

# Causal attribution of mental illness in south-eastern Nigeria

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## Abstract

**Background:** Understanding of mental illness in sub-Saharan Africa has remained under-researched in spite of the high and increasing neuropsychiatric burden of disease in the region.

**Aims:** This study investigated the causal beliefs that the Igbo people of south-eastern Nigeria hold about schizophrenia, with a view to establishing the extent to which the population makes psychosocial, biological and supernatural attributions.

**Method:** Multi-stage sampling was used to select participants ( $N = 200$ ) to which questionnaires were administered.

**Results:** Mean comparison of the three causal models revealed a significant endorsement of supernatural causation. Logistic regressions revealed significant contributions of old age and female gender to supernatural attribution; old age, high education and Catholic religious denomination to psychosocial attributions; and high education to biological attributions.

**Conclusions:** It is hoped that the findings would enlighten, augment literature and enhance mental health care service delivery.

## Keywords

Attribution, psychosocial, biological, supernatural, biopsychosocial

## Introduction

Mental disorders are among the most prevalent conditions impacting on health both in the developed and developing countries. The Global Burden of Disease study by the World Health Organization (WHO, 2001) revealed that neuropsychiatric conditions contribute 4% of the disease conditions in Africa, which is projected to rise to 18% by 2020. Yet, in sub-Saharan Africa, people's knowledge of mental illness, including the causal attributions they make, has remained under-researched (Gureje, Lasebikan, Ephraim-Oluwanuga, Olley & Kola, 2005).

Fiske and Taylor (1991) note that attribution processes play a significant role in granting people some sense of prediction and control over their lives. The causal beliefs that people hold about serious mental illnesses like schizophrenia have implications for help-seeking behaviours, recommendations for treatment and stigmatizing views towards the mentally ill (Compton, Esterberg, McGee, Kotwicki & Olivia, 2006). The diathesis-stress explanation, which traces a mental disorder like schizophrenia to a combination of biological vulnerability and psychological and socio-environmental stressors, is gaining popularity among clinical theorists today (Comer, 2010).

Research, however, places cultures at relative degrees of inclination towards the biopsychosocial model. In a 1990 national survey of Germany, for instance, psychosocial stress topped the public's causal attributions for mental illness, followed by lack of willpower

and biological causation, respectively. By 2001, however, biological explanation had displaced lack of willpower (Angermeyer & Matschinger, 2005). In an eight-year longitudinal survey that examined changes in public beliefs about social and environmental variables as risk factors for mental disorders in Australia and Japan, Jorm et al. (2005) discovered an increase in the proportion of the public that made genetic causal attributions for both depression and schizophrenia. A comparative study of young adults in Hong Kong and England found that while the Hong Kong youths considered social factors as the most likely causes of schizophrenia, the English youths were more likely to make genetic attributions (Furnham & Chan, 2004).

In a comparative study of the developed (Britain) and the developing (Sri Lanka) worlds, Furnham and Pereira (2008) observed that the latter demonstrated more negative beliefs and attitudes to schizophrenia. The Sri Lankans favoured superstitious, family and sociological causal explanations, while the British favoured biological

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explanations. In a related study that compared the English and the Punjabis, the Punjabis gave more religious explanations while the English gave more psychological explanations (Bhui, Bhugra & Goldberg, 2002). Writing on Africa, Idemudia (2003) contends that in spite of the cross-cultural and ethnic differences, there tends to be a general belief that both physical and mental diseases could be externally caused by such factors as hostile ancestral spirits, demonic possession, sorcery, evil machination, intrusion of objects, affliction by God or gods, disturbances in social relations, breach of a taboo or customs and natural causes.

The foregoing corroborates the conclusion that while traditional societies are associated more with supernatural and social aetiologies, the Western industrialized world more commonly makes natural and patient-centred explanations (Landrine & Khlonoff, 1994). Beliefs of traditional cultures are, however, more entrenched and structured than those of Western societies (Ballard, 1994). Pioneering studies in the 1960s and 1970s in Nigeria (Erinosho & Ayorinde, 1978; Odejide, 1978; Odejide & Olatawura, 1979; Prince, 1973) all showed the prevalence of supernatural causal beliefs, for example in witchcraft and curse by enemies. There was equally a foremost patronage of traditional healers. Suggesting a paradigm shift, however, Ilechukwu (1988) notes that the earlier predominance of supernatural causation in Nigeria seems to be giving way to the biopsychosocial model in urban areas. In a study that reviewed the causal beliefs for mental disorders in Lagos metropolis (south-western Nigeria), he found that less than half of the patients attributed their problem to a supernatural cause.

