RESEARCH ARTICLES

Characteristics of patients with psychosis at Ndola Teaching Hospital Psychiatric Unit, Zambia

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Description of patients with psychosis is important in deciding on the best treatment to be offered to them. The objective of the study was to describe patients with psychosis at Ndola Central Hospital Psychiatric Unit, Zambia. Of the 699 patients who were seen and diagnosed with psychosis in a period of 12 months (01/01/14 to 31/12/14), records of 248 patients were considered in the study. However, 233 (94.0%) of 248 records were reviewed. Most of the patients were single (47.2%), of male gender (64.8%), unemployed (73.5%), attained secondary or higher level of education (70.3%) and from families made up of 5 or more members. Among males, 90.8% consumed alcohol compared to 33.3% of females (p<0.001). In relation to drug abuse, 54.3% of males smoked cannabis while none of the females smoked it. Among females, 28.0% of them were on HAART compared to 0.7% of males. Overall, alcohol use was very common (76.7%), followed by cannabis abuse (35.2%); then familial psychosis (27.6%) and lastly antiretroviral drug use (10.3%). Further studies are needed to establish associations between the common factors found in the current study and psychosis.

Introduction

Mental illnesses such as psychoses are attributable to many predisposing factors. Psychosis can either be primary or secondary. Schizophrenia is a form of primary psychosis [1]. Forms of primary psychosis include brief psychotic disorder, schizophrenia, schizoaffective disorder and depression with psychosis [2]. Secondary psychosis can develop when there is sudden variation in the hormone levels whether due to low or high specific human body hormones [3]. Secondary psychosis comprises the following categories: Traumatic brain injury; Autoimmune disorders; Congenital/cytogenetic disorders; Toxic/drug-induced disorders; Iatrogenic psychoses; Cerebrovascular disorders; Space-occupying intracranial disorders; Metabolic disorders; Dietary disorders; Sepsis/infectious diseases; Unknown cause/degenerative/demyelinating disorders;

Seizure disorders and Endocrine disorders [4]. Description of patients with psychosis is important in deciding on the best treatment to be offered to them. Hence, the objective of the study was to describe patients with psychosis at Ndola Teaching Hospital Psychiatric Unit, Zambia.

Table 1 Social demographics of patients with psychosis at Ndola Teaching Hospital, 2014

	Total	Male	Female	
Factor	n (%)	n (%)	n (%)	p value
Age				0.020
<30yrs	75(35.9)	58(41.7)	17(24.3)	
30+yrs	134(64.1)	81(58.3)	53(75.7)	
Marital Status				0.536
Single	42(47.2)	27(51.9)	15(40.5)	
Married	29(32.6)	16(30.8)	13(35.1)	
Divorced/Widowed	18(20.2)	9(17.3)	9(24.3)	
Gender				
Male	151(64.8)	-	-	-
Female	82((35.2)	-	-	
Employment				0.056
Employed	18(26.5)	15(35.7)	3(11.5)	
Unemployed	50(73.5)	27(64.3)	23(88.5)	
Education				1.000
Up to Primary	27(29.7)	16(30.2)	6(28.6)	
Secondary or Higher	64(70.3)	37(69.8)	15(71.5)	
Family Size				0.335
<5 Members	27(28.7)	15(25.4)	12(37.5)	
5+ Members	64(70.3)	44(74.6)	20(62.5)	

Methods

The site of this study was Ndola Teaching Hospital Psychiatric Unit (NTHPU). Ndola Central Hospital is the second highest hospital in Zambia. The study population consisted of patients that were seen and diagnosed with psychosis at NTHPU from 1st January to 31st December 2014.

This was a retrospective study.

A total of 248 out of 699 records for patients with psychosis was determined as the sample size using a prevalence of 50±5% because of unknown prevalence of study variables. About 1 in 3 systematic sampling method was used to select records for the study.

Data was obtained from hospital registers and patients' files and was computerized using Epi Data Version 3.1. Analysis was conducted using SPSS Version 16.0 for analysis. The Chi-squared test was used to determine associations of factors with gender. The cut off point for statistical significance was set at the 5% level.

