

## AGGRESSIVE BEHAVIOUR AND MENTAL ILLNESS: A STUDY OF IN-PATIENTS AT ARO NEUROPSYCHIATRIC HOSPITAL, ABEOKUTA

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### ABSTRACT

**Objectives:** To determine the magnitude and pattern of aggressive behaviour among psychiatric in-patients and identity associated socio-demographic and clinical factors.

**Method:** The study was cross-sectional in design. Among patients admitted to the Neuro-psychiatric Hospital, Aro (and its Lantoro annex), Abeokuta between January 1 to December 31, 2005, those who manifested aggressive behaviour were identified. Each was evaluated by the medical team, and a questionnaire detailing socio-demographic and clinic variables was administered on them.

**Results:** A total of 305 patients comprising 213 (69.8%) males and 92(30.2%) females were managed as in-patients during the period of the survey. Out of these, 43 patients manifested aggressive behaviour representing a rate of 13.8%. The aggressive patients consisted of 26 males and 17 females, representing rates of 12.2 and 18.5 percent for the sexes respectively. Of the 11 diagnoses entered for all the patients, only 3 were associated with aggressive behaviour. These included schizophrenia, 21 patients (48.8%); bipolar manic illness, 12 patients (27.9%) and co-morbid substance use (mainly cannabis) and mental disorder, 10 patients (22.3%). Nursing personnel constituted the majority of target of aggression. Unemployment was the only socio demographic variable observed with significant positive relationship with aggressive behaviour. In addition, the commonest probable precipitants of aggressive behaviour included hallucinations, clamouring for discharge and attempting to abscond, reaction to confrontational interview, impulsivity and reaction to unmet demands.

**Conclusion:** Mental health practitioners (especially nurses) should be equipped with necessary skills in managing aggressive and potentially aggressive patients. The present observations may be useful in raising the suspicion of care providers on potentially aggressive patients for preventive purpose.

**Key Words:** Aggressive Behaviour, Mental Illness, South-Western Nigeria. (Accepted 23 March 2009)

### INTRODUCTION

Violent or aggressive behaviour is a common reason for emergency presentations, with assaultive behaviour estimated to occur in 3-10 percent of psychiatric patients<sup>1,2</sup>. Although, some reports have failed to either establish a link between mental illness and violent acts nor demonstrate any difference in violent behaviour between mentally ill persons and the general population,<sup>3,4</sup> an agglomeration of literature on the subject suggests that a relationship exists, especially under certain circumstances. For instance, a relationship has been shown between mental illness and violence, especially among persons who are psychotic and do not take their medications<sup>5,6,7,8,9,10,11</sup>. In addition, co-morbid substance abuse has been shown to increase the risk of violent behaviour among patients suffering from major mental disorders<sup>3,7,12,13</sup>.

The relationship between mental illness and violent behaviour is most striking in the relatively non-violent societies such as the Scandinavian countries. In Denmark, Mednick and his colleagues<sup>9</sup> observed that males who were 44 years old and below, and admitted to psychiatric hospitals constituted only 5 percent of the total population of males but were responsible for 30 percent of all violent offences committed by males. Likewise, female patients, who also constituted about 5 percent of the female population were responsible for 50 percent of all violent offences committed by females. Similar findings have been reported from Sweden<sup>12</sup>. Schizophrenia is a condition which particularly increases the risk of violent behaviour. Taylor and his colleague<sup>14</sup> reported that about 1 in 10 of men convicted of homicide had been treated for schizophrenia before.

Although, violence/aggression displayed by the mentally-ill is directed against significant others (partners or family members), there are reports

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spanning the past few decades of physical aggression against a number of prominent personalities by the mentally ill<sup>15</sup>. A prominent example is the attack on the former United States President, Ronald Regan.