A paradigm shift is equally suggested in the findings of Furnham and Igboaka (2007) who compared the causal beliefs, manifestations and treatment of schizophrenia in a similar sample of young Nigerians and British and reported that while the former were found to endorse supernatural causation as predicted, they equally favoured biological and sociological explanation even more than the British. Furthermore, while Nigerians recognized traditional and religious practices as possible treatment options, both groups, but especially Nigerians, favoured orthodox psychiatric interventions and supportive environments as treatment models. In this connection, Ohaeri (1998) had played down the popularity of the so-called traditional African beliefs as a naturally passing phase in a people's history.

Of the three major sociocultural groups that constitute Nigeria, mental illness causal attribution studies have been carried out among the predominantly Muslim Hausa group in the north, which mostly endorsed misuse of substances (Iliyasu & Last, 1991; Kabir, Iliyasu, Abubakar & Aliyu, 2004). Studies have equally been carried out among the mixed-faith (Muslim/Christian) Yoruba group in the south-west, which mostly endorsed supernatural factors (Adebowale & Ogunlesi, 1999; Adewuya & Makanjuola, 2008; Ohaeri & Fido, 2001). The predominantly Christian Igbo group in the south-east of the country has, however, not

been similarly investigated (Furnham & Igboaka, 2007). To test the hypothesis of paradigm shift, this study aims to establish the extent to which the Igbo people believe in scientific or supernatural causal explanation for schizophrenia using Ihiala, a semi-urban Igbo community, as a case study.

Schizophrenia is a psychotic disorder in which personal, social and occupational functioning deteriorate as a result of strange perceptions, disturbed thought processes, unusual emotions and motor abnormalities (Comer, 2010). It is a functional type of psychosis – madness in lay terms (Gomez, 1993). Explanatory models for schizophrenia are explored in this study vis-a-vis this conceptualization of the disorder as 'madness'. This is the popular notion of the study sample, which easily recognizes mental illness only when the sufferer roams the streets or is seen unkempt in a public place (Ewhrudjakpor, 2010).

More specifically, the study will test the prediction that supernatural causation will be endorsed more than psychosocial or biological explanations. Demographic correlates of causal attribution will equally be explored. While augmenting the fledgling literature, mental health education and service delivery could be facilitated by the findings, especially in a country like Nigeria with over 140 million people and less than 100 psychiatrists (Aniebue & Ekwueme, 2009).

## Method

### *Participants/sampling technique*

Multi-stage (random and opportunity) sampling was used to select participants ( $N = 200$ ) who were young (18–35 years) and old (> 35 years), male and female, not married and married, Catholic and Protestant, low in education (nil to secondary education) and high in education (higher education). The age discrimination at 35 is culturally determined. As Menon (2001) observed, stages of life are conceptualized differently across cultures and times. In many Nigerian cultures, especially among the Igbo people, the young develop a sense of adulthood through a series of age-related initiation rites (Olawoye et al., 2004). One of such rituals is the maturity rite 'izari afa' (public recognition), which is performed by people between 35 and 40 years and symbolizes the transition from youth to adulthood (Oko, 2011). The definition of the sample as Catholic or Protestant follows from the consideration that over 95% of the people in this region are Christians of either tradition (Agbodike, 2008). However, Protestantism is arguably more indigenized than the Rome-mediated Catholic Church (Meyer, 2004), reinforcing the rationale to compare explanatory models along these major denominational divides. The distinction between low and high education follows the conventional denotation of higher education as post-secondary education where subjects are studied at an advanced level. Secondary education is consequently considered under the lower category.

