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Antisocial Personality Disorder as an Associated Precursor to the Development of Substance Use Disorder among Substance Users and Non Substance Users in Federal Neuropsychiatric Hospital, Kaduna, Nigeria



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Abstract

To assess the association of antisocial personality disorder (ASPD) to the development/manifestation of substance use disorder among Substance Users and non-Substance Users in Neuropsychiatric Hospital, Kaduna. All the 120 participants were patients on admission at the Federal Neuropsychiatric Hospital (FNPH), Barnawa, Kaduna. Half (50%) of the participants were recruited among residents undergoing treatment for substance use disorder in the Drug, Alcohol, Treatment, Education and Rehabilitation (DATER) unit of the Hospital. While the remaining half (50%) of the respondents were recruited from the male and female wards of the same hospital and they were non-substance use disorder patients. Data was collected from the participants using socio-demographic questionnaire and Minnesota Multiphasic Personality Inventory (MMPI-2) to ascertain the presence of antisocial personality disorder trait. Majority of the participants were males 72.5%, while 27.5% were females. There is higher antisocial personality disorder trait mean score among substance use disorder participants compared to respondents who do not use substance. This difference is statistically significant ($t = 3.56$; $p < .01$). Also, t test analysis performed on the data showed that there was a significant main effect of antisocial personality, $t(118) = -3.56$ $p < 0.01$. The overall findings in this study lend support to the hypothesis, that antisocial personality disorder (ASPD) is an associated precursor to the development/manifestation of substance dependence problems among substance use dependent patients (SUDs).

Keywords: Antisocial personality disorder; Personality disorder; Psychoactive substance dependence patients; Substance abuse; Substance use disorder.

1. Introduction

Drug addiction otherwise refer to as substance use disorders (SUDs) is a chronic relapsing brain disease. It is characterized by compulsive, uncontrollable drug craving, seeking and use that persist even in the face of extremely negative consequences [1-3]. The lifetime rate of the most commonly use substance in Nigeria alcohol at 39% [4]. This rate is higher than the 30% reported in America [5]. Nonetheless, both rates are high and often bring to the fore the need to reverse this trend. As a preventive way forward is to understand the precursors associated with the onset of addiction. Among the suggested precursors of drug addiction is heritability [6]. One of such heritability factors identified before onset of SUD is presence of conduct disorder [7] which might end up as antisocial personality disorder [8].

Antisocial personality disorder (ASPD) according to Diagnostic and Statistical Manual of Mental Disorders (5th ed.; DSM-5), is a pervasive pattern of disregard for and violation of the right of others, occurring since the age of 15 years, and indicated by at least three of the following: willful breaking of social norms, deceitfulness, impulsivity, irritability/aggressiveness, reckless disregard for safety of self or others, persistent irresponsibility and lack of remorse [8]. Other features include evidence of conduct disorder with onset before 15 years and not occurring exclusively during another major mental illness like schizophrenia or bipolar disorder [8]. In other words, ASPD often has negative impacts on the individual's physical, psychological, social, economic and occupational life as well as adversely affecting the society (i.e. particularly related to crime). The latter effect is often linked to the features of ASPD typified by engaging in irresponsible behavior like addiction and showing lack of remorse for misdeeds [9].

There are speculations that antisocial personality disorder is an associated precursor to the development of substance use disorder (SUD) especially among substance users and non-substance users. Substance related problems are on increase and it has also observed that SUDs have shown to have high rate of antisocial personality disorder.

In addition, mental health professionals, for example, Clinical Psychologists, Psychiatrists, Psychiatric Nurses etc., observe many cases of substance use disorders associated with antisocial personality disorder in most psychiatric hospitals or drug rehabilitation centers. However, the studies associating ASPD with SUDs [9, 10] are majorly from Euro-America sub-continent, there is almost no study confirming the situation especially in the northern Nigeria. The dearth of available studies on antisocial personality disorder on substance dependent problems in general and specific using Nigeria sample prompted the researchers to undertake this study. The present study contributes to the literature on personality, psychopathology and substance dependence by using a Nigeria sample drawn from the psychiatric hospital setting.

This study therefore, focused on the association of ASPD as a precursor to SUDs by comparing ASPD traits in participants with SUDs problem to those without. It was hypothesized that:

1. Substance use disorder participants will have higher ASPD trait score than non-SUD respondents.

2. Material and Methods

2.1. Participants

The sample consist of 120 participants (87 males and 33 females) with aged range of 18 to 65-year-old. Fifty of the 60 participants recruited in the Drug Alcohol Treatment Education and Rehabilitation (DATER) unit of Federal Neuropsychiatric Hospital, (FNPH) Barnawa, Kaduna were receiving treatment as inpatients. The remaining 10 participants were receiving treatment on out-patient basis. These participants were among those who came for treatment between 2014-2016 in the DATER unit. The other 60 participants (i.e. non-SUD patients) were recruited from the male and female wards of the Hospital within the same period of study. Informed consent was obtained from all the participants before participating in this study. The Health Research Ethical Committee of Federal Neuropsychiatric Hospital, Barnawa, Kaduna, gave ethical clearance to carry out this study.

2.2. Instrument

Data on ASPD trait scores were collected using Minnesota Multiphasic Personality Inventory (MMPI-2). MMPI-2 is an objective assessment instrument globally use in assessing the presence of psychopathology and personality disorder. It contains 567 items. T score above 64 on the scale indicated psychopathology. The reliability and validity coefficients are within the range of 0.82 to 0.90 [11, 12].

