

Research Article

Dropout and Its Correlates Among Children and Adolescents with Mental Illness in Ibadan, Nigeria: Implications for Policies

Toyosi Olatundun Ogunfowora^{1, 4} , Yetunde Celia Adeniyi^{1, 2, *} ,
Haleem Abiodun Abdurahman^{1, 5}, Joshua Akinyemi³, Olayinka Olusola Omigbodun^{1, 2}

¹Centre for Child and Adolescent Mental Health, University of Ibadan, Ibadan, Nigeria

²Department of Child and Adolescent Psychiatry, University College Hospital, Ibadan, Nigeria

³Department of Medical Statistics, Faculty of Public Health, University of Ibadan, Ibadan, Nigeria

⁴Herefordshire and Worcestershire Health and Care NHS Trust, United Kingdom

⁵Lincolnshire Partnership NHS Foundation Trust, United Kingdom

Abstract

Background: Dropout is a common clinical phenomenon among patients with mental illness and seems worse among children and adolescents living in low-income countries. Most studies on dropouts have been among adult patients living in high- and middle-income countries. **Methodology:** In this mixed method study of sequential exploratory design, a total of 113 new patients were recruited for the quantitative part while 25 participants out of those who dropped out of treatment had an in-depth telephone interview. The quantitative data was analyzed using the statistical package for social sciences version 23 while the qualitative data was coded into themes manually using content analysis. **Results:** Ninety-seven percent of the participants dropped out of treatment. Almost 50% of the participants who dropped out did so after their first appointments. The rate of dropout was found to increase with time. Socio-demographic characteristics had no significant association with dropout. Patients' diagnosis type or presence of comorbidity also was not associated with dropout. However, the types of treatment received was significantly associated with dropout ($p = 0.040$). The commonest reason for dropout was no improvement in clinical condition. **Conclusion:** The rate of dropout among the participants in this study was very high. However, majority showed willingness to re-initiate treatment. Further studies are needed to test possible ways to reduce dropouts among this population. Implications for health policies are also discussed.

Keywords

Dropout, Child and Adolescent Psychiatry Clinic, Clinic Attendance, Nigeria

*Corresponding author: pcyetty@yahoo.com (Yetunde Celia Adeniyi)

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1. Introduction

Dropout has been defined as a total disengagement from treatment without either clinical resolution of symptoms or agreed treatment plan [1]. Noncompliance with follow-up could be quite challenging among people with mental health problems and specifically in children and adolescents, who often depend on their parents/caregivers for care. Since mental disorders are often chronic in nature, continuity of care becomes crucial for an effective delivery of mental health service. With the current treatment coverage that is below expected, missed appointments further drains on available resources and compromises quality of care [2].

Nevertheless, there is a dearth of studies with respect to dropout among children and adolescents attending psychiatric outpatient clinic in Nigeria and other sub-Saharan African (SSA) countries. Having knowledge of the dropout rate will be useful in planning a more effective mental health service delivery. In addition, understanding the reasons for possible dropout might add to the body of evidence in support of integrating mental healthcare into primary healthcare.

This study therefore aimed at providing local data on the prevalence and correlates of non-attendance and subsequent dropout within a child and adolescent psychiatry service. It was also expected that the qualitative interview will provide in-depth understanding into the factors responsible for drop-out among children and adolescents with mental illness.

2. Methodology

2.1. Study Site

This study was carried out at the child and adolescent mental health clinic of the University College Hospital, Ibadan, Nigeria. The hospital is a tertiary center which serves as a referral center for patients from surrounding hospitals and schools. The Child and Adolescent psychiatry unit is exclusively dedicated to the care of children and adolescents with mental health problems. The unit started in 1999 with an outpatient clinic service and it became a full department in November 2009. The department provides psychiatric services involving inpatient care, outpatient care, emergency services, liaison services with pediatric neurology and oncology units, community services at the juvenile correctional home and school mental health service at the University of Ibadan and other schools in Ibadan. All new patients who presented at the child and adolescent psychiatry clinic were registered and assessed by a Senior Registrar or Consultant Psychiatrist who then makes a clinical diagnosis based on the International Classification of Diseases, tenth revision (ICD-10). Depending on patient's need, appropriate intervention is instituted which may involve prescription of drugs. Relevant investigations are also requested to be done before the next appointment. Investigations, drugs and other relevant

therapies are usually paid for 'out of pocket'. The patients are given a follow-up date which ranges from 2 weeks to a month.

2.2. Study Method

This is a cross-sectional study of mixed method type, comprising of a quantitative phase followed by a qualitative phase.

