



Perceived Causes of Mental Illness among Patients with Psychiatric Disorders in Kaduna State, North-Western Nigeria

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Abstract. Although it has been established that mentally ill individuals experience social stigma during the course of therapy, some studies suggest that perception about the illness can affect patients' readiness and willingness to seek and adhere to treatment regimen (Averous *et al.*, 2018 and Argungu *et al.*, 2018) This study aims to assess the perceived causes of mental illness among patients with psychiatric disorders in Kaduna state. Two objectives were stated: To assess the perceived causes of mental illness among patients with PD, find the relationship between socio-demographic/clinical Information and perceived causes of mental illness among patients with PD. A descriptive cross-sectional research designed was employed with quantitative data collection approach. A total of 325 patients with mental illness were recruited from Out-patients of the only 3 mental health institutions in Kaduna state namely; the Federal Neuropsychiatric Hospital Barnawa, Ahmadu Bello University Teaching Hospital and Barau Dikko teaching Hospital, Kaduna. Researcher administered questionnaire was used as the tool for data collection. Systematic sampling technique was employed to select the participants based on the inclusion and the exclusion criteria. A total of 291 questionnaires were finally analyzed (response rate of 89.5%) using SPSS version 23.0. The result revealed that the mean age of the participants is 36.5 years, majority of the participants are Hausa by ethnicity, literate and lives in the urban area. The majority of the participants perceived mental illness to be caused by Substance Abuse (87.7%), Brain malfunction (86.9%), Physical

injury to the brain (86.9%), Stress and overthinking (84.5%), Traumatic life event (80.4%) and evil spirit (73.8%). Relationship was found between perceived causes of mental illness and monthly income ($p=0.035$), perceived causes of mental illness and psychiatric diagnosis ($p=0.018$). Based on the findings of the study it was recommended that there is need for health care providers to do more in updating their knowledge as well as educating patients with mental illness on evidence-based risk factors and causes of mental disorders, media organizations were also encouraged to take part in public enlightenments on that.

Keywords: Perception, Causes of mental illness, Patients with mental illness

1. Introduction

The American Psychiatric Association (APA), in 2013 redefined mental disorders in the 5th edition of Diagnostic and Statistical Manual of Mental Disorders: DSM-V as a syndrome characterized by clinically significant disturbance in an individual's cognition, emotion regulation, or behavior that reflects a dysfunction in the psychological, biological, or developmental processes underlying mental functioning (APA, 2013). The 10th revision of international classification of Diseases: ICD-10 also contains similar definition.

In 2019, 1 in every 8 people, or about 970 million people around the world were living with a mental

disorder, with anxiety and depressive disorders the most common while schizophrenia affects approximately 24 million people or 1 in 300 people worldwide (Institute of Health Metrics and Evaluation, 2022). According to American Psychiatric Association (2018), nearly one in five (19 %) of adults in the United States experience some form of mental illness, one in 24 (4.1 %) has a serious mental illness, one in 12 (8.5 %) has a diagnosable substance use disorder (APA, 2018). In Nigeria, an estimated 20%–30% of our population is believed to suffer from mental disorders (Onyemelukwe, 2016). Considering that Nigeria has an estimated population of over 200 million, this number is very significant

It is established among mental health professionals that there is no sole cause of mental illness. The predominant view as of 2018 is that genetic, psychological, and environmental factors collectively referred to as Biopsychosocial causes or contribute to the development or progression of mental disorders (Arango, 2018).

The biopsychosocial model is usually interpreted as implying that biological, psychological, and social factors are coequal partners in the etiology of mental disorder (Kinderman, 2005). Biological factors include; genetics, prenatal damage, exposure to toxins, infections, substance abuse and brain defects or injuries. Environmental and psychological triggers complement one another resulting in emotional stress, which in turn activates a mental illness (Ahn et al., 2009). The psychological approach treats mental illness as if it were a sickness or abnormality in the mind or psyche (i.e., the soul) (Scheid and Brown, 2010). Stresses and strains related to socioeconomic status (SES) or social class have been linked to the occurrence of major mental disorders, with a lower or more insecure educational, occupational, economic or social position generally linked to more mental disorders (Muntaner et al., 2004). Theorists of child development have argued that persistent poverty leads to high levels of psychopathology and poor self-concepts (McLeod et al, 1993).

