Data Article

Quantitative exploration of factors influencing psychotic disorder ailments in Nigeria

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Abstract

In this data article, records on demographic data, family problem issues, as well as results of medical tests from five major classes of psychotic disorder namely: bipolar; vascular dementia, minimal brain dysfunction; insomnia; and schizophrenia, were collected on 500 psychotic patients carefully selected from the pool of medical records of Yaba Psychiatric Hospital, Lagos, Nigeria, for the period of 5 years, between January 2010 and December 2014, were examined. X-squared Statistic was used to examine each of psychotic disorders to identify demographic (age, gender, religion, marital status, and occupation) and family issues (loss of parent, history of such ailment in the family (family status), divorce, head injury, and heredity of such ailment (genetic) factors that influence them. A clear description on each of these psychotic disorders (bipolar; vascular dementia, minimal brain dysfunction (MBD), insomnia and Schizophrenia) was considered separately using tables and bar diagrams. Data analysis results are as follows: firstly, 40.2%, of the 500 psychotic patients tested positive to bipolar, 40.6% to insomnia, 75.0% to schizophrenia, 43.6% to MBD and 69.2% to vascular dementia. Secondly, female patients were more prone to all the psychotic indicators than their male counterpart except in MBD. Thirdly, the oldest age group (> 60 years) is more prone to bipolar and insomnia ailments, while the mid age group (30 – 60 years) is prone to schizophrenia and vascular dementia, and the youngest group (< 30 years) is prone to MBD.
Lastly, the factors that influence the ailments are listed: **bipolar** (age, occupation, marital status, divorce, and spiritual consultation); **insomnia** (age, occupation, marital status, divorce, and spiritual consultation); **schizophrenia** (age, occupation, religion, marital status, hereditary, and divorce); **MBD** (gender, age, occupation, and marital status); and **vascular dementia** (history of the ailment and spiritual consultation). Bipolar and insomnia are influenced by the same set of factors, which implies that any patient having one is most likely to be at risk of having the other.

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### Specification Table

| Subject area               | More specific subject area             | Type of data       | How data was acquired          | Data format                                                                 |
|----------------------------|----------------------------------------|--------------------|--------------------------------|----------------------------------------------------------------------------|
| Medicine                   | Psychotic Disorder, Psychiatry, Neuroticism, Psychosis | Tables and figures | Unprocessed secondary data     | Processed as patient by patient records on Demographic variables, Family problems issues and Test results from five classes of Psychotic Disorder indicators |
| Experimental factors       |                                        |                    |                                | Data obtained from Yaba Psychiatric Hospital, Yaba, Lagos                  |
| Experimental features      |                                        |                    |                                | Computational Analysis: Contingency Tables, $X^2$ statistic for test of independence, Histogram, Bar diagram |
| Data source location       |                                        |                    |                                | Yaba Psychiatric Hospital, Yaba, Lagos State, Nigeria                     |
| Data accessibility         |                                        |                    |                                | All the data are in this data article as a supplementary data file         |
| Software                   |                                        |                    |                                | SPSS Statistical program and Microsoft Excel                              |

### Value of the Data

- The data on psychotic disorder patients could be useful for the government to monitor the mental health activities of the population, most especially the youth.
- The data will be useful in survival analysis and demographic studies.
- The data can be useful for educational purposes and health assessment studies.
- The data is useful in the study of epidemiology of psychiatry and public health.
- Several known models, for example, binary logistic regression, multinomial logistic regression, multiple regression and probability fit can be applied which provide alternatives to analysis with $X^2$ statistic.
- The data analysis results may fuel further investigations on the area for example the gender and age differences in the manifestation of the various ailments.
- Comparative analysis may be carried out using the data and other previous studies on psychotic disorder ailments.
- The prevalence and distribution of the psychotic disorder obtained from the data analysis can help in psychiatric counselling and management of psychotic episodes.
- The quality of the data could be improved by increasing the number of variables or modifying the inherent variables.
1. Data