2.3. Data Collection

Purposive sampling was used for the quantitative phase and simple random sampling (table of random numbers) was used for the qualitative phase. A total of 113 new patients were recruited for the quantitative part. Included were individuals below 20 years, who had diagnosis of a mental disorder and had been given a follow up appointment while those whose case folders could not be retrieved were excluded. For the qualitative part, 25 participants (parent/caregiver) out of those who dropped out of treatment, had an in-depth interview via telephone conversation to explore possible reasons for drop-out.

2.4. Measures

A self-designed socio-demographic questionnaire was used for the quantitative aspect and a discussion guide was used for the qualitative aspect.

2.5. Data Analysis

The quantitative aspect was analyzed using the Statistical Package for Social Sciences (SPSS) program, version 23. Quantitative data was summarized and reported as proportions, median estimates, and was presented using tables and charts. Chi square was used to determine the relationship between clinic attendance and socio-demographic variables such as gender, age, type of family etc. All results were regarded significant at $p < 0.05$. The confidence level for all the tests was set at 95%.

The qualitative part involved transcription of recordings verbatim and translation to English language was done for recordings done in Yoruba language. Data was coded into themes manually using content analysis.

2.6. Ethical Approval

Ethical clearance for the study was obtained from the Ethical Review Committee of the University of Ibadan/University College Hospital. Participation in the telephone interview was voluntary. Refusal to participate in the study did not in any way adversely affect the care received at the healthcare facility. Individual verbal consent was obtained

from each of the respondents. All information was gathered by the researcher alone to ensure confidentiality and participants were identified using only serial numbers to ensure their privacy.

3. Results

3.1. Socio-demographic Characteristics of Participants

Table 1 shows the socio-demographic characteristics of the study participants. There were 66 (58.4%) males, and 47 (41.6%) females, with a female to male ratio of 1:1.4. The age

of the participants ranged from 2 to 19 years. Sixty-eight participants (60.2%) were adolescents whose age ranged between 10 and 19 with a mean age of 11.09 ± 4.49 while forty-one (36.3%) were children under 10 years. Fifty-four (47.8%) participants were in primary school, 41 (36.3%) were in secondary school and 16 (14.2%) were having tertiary level of education.

Ninety-three (82.3%) of the participants were from monogamous family settings, sixteen (14.2%) lived in a polygamous family and four (3.5%) were products of single parenting. Participants whose parents were married were seventy-four (65.5%), eleven (9.7%) had separated/divorced parents, fifteen (13.3%) had either of the parents dead, and six (5.3%) had parents who were never married.

Table 1. Socio-demographic characteristics of participants.

	Variables	Frequency (n)	Percent (%)
Sex	Male	66	58.4
	Female	47	41.6
Age (Years)	<10	41	36.3
	10-19	68	60.2
	Missing	4	3.5
Education Level	Primary	56	49.6
	Secondary	41	36.3
	Tertiary	16	14.2
Ethnicity	Yoruba	96	85
	Ibo	4	3.5
	Hausa	3	2.7
	Others	10	8.8
Religion	Christianity	80	70.8
	Islam	33	29.2
Family Type	Monogamous	93	82.3
	Polygamous	16	14.2
	Single Parent	4	3.5
Parents' Status	Married	74	65.5
	Separated/Divorced	11	9.7
	Father/Mother is Dead	15	13.3
	Never Married	6	5.3
	Missing	7	6.2
Father's level of education	No formal education	1	0.9
	Primary education	3	2.7
	Secondary education	25	22.1
	Tertiary education	43	38.1

	Variables	Frequency (n)	Percent (%)
Mother's level of education	Missing	41	36.3
	No formal education	2	1.8
	Primary education	13	11.5
	Secondary education	18	15.9
	Tertiary education	40	35.4
Who participant lives with	Missing	40	35.4
	Both parents	69	61.1
	Others	44	38.9

3.2. Prevalence of Drop-out Among Children and Adolescents Attending Outpatient Clinic

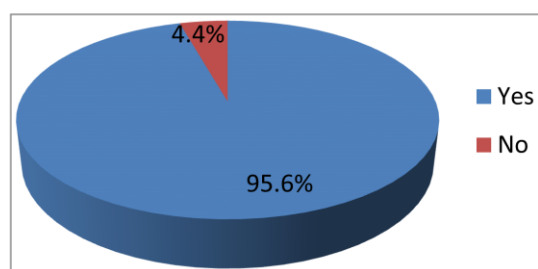


Figure 1. Prevalence of drop-out among children and adolescents attending outpatient clinic.

Out of the 113 participants involved in this study, 109 dropped out which gave a prevalence of 95.6%. see [Figure 1](#).

