15 .522	42 .000
Anankastic	*0 +.046	7.1 .274	8.3 .434	17.9 .916	25 .316	22 .521		5.3 .180
Anxious	*13 +.601	14.3 .375	25 .001	5.1 .463	6.3 .784	29 .000	2.6 .310	

n= total number of inmates, *co-occurrence defined as the number of inmates with both disorders, +significant level (p values)

Both instruments (DSM-111-R and ICD-10) jointly diagnosed 13 inmates as having antisocial PD, showing a strong association between them in diagnosing antisocial PD (k=0.53). Both instruments showed that antisocial PD has a good comorbidity association with paranoid PD and borderline PD, while the DSM-111-R strongly compliments narcissistic PD (p<0.01) as shown in Table 3 and 4. Nine inmates were jointly diagnosed as paranoid PD, showing high concordance between them in diagnosing paranoid PD (k=0.55). Using DSM-111-R it was shown that being paranoid comorbidly predisposes one to being antisocial, borderline and narcissistic. ICD-10 paranoid could co-occur with dissocial, dependent, impulsive and histrionic (p=0.01) (Table 3 and 4). Both instruments affirm 4 inmates as dependent PD, showing a strong association between them (k=0.56). With the DSM-111-R, dependent PD could occur with borderline, narcissistic, histrionic and avoidant, while the ICD-10 dependent PD could occur with paranoid, histrionic and anxious (p=0.01) (Table 3 and 4).

Six inmates were jointly diagnosed as borderline/impulsive PD (k=0.26) with both instruments, borderline could occur with paranoid and antisocial. Nine inmates were jointly diagnosed schizoid PD (k=0.67), with the DSM-111-R, dependent could occur with avoidant (p<0.01). Ten inmates were jointly diagnosed as histrionic (k=0.64). DSM-111-R histrionic co-occurs with dependent

and narcissistic (p<0.01), while ICD-10 histrionic co-occurs with paranoid, dependent, impulsive, schizoid and anxious (p<0.01) (Table 3 and 4).

Both instruments did not have any joint diagnosis for avoidant/anxious PD (p>0.8). The instruments appear not to have any agreement in diagnosing anxious/avoidant PD (k=0.08). Nevertheless, there were comorbid associations with other PD.

Nine inmates of DSM-111-R diagnosis had two PD diagnosis while eighteen of ICD-10 had same, four of DSM-111-R had three PD diagnosis as against six of ICD-10. Both instruments picked one inmate each as having five PD diagnosis. On the whole, seventeen inmates (26%) of DSM-111-R and 28 inmates (25%) of ICD-10 diagnosis had multiple PD diagnosis.

DISCUSSION

PDs are often diagnosed as comorbid to other disorders; therefore, most studies have discussed comorbidity by relating axis 11 disorders to axis 1. Most researches on this have concentrated on borderline PD, affective disorders and other axis 1 disorders. Many previously published studies on comorbidity among axis 11 disorders used diagnoses made by clinical judgement or DSM-111 criteria.

Andrews et al concluded that there are differences in almost every category, but in clinical practice, they are likely to be functionally equivalent.[11] In a study by Stercevic et al using SCID-11 personality questionnaire modified for DSM-IV and ICD-10 on 58 patients with agro-phobia, observed that there was a tendency for ICD-10 to over diagnose PD.[12] This conforms with the findings of this study (Table 1) as ICD-10 diagnosed 111 PD as against 65 by DSM-111-R, but differs in the area of individual PD diagnosis. In this study ICD-10 diagnosed more inmates with borderline and dependent PD, contrary to findings of Stercevic et al the two diagnostic instruments have continuously shown significant differences especially in research fields, nevertheless there is a poor to fair agreement between DSM-111-R and ICD-10.

Loranger et al on the inter-rater reliability and stability of PD, using IPDE, found moderate agreement between the two instruments.[13] They noted that DSM-111R diagnosed more antisocial and histrionic PD, while ICD-10 picked up more anxious PD compared with DSM-111-R avoidant PD. They concluded that overall agreement between them in diagnosis of specific PD ranged from k=0.32 for antisocial to k=0.66 for borderline. This study reports that the agreement on specific PD diagnosis generated by the two instruments ranged from good for schizoid (k=0.67), histrionic (k=0.64), dependent (k=0.56), paranoid (k=0.55), and antisocial (k=0.53) to poor for obsessive (k=0.34) and borderline (k=0.26) and very poor for avoidant (k=0.08). This is slightly different from the report of Lisa et al when they evaluated 138 patients and reported moderate concordance, with least concordance on antisocial PD. This study in the prisons showed poor concordance for borderline (k=0.26) contrary to high concordance (k=0.60) revealed by Loranger. The very poor concordance (k=0.08) between avoidant and anxious PD calls for great clinical concern. Are these two instruments assessing the same disorder? This study does not support that.

The validity of DSM-111-R and ICD-10 in diagnosing axis 11 disorders could be said to be good for schizoid, histrionic, dependent, paranoid and antisocial PD, poor for obsessive and borderline, and very poor for avoidant PD.

The prison community harbours difficult people, and these are inmates who ordinarily would not present themselves for any form of evaluation and who are not receiving treatment for any emotional disorders. Their recidivism and extreme misdemeanour suggests there may be inmates with multiple PD diagnosis. A patient with more than one PD diagnosis must be extremely difficult to the society. This study reports 26% of the DSM-111-R PD and 25% of ICD-10 PD as having more than one PD diagnoses. Both instruments agree that having paranoid PD makes it more likely for one to have antisocial, borderline, and avoidant PD, while DSM-111-R agrees to narcissistic and passive aggressive PD. Dependent PD could jointly occur with borderline, narcissistic and histrionic PD. Antisocial PD could occur with paranoid, borderline, narcissistic and avoidant PD. The least likely axis 11 disorder to have axis 11 comorbidity are: schizoid PD, which co-occurred only with avoidant, obsessive PD which could only occur with avoidant.

This high rate of comorbidity of axis 11 PD suggests several areas of overlap in their assessment, making them more heterogeneous. This result is also in agreement with the findings of Oldham et al who reported high comorbidity with six pairs of axis 11 disorders.[14] This also agrees with the analysis of Widiger et al who finally concluded that comorbidity appears to be the norm in PD, giving more credence to his argument in favour of a dimensional approach in diagnosing axis 11 disorders.

CONCLUSION

The pattern of PD in the prison community has been established, the two internationally acceptable diagnostic instruments, the DSM-111-R and the ICD-10 have been found reliable in assessing antisocial, paranoid, dependent, borderline, and histrionic PD, disagreeing for avoidant/anxious PD. A high comorbidity of PD exists in the prison inmates and the high rate of multiple PD diagnoses raises concerns considering the extreme difficult disposition and recidivism seen in inmates.

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