

Original Research Article**Pathways to psychiatric care among patients with schizophrenia
in Uyo, Nigeria****ABSTRACT**

Background: The pathways patients navigate to access mental health care has been reported to be responsible for the delay in commencing effective treatment following onset of schizophrenia.

Objective: This study was conducted to delineate the pathways patients navigate on their way to psychiatric services and to explore the socio-demographic and clinical factors on the delay of referral for treatment.

Study design: This was a cross-sectional study that assessed the pathways to mental health care among patients with schizophrenia ($n = 108$), at their first contact with mental health services at the University of Uyo Teaching Hospital mental health services.

Result: Traditional and religious healers were the first contact for the majority (76.8%) of the patients. Patients who first contacted non-orthodox healers made a greater number of contacts in the course of seeking help compared to those who first contacted orthodox practitioners ($p=0.02$). Negative symptoms of schizophrenia were significantly associated with a longer duration of untreated psychosis ($p<0.001$)

Conclusion: Mental health educational interventions are required to change the health system and illness beliefs of the people. This will change their beliefs and perceptions of mental illness and ultimately positively change their help seeking behaviour towards mental healthcare.

Key words: Schizophrenia, pathways to care, Nigeria

26 INTRODUCTION

27 Schizophrenia is a chronic, disabling mental disorder affecting about 1% of the general
28 population and is a major contributor to the global burden of disease [1] According to the
29 World Health Organisation (2004), mental illnesses account for 11.5% of the global burden
30 of disease and this figure is projected to increase to 15% by 2020. Worldwide, 340 million
31 people suffer from mental illnesses, with the majority living in the developing world [2].
32 With more than 40 million people affected with schizophrenia in low and middle income
33 countries in need of treatment, there exist a huge treatment gap in spite of availability of
34 effective treatment, because of the disparity between mental health needs and available
35 treatment resources [3,4,5]

36 Help seeking behaviour is the critical link between the emergence of mental health issues and
37 the provision of mental health care services [6]. Pathways to care has been defined as the
38 sequence of contacts an ailing person makes with services provided by individuals or
39 organisations, prompted by the effort of the distressed persons and those of his or her
40 significant others, in the process of seeking treatment for the ailment [7]. The pathways
41 toward mental illness care are diverse and dependent on socio-cultural and economic factors
42 including the conventions governing referral, the availability/accessibility of mental health
43 services, and the relationship between mental health services and the rest of the disciplines
44 [8,9]

45 Studies have shown that delay in the commencement of appropriate treatment following the
46 onset of psychosis is associated with more severe symptom profile, worse psychosocial
47 functioning, poorer quality of life, and poorer treatment outcomes in patients with
48 schizophrenia [10,11]. It has also been reported that many individuals with first episode
49 psychosis experience significant delays before receiving treatment [12]. Efforts at reducing
50 the lag in the initiation of treatment for first episode schizophrenia has led to an increasing

51 research interest in the pathways through which people with mental disorders access care,
52 with the view to identifying points of delay and, consequently potential loci of interventions
53 that could minimize the delay [13].

54 Worldwide several studies [14,15,16] have been conducted on pathways to mental health care
55 in first episode schizophrenia. These studies have reported variations across countries which
56 have been attributed to differences in socio-cultural, religious, and health service contexts.
57 Physicians and other orthodox medical professionals or services are usually the first point of
58 contact for patients with schizophrenia in western countries, whereas non physicians are the
59 major first point of care for service users in Asia and Africa [17,18]. Previous studies
60 conducted on subjects in Nigeria have highlighted the fact that Pathways patients take to
61 psychiatric care reflects the popular beliefs about mental illness [19]. In Nigeria there are still
62 strong beliefs in magico-religious origins of human ailments, especially mental disorders
63 [20]. Adebowale and Ogunlesi (1999) reported that the majority of patients in their study
64 attributed their ailments to supernatural causes, which explains why visiting a spiritual house
65 was their first option [20]. The continued influence of such healers has been associated with
66 beliefs about witchcraft as a cause of mental illness and with patients' desire to be protected
67 from relapses since traditional and religious healers often claim total cure [21,22]. Previous
68 studies that have explored the influence of socio-demographic and clinical factors on
69 pathways to mental health care have reported inconsistent findings. While some studies have
70 reported that patients whose first contact in the pathway to care were non physicians had
71 significantly longer duration of untreated psychosis [23,24,25] others did not find such
72 association [26,27,28]. It has been reported that pathways to care may vary across diagnostic
73 categories. Many of these studies have examined heterogeneous sample with various mental
74 disorders. Research on the pathways to mental healthcare in patients with schizophrenia
75 become imperative as this will enable effective planning of mental health services and

76 programmes to reduce the gap experienced in accessing care and support for those in need.
77 This study explored the pathways to mental health service of families and persons with
78 schizophrenia in Uyo, South-South region of Nigeria before they arrive at mental health care
79 services.