Recent events in the hospitals where the authors work have suggested that aggressive behaviour or violence remains an integral part of psychosis. There are several recorded cases of physical aggression against staff, occasionally resulting in serious injuries requiring emergency specialist intervention. Cases of violent destruction of electronics, louvers and windscreens of vehicles have also been recorded with attendant economic burden.

There is therefore a need to formulate strategies aimed at predicting and preventing aggressive acts, and containing such acts when they are manifested by patients admitted on account of mental illness in such a way as not to cause any bodily harm or injury to themselves or others, or result in destruction of properties.

This study was therefore carried out with the following objectives:

1. to assess the magnitude and distribution of aggressive behaviour among patients admitted on account of a mental disorder.
2. to identify socio-demographic and clinical variables that may be associated with aggressive behaviour among psychiatric patients.
3. to use the findings to suggest appropriate crisis intervention/ containment approach(es).

## MATERIALS AND METHODS

The study was carried out at the wards of the Neuro-psychiatric Hospital Aro and the Lantoro annex of the hospital, all located in Abeokuta, Ogun state, south-western Nigeria. Approval for the study was obtained from the Ethical Board of Aro Neuropsychiatric Hospital.

All the patients who were on admission between January 1 and December 31, 2005 were studied. Each patient who manifested aggressive behaviour was rapidly evaluated, had aggressive behaviour contained and referred to the clinical team in-charge of the case for a more comprehensive management. Thereafter, a questionnaire, (Crisis Intervention Questionnaire) was completed on the patient by the research assistant (nursing personnel) on duty, who has been previously trained on the administration of the questionnaire. Additional information was collected by the medical staff after management of the case and after checking the completed questionnaire. The Crisis Intervention Questionnaire which contained 16 items, many of which were adapted from the Triage Model of Psychiatric Emergency service by Gerson and Bassulk<sup>16</sup>, was formulated after an extensive collaboration with many psychiatrists with particular interest in the

subject of study. It consisted of two sections. The first section contained socio-demographic variables to elicit information on age, gender, religion, marital status, level of education and employment status. The second section elicited information on clinical variables such as diagnosis, number of episodes of mental illness, time and day of aggressive behaviour, nature of aggressive behaviour, probable cause of aggressive behaviour, target of aggression, characteristics of target (such as sex) and previous episode(s) of aggressive behaviour.

The data were analysed using the SPSS software. The sociodemographic and clinical characteristics of the patients as well as the probable causes of aggressive behaviour and related variables were presented in simple percentage. The association of sociodemographic and clinical variables with aggressive behaviour was determined using the chi-square test. A *p* value of <0.05 was used as the level of statistical significance.

## RESULTS

A total of 305 patients were admitted during the period of the survey comprising 213 (69.8%) males and 92 (30.2%) females. Out of these, 43 patients manifested aggressive behaviour. This represented a rate of 13.8 percent. The age range of the aggressive patients was 13 to 66 years. The other socio-demographic characteristics of the aggressive patients are shown in Table 1. There were more males (60.5%) and more Christians (67.4%) in the sample. In addition, there were more Christians (67.4%), a reflection of higher proportion of attendees belonging to this religion. Majority was single or never married (60.5%). Majority also had at least secondary school level of education. Also, those who were unemployed at the time of admission were in the majority (69.8%).

Schizophrenia topped the list of diagnoses among the aggressive patients (Table 2). Other diagnoses include the manic phase of bipolar affective disorder and co-morbid substance use and psychotic disorder. Those with only one episode of psychiatric disorder were more represented than those with higher episodes, with frequency of aggressive behaviour reducing with increasing number of episodes. Majority of the attacks occurred during evening and night periods (69.8%) and was evenly distributed among the seven days of the week. Also, nature of aggression (physical, verbal or a combination) was evenly distributed. Living objects (90.7%) constituted majority of the target of aggression with staff members having the highest risk of been attacked (57.5%). Among the staff, nurses were more prone to attack. Also, males and females were attacked almost equally and distribution of the patients on the positive or negative history of

previous aggressive behaviour was similar. From Table 3, the most important probable cause of aggressive behaviour was responding to hallucinatory voices (34.9%). Other common causes include attempt to abscond from the hospital, impulsive behaviour, negative response to confrontational interview and violating ward rules.