Public perceptions of mental illness vary widely across different cultures worldwide, and there exist widespread negative beliefs, attitudes, stereotypes and myths concerning mental illness and the mentally ill in different communities (Arnault, 2009). A World Health Organization report states that the beliefs and attitudes held by members of a community may influence many facets of mental health care (WHO, 2001).

In Ancient Mesopotamia, diseases and mental disorders were believed to be caused by specific deities (Black and Green, 1992). In ancient Hindu, Mental disorders were generally thought to reflect abstract metaphysical entities, supernatural agents, sorcery and witchcraft (Bhugra, 1992). According to Chinese thought, five stages or elements comprised the conditions of imbalance between Yin and yang. Mental illness, according to the Chinese perspective is thus considered as an imbalance of the yin and yang because optimum health arises from balance with nature (Lam et al., 2010).

Different regional studies reveal different views (Choudhry et al., 2016). Pacific Islanders believe mental illness is as a result of family conflicts (Douglas and Fujimoto, 1995). In a study performed in Myanmar, a Southeast Asian country, economic, family and domestic issues, excessive worry, spirits and trauma are perceived to be the causes of mental illness (Fellmeth et al., 2015). Another study conducted in India revealed almost half (45.4%) of the patients believed in a supernatural/religious aetiology for their illness. Among the specific causes, planetary influences (13.5%) and God's will (30.8%) were the most common supernatural and religious cause, respectively (Grover et al., 2016). This view is not only limited to Asians; some western countries hold this view. A study conducted in Switzerland, with psychiatric patients, revealed that demons were considered the main cause of mental health problems (Pfeifer, 1999).

A study performed among relatives of people with mental illness in the predominant Muslim country of Saudi Arabia has revealed that evil eye followed by personal weakness are believed to be the main causes of mental illness, males more than females attributed mental illness to personal weakness (Elbur et al., 2014). Evidences from rural Cameroon shows that Christians (22.7%) had a greater tendency to associate epilepsy to witchcraft compared to Muslims (13%) (Bain et al., 2013).

Benti et al (2016) reported supernatural causes like evil spirit, God's punishment, and witchcraft as the perceived causes of mental illness among residents of a rural town in Ethiopia.

In Nigeria despite cultural and ethnic differences various studies have shown similar beliefs about the causes of mental illness. A study performed in the South Eastern Nigeria among native Igbo found mixed endorsements of the supernatural, biological and psychosocial causal explanations with supernatural causations being significantly more

endorsed (Ikwuka, 2016). Also, in Ekom Iman community in Akwa Ibom State in the South-South region of Nigeria, Jombo, Iyanam and Idung (2019) reported many believed psychoactive substance abuse, brain illnesses/trauma and supernatural factors were etiologic to mental illness.

Adewuya and Makanjuola (2008) conducted a study on lay beliefs regarding the causes of mental illness in south-western Nigeria and found out Beliefs in supernatural factors and the misuse of psychoactive substances were the most prevalent. A similar study conducted by Murtala *et al* (2020) revealed that brain disease (16.20%), domestic violence (14.52%), hereditary (13.13%), evil spirit (12.85%) and trauma (12.01%) were identified as the major causes of mental illness among adults in Birnin Kudu metropolis, Jigawa state, North western Nigeria.

1.1 Problem Statement

Mental health disorders are common, global burden of diseases report 2010 stated that, mental and substance abuse disorders accounted for 7.4% of diseases burden. This is more than HIV/AIDS, tuberculosis, diabetes, or transport injury (Murray *et al.*, 2012). The increase in the prevalence of mental health illness is alarming; it is unarguably one of the major challenges of our time

There are different widely held beliefs on the causes of mental illness all over the world. Choudhry and his colleagues (2016), are of the opinion that attitudes and beliefs of lay individuals about mental illness are shaped by personal knowledge about mental illness, knowing and interacting with someone living with mental illness, and cultural stereotypes.

Over many years of working and interacting with patients living with mental illness in different mental health institutions in Nigeria, the researchers observed that most of the patients had poor perception on the causes of mental illness. Furthermore, it was understood by the researchers that cultural beliefs as well as perceptions of patients on the causes of mental illness are often neglected in planning and delivery of care in mental health institutions in Nigeria in which mental health institutions in Kaduna State are inclusive.

The researchers noted that public and individual's perception on the causes of mental illness often influence treatment of people living with mental illness. It encourages hopelessness on the outcome of the treatment among the patients as well as giving up on the medical treatment as a whole. This study aims to investigate the perceived causes of mental illness

among patients with psychiatric disorders in Kaduna state, Northwestern Nigeria.