80 **MATERIALS AND METHODS**

81 **2.1 Location of the study:**

82 This study was conducted at University of Uyo Teaching Hospital from November 2014 to
83 April 2015. The hospital is located in Uyo, the capital city of Akwa Ibom State, Nigeria. The
84 hospital is a 450 bed capacity tertiary healthcare centre that offers secondary and tertiary
85 care. It receives referral from primary and secondary healthcare facilities in the state as well
86 as from the neighbouring states. All diagnoses made in the institution were according to the
87 tenth edition of the International Classification of Diseases and health-related disorders (ICD
88 -10) criteria (29). Clinically generated data for each subject enrolled were matched to the ICD
89 -10 criteria.

90 **2.2. Subjects.** The sample consisted of one hundred and eight (n=108) new patients recruited
91 on the day of their first presentation to the facility. Inclusion criteria consisted of (1) patients
92 with a diagnosis of schizophrenia, according to the International Classification of Diseases
93 (ICD-10) diagnostic criteria, (2) patients whose presentation to the facility was the first
94 contact with orthodox mental health care since onset of illness

95 **2.3. Procedure.** Approval for the study was obtained from the Research and Ethical
96 Committee of the University of Uyo teaching Hospital. Informed consent was obtained from
97 patients and their accompanying family members. Patients who met the inclusion criteria
98 were consecutively recruited into the study after a comprehensive psychiatric evaluation and
99 diagnosis by resident doctors in psychiatry. The Mini International Neuropsychiatric
100 Interview (MINI) English Version 5.0.0 [30] was further used to confirm the diagnosis of

101 schizophrenia in the participants. The MINI was designed as a brief structured interview for
102 the major Axis I diagnosis in the Diagnostic and Statistical Manual (DSM-IV) [31] and ICD-
103 10.

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2.4. Measures

107 2.4.1. Semi-structured Questionnaire.

108 A socio-demographic questionnaire designed by the authors was used to obtain information
109 Socio-demographic details (Age, gender, years of formal education, marital status, place of
110 residence).

111 The encounter form, filled out by the psychiatrist who saw the patient during the initial
112 interview, was used to gather systematic information about the sources of non orthodox care
113 such as religious and traditional healers including herbalist, prophets, and other Christian or
114 Muslim institutions used by patients before presentation to the mental health professional.

115 Non physician pathways were defined as contacts to non orthodox practitioners such as
116 traditional or religious healers, while physician pathways consisted of contacts to general
117 practitioners and other orthodox medical practitioners including psychiatrists. The duration of
118 psychosis before consulting the first contact point and the reasons for the choice of contacts
119 in the pathways to care were explored. The interval in weeks between the onset of psychotic
120 symptoms and contact with professional mental health care was regarded as duration of
121 untreated psychosis (DUP). DUP is usually defined as the time from the appearance of the
122 first psychotic symptoms to the time of commencement of antipsychotic drug treatment. The
123 onset of psychotic symptoms was determined from information provided by the patients and
124 informants, and a distinction was made between DUP and the onset of illness, which is the
125 emergence of first psychiatric symptoms.

126 2.4.2. Positive and Negative Syndrome Scale (PANSS). (32)

127 This was used to assess certain clinical characteristics in the patients with schizophrenia. It
128 includes a structured interview to assess patients on 30 items covering positive and negative
129 symptoms as well as general psychopathology. Of the thirty items included in the PANSS,
130 seven constitute a positive scale, seven a negative scale, and the remaining sixteen a general
131 psychopathology scale. For each item, ratings are made on a 1–7 scale of increasing levels of
132 psychopathology ranging from absent to extreme. The scores for the scales are arrived at by
133 summation of ratings for the component items.

134 All the above questionnaires used in this study were translated into Ibibio language separately
135 by two bilingual translators. The two versions were combined and revised and then back
136 translated into English by another bilingual translator. The translation was refined after back
137 translation until agreement was obtained among the four people involved in the translations.

138 For data collection a structured interview was conducted by the researchers by posing
139 questions to patients in English or Ibibio language, depending on the mother tongue of the
140 patient.