3.3. Association Between Dropout and Clinical Characteristics of Participants

[Table 2](#) shows the relationship between dropout and clinical characteristics of the study participants. There was no association between dropout and psychiatric diagnosis ($p = 0.107$). Also, no association exists between dropout and psychiatric ($p = 0.290$) or medical ($p = 0.186$) comorbidity among participants. However, there was a significant association between drop-out and treatment type among participants in the study population ($p\text{-value} = 0.040$).

Table 2. Association between dropout and clinical characteristics of the participants.

Variables	Drop Out		Statistic χ^2	*p-value
	Yes	No		
Diagnosis				
Neurodevelopmental disorders	65 (98.5)	1 (1.5)		
Depression	8 (100)	0 (0.0)		
Psychosis	5 (83.3)	1 (6.7)		
Elimination	8 (100)	0 (0.0)	10.452	0.107
Neurotic/Somatoform disorders	6 (100)	0 (0.0)		
Epilepsy	3 (75.0)	1 (25.0)		
Others	14 (93.3)	1 (6.7)		
Psychiatry comorbidity				

Variables	Drop Out		Statistic χ^2	*p-value
	Yes	No		
Yes	24 (100)	0 (0.0)	1.118	0.290
No	85 (95.5)	4 (4.5)		
Medical comorbidity				
Yes	34 (100)	0 (0.0)	1.785	0.182
No	75 (94.9)	4 (5.1)		
Both comorbidity				
Yes	6 (100)	0 (0.0)	0.233	0.630
No	103 (96.3)	4 (3.7)		
Type of treatment				
Biopsychosocial	52 (92.9)	4 (7.1)	4.221	*0.040
Psychosocial	57 (100)	0 (0.0)		

3.4. Reasons for Dropout

Out of the 109 patients who dropped out, 54 parents/caregivers were contacted out of which 25 participated in the telephone interview. Among those who were interviewed, 68% were mothers, 22% were father while the remaining 10% were other caregivers. The themes generated from the interviews are presented below with sample quotes.

3.4.1. No Improvement in Symptoms

About half of the people interviewed mentioned that the main reason for dropout was the lack of improvement in symptoms.

.....in my own view, there was no improvement, so I don't think it was necessary to be bringing her" (Father of a 16 year old with seizure disorder).

3.4.2. Significant Improvement or Complete Resolution of Symptoms

While some gave no improvements in symptoms as reason for dropout, some however mentioned the reason for dropout as complete remission of symptoms or significant improvement.

".....the symptoms have gone, and she is studying psychology at the University. You people don't know what you've done for us, once she is home we will come and say a big thank you, honestly am so happy you've really influenced her a lot" (Mother of an 18-year-old with ODD).

"Yes, she takes her drug once in a while now when she's in the mood, she's in the hostel now am so happy" (Mother of a 12-year-old with depression).

3.4.3. Financial Constraints and Access to Care

"We have not been coming to the hospital because of money for transportation, we live far from the hospital" - Mother of a 6-year-old with ADHD.

3.4.4. Spiritual Reasons

Some reported that the cause of illness was spiritual hence, orthodox care was unnecessary. A few also mentioned that they decided to pray rather than coming back to the hospital.

"I don't know much, but we believe it is spiritual, not a hospital thing" (Sister of a 15-year-old with Schizophrenia).

"No, at all, we just put it to prayer" (Father of a 16-year-old with seizure disorder).

Table 3. Reasons for dropout (N=25).

Variable	Frequency (n)	Percent (%)
No improvement	10	40
Improving/Well	4	16
Financial constraint	3	12
Spiritual cause	2	8
Distance from the hospital	2	8
Referred	1	4
Unspecified	3	12

4. Discussion

About 98% of participants in this study were attending schools, this is similar to the findings of Ogun et al in Lagos Nigeria, who reported that the attendees of a child and adolescent mental health clinic within the year of assessment were predominantly 10 years and above [3]. This brings to the fore the very importance of school mental health programs. In the last decade, there has been more focus on the implementation of school-based mental health services as schools have been identified as ideal settings to reach needy children in the community. Evidence suggests that school-based mental health services (SBMHS) have the highest likelihood of reaching children and youth in need [4]. Integrated school mental health literacy interventions may offer an effective and sustainable approach to enhancing mental health literacy for educators and students globally. Despite all the robust evidence about the effectiveness of SBMHS, there is very little evidence on the implementation in resource constraints settings like Nigeria.