1.2 Objectives of the study

- Assess the perceived causes of mental illness among patients with mental illness in Kaduna State.
- Find the relationship between socio-demographic/clinical information of patients and the perceived causes of mental illness among patients with mental illness in Kaduna State, Nigeria.

2. Methodology

Because the research aimed to assess the perceived causes of mental illness among patients with psychiatric disorder, Descriptive Cross-sectional research design, with quantitative data collection approach was employed. The study was conducted at the only 3 hospitals that provides psychiatric services in Kaduna state, namely the Federal Neuropsychiatric Hospital Barnawa, Ahmadu Bello University Teaching Hospital and Barau Dikko Teaching Hospital. Kaduna state is located in the North-west geo political zone of Nigeria. Systematic sampling was used to select each respondent, using outpatient's registers as the sampling frame. Cochran's formula (WG Cochran, 1977) was used to calculate the sample size, attrition rate of 10% was added, bringing the sample size to 325. The number was proportionally distributed based on the population of patients in the 3 participating facilities as follows; 248 patients were recruited from the Federal Neuropsychiatric Hospital Kaduna, 75 patients were recruited from Ahmadu Bello University Teaching Hospital, while 2 patients were recruited from Barau Dikko Teaching Hospital.

Those included in the study are: A) All patients with mental illness attending psychiatric out-patients units in hospitals in Kaduna state. B) Patients with mental illness aged 18 years and above. C) Patients that are diagnosed with mental illness for at least 3 months at the time of the study. D) Patients with full insight so that they will be able to respond to the items on the questionnaire. Insight was assessed using a method applied by a study conducted among patients with psychiatric disorder in the North-eastern Nigeria. Three (3) dichotomous questions were asked, a score of No was assigned zero while the score of Yes was assigned 1 for any item answered; Do you think that you require a treatment? And, do you think you require a treatment to stay well? And, do you think you require your medication to stay well? A perfect score of 3 is regarded as full insight (Ibrahim et al,

2015). Only the patients with full insight were included in this study. While all psychiatric in-patients and those with poor command of English or Hausa language were excluded from this study

The data collection period for this research was from 1st November to 21st January 2021 (11 weeks).

2.1 Instrument for data collection

A questionnaire was used as the instruments for data collection. The questionnaire was obtained from the similar studies done in Nigeria, and modified for the purpose of this research.

2.2 Section “A” Socio-demographic/Clinical Information

Socio demographic and clinical information of the respondents which was developed by the researcher, it contains information like psychiatric diagnosis of the patient, age, marital status, level of education among others.

Section “B” Perception on the causes of mental illness questionnaire

It is a 15 items 4 points likert scale questionnaire. It was designed for the respondents to indicate their level of agreement or disagreement under 3 subheadings as follows; Psychosocial/Environmental causes, Biological/Genetic causes, Spiritual/Supernatural causes. The questionnaire was adapted from similar research performed in the North Western Nigeria by Kabir et al (2004).

2.3 Scoring System

The responses were categorized in to 2 dichotomous responses. With strongly agreed and agreed been represented by YES while strongly disagreed and disagreed been represented by NO. The responses were presented in frequency and percentage to show how the respondents perceived the causes of mental illness.

2.4 Data collection and analysis

Ethical approval was sought for and was granted to the researchers by the research ethical committees of the Federal Neuropsychiatric Hospital Barnawa Kaduna, Ahmadu Bello University Teaching Hospital (ABUTHZ/HREC/F42/2021) and Barau Dikko

Teaching Hospital Kaduna (BDTH/MAC/GEN/134/VOL/1).

The researchers trained five (5) research assistant in the Federal Neuropsychiatric Hospital Barnawa, Kaduna. One (1) of the research assistants is a lecturer with the school of post basic psychiatric Nursing of the Federal Neuropsychiatric Hospital Barnawa, Kaduna while the rest are students of the same institution. One (1) Nursing student from the department of Nursing Ahmadu Bello University Zaria was recruited for data collection in Ahmadu Bello University Teaching Hospital, Zaria, while in Barau Dikko Teaching Hospital, the data collection was done by the researchers. The research assistants were provided with the Hausa version of the questionnaire, in order to use in translation of the item of the questionnaire to the respondents. Half day training was provided to the research assistants on the objectives of the research, more details on the items of the questionnaire, the inclusion and the exclusion criteria, sampling technique as well as process of obtaining informed consent. The researchers were responsible for carrying out the insight assessment while the research assistant administered the questionnaire as well as obtaining the informed consent from the participants.