The data for this paper were obtained from Yaba psychiatry hospital, Yaba, Lagos state, Nigeria, being the medical records of 500 psychotic patients for a period of five years between January 2010 and December 2014. The data are 16 variables classified as demographic variables (gender, age, marital status, occupation and religion); family problems/ issues (history of ailment in the family, loss of parents, family hereditary of the ailment, head injury, spiritual consultation, and divorce); and medical test result for five psychotic disorder indicators (bipolar, vascular dementia, minimal brain dysfunction, insomnia, and schizophrenia). The data can be accessed as Supplementary data.

The descriptions of the ailments are given below.

Definition

- Bipolar disorder: This is a form of brain disorder that causes unusual and uneven shifts in mood, energy and activity levels and the ability to effectively perform routine tasks. This can manifest as manic, hypomanic and depressive (mood) episodes.
- Insomnia: This is a problem of the brain being able to effectively coordinate sleep patterns resulting to long duration of sleeplessness and loss of sleep drive.
- Schizophrenia: This is a form of severe mental disorder that affects the thinking, feelings and behavioural ability of the person. The symptoms include: hallucinations, thought and movement disorders, delusions, reduced speaking, inconsistency in routine activities, reduced reasoning capability, and inattentiveness and so on.
- Minimal brain dysfunction (MBD): This is a neurodevelopmental disorder which is characterized by under control of emotions, activity and behavior and cognitive difficulties in learning and writing.
- Vascular dementia: This ailment bears close resemblance in symptoms with Alzheimer's disease. It is a gradual decline in cognitive capability due to obstructions to blood flow to the brain. Symptoms include: speech and vision impairment, confusion, anxiety and disorientation.

1.1. Age distribution of the psychotic patients

Statistical summary of the age distribution of psychotic patients is presented in Table 1. It can be seen that the average age of these patients is 37 years. The youngest and the oldest psychotic patients are 6 and 86 years old respectively.

Histogram for age distribution is presented in Fig. 1.

| Statistic               | Value   |
|------------------------|---------|
| Mean                   | 37.16   |
| Standard error of mean | 0.689   |
| Median                 | 34.00   |
| Mode                   | 34.00   |
| Standard deviation     | 15.401  |
| Skewness               | 0.495   |
| Standard error of skewness | 0.109 |
| Kurtosis               | -0.455  |
| Standard error of kurtosis | 0.218 |
| Minimum                | 6       |
| Maximum                | 86      |
| Lower quartile         | 24.00   |
| Upper quartile         | 46.75   |
It can be observed from Fig. 1 that the age distribution is almost normally distributed with mode and median the same (34 years), only mean (37 years) is slightly different. With the aid of Fig. 1, the age of the patients is classified into three different categories, namely: less than 30 years, between 30 and 60 years inclusive, and greater than 60 years.

1.2. The demographic variables of the psychotic patients

The detailed demographic variables of the psychotic patients investigated for the five disorders are summarized in Table 2.

![Histogram of age distribution of psychotic disorder patients in Yaba psychiatry hospital between 2010 and 2014.](image)

**Table 2**
Summary of demographic variables of the patients in relation to the five psychotic ailments the patients tested positive.