2.3. Procedure

The study was made possible by the members of the Health Research Ethical Committee of Federal Neuropsychiatric Hospital (FNHP), Barnawa, Kaduna. They approved the research and permitted that the study be conducted in the DATER unit and in the male and female wards of the hospital. The clinical interview and diagnosis were made by the Consultant Psychiatrist. However, Clinical Psychologist further conducted clinical interview and assessment with the use of psychological assessment instrument called MMPI-2 to further ascertain diagnosis, presence of psychopathology and for data collection, before they were finally recruited into the study.

2.4. Design and Statistics

The study was cross-sectional by design. It consists of one independent variable (i.e. antisocial personality disorder trait scores) that compared SUD participants with non-SUD respondents. A student t-test analysis using statistical package for social sciences (SPSS), version 22 was applied to analysis the data for the hypothesis.

3. Results

Table 1 shows the background information of respondents. About 72.5% of the respondents were male while 27.5% were females. For ASPD score 63.5% had ASPD, while 27.5% participants had no ASPD.

Table-1. Background information of respondents

Variable	Frequency	Percentage
Sex		
Male	87	72.5
Female	33	27.5
Total	120	100
ASPD Score		
ASPD Disorder	76	63.5
Non ASPD Disorder	33	27.5
Total	120	100

Note: ASPD = Antisocial personality disorder

Table 2 shows the mean score of the antisocial personality disorders trait scores among SUD participants is higher than that of non-SUD respondents. This difference is statistically significant. The scores obtained from antisocial personality disorder among SUD and non SUD participants served as the dependent measure for the study. The mean scores and standard deviation of the groups compared showed that antisocial personality disorder among SUD participants had different score than non-SUD participants.

Table-2. Mean score of the antisocial personality disorders trait

Variable	Mean	Standard deviation
SUD participants	1.52	0.514
Non-SUD participants	1.22	0.415
	t-test = 3.56; p<0.01	

Note: ASPD = antisocial personality disorder; SUD = substance use disorder

Table 3 shows the t test analysis performed on the data. There was a significant main effect of antisocial personality, $t(118) = -3.56$ $p < 0.01$. That is to say that, the presence of antisocial personality disorder among SUD differed significantly with non-SUD participants. This finding support the hypothesis, which predicted a statistical significant difference between participants with antisocial personality disorder and non-antisocial personality disorder in the development of substance dependent problems.

Table-3. A summary of t test analysis on antisocial personality disorder with equal sample size showing difference among SUD and non- SUD psychiatric patients

Independent sample test								
		Levene's test for equality of variance						
		F	SIG.	T	DF	SIG. (2-TAILED TEST)	MEAN DIFF.	STD. ERROR DIFF
ASPD Score	Equal variance assumed	27.574	.000	-3.558	118	.001	-3.000	.084
	Equal variances not assumed			-3.558	113.858	.001	-3.000	.084

$P < .01$; Note. ASPD = Antisocial personality disorder

4. Discussion

The results presented in tables support the hypothesis of this study. The hypothesis that substance use disorder participants will have higher ASPD trait score than non-SUD respondents in the development of substance dependent problems support the research. This shows that respondents with substance use disorder differed significantly with respondents without SUD in the development of substance dependent problems [7-9, 13]. This may be a result of the following according DSM-V:

"A. A pervasive pattern of disregard for and violation of the right of others, occurring since the age of 15 years, as indicated by three (or more) of the Following:

1. Failure to conform to social norms with respect to lawful behaviors, as indicated by repeatedly performing acts that are grounds for arrest
 2. Deceitfulness, as indicated by repeated lying, use of aliases, or conning others for personal profit or pleasure
 3. Impulsivity or failure to plan ahead
 4. Irritability and aggressiveness, as indicated by repeated physical fight or assaults
 5. Reckless disregard for safety of self or others
 6. Consistent irresponsibility, as indicated by repeated failure to sustain consistent work behavior or honor financial obligations
 7. Lack of remorse, as indicated by being indifferent to or rationalizing having hurt, mistreated/or stolen from another
- B. The individual is at least age 15 years
 C. There is evidence of conduct disorder with onset before 15 years
 D. The occurrence of antisocial behavior is not excessively during the worse of Schizophrenia or bipolar disorder".

This is in conformity with some prior studies that ASPD is higher among SUD individuals [8, 9, 13]. According to them, antisocial personality disorder described as irresponsible behavior and lack of remorse for misdeeds which develop during childhood or early adolescent and persist into adulthood contributes to the risk of developing drug addiction or substance dependent problems.

From the above, the result generally meets the prediction of this study. The result has provided the basis for answering the question raised in the study. The significant difference found in the study between the users and non-users is quite revealing. Even though this study did not access retrospectively for the presence of conduct disorder or ASPD traits in the participants, it did speculatively suggest so as in the finding of Dick, *et al.* [7].

5. Conclusion

The result obtained from this study shows there exist a significant difference in the ASPD trait scores of SUD participants compared to non-SUD respondents. It contributed to paucity of study on this variable in Nigeria that ASPD is an associated precursor of the start of SUD. It challenges mental health professionals to find ways to reduce incidence of ASPD traits in individuals in order to lower the occurrence of SUD in the community.

Declaration of Conflicting Interests

Authors mentioned above, have no conflicts of interests, financial or otherwise with the present study.

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