The data obtained from the questionnaire was coded and entered into the computer coding sheets. The data was processed using the statistical package for social science (SPSS, version 23.0). Appropriate descriptive statistical techniques including frequency tables, percentages and inferential statistics (Chi square) were applied.

3. Results

The sample size of this study is 325 patients but 291 were analyzed which signifies response rate of 89.5%. The attrition rate is attributed to withdrawal of consent midway in to the data collection by some of the respondents (n=12), inability of the patients to answer more than 5 items in the questionnaire (n=16), and missing questionnaires (n=6).

The questionnaires were analyzed and presented in the form of descriptive and inferential statistics. The findings were organized based on the objectives of this research. The presentation starts with the socio-demographic/clinical information, followed by the perceived causes of mental illness.

Table 1: Distribution of the patients according to socio-demographic/ clinical Information. N=285

Variables	F	(%)
Gender		
Male	144	49.5
Female	147	50.5
Age:		
Mean: 36.1 years, Range: from 18 to 80 years. SD: 12.62		
Place of residence (locality)		
Local	103	35.4
Urban	135	46.4
Semi Urban	53	18.2
Religion		
Christianity	98	33.7
Islam	193	66.3
Ethnicity		
Hausa	191	65.6
Igbo	15	5.2
Yoruba	27	9.3
Others	58	19.9
Level of Education		
Primary Education	51	17.5
Secondary Education	99	34
Tertiary Education	86	29.6
No Formal Education	55	18.9
Marital Status		
Single	110	37.8
Married	151	51.9
Separated	30	10.3
Average Monthly Income		
Less than 30,000	89	30.6
More than 30,000	56	19.2
No Income	146	50.2

Results in table 1 shows that 50.5% of the respondents are females, the mean age of the respondents is 36.1 years. It also shows that 46.4% of the respondents live in the urban area while 35.4 percent of the respondents and 18.2% of the respondents live in the rural and urban areas respectively.

The table shows that 66.3% of the respondents are Muslim while 33.7% are Christians, majority of the respondents are Hausa by ethnicity followed by other minority ethnic groups then Yoruba and Igbo. It shows that 17.5% have primary education, 34% of the respondents have attained secondary education, 29.6% tertiary education while 18.9% have no formal education., majority of the respondents are married (51.9%). Half of the respondents 50.6 have no income at all.

Table 2: Distribution of the patients according to their psychiatric diagnosis

N=291

Variables	(F)	(%)
Schizophrenia	74	25.0%
Psychoactive Substance Use Disorders	47	16.2%
Bipolar Disorder	42	14.7%
Psychosis	36	14.4%
Depressive Disorder	35	12.0%
Psychosomatic Seizures	20	6.9%
Puerperal Psychosis	17	5.8%
Obsessive Compulsive Disorder	13	4.5%
Anxiety Disorder	7	2.4%

Table 2 shows that 25% of the respondents were diagnosed with schizophrenia, 16.2% psychoactive substance use disorders, 14.7% bipolar disorder, 14.4% psychosis, 12.0% depressive disorder, 6.9% psychosomatic seizures, 5.8% puerperal psychosis, 4.5% obsessive compulsive disorder, and 2.4% anxiety disorder.

Table 3: Distribution of the patients according to their Perceived causes of mental Illness. N=291

Variables	YES		NO	
	F	%	F	%
Psychosocial and Environmental Causes				
Caused by Stress and Overthinking	236	84.5%	45	15.5%
Caused by Traumatic Life Event	234	80.4%	57	19.6%
Caused by Problems From Childhood	202	68.9%	89	31.1%
Caused by Poverty	190	65.3%	101	34.7%
Caused by Lack of Social Support	127	64.3%	104	35.7%
Biological and Genetic Causes				
By Drug Misuse	254	87.3%	37	12.7%
By Physical Injury to the Brain	253	86.9%	38	13.1%
By Brain Malfunctions	253	86.9%	38	13.1%
Is Inherited	197	67.7%	94	32.3%
Caused by Viral and Bacterial Infection	147	50.5%	144	49.5%
Spiritual and Supernatural Causes				
By Evil Spirit	215	73.8%	76	26.2%
By Witchcraft	259	60.5%	115	39.5%
By Magic	155	53.3%	136	46.7%
By Punishment from God	136	46.7%	155	53.3%
By Blessing from God	126	43.3%	165	56.7%