As a semi-urban town, Ihiala suffices for home to a fairly representative demographic and was therefore chosen as a microcosm of the wider Igbo community. The first stage of sampling involved a random selection of villages, markets, schools and corporate business establishments in the town through a balloting process. In the second stage, the invitation to participate was extended to people as they were encountered in the selected settings. Questionnaires were administered to the first 50 people who consented to the study and completed the questionnaire in each of the four selected settings, making a total of 200 respondents. There was a 100% response rate in the villages, the schools and the markets, as is typical of people in this region who demonstrated supportive interest in the study. Three bankers who initially consented to the study were unavailable for the survey, citing time constraints. These were subsequently replaced with available colleagues.

### Instrument

The questionnaire developed by Adewuya and Makanjuola (2008) in their investigation of lay causal beliefs for mental illness among the comparable Yoruba culture of south-western Nigeria was adapted for the study. The questionnaire was translated into the native Igbo language to complement the English version. To arrive at the final draft, the translation was reviewed by experts in either language with inputs from a psychiatric nurse. The first part required participants to provide their socio-demographic data. The second part consisted of 18 items detailing possible causes to which schizophrenia could be attributed. These came under three models: psychosocial (life stresses, alcohol/substance misuse and personal deficit); supernatural (divine sanctions, evil forces and fate); and biological (heredity, brain injury, infection/childbirth). Each of the items had a four-point Likert scale: 'not a cause'; 'rarely a cause'; 'likely a

cause'; and 'definitely a cause'. Responses of 'likely a cause' and 'definitely a cause' were counted as endorsing a cause.

### Procedure

Ethical approval for the study was provided by the Ethics and Research Committee of the University of Derby in the UK. Undergraduate students from the University of Nigeria were recruited and trained to help with the administration of the questionnaire. An invitation to participate was extended to prospective participants by hand. Those willing to participate in the study signed or thumb-printed a consent form before the questionnaire was administered.

### Data analysis

The data were analysed using the Statistical Package for Social Sciences (SPSS) version 16. Descriptive statistics were provided as frequencies, means (SD) and ranking. Group comparisons were by repeated-measures analysis of variance (ANOVA). Significance was calculated at  $p < .05$ . Logistic regressions were computed to establish the contributions of the demographic variables to the endorsements of the causal categories.

### Results

The characteristics of the sample were as follows: young  $n = 112$  (56%); old  $n = 88$  (44%); male  $n = 82$  (41%); female  $n = 118$  (59%); not married  $n = 95$  (47.5%); married  $n = 105$  (52.5%); Catholic  $n = 139$  (69.5%); Protestants  $n = 61$  (30.5%); low in education  $n = 97$  (48.5%); high in education  $n = 103$  (51.5%).

The pattern of perceived causation of mental illness (as illustrated in Table 1) showed that the most frequently endorsed causation was brain injury ( $n = 170$ ,  $M = 3.16$ ,  $SD$

**Table 1.** Frequency of the perceived causation of mental illness.

Psychosocial factors	<i>n</i>	<i>M</i>	<i>SD</i>	Ranking
Life stresses (marriage, work, finance)	319	1.30	1.04	6
Misuse of substances (psychoactive agents, alcohol)	307	2.87	1.25	3
Personal deficit (failure, lack of willpower)	114	.93	1.02	8
<b>Psychosocial causes overall</b>	<b>739</b>	<b>1.64</b>	<b>0.71</b>	<b>(3)</b>
<b>Supernatural factors</b>				
Divine sanction (God's will/divine punishment)	192	1.74	1.53	5
Evil forces (witchcraft/sorcery/evil spirits)	385	2.28	1.34	4
Fate (destiny/bad luck)	139	1.20	1.41	7
<b>Supernatural causes overall</b>	<b>716</b>	<b>1.93</b>	<b>0.96</b>	<b>(1)</b>
<b>Biological factors</b>				
Heredity	159	2.91	1.54	2
Brain injury	170	3.16	1.39	1
Childbirth/infection	44	.33	0.79	9
<b>Biological causes overall</b>	<b>373</b>	<b>1.79</b>	<b>0.50</b>	<b>(2)</b>