| Demographic Variable | Bipolar | Insomnia | Schizophrenia | MBD | Vascular dementia |
|----------------------|---------|----------|---------------|-----|------------------|
| Gender               |         |          |               |     |                  |
| Male                 | 85      | 87       | 203           | 140 | 161              |
| Female               | 116     | 116      | 222           | 78  | 185              |
| Age group            |         |          |               |     |                  |
| < 30                 | 42      | 44       | 173           | 104 | 125              |
| 30 – 60              | 76      | 76       | 204           | 102 | 154              |
| > 60                 | 83      | 83       | 48            | 12  | 67               |
| Religion             |         |          |               |     |                  |
| Christianity         | 82      | 84       | 193           | 98  | 148              |
| Islam                | 93      | 93       | 177           | 91  | 157              |
| Others               | 26      | 26       | 55            | 29  | 41               |
| Occupation           |         |          |               |     |                  |
| Artisan              | 53      | 56       | 131           | 57  | 100              |
| Civil Servant        | 44      | 43       | 62            | 22  | 49               |
| Force                | 6       | 6        | 21            | 14  | 14               |
| Retired              | 38      | 38       | 7             | 4   | 26               |
| Student              | 29      | 29       | 113           | 68  | 80               |
| Unemployed           | 31      | 31       | 91            | 53  | 77               |
| Marital status       |         |          |               |     |                  |
| Married              | 148     | 148      | 220           | 94  | 190              |
| Single               | 53      | 55       | 205           | 124 | 156              |
| Overall              | 201 (40.2%) | 203 (40.6%) | 425 (75.0%) | 218 (43.6%) | 346 (69.2%) |

It can be observed from Fig. 1 that the age distribution is almost normally distributed with mode and median the same (34 years), only mean (37 years) is slightly different. With the aid of Fig. 1, the age of the patients is classified into three different categories, namely: less than 30 years, between 30 and 60 years inclusive, and greater than 60 years.
From Table 2, it can be seen that 40.2% of the 500 psychotic patients tested positive to bipolar, 40.6% to insomnia, 75.0% to schizophrenia, 43.6% to MBD and 69.2% to vascular dementia. This implies that schizophrenia is the most incident ailment among the psychotic patients, followed by vascular dementia and others.

It can also be seen that female patients were more prone to all the indicators than their male counterpart except in MBD. However, on average 135 males out of a total of 233 male psychotic patients, which is 57.9% and 143 females out of a total of 267 females are tested positive which is 53.6%.

Bipolar disorder and insomnia are most prevalent in the oldest age group (> 60 years). Schizophrenia and vascular dementia are most prevalent in the mid age group (30–60 years) and MBD is most prevalent in the mid age group in the youngest group (< 30 years). In general, mental disorder is most prevalent in the mid age group and least in oldest age group.

No general statement is made as the sample size is small and inadequate to infer the overall psychotic population. The data is obtained from the patients and is not intended to attribute any disease incident or prevalence to any religion. Yaba Psychiatry hospital is one of several psychiatric hospitals in Nigeria.

All the five psychotic disorders are most prevalent in the artisan group and least in the force group. The pressure of marriage may be a reason why psychotic ailments are prevalent among the married patients and externalizing behavior which is more prevalent among the youths may be the reason why MBD is most prevalent among the single patients.

1.3. The family issues distribution of positive test results

The psychotic patients that tested positive to the five psychotic disorder ailments are classified according to their family issues/problems and are shown in Table 3. Each of the family problem issue’s variables are cross classified with number of those that were tested positive for the five psychotic disorder indicators.

1.4. Proportion of true positives

In addition, the proportions of those that are really positive for each of the family problem issues are presented in Table 4. That is, those that had the history of the ailment in their family, inherited the

| Table 3 |
|---|
| Summary of the five psychotic disorder ailments tested positive by family issues and presence of head injury. |
| Variable | Bipolar | Insomnia | Schizophrenia | MBD | Vascular dementia |
| History in family | No | 91 | 92 | 203 | 102 | 150 |
| | Yes | 110 | 111 | 222 | 116 | 196 |
| Heredity | No | 115 | 115 | 245 | 126 | 195 |
| | Yes | 86 | 88 | 180 | 92 | 151 |
| Loss of parent (s) | No | 85 | 85 | 175 | 95 | 140 |
| | Yes | 116 | 118 | 250 | 123 | 206 |
| Divorce | No | 164 | 166 | 384 | 194 | 309 |
| | Yes | 37 | 37 | 41 | 24 | 37 |
| Head Injury | No | 162 | 164 | 341 | 174 | 282 |
| | Yes | 39 | 39 | 84 | 44 | 64 |
| Spiritual consult | No | 49 | 50 | 134 | 67 | 45 |
| | Yes | 152 | 153 | 291 | 151 | 301 |
| Overall | 201 | 203 | 425 | 218 | 346 |
### Table 4
Summary of proportion of psychotic patients that have ‘YES’ option on any of the family problem issues and tested positive to the five psychotic disorder ailments.