Table 3 Shows that the respondents endorsed psychosocial and environmental factors as follows; 84.5% of the respondents perceived mental illness to be caused by Stress and Overthinking, 80.4% of the respondents perceived traumatic life event as the cause of mental illness, 68.9% Caused by Problems From Childhood. Based on the biological and genetic causes 67.7% perceived mental illness to be Inherited, 65.3% Caused by Poverty, 64.3% Caused by Lack of Social Support, 50.5% Caused by Viral and Bacterial Infection, 86.9% By Physical Injury to the Brain, 86.9% By Brain Malfunctions, 87.3% By Drug Misuse. On the spiritual and supernatural causes 53.3% perceived mental illness to be caused by magic, 73.8% By Evil Spirit, 60.5% by witchcraft, 43.3% by blessing from God, 46.7% by punishment from God.

Inferential Statistics

Table 4: Relationship between the perceived causes of mental illness and socio-demographic/clinical information of the patients with mental illness in Kaduna state.

N=291

Perception	Chi-square	p-value
Socio-demographic/clinical information		
Gender	34.758	0.480
Age	1512.795	0.959
Place of residence	77.584	0.250
Religion	37.870	0.340
Tribe	94.780	0.764
Level of Education	103.404	0.526
Occupation	94.649	0.756
Marital Status	70.051	0.476
Monthly Income	92.849	0.035*
Psychiatric diagnosis	369.612	0.018*

P<0.05

Table 4 shows that there is a statistically significant relationship between perceived causes of mental illness and monthly income. It also shows a statistically significant relationship between the perceived causes of mental illness and psychiatric diagnosis.

4. Discussion

The findings of the study revealed that the study is gender balanced with almost equal gender distribution. This may be connected to psychiatric diagnosis of the respondents with female having more prevalent of depression (Abate, 2013) and mood disorders (Burrone et al, 2020) while males having more prevalent of substance (Fentaw, Fenta and Biresaw, 2022) and schizophrenia (Chukwujekwu, 2019). The median age of the respondents is 36.3 years, with 18 been the age of the youngest respondent and 80 been the age of the oldest respondent. This shows that majority of patients with mental illness in Kaduna state are within the most productive age of their lives. This finding is supported by a study conducted by Nwoga et al (2017) in which the mean age of 36.5 was reported among patients with mental illness in the neighbouring Jos, Plateau state Nigeria. This finding has led to another finding of this study that the majority of the participants of this study earn less than the Nigeria's minimum wage of NGN30,000 or have no income at all. This may be connected to the negative effect of mental illness in their professional and occupational lives. The negative impact as shown has affected the income and financial wellbeing of many families.

Majority of the respondents are Hausa followed by 23 minor tribes who are dominant in southern Kaduna and middle belt states of Nigeria. The higher prevalence of Hausa tribe may not be unconnected with the high population of Hausa people living in Kaduna and other neighbouring states.

In terms of educational attainment this study found that 30.2% of the respondents have tertiary education, 34% have secondary education, and 17.2% have primary education while 18.2% have no formal education. This is similar to the findings of Balarbe, (2015) in which Tertiary education (34.7%), secondary education (21.5%), primary education (13.5) and no formal education (12.5) among schizophrenic patients in tertiary hospitals in Kaduna state was reported. From the above findings of this study, it should be noted that, the formal literacy rate is 80.8% among patients with mental illness in Kaduna state. The literacy rate finding is significantly higher than the Nigeria's literacy rate, in which national average of 62% was reported by the U as at 2018 (World Bank, 2021). This has shown that majority of people living with mental illness are educated and can contribute to the development of the society.

More than half of the respondents are married, and 38.6% of the respondents are single while 9.5% of the respondents are separated due to divorce, death of spouse or separated because of the difficulties related to mental illness. Mojtabai et al., (2017) reported that individuals with common mental disorders have greater risk of marital dissolution, and are less likely to enter new marriages

In terms of the psychiatric diagnosis of the respondents psychiatric of the respondents (26%) are schizophrenic, followed by substance use disorders with 16.5%, while 14.7% bipolar disorder, 12.6% psychosis followed by depressive disorder. The findings are similar to the findings of the study conducted in the neighbouring Jos, Plateau state, where 28.2% of the respondents were schizophrenic, bipolar disorder 26.7%, 21.5% depressive disorder, drug related cases 11.3% and anxiety disorder 1.5% (Nwoga et al., 2017).

