Prevalence, factors and reasons associated with missed first appointments among out-patients with schizophrenia at the Federal Neuro-Psychiatric Hospital, Benin City

Felicia Ibironke Thomas, Sunday Osasu Olotu and Joyce Ohiole Omoaregba

Background

Non-attendance to clinic appointments is associated with poorer treatment outcomes. There is a dearth of information about missed first clinic appointments among patients with schizophrenia in Nigeria.

Aims

To determine the prevalence, correlates and reasons for missed first appointment among out-patients with schizophrenia at the Federal Neuro-Psychiatric Hospital, Benin City, Nigeria.

Method

A cross-sectional descriptive study among 275 out-patients with schizophrenia, using the Mini International Neuro-Psychiatric Interview and the Brief Psychiatric Rating Scale.

Results

The prevalence of missed first appointment was 31%. Higher BPRS score was associated with missing the appointment. The main reasons for missed appointments were: forgetting the appointment date and patient's refusal to come to the clinic.

Conclusions

Missed first out-patient clinic appointment is common among patients with schizophrenia at the study site, forgetting appointment dates being a common reason. Among other recommendations, methods of reminding patients and caregivers of appointment dates at the study location may need to be explored.

Declaration of interest

None.

Schizophrenia and the challenges of outpatient follow-up

Schizophrenia is one of the most disabling mental disorders, affecting cognition, emotion, perception, sense of self and various aspects of behaviour.[1] As of 2004, the age-standardised prevalence of schizophrenia in Nigeria was about 247 per 100 000.[2] Patients with schizophrenia in Nigeria experience high levels of self-stigma and discrimination;[3,4] their caregivers also experience significant burden and psychological distress.[5] Appropriate treatment instituted early in the course of schizophrenia is key to reducing the associated morbidity that rapidly occurs during the first few years.[6,7] Unfortunately, in Nigeria, as in other African countries, patients usually present after a long duration of untreated psychosis (DUP).[8,9] Up to one in five patients with schizophrenia default on clinic appointments.[10]

The first out-patient clinic visit is especially important, as it ordinarily provides the earliest opportunity to re-assess the patient, get feedback about symptom response to the therapy instituted at the first assessment, and assess medication adherence and experience of side-effects. Initial appointments are more frequently missed and less often rescheduled than appointments later in the course of treatment.[11] The adverse outcomes of missing follow-up appointments are weightier for patients with severe and enduring mental illnesses such as schizophrenia, who are more likely to require subsequent hospital admission than those with less severe disorders.[12,13] Not attending clinic appointments early in the course of treatment for psychiatric disorders has been shown to increase the risk of further non-attendance and even disengagement from out-patient services.[13]

Contributory factors for missed appointments

Reasons given by patients for missing appointments include forgetting appointment dates, transportation difficulties, appointment costs,[14,15] and mix-up in appointment dates and/or times.[16] Also implicated are sociodemographic variables such as younger age, male gender,[17] unemployment,[18] distance from the hospital and inadequate finances,[10] and clinical variables such as severe psychotic symptoms and poor insight.[19] Knowledge of the factors and reasons associated with increased likelihood of default of patients with schizophrenia from their first out-patient clinic appointment would be valuable for planning effective strategies to prevent subsequent non-attendance in our environment. To the knowledge of the authors of this work, at this time, there are no published studies conducted in Nigeria to establish these factors and reasons among patients with schizophrenia as a specific diagnostic group, hence the need for this study.

Methods

Study design

This was a cross-sectional descriptive study.

Setting

The study was conducted at the Emergency and Assessment Unit of the Federal Neuro-Psychiatric Hospital, Benin City, Nigeria. Patients presenting to the hospital for the first time are assessed in this unit, and treatment is commenced. Patients not admitted

into hospital are given an appointment in 2–4 weeks to continue follow-up at the out-patient clinics.

Study population and sampling method

In an earlier study,[10] the out-patient default rate for patients with schizophrenia was 20.4%. Using the formula for single population proportion, $n = (z^2(p)(q))/d^2$, (where n is minimum sample size, z = 1.96 (95% confidence interval), p is prevalence from previous study, $q = (1–p)$, and d is acceptable standard error of the mean (0.05)) and allowing for 10% attrition, an intended sample size of 275 was obtained. The study population consisted of 275 consecutive adult patients (18–64 years) who were presenting to the hospital for the first time, with a clinical diagnosis of schizophrenia confirmed by the Mini International Neuropsychiatric Interview (MINI), and 270 caregivers who accompanied them. A caregiver in this study was taken to be the person who accompanied the patient for the initial consultation and who indicated they would be responsible for ensuring the patient attended the follow-up appointment.