141 2.5. Statistical Analysis

142 Descriptive statistics such as frequencies, median, mean and standard deviation were
143 computed for socio-demographic and clinical characteristics of the participants and other
144 variables as appropriate. Relevant inferential statistics such as chi-square and *t*-test were used
145 to determine the relationship between outcome and independent variables. Significance was
146 computed at $p < 0.05$.

147 **RESULT**

148 The mean age of the participants was 36.02 ± 11 years. More than half of the sample were
149 males (66.7%). The majority of the participants were single (77.8%) and more than half of
150 them (70.4%) were unemployed. Secondary education was the highest level of education
151 attained by (45.4%) of participants while (43.5%) of them attained up to tertiary education.

152 The mean positive and negative scales scores of PANSS were (30.70±9.1) and (18.37±9.9),
 153 respectively (Table 1).The mean general psychopathology scale score of the PANSS was
 154 41.36±12.7. The mean and median DUP were 72.80±75.7 weeks and 52weeks, respectively
 155 .

156 Table 1 Socio-demographic and Clinical characteristics of the participants

| Variables | n(%) |
|-------------------------|------------|
| Age in years (mean±SD) | 36.02±11 |
| Age | |
| ≤20 years | 24(22.2) |
| >20 years | 84(77.8) |
| Sex | |
| Male | 72(66.7) |
| Female | 36(33.3) |
| Place of residence | |
| Rural | 36(33.3) |
| Urban | 72(66.7) |
| Marital status | |
| Single | 84(77.8) |
| Married | 24(22.2) |
| Educational level | |
| Primary | 12(11.1) |
| Secondary | 49(45.4) |
| Tertiary | 47(43.5) |
| Employment status | |
| Employed | 32(29.6) |
| Unemployed | 76(70.4) |
| PANSS score | |
| Positive scale score | 30.70±9.1 |
| Negative scale score | 18.32±9.9 |
| General psychopathology | 41.36±12.7 |
| Dup in weeks | 72.8±75.7 |

157

158 Table 2 shows the distribution of patients according to the pathways to care and the reasons
 159 given for the choice of the first treatment option used and belief about the cause of the illness
 160 by patients/relatives. Of all participants, 65.7% consulted religious healers as the first place of
 161 choice for treatment while 11.1% sought traditional healers as the first contact in the help seeking path
 162 to mental health. 19.4% of participants reported poor knowledge about efficacy of orthodox medical

163 treatment and 13.0% cited the influence of significant others in their decision to seek non orthodox
 164 treatment alternatives. Psychiatrists were the first contact for 18.5% of participants while 4.6% of
 165 participants received medical attention from general medical practitioners before referral.

166 Table 2: Pathways to care and reasons for choosing non orthodox treatment

| Variables | n(%) |
|--|----------|
| Place of first visit for treatment | |
| Religious healers | 71(65.7) |
| Traditional healers | 12(11.1) |
| General/private Hospital | 5(4.6) |
| Psychiatric Hospital | 20(18.5) |
| Reason for choice of first place of treatment | |
| Spiritual/traditional beliefs about causality | 55(50.9) |
| Ignorance about effectiveness of orthodox treatment | 21(19.4) |
| Influence of significant others | 14(13.0) |
| Confident of cure | 11(10.2) |
| Stigma | 6(5.6) |
| Proximity | 1(0.9) |
| Place of second visit for treatment | |
| Religious healers | 28(36.8) |
| Traditional healers | 12(15.8) |
| General/private Hospital | 4(5.3) |
| Psychiatric Hospital | 28(36.8) |
| Place of third visit for treatment | |
| Religious | 20(41.7) |
| Traditional | 12(20.5) |
| Psychiatric Hospital | 16(33.3) |
| Reason for use of psychiatric hospital | |
| Advice from friends/relatives | 71(65.7) |
| Referral from religious | 12(11.1) |
| Minimal/No improvement | 5(4.6) |

167

168 Almost 19.4% of the patients thought the illness was not amenable to orthodox care while
 169 nearly 10.2% had confidence that their first choice of treatment would give them a cure.
 170 36.4% of participants had visited a second religious treatment centre and 41.7% had visited a
 171 third religious centre before arriving at a psychiatric treatment service.