The findings of this study revealed that majority of respondents endorsed Drug misuse as the major cause of mental illness, followed by physical injury to the brain with the same endorsement as brain malfunction. Stress and overthinking was ranked 4th, followed by traumatic life event. Evil spirit and inheritance also received a major endorsement by the respondents. The findings of this study in which drug misuse is perceived to be the major cause of mental illness is in agreement with the findings of Kabir et al (2004) in which Drug misuse including alcohol, cannabis, and other street drugs was identified as a major cause of mental illness, in a rural community in North western Nigeria. Johnson and Benso, (2017) also conducted a study in south southern Nigeria in which the findings of this study are supported by revealing the perceived causes of mental illness to be substance abuse, followed by brain diseases and traumatic events. In another perspective Yar'Zever (2017) assessed 266 patient's relatives' beliefs about causes of mental illness in Kano, North Western Nigeria and reported (49.6%) of the subjects thought that evil spirit was the major cause of mental illness, followed by personal weakness (47.4%). Another study conducted in the neighbouring Plateau state is also not in agreement with the findings of this study, by revealing that 88(45.1%) of the participants attributed their illness to spiritual causes, 48(24.6%) to medical causes, 19(9.7%) as due to frustration in life while 19(9.7%) rationalized it as the will of God (Nwoga et al., 2017). Okpalauwaekwe, Mela and Oji (2017) systematically reviewed 25 similar literatures to assess the knowledge and attitude toward mental illness by Nigerians. The finding shows some cross-cultural variations, however, still similar in outcomes.

Accordingly, most common knowledge of causes of mental illness observed in scoping articles were supernatural causes including magic, witchcrafts, sorcery, and divine punishments. Majority 88(45.1%) of the participants attributed their illness to spiritual causes, 48(24.6%) to medical causes, 19(9.7%) as due to frustration in life while 19(9.7%) rationalized it as the

A statistical significant relationship was found between the perceptions of patients on the causes of mental illness and monthly income. This may not be unconnected with the status of the respondents within the society, despite that the higher number of the participants lives within the urban area, majority of the respond either have no income at all or lives below the Nigeria's minimum wage.

A statistical significant relationship was also found between perception of patients on the causes of mental illness and psychiatric diagnosis. This shows that psychiatric diagnosis may positively or negatively affects patient's perception on the causes of mental illness. This may also be connected with the level of insight associated with different mental disorders

5. Conclusion

Based on the findings of this study, the following conclusions were made:

- The majority of the participants perceived mental illness to be caused by Substance Abuse (87.7%), Brain malfunction (86.9%), Physical injury to the brain (86.9%), Stress and overthinking (84.5%), Traumatic life event (80.4%) and evil spirit (73.8%).
- There is a relationship between perceived causes of mental illness and monthly income ($p=0.035$),
- There is a relationship between perceived causes of mental illness and psychiatric diagnosis ($p=0.018$)

6. Recommendations

Based on the findings of this study, it is recommended that:

- The high formal literacy rate among the respondents has shown that, people living with mental illness are capable of contributing in policy formulation. Therefore, they should be included in mental health policy formulation, this will help in

providing sound policies that will assist in treatment and care of people living with mental illness.

- There is need for health care providers to do more in updating their knowledge as well as educating patients with mental illness on evidence-based risk factors and causes of mental disorders. Media organisation are also encouraged to take part in public enlightenments on that.