In this study, the commonest psychiatric comorbidity was intellectual disability with a prevalence of 8.0% while epilepsy was the commonest (13.3%) medical comorbidity. This is in line with the finding of Oshodi et al, where it was reported that about half of patients receiving child and adolescent psychiatry services in a tertiary hospital in Lagos Nigeria, had either intellectual disability or epilepsy [5]. This could be because epilepsy often co-occur with neurodevelopmental disorders especially intellectual disability and autism spectrum disorder which were the most prevalent among the study participants [6].

The rate of dropout in this study was 95.6% which is higher than reported by previous studies [5, 7]. This could be due to the failure to exclude referred cases. Referrals are often made to community outreaches, as well as liaison clinics, to ease burden on caregivers while ensuring continuity of care. Such community services are given at the University health center for undergraduates and children of the University staff, juvenile correctional home, special schools among others. A significant association was found to exist between dropout and the type of treatment received, which is in line with the findings of Edlund et al in the United States which reported that combination of pharmacotherapy and talk therapy enhances treatment adherence than single modalities of treatment - pharmacotherapy only, talk therapy only or counseling only [8]. However, the association between type of treatment and dropout was in contrast with the findings of Cottrell et al among patients receiving child and adolescent psychiatry service in London where type of treatment was reported to have no association with dropout [9].

The most stated reason for dropout among participants was no improvement in patient's clinical condition. This is in keeping with the finding of Grover et al in India who reported that those who dropped out early and never returned had "no relief of symptoms" as the commonest reason [7]. In some

chronic psychiatric conditions for example Schizophrenia, 30% of patients respond poorly to antipsychotics and about 7% show total non-response [10]. Therefore, some participants could have experienced poor response to treatment, seeking an alternative orthodox or non-orthodox care. Complete resolution of symptoms was reported among some participants as the cause of dropout, which is also as reported by Mason that the perception that follow up is not necessary is a reason for dropout among attendees of outpatient clinics [11]. The stigma of being seen to be accessing mental health care which is still prevalent could have been responsible for this, such that with little improvement in symptoms, parents/caregivers tend to withdraw from care [12].

Financial constraint as a reason for dropout could be because children and adolescents do not have a source of income therefore, their financial burden of healthcare solely falls on their parents/caregivers. Many of these parents do not have health insurance and for those who do, such schemes do not cover for treatment of chronic mental disorders. Some reported distance from the hospital as the reason for dropout but often alongside financial constraint. This is in line with the findings of several researchers who had reported that the distance between the home and healthcare facility plays a significant role in continuity of treatment [12-15].

Aetiology of the illness was the stated reason by some of the participants as they believe that it was spiritual, hence, sought for non-orthodox care either in religious houses or traditional home. This is supported by the findings of Ogun et al in Lagos Nigeria where it was reported that about one-fifth of the caregivers belief that the cause of illness was evil spirit [3]. It has also been reported that caregivers are often unwilling to accept that the emotional or behavioural problems of the children are as a result of mental disorder [15]. One of the participants stated that referral to another facility was responsible for loss to follow up since they do not need to come back and have continued their follow up elsewhere.

5. Conclusions and Implications for Policy

This study supported previous findings in the literature that dropout is a common phenomenon in outpatient psychiatric care. The rate of dropout among the participants in the current study was very high, and this requires prompt intervention. The majority of those who were contacted on phone were appreciative and showed willingness to re-initiate treatment, hence could motivate treatment continuation. There is a need for wider health insurance coverage, which incorporates mental health treatment, in order to cater for financial challenges of accessing care. Furthermore, integrating mental health into primary health care would provide accessible and affordable mental health services for all. In addition, strengthening school mental health programs to provide care for in-school children and adolescents will likely improve

treatment adherence and reduce the burden of care on the caregivers. Building the capacity of mental health professionals, teachers, and other stakeholders to identify and support children and adolescents with mental health issues is key. Finally, leveraging digital innovations, such as online counseling and support groups, to reach more children and adolescents will also help to reduce dropout rate.

Abbreviations

ICD-10	International Classification of Diseases, Tenth Revision
SSA	Sub-Saharan Africa
SPSS	Statistical Package for Social Sciences
SBMHS	School-Based Mental Health Services

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Author Contributions

Toyosi Olatundun Ogunfowora: Conceptualization, Formal Analysis, Methodology, Project administration, Resources, Supervision, Writing - original draft, Writing - review & editing

Yetunde Celia Adeniyi: Conceptualization, Methodology, Supervision, Writing - review & editing

Haleem Abiodun Abdurahman: Conceptualization, Methodology, Data curation, Supervision, Writing Review and Editing

Joshua Akinyemi: Conceptualization, Methodology, Data curation, Supervision, Formal Analysis

Olayinka Olusola Omigbodun: Conceptualization, Methodology, Supervision, Resources

Conflicts of Interest

The authors declare no conflicts of interest.

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