Data collection

A semi-structured sociodemographic questionnaire

The first section was designed to capture sociodemographic variables of the patient and the caregiver (such as age, gender, religion, ethnic group, place of domicile, employment status and educational status) as well as the telephone number of the patient and/or caregiver. The second section of the questionnaire was designed to capture illness-related characteristics (such as ICD-10 diagnosis, duration of untreated illness, psychoactive substance use and forensic history).

MINI Plus 5.0.0

The MINI is a clinician-rated brief, structured interview for the major Axis I psychiatric disorders in DSM-IV and ICD-10. It has high validity and reliability in eliciting symptom criteria used in making ICD-10 diagnoses[20] and has been used previously in the setting of this study.[21] The psychosis module of the MINI was used to confirm the diagnosis of schizophrenia in each study participant prior to enrolment in the study.

Brief Psychiatric Rating Scale (BPRS) version 4.0

The BPRS is a clinician-rated instrument that shows adequate validity[22] and is used to assess severity of psychopathology. Ratings are made on a seven-point scale ranging from 'not present' (1) to 'extremely severe' (7). A simple summation of the scores obtained provides a total score, which is an index of illness severity. The BPRS was used in this study to evaluate severity of psychopathology.

One of the authors (T.F.I.) recruited the participants while on a 6-month rotation at the Emergency and Assessment Unit of the study site. Patients who had an ICD-10 diagnosis of schizophrenia, confirmed by the consultant psychiatrist, and who met the criteria for schizophrenia on the MINI and were to be managed as out-patients were asked (or their caregiver was asked) for verbal informed consent to participate in the study. The sociodemographic questionnaire and the BPRS were then administered to the patient. Before leaving, the date for the next appointment (2–4 weeks from the date of the interview) was entered into the patient's appointment card by the medical records staff (date was confirmed by T.F.I.) and given to the patient (and/or caregiver). Participants were enrolled and data collected over 14 weeks (21 January 2015 to 30 April 2015).

The case files of study participants were checked exactly 2 weeks after their respective appointment dates; a patient was deemed to have missed the first appointment when they failed to attend the out-patient clinic on the scheduled appointment date and did not attend within 2 weeks after that scheduled date. Within the week after a patient had been ascertained to have defaulted, a telephone call was made by T.F.I. to ascertain reasons for the missed appointments; calls were made to patients who were able to provide phone numbers on which they could be contacted; in the case of others who were too ill to communicate in a coherent manner, or did not have functioning phone lines, calls were made to the caregiver. The call duration was about 3–5 min on average.

Data analysis

Data was analysed using the Statistical Package for Social Sciences (SPSS) version 20. Categorical data were summarised using frequencies; continuous data were summarised using median, mean and s.d.. Both types of data were displayed in tables. The association between categorical variables was determined using the χ^2 test, while associations between continuous variables were determined using the Mann–Whitney U test. The level of significance was set at $P \leq 0.05$.

Ethical considerations

Ethical approval (Ref. PH/A.864/184) was obtained from the Ethical Committee of the Federal Neuro-Psychiatric Hospital, Benin City, prior to commencement of the study. All participants gave verbal informed consent. All data were treated with confidentiality and anonymity was maintained.

Results

The results have been reported in keeping with the STROBE reporting guidelines for observational studies (https://strobe-statement.org/index.php?id=strobe-home). Data were analysed for 275 patients with schizophrenia, 270 of whom were accompanied by a caregiver.

Sociodemographic characteristics of patients with schizophrenia

Age at presentation did not have a normal distribution (Kolmogorov–Smirnov statistic: D (275) = 0.11, $P < 0.001$); 117 patients (42.5%) were 18–29 years old. The median age for females was significantly higher than that for males.

Just over one-third of patients had completed at least 12 years of formal education. Most of them were unemployed.

About equal proportions of patients resided within a distance of 25 km from the hospital (i.e. within Benin City) and more than 25 km from the hospital (i.e. outside Benin City), respectively.

Clinical characteristics of patients with schizophrenia

One hundred and fifty patients (54.5%) reported that they first experienced psychotic symptoms between the ages of 11 and 29 years. The median age at onset of psychosis for females (32.42 years) was significantly higher than that for males (27 years) ($P < 0.01$).

In this study, the DUP was taken to be the time from experiencing the first psychotic symptom to the time of initiation of appropriate psychiatric treatment.[23] Possible BPRS scores range from 13 to 168. Only 15 patients (5.5%) had a history of forensic or legal problems (e.g. deportation from a foreign country owing to lack of valid resident's permit, arrested for wandering at night, destruction of property, assault) (Table 1).