| Demographic variables | Bipolar | Insomnia | Schizophrenia | MBD | Vascular dementia |
|-----------------------|---------|----------|---------------|-----|-------------------|
| History               | 0.547   | 0.547    | 0.522         | 0.532| 0.566             |
| Hereditary            | 0.428   | 0.433    | 0.424         | 0.422| 0.436             |
| Loss of parent(s)     | 0.577   | 0.581    | 0.588         | 0.564| 0.595             |
| Divorce               | 0.184   | 0.182    | 0.086         | 0.110| 0.107             |
| Head injury           | 0.194   | 0.192    | 0.198         | 0.202| 0.185             |
| Spiritual consult     | 0.756   | 0.754    | 0.685         | 0.693| 0.870             |

### Table 6
Summary of the $X^2$ estimates of five psychotic disorder indicators against demographic factors (with p-value in bracket).

| Demographic variables | Bipolar | Insomnia | Schizophrenia | MBD | Vascular dementia |
|-----------------------|---------|----------|---------------|-----|-------------------|
| Gender                | 2.511   | 1.924    | 1.545         | 48.225| 0.002             |
| Age group             | 89.619  | 86.573   | 160.892       | 59.768| 2.199             |
| Occupation            | 63.852  | 61.422   | 198.550       | 47.252| 9.504             |
| Religion              | 181.81  | 131.31   | 677.79        | 1140 | 1308              |
| Marital status        | 41.493  | 38.749   | 22.643        | 26.868| 0.756             |

* Significant at 5% level of significance.
ailment, lost their parents, divorced, had head injury or consulted spiritualist and at the same time tested positive on any of the five psychotic disorder ailments.

On the average, 54.3% were having history of the ailment in their family and tested positive for any of the five psychotic indicators, 42.9% inherited the ailment from their family and tested positive for any of the five psychotic indicators, 58.1% lost their parent(s) and tested positive for any of the five psychotic indicators, 13.4% were divorced and tested positive for any of the five psychotic indicators, 19.4% had head injury and tested positive for any of the five psychotic indicators, and 75.2% consulted spiritualist and tested positive for any of the five psychotic indicators.

2. Methods and materials

Several studies have been conducted on the psychotic disorder ailments. [1–28]. Similar data articles on medicine that applied statistical tools can be helpful, readers are refer to [29–40].
Contingency table is a rectangular table having $I$ rows for categories of $X$ and $J$ columns for categories of $Y$. The cells of the table represent the $IJ$ possible outcomes. In order to test for independent or association between the two categories $X$ and $Y$, we used $X$-squared statistic which is approximately Chi-squared distribution.

Table 5 presents contingency table for just five (5) different combinations out of fifty-five (55), of any of the five psychotic indicators and any one of the demographic variables (5 of them) or family problem issues (6 of them) stated in this paper.

Table 6, also presents the estimates of the $X^2$ statistic for each of the combinations in contingency Table 5. Figs. 2–6 present the bar diagram for each of the combinations in contingency Table 5.
Tables 6 and 7 present the summary $X^2$ statistic estimates for the five psychotic indicators, and the five demographic variables and six family problem issue indicators respectively with their p-values.

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Transparency document. Supplementary material

Transparency data associated with this article can be found in the online version at http://dx.doi.org/10.1016/j.dib.2017.07.046.

Appendix A. Supporting information

Supplementary data associated with this article can be found in the online version at http://dx.doi.org/10.1016/j.dib.2017.07.046.

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