= 1.39), followed by heredity ( $n = 159$ ,  $M = 2.91$ ,  $SD = 1.54$ ), misuse of substances/alcohol ( $n = 307$ ,  $M = 2.87$ ,  $SD = 1.63$ ) and evil forces ( $n = 385$ ,  $M = 2.29$ ,  $SD = 1.76$ ). Childbirth/infection ( $n = 44$ ,  $M = 0.37$ ,  $SD = 1.5$ ) and personal deficit ( $n = 114$ ,  $M = 0.93$ ,  $SD = 1.49$ ) were the least endorsed causal categories. However, the true weight of each model was computed by calculating the mean scores of the constituent categories. This indicates that supernatural causes had the highest endorsement ( $n = 716$ ,  $M = 1.82$ ,  $SD = 1.81$ ), followed by biological causes ( $n = 373$ ,  $M = 1.70$ ,  $SD = 1.85$ ) and psychosocial causes ( $n = 739$ ,  $M = 1.60$ ,  $SD = 1.76$ ).

A one-way repeated measures ANOVA was used to compare these means. Mauchly's test indicated that the assumption of sphericity had been violated ( $\chi^2(2) = 33.93$ ,  $p < .05$ ); therefore, degrees of freedom were corrected using Greenhouse-Geisser estimates of sphericity ( $\epsilon = 0.85$ ). The results show that there was a significant main effect of causal model ( $F(1.70, 297.33) = 9.57$ ;  $p < .001$ ; partial  $\eta^2 = 0.052$ ). Supernatural attributions were made more than psychosocial attributions ( $F(1,175) = 14.48$ ;  $p < .001$ ; partial  $\eta^2 = 0.76$ ). Supernatural attributions were equally made more than biological attributions ( $F(1,175) = 5.085$ ;  $p < .05$ ; partial  $\eta^2 = 0.028$ ).

The variables were entered into logistic regression to determine the socio-demographic variables specifically predictive of the causal categories. Age made a statistically significant contribution to the endorsement of the supernatural category 'Divine Sanction' ( $\beta = 1.203$ ,  $Wald = 12.985$ ,  $p < .001$ ), with an odds ratio of 3.33 indicating that the old are 3.33 times more likely to attribute schizophrenia to God's will and divine punishment than the young. Gender also made a statistically significant contribution to the endorsement of this category ( $\beta = -0.802$ ,  $Wald = 5.527$ ,  $p < .05$ ), with an odds ratio of 0.448 indicating that females are 0.448 times more likely to attribute schizophrenia to God's will and divine punishment than the males. Age equally made a statistically significant contribution to the endorsement of the supernatural category 'Fate' ( $\beta = 1.399$ ,  $Wald = 12.948$ ,  $p < .001$ ), with an odds ratio of 4.052 indicating that the old are 4.052 times more likely to attribute schizophrenia to destiny and bad luck than the young. Gender also made a statistically significant contribution to the endorsement of 'Fate' ( $\beta = -0.805$ ,  $Wald = 4.233$ ,  $p < .05$ ), with an odds ratio of 0.447 indicating that females are 0.447 times more likely to attribute schizophrenia to destiny and bad luck than the males.

Religious denomination made a statistically significant contribution to the endorsement of the psychosocial category 'Life Stresses' ( $\beta = 0.846$ ,  $Wald = 4.679$ ,  $p < .05$ ), with an odds ratio of 2.330. This indicated that Catholics are 2.330 times more likely to attribute schizophrenia to stresses in marriage, work and finance than Protestants. Level of education also made a statistically significant contribution to the endorsement of this causal category ( $\beta = 0.677$ ,  $Wald = 4.174$ ,  $p < .05$ ), with an odds ratio of 1.968 indicating that those with higher education are 1.968 times

more likely to attribute schizophrenia to stresses in marriage, work and finance than those low in education.

Age made a unique statistically significant contribution to the endorsement of the psychosocial category 'Personal Deficit' ( $\beta = 1.410$ ,  $Wald = 5.257$ ,  $p < .05$ ) with odds ratio of 4.095 indicating that the old are 4.095 times more likely to attribute schizophrenia to failure in life and lack of will power than the young. Level of Education made a unique statistically significant contribution to the endorsement of the biological category 'Heredity' ( $\beta = .789$ ,  $Wald = 4.634$ ,  $p < .05$ ) with odds ratio of 2.201 indicating that those with higher education are 2.201 times more likely to attribute mental illness to Heredity than those with low education.