Table 1 Sociodemographic and clinical characteristics of patients with schizophrenia

Variable	Frequency (N = 275)	Percentage
Gender		
Male	151	54.9
Female	124	45.1
Median age at presentation, years (range)	31 (18–64)	
Male	29 (18–63)	MWU = 6592.000
Female	35 (18–64)	P < 0.01
Level of education		
No formal education	20	7.3
<12 years formal education	103	37.5
≥12 years formal education	152	55.2
Employment status		
Employed	98	35.6
Unemployed	177	64.4
Place of domicile		
≤25 km from the hospital	139	50.5
>25 km from the hospital	136	49.5
ICD-10 diagnosis		
Paranoid schizophrenia (F20.0)	192	69.8
Undifferentiated schizophrenia (F20.3)	59	21.5
Hebephrenic schizophrenia (F20.1)	13	4.7
Catatonic schizophrenia (F20.2)	10	3.6
Simple schizophrenia (F20.6)	1	0.4
Median DUP, weeks (range)	52.0 (24–728)	
Median BPRS score (range)	40.0 (12–85)	
Lifetime history of psychoactive substance use		
Yes	56	20.4
No	219	79.6
History of forensic problems		
Yes	15	5.5
No	260	94.5

BPRS, Brief Psychiatric Rating Scale; DUP, duration of untreated psychosis; MWU, Mann–Whitney U statistic.

Prevalence of missed first out-patient clinic appointment among patients with schizophrenia

Of the 275 patients with schizophrenia who participated in this study, 87 did not attend their first out-patient clinic appointment either on the scheduled date or within 2 weeks post-appointment. The prevalence of missed first clinic appointment was therefore 31%.

Reasons patients with schizophrenia missed their first out-patient clinic appointment

Eight (9.2%) of the 87 patients who did not attend their first out-patient clinic appointment could not be reached on the mobile phone numbers provided. For the other 79 patients, the reasons given by them or their caregivers for missing the appointment are shown in Table 2.

Correlates of missed first out-patient appointment

There was no significant association between sociodemographic characteristics and missing the appointment. The median BPRS score for the group of patients who missed their appointment was significantly higher than that for the group of patients who attended their appointment (Table 3).

A binary logistic regression model using a forced entry method was undertaken, with the dependent variable being 'missed first appointment', which was coded as '1 = yes' and '2 = no'. Categorical and continuous variables were entered in a non-stepwise fashion into the regression model.

The Hosmer and Lemeshow test ($\chi^2 = 13.198$, d.f. = 8, $P = 0.105$) showed that the model generated was a good fit, as it had a P value >0.05 (Cox and Snell $R^2 = 0.065$; −2 log-likelihood = 324.766). A higher BPRS score was found to predict missing the first clinic appointment in the regression model ($P < 0.001$) (Table 4).

Discussion

The prevalence of missed first out-patient clinic appointments obtained in this study is similar to that found by a previous study in the same setting,[24] although the study population in the latter consisted of patients with different psychiatric disorders. It is also consistent with the range of values obtained in other studies on out-patient default (17–46%).[12,18] Although Adelufosi and colleagues[10] used the same operational definition for 'default' and had similar study participants (patients with schizophrenia), they reported a lower prevalence (20.4%). This could be because participants in their study had been attending the out-patient clinic for at least 6 months. The pattern of attendance of clinic appointments for new referrals has been shown to be different from that of patients on long-term follow-up.[12] The finding from this study is significant for several reasons: the consequences of missed appointments include poorer clinical and social outcomes,[12,25] as well as predicting future clinic non-attendance.[12] Missed appointments are also associated with wasted physician and clerical time, and economic loss to the country from reduced productivity. The consequences could also include over-utilisation of general medical resources, as these patients make more visits to general practitioners and other medical specialties for 'difficult to explain somatic symptoms'.[26,27] In resource-poor settings such as Nigeria, already meagre health resources are wasted when patients do not turn up for their appointments. When defaulters eventually present at other times, they increase the workload, resulting in increased frustration and reduced empathy towards such patients (which is detrimental to the much needed therapeutic alliance between patients and health professionals).