The results (Table 4) also show that the aggressive patients were not significantly different from the non-aggressive ones on most of the socio-demographic and clinical variables that were examined. However, they were more likely to be unemployed than those who did not manifest aggressive behaviour ( $p < 0.01$ ). With respect to the psychiatric diagnoses, aggressive behaviour was observed in 15.5 percent of schizophrenic patients, 24.5 percent of those with manic illness and in 12.8% of patient who were on admission on account of substance use and comorbid psychiatric disorder. No case was reported among patients with other diagnoses which included schizoaffective disorder, other bipolar affective disorders, delirium, seizure disorder, dementia, mental retardation, unipolar depressive illness and acute psychotic disorders.

**Table 1: Socio demographic Characteristics of the Aggressive Patients (N=43).**

Variable	Frequency	Percentage
<b>Gender</b>		
Male	26	60.5
Female	17	39.5
<b>Religion</b>		
Christianity	29	67.4
Islam	7	16.3
Traditional	2	4.7
Others	5	11.6
<b>Marital Status</b>		
Single/Never married	26	60.5
Married	9	20.9
Divorced/Separated	8	18.6
<b>Education</b>		
Nil	4	9.3
Primary	5	11.6
Secondary	18	41.9
Tertiary	16	37.2
<b>Employment</b>		
Employed	13	30.2
Unemployed	30	69.8

**Table 2: Clinical Characteristics and Related Variables among the Aggressive Patients (N=43).**

Variable	Aggressive Patients (N=43)	
	Frequency	%
<b>Diagnosis</b>		
Schizophrenia	21	48.8
Affective (Mania)	12	27.9
Co-morbid Drug Use	10	22.3
<b>Number of Episodes</b>		
One	21	48.8
Two	11	25.6
Three	10	22.3
Five	1	2.3
<b>Time of Aggression</b>		
Morning/Afternoon	13	30.2
Evening/Night	30	69.8
<b>Day of Aggression</b>		
Week day	30	69.8
Weekend day	13	30.2
<b>Nature of Aggression</b>		
Verbal	13	30.2
Physical	16	37.2
Physical and verbal	14	32.6
<b>Target of Aggression</b>		
Living Object	39	90.7
Non-Living Object	3	7.0
Living and Non-Living	1	2.3
<b>Living object Attacked*</b>		
Staff	23	57.5
Non-staff	4	10.0
Co-patient	7	17.5
Staff and Relative	3	7.5
Staff and patient	3	7.5
<b>Staff Attacked*</b>		
Nurses	27	93.1
Doctors	2	6.9
<b>Sex of living target*</b>		
Male	19	47.5
Female	21	52.5
<b>Previous Episode of Aggression</b>		
Yes	20	46.5
No	23	53.5

\*Sum less than 43 because variable relates to a subgroup of total cohort.

**Table 3: Probable Causes of Aggressive Behaviour by the Patients.**

Variable	Frequency	Percentage
Hallucination	15	34.9
Clamouring for Discharge and Attempt to Abscond	8	18.6
Confrontational Interview	6	14.0
Impulsivity	6	14.0
Violating Ward Rules	4	9.3
Unmet Demands	2	4.7
Caught Smoking Cannabis	1	2.3
Power Outage	1	2.3

**Table 4: Comparison of Some Socio demographic and Clinical Variables between the Aggressive and Non-Aggressive Patients.**