## Discussion

To test the hypothesis of paradigm shift, this study investigated the causal attribution that the Igbo people of south-eastern Nigeria make regarding schizophrenia. The relatively high endorsements of individual (biological) items 'brain injury' and 'heredity' and the psychosocial item 'use of drugs' appear indicative of a paradigm shift at the causal-category level. Model-wise, however, supernatural attribution is significantly made more often than biological and psychological attributions, which agrees with contemporary related studies (Adebowale & Ogunlesi, 1999; Adewuya & Makanjuola, 2008; Ohaeri & Fido, 2001). Supernatural attribution was so well established that neither educational status nor religious denomination made a significant difference in its pattern of endorsement. The hypothesis of paradigm shift from superstitious to more scientific notions is therefore not significantly supported.

Confirming Ballard's (1994) observation that beliefs of traditional cultures are more entrenched, this equally challenges the assumption that western education easily eradicates traditional/supernatural beliefs. Religion (Pfeifer, 1994) and culture (Furnham & Chan, 2004) are notable mediating factors for this pattern of attribution. As Idemudia (2003) observes, the aetiology and symptom presentation of the mentally ill are mostly functions of culture. In the Igbo world view, for instance, the breaking of taboos, disruptive behaviours and disharmony with one's pre-life accord are punishable by ill-health and misfortunes (Nzewi, 1989). The Igbo people are equally deeply religious and studies indicate that the more religious people are, the more they tend to make supernatural attribution (Bhui et al., 2002). Beyond the normative belief in *Chi ukwu* (the Almighty God), they believe in the cults of lesser gods like *Ala* (the earth goddess) who enforces morality, punishing taboos in the form of afflictions (Agbodike, 2008).

The old significantly endorsed supernatural causation more than the young, which equally agrees with earlier findings (Adewuya & Makanjuola, 2008). People arguably tend to grow more conservative with age. In the African communalistic world view, the elders are the custodians of

traditions and belief systems (Ikuenobe, 2006). The old are therefore more likely to hold enduring pre-scientific and traditional views. Females endorsed supernatural causes significantly more than the males, which is consistent with the view that females are more religious (Trzebiatowska & Bruce, 2012) and more susceptible to paranormal beliefs (Goode, 2000) than the males.

The more educated endorsed biological and psychosocial causation more than the less educated, which could follow from the consideration that education in the colonies normally take after the colonial (Western) models (Mazonde, 2001). Hence, the more this form of education is acquired, the more causal attribution will mirror Western models with greater endorsement of biological and psychological causes. Western influence could equally explain the Catholics' endorsement of psychosocial causes more than the Protestants. The Catholic Church, with its unitary Rome-mediated top-down system, remains relatively more Western and less indigenized in its ideologies than the other independent Christian denominations in Africa (Meyer, 2004).

Helman (1990) and Weiss (1996) demonstrate that causal explanatory models influence the symptom presentation of a disorder. Causal beliefs also have implication for help-seeking behaviours, recommendations for treatment and stigmatizing views towards the mentally ill (Compton et al., 2006). Beliefs can equally impede treatment (Carteret, 2011), hence therapists agree that understanding the beliefs of clients enhances communication and most clients do best when levels of empathy are high (Tuckett & Williams, 1984). It is therefore hoped that while augmenting the fledgling literature, studies of this nature will enlighten and also enhance health care service delivery.

## Conclusion

In a society like Nigeria with limited mental health resources, knowledge of the demographics at risk will help in the proportionate distribution of the scarce resources. Further research should however explore the mechanisms that inform patterns of causal attributions. It will not be enough, for instance, to report that females make more supernatural attributions than males. Intervention will become more decisive if information is available on *why* this is so. Other limitations of this study include the lack of probability sampling and small sample size, inadequate to support generalization. These notwithstanding, making the case for revisiting the hypothesis of a paradigm shift could be a way of ensuring that emergent research is set on surer footing.

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## Declaration of conflicting interest

The author declares that there is no conflict of interest.

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