172 Table 3 shows the association between the pathways to care and the socio-demographic and
 173 clinical characteristics of the patients. Patients with non orthodox contacts in their pathway to
 174 mental health services had longer duration of untreated psychosis ($p=0.001$) and visited a
 175 greater number of contacts ($p=0.02$) in their pathways to care. There was significant
 176 association between pathways to care and the negative PANSS scores of the participants
 177 ($p<0.001$). Patients who first presented to religious and traditional healers had marginally
 178 higher scores in the positive symptoms and general psychopathology subscales of the
 179 PANSS.

180 Table 3: Association between pathways to care and patients' characteristics

| Variables | Physician | Non Physician | statistics | p-value |
|------------------------------|-------------------|-------------------|---------------|------------------|
| Gender | | | | |
| Male | 15(21.7) | 54(78.3) | $\chi^2=1.31$ | 0.25 |
| Female | 5(12.8) | 34(87.2) | | |
| Employment | | | | |
| Employed | 8(25.0) | 24(75.0) | $\chi^2=1.26$ | 0.26 |
| Unemployed | 12(15.8) | 64(84.2) | | |
| Education | | | | |
| ≤ 6 years | 14(17.1) | 68(82.9) | $\chi^2=0.47$ | 0.49 |
| >6 years | 6(23.1) | 20(76.9) | | |
| DUP | | | | |
| Short (≤ 52 weeks) | 14(28.0) | 36(72.0) | $\chi^2=5.54$ | 0.01 |
| Long (>52 weeks) | 6(10.3) | 52(89.7) | | |
| Age in years (mean \pm SD) | 24.00 \pm 3.4 | 24.14 \pm 3.9 | $t=-0.16$ | 0.21 |
| Number of contacts | 1.27 \pm 0.47 | 2.08 \pm 1.2 | $t=-4.3$ | 0.02 |
| PANSS | | | | |
| Positive score | 26.80 \pm 11.06 | 31.6 \pm 8.46 | $t=-1.82$ | 0.12 |
| Negative score | 9.40 \pm 2.21 | 20.41 \pm 9.87 | $t=-9.47$ | <0.001 |
| General psychopathology | 30.60 \pm 9.66 | 43.81 \pm 12.10 | $t=-5.25$ | 0.21 |

181 • Duration of untreated psychosis was dichotomised at a median score.

182

183 Table 4 shows the association between the duration of untreated psychosis and patients'
 184 characteristics. Patients who were younger than 20 years were more likely present to a psychiatric
 185 facility within one year of onset of symptoms. Urban residency of patients was associated with early

186 presentation for orthodox medical attention ($p=0.01$). Only the negative subscale of PANSS was
 187 associated with a long duration of untreated psychosis ($p=0.02$)

188

189 Table 4: Association between duration of untreated psychosis and patients' characteristics

| Variables | Duration of illness before treatment | | χ^2 | P-value |
|--------------------|--------------------------------------|-------------------|----------|------------|
| | ≤ 1 year n(%) | >1 year n(%) | | |
| Age | | | | |
| ≤ 20 years | 16(66.7) | 8(33.3) | 5.15 | .02 |
| >20 years | 34(40.5) | 50(59.5) | | |
| Gender | | | | |
| Male | 29(42.1) | 29(41.4) | 1.89 | .17 |
| Female | 21(55.3) | 17(44.7) | | |
| Employment | | | | |
| Employed | 18(56.3) | 14(43.8) | 1.81 | .18 |
| Unemployed | 32(42.1) | 44(57.9) | | |
| Education | | | | |
| ≤ 12 years | 25(41.0) | 36(59.0) | 1.59 | .21 |
| >12 years | 25(53.2) | 22(46.8) | | |
| Place of residence | | | | |
| Urban | 40(55.6) | 32(44.4) | 7.45 | .01 |
| Rural | 10(27.8) | 26(72.2) | | |
| PANSS | | | | |
| Positive | | | | |
| ≤ 28 | 20(50.0) | 20(50.0) | .35 | .55 |
| >28 | 30(44.1) | 38(55.9) | | |
| Negative | | | | |
| ≤ 28 | 42(52.5) | 38(47.5) | 4.78 | .02 |
| >28 | 8(28.6) | 20(71.4) | | |

190

191 DISCUSSION

192 In this study, majority of participants (76.8%) used non-orthodox treatment as their first
 193 treatment option. This comprises (65.7%) of those who patronized religious healers as their
 194 first contact and (11.1%) of participants who visited traditional healers for their first
 195 treatment attention. This finding is similar to previous Nigerian studies [33,34,35] which
 196 have reported similar high level non orthodox care preference among service users.