References

- Abate, Kalkidan Hassen. "Gender disparity in prevalence of depression among patient population: a systematic review." *Ethiopian Journal of Health Sciences* 23.3 (2013): 283-288.
- Adewuya, A. O., & Makanjuola, R. O. (2008). Lay beliefs regarding causes of mental illness in Nigeria: Pattern and Correlates. *Social Psychiatry and Psychiatric Epidemiology*, 43, 336-341.
- Ahn, W. K., Proctor, C. C., & Flanagan, E. H. (2009). Mental Health Clinicians' Beliefs About the Biological, Psychological, and Environmental Bases of Mental Disorders. *Cognitive science*, 33(2), 147–182. <https://doi.org/10.1111/j.1551-6709.2009.01008.x>
- American Psychiatric Association (2018). <https://www.psychiatry.org/patients-families/what-is-mental-illness>. Accessed February 2020
- Arango, Celso; Díaz-Caneja, Covadonga M; McGorry, Patrick D; Rapoport, Judith; Sommer, Iris E; Vorstman, Jacob A; McDaid, David; Marín, Oscar; Serrano-Drozdzowskyj, Elena; Freedman, Robert; Carpenter, William (2018). "Preventive strategies for mental health" (PDF). *The Lancet Psychiatry*. 5 (7): 591–604.
- Argungu Musa Zulkiflu, Lawali Yakubu, Bawa Nasiru Shagari, Auwal Muhammad, Sani Muhammad Abdurrahman, Suleiman Abdurrahman, and Ahmed Muhammed Maryam (2018) "Patients' Perception on the causes of Mental Illness at Zauru General Hospital, Kebbi state, Nigeria. *International Journal of Nursing and Medical Science*; 7 (2), 811-830
- Bain, L. E., Awah, P. K., Takougang, I., Sigal, Y., & Ajime, T. T. (2013). Public awareness, knowledge and practice relating to epilepsy amongst adult residents in rural Cameroon-

- case study of the Fundong health district. *Pan African medical journal*, 14(1).
- Balarbe., F. (2017). Factors affecting treatment of schizophrenic patients in tertiary health care centres in Kaduna State(unpublished Msc thesis). Ahmadu Bello University Zaria.
- Benti, M., Ebrahim, J., Awoke, T., Yohannis, Z., & Bedaso, A. (2016). Community perception towards mental illness among residents of Gimbi town, Western Ethiopia. *Psychiatry Journal*, 2016.
- Bhugra, D. (1992). Psychiatry in ancient Indian texts: A Review. *History of Psychiatry*, 3(10), 167-186.
- Black, J., & Green, A. (1992). Gods, demons and symbols. *Ancient Mesopotamia*,(London, 1998), 108-109.
- Burrone, M.S.; Alvarado, R.; Colantonio, L.D.; Enders, J.E. (2020). "revalence of Mood and Anxiety Disorders Among Adults Seeking Care in Primary Healthcare Centers in Cordoba, Argentin". *Frontiers in Psychiatry* 11
- Chukwujekwu CD (2019) Prevalence, Patterns and Correlates of Schizophrenia among Out-Patient Attendees at Madonna University Teaching Hospital, Elele: A 3-Year Review. *Clin Psychiatry Vol.5 No.1:2*
- Douglas, K. C., & Fujimoto, D. (1995). Asian Pacific elders: implications for health care providers. *Clinics in Geriatric Medicine*, 11(1), 69-82.
- Elbur, A. I., Albarraq, A. A., Yousif, M. A., Abdallah, M. A., & Aldeeb, I. D. (2014). Relatives' perception on mental illnesses, services and treatment, Taif, Saudi Arabia. *WJ Pharm Pharm Sci*, 3(2), 969-980.
- Fellmeth, G., Plugge, E., Paw, M. K., Charunwatthana, P., Nosten, F., & McGready, R. (2015). Pregnant migrant and refugee women's perceptions of mental illness on the Thai-Myanmar border: A Qualitative Study. *BMC pregnancy and Childbirth*, 15(1), 1
- Fentaw, K. D., Fenta, S. M., & Biresaw, H. B. (2022). Prevalence and Associated Factors of Substance Use Male Population in East African Countries: A Multilevel Analysis of Recent Demographic and Health Surveys From 2015 to 2019. *Substance abuse: research and treatment*, 16, 11782218221101011. <https://doi.org/10.1177/11782218221101011>
- Grover, S., Hazari, N., Aneja, J., Chakrabarti, S., & Avasthi, A. (2016). Influence of religion and supernatural beliefs on clinical manifestation and treatment practices in patients with bipolar disorder. *Nordic Journal of Psychiatry*, 70(6), 442-449.
- Ikwuka, U. (2016). Perceptions of mental illness in south-eastern Nigeria: causal beliefs, attitudes, help-seeking pathways and perceived barriers to help-seeking.
- Institute of Health Metrics and Evaluation. Global Health Data Exchange (GHDx), (<https://vizhub.healthdata.org/gbd-results/>, accessed 27 December 2022)
- Jombo, H. E., Idung, A. U., & Iyanam, V. E. (2019). Knowledge, Attitudes and Perceptions about Mental Illness in Ekom Iman Community in Akwa Ibom State, South-South Nigeria. *Asian Journal of Medicine and Health*, 1-9.
- Kabir, M., Iiyasu, Z., Abubakar, I., & Aliyu, M. (2004). Perception and beliefs about mental illness among adults in Karfi village, Northern Nigeria. *BMC International Health and Human Rights*, 4, 3 - 3.
- Kinderman, P. (2005). A psychological model of mental disorder. *Harvard Review of Psychiatry*, 13(4), 206-217.
- Lam, C. S., Tsang, H. W., Corrigan, P. W., Lee, Y. T., Angell, B., Shi, K., ... & Larson, J. E. (2010). Chinese Lay Theory and Mental Illness Stigma: Implications for Research and Practices. *Journal of Rehabilitation*, 76(1).
- McLeod, J., & Shanahan, M. (1993). Poverty, Parenting, and Children's Mental Health. *American Sociological Review*, 58(3), 351-366. doi:10.2307/2095905
- Mojtabai, R., Stuart, E. A., Hwang, I., Eaton, W. W., Sampson, N., & Kessler, R. C. (2017). Long-term effects of mental disorders on marital outcomes in the National Comorbidity Survey ten-year follow-up. *Social psychiatry and psychiatric epidemiology*, 52(10), 1217-1226. <https://doi.org/10.1007/s00127-017-1373-1>
- Muntaner, C., Eaton, W. W., Miech, R., & O'campo, P. (2004). Socioeconomic position and major mental disorders. *Epidemiologic Reviews*, 26(1), 53-62.
- Murray CJL, Vos T, Lozano R, Naghavi M, Flaxman AD, et al. (2012) Disability adjusted life years (DALYs) for 291 diseases and injuries in 21 regions, 1990-2010: A systematic analysis for the global burden of disease study 2010. *Lancet* 380: 2197-2223
- Murtala H.H. Umar A.A. Kamilu A. Ibrahim U.M. Anyebe E.E. Suleiman A.D. Yalwa T. (2020) Perception and beliefs about mental illness among adults in Birnin Kudu