Ethical considerations: The study was approved by the Copperbelt University, School of Medicine, Public Health Unit. Permission to conduct this research was given by Ndola Teaching Hospital management.

Results

Altogether, 233 (94.0%) out of 248 patient records with psychosis were reviewed. Table 1 describes factors related to gender. Of the factors in the table, only age was significantly associated with gender (p=0.020). Males tended to be younger than females at presentation with psychosis. Most of the patients were single (47.2%), of male gender (64.8%), unemployed (73.5%), attained secondary or higher level of education

Table 2 Distributions of alcohol and drug use by gender among patients at Ndola Teaching Hospital with Psychosis, 2014

	Total	Male	Female	
Factor	n (%)	n (%)	n (%)	p value
Alcohol				<0.001
Yes	122(76.7)	109(90.8)	13(33.3)	
No	37(23.3)	11(9.2)	26(66.7)	
Drugs				<0.001
Cannabis	82(35.2)	82(54.3)	0(0)	
HAART	24(10.3)	1(0.7)	23(28.0)	
Others	18(7.7)	8(5.3)	10(12.2)	
None	109(46.8)	60(39.7)	49(58.8)	

(70.3%) and from families made up of 5 or more members.

Table 2 makes description that drug use was significantly associated with gender. Among males, 90.8% consumed alcohol compared to 33.3% of females ($p<0.001$) with an overall alcohol use prevalence of 76.7%. In relation to drug abuse, 54.3% of males smoked cannabis while none of the females smoked it with an overall cannabis use prevalence of 35.2%. Among females, 28.0% of them were on HAART compared to 0.7% of males, giving an overall rate of 10.3% of patients who were on HAART. History of psychosis was not associated with gender ($p=0.864$). Overall, 27.6% of the patients had history of psychosis as shown in Table 3.

Discussion

In the current study, alcohol use was very common (76.7%), followed by cannabis abuse (35.2%); then familial psychosis (27.6%) and lastly antiretroviral drug use (10.3%). In a study [5] done in the Western Cape-South Africa, it was revealed that alcohol (27%) abuse was the highest abused substance hence, contributor to development of psychosis though its abuse is often times underestimated because it is a legal substance in many regions. Another study [6] done in Manchester-UK, demonstrated that alcohol (24%) abuse had a bearing on developing psychosis in general population. Both studies done in South Africa and Manchester-UK also had psychosis caused by alcohol on the top list.

Table 3 Family history of Psychosis by gender among patients with psychosis at Ndola Teaching Hospital, 2014

	Total	Male	Female	
Factor	n (%)	n (%)	n (%)	p value
History of Psychosis				0.864
Yes	21(27.6)	13(26.0)	8(30.8)	
No	55(72.4)	37(74.0)	18(69.2)	

The lower values in the two regions compared with the findings in this research according to the local setting, stresses the fact that there is probably more alcohol intake in this region than in some other regions. Cannabis abuse had the second highest frequency from alcohol use. This was expected due to the fact that cannabis is widely available in many regions. In a study [7] done in India, it was documented that individuals who abused cannabis (28%) and had a genetic predisposition to developing psychosis had 10 times chances higher of

developing psychosis than those who did not have genetic predisposition. The former explained the reason why cases of familial psychosis with third highest frequency in the current study, were encountered in this study as well. A cross-sectional study [8] done on the Australian population demonstrated that, even though alcohol and cannabis dependence had an association with developing psychosis, control of the abuse of these substances reduced markedly on the chances of developing psychosis.

Antiretroviral drug use had the lowest frequency of the cases of psychosis seen at Ndola Central Hospital Psychiatric Unit in 2014. This finding was not consistent with a study [9] done in the Germany outlined that about half of the patients on HAART having efavirenz developed psychosis. Other studies support the assertion that antiretroviral drugs such as efavirenz are neurotoxic and can cause psychotic illness [10,11]. This makes it difficult to distinguish between HIV induced psychosis and antiretroviral drugs induced psychosis especially in resource poor settings where proper diagnostic tools may be lacking.

Missing information is common in record reviews and this study was no exception to this limitation. We have no reason to believe that the study results may have been significantly affected by this limitation. In conclusion, there is need to establish associations between the common factors that have been identified in the current study and psychosis.

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