Variable	Total number of patients (N)	Aggressive Patients Number (%)	Non-aggressive Patients Number (%)	X <sup>2</sup>	df	P
<b>Gender</b>						
Male	213	26(12.2)	187(87.8)	2.05	1	>0.05
Female	92	17(18.5)	75(81.5)			
<b>Age Group</b>						
<40 years	227	34(15.0)	193(85.0)	0.57	1	>0.05
>/40 years	78	9(11.5)	69(88.5)			
<b>Education</b>						
Nil/Primary	67	9(13.4)	58(86.6)	0.03	1	>0.05
Secondary/Tertiary	238	34(14.3)	204(85.7)			
<b>Employment</b>						
Employed	170	13(7.6)	157(92.8)	13.20	1	<0.01
Unemployed	135	30(22.2)	105(77.8)			
<b>Marital Status</b>						
Married	62	8(12.9)	54(87.1)			
Single/Separated	243	35(14.4)	208(85.6)	0.09	1	>0.05
<b>Diagnosis*</b>						
Schizophrenia	134	21(15.7)	113(84.3)	3.10	2	>0.05
Affective (mania)	49	12(24.5)	37(75.5)			
Comorbid Drug Use and Mental Disorder	78	10(12.8)	68(87.2)			

\*Sum less than total cohort (305) because 44 non-aggressive patients with other diagnoses were excluded.

## DISCUSSION

The proportion of psychiatric in-patients observed with aggressive or assaultative behaviour in our sample (13.8%) conforms to a previous report<sup>1</sup> and indicates the need for mental health professionals to be equipped with necessary skills to manage aggression among them. The data also indicate that most of the investigated socio-demographic variables could not be used to predict or suspect those who would be more likely to manifest aggressive behaviour. Only unemployment was observed to be significantly associated with aggressive behaviour in the sample. Unemployment is a potential cause of frustration, which in turn underlies the manifestation of aggressive behaviour, even among individuals not suffering from a mental disorder.

Schizophrenia was the commonest diagnosis among the aggressive patients. Many previous reports have established a link between schizophrenia and violent behaviour<sup>4,17</sup>. Certain manifestations of schizophrenia, such as the presence of delusions and hallucinations were observed to be mainly responsible for this link. Apart from manic illness, the other common diagnosis among the aggressive patients was comorbid substance use (majority being polydrug use in which one of the drugs was usually cannabis) and mental disorder. As stated in the Introduction section, several authors<sup>3,7,12,13</sup> have observed that a comorbid substance abuse is a risk

factor for violent behaviour among individuals with a mental disorder. From the results, patients with first episode of illness were more represented among the aggressive patients. This might be due to the fact that neuroleptization and chronicity among the 'old' ones had reduced their level of aggression to some extent. The aggressive outburst of the patients was more against the nursing staff. Long hours of contact with the patients, and frequent instructions given by the nurses could result in conflict between them and patients, especially when they have not gained insight into their problem. Hallucinations and impulsivity are two of the identified probable causes of aggressive behaviour among the sample. This observation is a reflection of the high rate of schizophrenia among the sample and suggests that schizophrenic patients with these symptoms should be given more intensive attention to prevent or contain aggressive behaviour. In addition, the other probable precipitants of aggressive behaviour appear important.

From the foregoing, it is important for health care providers (especially nurses) to be equipped with necessary skills in managing aggressive behaviour among psychiatric inpatients. Particularly, skill will be required in the interaction of staff with patients, and in interviewing them, especially those suffering from schizophrenia, manic disorder or comorbid cannabis abuse and psychosis. In addition, such patients who are unemployed, with active

hallucination and impulsivity, and who are clamouring for discharge, violating ward rules and making unrealistic demands should be suspected as potentially aggressive, and efforts should be made to prevent or contain aggression among them.

A limitation of this study is that diagnoses of psychiatric disorders were based on case note records, which are unreliable. Also, the number of patients observed with aggressive behaviour was rather small, making generalization of our findings difficult. Further studies should employ larger samples, which can be achieved by extending the duration of the study. Also, there is a need to further study aggressive behaviour among patients with mental disorders using diagnoses derived from clinical interview.

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