Table 2 Reasons patients with schizophrenia missed their first out-patient clinic appointment

Reason for missing the appointment	Frequency (N = 79)	Percentage
Caregiver forgot the appointment	13	16.5
Patient refused to come for the appointment	13	16.5
No funds for cost of transportation	10	12.6
Patient is 'well' now	10	12.6
Caregiver not available to accompany patient	9	11.4
No reason given	7	8.7
Patient is receiving treatment from another 'doctor'	6	7.6
Patient has been taken to a church for prayers	6	7.6
Patient relocated	4	5.2
Caregiver lost her husband	1	1.3

Table 3 Sociodemographic and clinical correlates of missed first out-patient appointment

Categorical variables	Attended appointment		χ^2(d.f. = 1)	P
	No (N = 87) n (%)	Yes (N = 188) n (%)		
Gender				
Male	46 (52.9)	105 (55.9)	0.213	0.65
Female	41 (47.1)	83 (44.1)		
Level of education				
<12 years formal education	35 (40.2)	88 (46.8)	1.041	0.31
≥12 years formal education	52 (59.8)	100 (53.2)		
Place of domicile				
≤25 km from the hospital	40 (46.0)	99 (52.7)	1.063	0.3
>25 km from the hospital	47 (54.0)	89 (47.3)		
Employment status				
Employed	34 (39.1)	64 (34.0)	0.658	0.42
Unemployed	53 (60.9)	124 (66.0)		
Lifetime psychoactive substance use				
Yes	18 (20.7)	38 (20.2)	0.008	0.93
No	69 (79.3)	150 (79.8)		
Continuous variables	**No** (N = 87)	**Yes** (N = 188)	**MWU**	**P**
Median age at presentation, years	31	31.5	7989.5	0.758
Median BPRS score	45	39	5544.5	**0.001**
Median DUP, weeks	52	36	7286	0.139

BPRS, Brief Psychiatric Rating Scale; DUP, duration of untreated psychosis; MWU, Mann–Whitney U statistic.

Factors which may have contributed to the prevalence of missed appointment obtained in this study include effects of stigma, and conceptions about symptoms and treatment. Schizophrenia is a disorder associated with behavioural manifestations which call the attention of others to the patient and their family. Studies from Africa and other parts of the world indicate that in spite of increasing education and enlightenment, many people still ostracise and discriminate against people with schizophrenia and their families.[28,29] When patients and their caregivers eventually take the decision to present to an orthodox mental health facility, their initial motivation could be the distressing behavioural manifestations of the illness (e.g. responding to hallucinations, poor personal hygiene, aggressive behaviour). If these symptoms subside after initial commencement of psychotropic medications, the patient and/or their caregiver may not see the need to return for the next appointment. As it takes a few weeks for psychotropic medications to attain plasma concentrations required for notable effects to be seen, patients and/or caregivers may conclude that the medications are 'ineffective' and decide to try some other form of care instead of returning for their clinic appointment.[30] Future studies could assess the satisfaction with care received, whether the treatment plan was understood, and whether or not the treatment given was thought to have been useful or effective.

Patients with higher BPRS scores in this study were more likely to miss their appointments than patients with lower scores. This is consistent with the findings of Adelufosi and colleagues,[10] who also rated severity of psychosis using the BPRS. Greater severity of psychiatric symptoms has been associated with missing clinic appointments even when other rating scales were used.[12,31] Positive and negative symptoms of schizophrenia could contribute to patients not attending their appointments. Positive symptoms such as paranoid delusions, delusions of control and hallucinations make patients suspicious of the intentions of their caregivers and the mental health professionals, and thus less likely to adhere to treatment modalities prescribed. Negative symptoms such as apathy and avolition could also worsen a patient's social isolation and make them less likely to adhere to scheduled appointments. Greater severity of symptoms may also worsen insight, which is a significant predictor of functioning and adherence to treatment.[32]

As in other studies, forgetting the appointment date was one of the most common reasons for missed appointments. This could be a result of impairment in cognitive function, which sometimes occurs in schizophrenia. It could also result from the caregiver being occupied with other responsibilities and activities which they judged to be equally or more important.

'Denial' could be an unconscious defence which enables patients and caregivers to cope with the distress associated with facing up to the reality of having a severe psychiatric disorder; forgetting would thus be a convenient 'excuse' for missing follow-up appointments. In order to reduce the incidence of missed appointments due to forgetting, healthcare providers have used various ways of reminding their clients of their appointment dates, e.g. telephone calls and short message service (SMS) text messages a few days before the appointment.[33]

Table 4 Logistic regression of sociodemographic and clinical variables of patients on missed first clinic appointment

Predictor variable	B	s.e. (B)	Wald's χ^2	P	OR	95% CI
Age, years	−0.002	0.013	0.037	0.85	0.99	0.97–1.02
Male gender	0.020	0.280	0.005	0.94	1.02	0.59–1.77
Employed	−0.360	0.284	1.610	0.20	0.69	0.40–1.22
Domicile >25 km from hospital	0.184	0.274	0.453	0.50	1.20	0.70–2.06
DUP, weeks	0.001	0.001	0.191	0.66	1.00	0.99–1.00
BPRS score	0.041	0.011	14.394	**0.00**	1.04	1.02–1.07
Constant	−2.395	0.679	12.436	0.00		

BPRS, Brief Psychiatric Rating Scale; DUP, duration of untreated psychosis; OR, odds ratio.