- Metropolis Jigawa State. *IFE Psychologia : An International Journal* Vol. 28, No. 2
- Nieuwsma JA, Pepper CM, Maack DJ, Birgenheir DG. (2011) Indigenous perspectives on depression in rural regions of India and the United States. *Transcultural Psychiatry*. 48(5):539-568.
doi:10.1177/1363461511419274
- Nwoga, C. N., Agbo, P. E., Davou, F. J., Agbir, T. M., & Audu, M. D. (2017). Medication adherence among psychiatry out patients in Jos University Teaching hospital. *Jos Journal of Medicine*, 11(1), 31-34.
- Nwoga, C. N., Agbo, P. E., Davou, F. J., Agbir, T. M., & Audu, M. D. (2017). Medication adherence among psychiatry out patients in Jos University Teaching hospital. *Jos Journal of Medicine*, 11(1), 31-34.
- Okpalauwaekwe, U., Mela, M., & Oji, C. (2017). Knowledge of and attitude to mental illnesses in Nigeria: a scoping review. *Integr J Glob Health*, 1(1), 5.
- Onyemelukwe C (2016). Stigma and mental health in Nigeria: Some suggestions for law reform. *J Law Policy Glob*;55:63-8
- Pfeifer, S. (1999). Demonic attributions in nondelusional disorders. *Psychopathology*, 32(5), 252-259.
- Saint Arnault, D. (2009). Cultural determinants of help seeking: A model for research and practice. *Research and Theory for Nursing Practice*, 23(4), 259-278.
- Scheid, T., & Brown, T. (2009). A Handbook for the Study of Mental Health Second Edition: Social Contexts, Theories, and Systems. In T. Scheid & T. Brown (Eds.), A Handbook for the Study of Mental Health: Social Contexts, Theories, and Systems (p. Iii). *Cambridge: Cambridge University Press*
- World Bank.(n.d). Literacy rate adult percentage of age 15 and above, Nigeria. Retrieved from <https://data.worldbank.org/indicator/SE.AD.T.LITR.ZS?locations=NG>.
- Zever, I.S. (2017). Assessment of Relatives Beliefs and Attitude on Mental Illness and Treatment in Kano, Nigeria. *Annals of Medical and Health Sciences Research*, 7.