197 This could be attributed to their belief in the supernatural and magical causation of their
 198 problem. Almost 50.9% of the patients thought the illness was not amenable to orthodox care

199 and 19.4% of participants expressed ignorance about the effectiveness of orthodox care. This
200 implies that a high percentage of service users in this culture continue to navigate tenuous
201 pathway to effective mental health care in an orthodox setting. It is observed in this study that
202 those who made initial contact with unorthodox practitioners in the pathway of care
203 continued in that path when there were no discernable or remarkable improvements. They
204 were more likely to visit more than one treatment centre. In this study, 41.7% visited a
205 second religious treatment centre and 36.8% visited a third before attention in a tertiary
206 psychiatric facility. It is evident in this study that Religious belief has a strong influence on
207 the choice of treatment for mental illness and patients who were taken to religious or
208 traditional healers tended to delay the time of presentation at psychiatric hospital. Several
209 studies [33,34,35] reported that consultation with traditional and religious healers often
210 results in significant delays before patients present at the psychiatric clinic. Also, Makanjuola
211 found that such delays were associated with unsatisfactory clinical outcome (36). A similar
212 study done in India [37] showed that 85% of clients attending mental health services had
213 consulted religious healers prior to their visit to the hospital. In this study navigation through
214 the unorthodox pathway was a cause of significant delay in the duration of untreated
215 psychosis (DUB) $p=0.02$. Since patients with schizophrenia present early to religious and
216 traditional healers in Nigeria, there is a possibility of reducing the delay in accessing
217 orthodox mental health service by the liaison of orthodox mental health professionals with
218 traditional healers [13]

219 In this study, there was no significant association between pathways to care and the socio-
220 demographic characteristics of the participants. This implies that the preferential use of non-
221 orthodox practitioners was regardless of level of education, age, gender, and economic status.
222 Poor knowledge about the efficacy mental health services was cited by 19.4% of participants
223 to have contributed to non utilization of services at the onset of illness. This finding is similar

224 to a Nigerian study which reported 14.6% of participants being ignorant of mental health
225 services [38]. It is observed that participants with more years of formal education were as
226 likely as those with less years of formal education to choose the unorthodox treatment option
227 first. The low level of knowledge about orthodox mental health services actually implies a
228 lack of knowledge about the nature of mental illness due to poor health education,
229 inaccessibility to good health care services and also low literacy levels prevalent in some
230 areas. Ganasen et al. argues that poor knowledge of mental health issues and services in
231 developing countries can be an obstacle to providing treatment for those in need, and is of
232 particular concern in a resource poor environment [39]. Therefore, interventional health
233 educational strategies focusing on the community may be the way forward. There is the need
234 for effective implementation of mental health services at the primary healthcare level to make
235 evidence of effective treatment for mental health conditions more visible and available. This
236 potentially can improve the community's knowledge, attitude and practices with regard to
237 mental healthcare help seeking behaviour.

238 In this study, negative symptoms was significantly associated with non physician pathway to
239 care ($p < 0.001$) implying increased tendencies to delay presentation to orthodox psychiatric
240 treatment. Patients with negative symptoms were more likely to have visited more than one
241 treatment centre before visiting psychiatric hospital compared to those with positive
242 symptoms. This may be due in part to wrong interpretation of problems by relatives and
243 inadequate diagnosis by the doctors. This is in agreement with previous study which had
244 reported that Non-psychiatric facilities were sought more often when the problems of a patient were
245 mainly of "negative symptoms" such as "deviation from a daily routine" or "impairment in social
246 functioning" [40].

247 Residential status was a factor in early presentation to psychiatric services. Makanjuola noted that
248 the distance between the patient's home and the psychiatric facility was related to delay in

249 presentation as well as prior treatment by religious or traditional healers [36]. This means that
250 rural people have to travel great distances for specialized care. Due to the absence of these
251 services in the community, religious and traditional healers tend to provide succour to people
252 with mental health issues [41].

253 This study has some limitations. The reliance on report of subjects to determine the pathway may
254 introduce bias like recall bias and recall difficulties. Also, the cross sectional nature of the study may
255 not establish causal relationship, therefore the value remains exploratory. The study was conducted in
256 one institution and the findings may not be generalised to the whole country.

257 In conclusion, the culture and belief of a people affect their help seeking behaviour towards
258 mental healthcare. Therefore, mental health education intervention measures targeted at the
259 masses and non-orthodox care givers will enhance the overall mental healthcare delivery
260 system in resource poor setting prevalent in many developing countries.

261

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