In this study, some appointments were not kept because the patient was said to be receiving treatment from another 'doctor' (six patients) or had been taken to a church for prayers (six patients). It is not uncommon in our environment for patients and/or their caregivers to seek other sources of care even after treatment has commenced at a mental health facility. Reasons for this include cultural or social acceptability and proximity to the patient's location; about half of the patients in this study resided more than 25 km away from the hospital. In Nigeria, mental health services have still not been properly integrated into primary healthcare systems, in spite of the recommendations of the World Health Organization and advocacy groups in the country. Patients with mental health problems still have to travel long distances, sometimes at great financial cost, via poor road networks linking rural areas to the urban areas where specialist psychiatric hospitals are centralised.[34,35]

Some caregivers did not see the need to bring the patient to the scheduled clinic appointment because they had the impression that the patient's mental state had improved enough. This suggests that during the initial assessment they may not have received (or understood) information about the course of the illness, duration of treatment and the fact that initial signs of improvement (e.g. reduced aggression, responding less to hallucinations, improved sleep) do not mean that the patient is 'cured'.

It is possible that some respondents gave reasons which they perceived would be 'more excusable' than the 'real' reasons for not returning for follow-up. They could have had unvoiced reservations or misconceptions about the illness, course, treatment, prognosis, effects on the life of the patient, side-effects of medication, and fears around stigma associated with having a mental disorder or being a relative of someone with a mental disorder. This question would be of interest if future studies are done to investigate reasons for missed appointments among patients in other states in Nigeria.

The strengths of this study are that participants had the same clinical disorder (schizophrenia), and that standardised instruments were used to confirm the patients' diagnosis (MINI) and assess the severity of psychopathology (BPRS).

Limitations

The generalisability of the results of this study is limited by its having been conducted in a tertiary hospital setting, where patients with more severe symptoms are more likely to present, compared with primary care or community-based settings.

Some of the study participants could not be reached on the phone numbers they had provided and their reasons for missing appointments could therefore not be ascertained. The reasons for missing the appointment were reported in some cases by caregivers who were the contact persons for the patients at the point of enrolment into the study (e.g. where patients were too ill to provide a phone number, or did not have a functioning telephone line); it was thus difficult to verify the reasons from the patients themselves.

Although we collected information on the reasons that appointments were not attended, it would have been useful to find out from patients who kept their appointments why they decided to and made the effort to attend within the specified period. This data could help to better understand the motivating factors for patients and caregivers to keep their appointments, and aid service providers to optimise clinic appointment attendance.

Recommendations

Interventions such as telephone calls or text message reminders of appointment dates could be explored as a means to reduce the rate of missed appointments among patients with schizophrenia

at the Federal Neuro-Psychiatric Hospital, Benin City. The government and other stakeholders also need to facilitate the full integration of mental health into primary healthcare in Nigeria, to reduce the burden of travelling long distances to access care from tertiary hospitals in urban areas. It is recommended that at first contact mental health professionals give their patients (and caregivers) adequate information about the diagnosis, prognosis and the treatment plan, and clarify any misconceptions they have. This would go a long way to allay their fears and boost their confidence in adhering to continuing attendance at orthodox mental health facilities.

Future studies on attendance of patients to clinic appointments could also explore patients' and caregivers' reasons and motivations for attending their clinic appointments punctually.

Felicia Ibironke Thomas, MB;BS, FWACP(Psych), FMCPsych, Senior Registrar, Department of Clinical Services, Federal Neuro-Psychiatric Hospital, Benin-City, Edo State, Nigeria; **Sunday Osasu Olotu**, MB;BS, FWACP (Psych), MSc, Consultant Psychiatrist, Department of Clinical Services, Federal Neuro-Psychiatric Hospital, Benin-City, Edo State, Nigeria; **Joyce Ohiole Omoaregba**, MB;BS, FWACP (Psych), MSc, Consultant Psychiatrist, Department of Clinical Services, Federal Neuro-Psychiatric Hospital, Benin-City, Edo State, Nigeria

Correspondence: Dr Felicia Ibironke Thomas, MB;BS, FWACP(Psych), FMCPsych, Senior Registrar, Department of Clinical Services, Federal Neuro-Psychiatric Hospital, Benin-City, Edo State, Nigeria. Email: ronke2k7@yahoo.com

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