

**CLINIC DROPOUT AND ITS CORRELATES AMONG
PATIENTS ATTENDING CHILD AND ADOLESCENT
MENTAL HEALTH CLINIC AT THE UNIVERSITY
COLLEGE HOSPITAL, IBADAN**

BY

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FULFILMENT OF THE REQUIREMENTS FOR THE
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OF IBADAN**

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DECLARATION

“I declare that this work presented here is done by me, and has not been presented partly, or wholly to any other college for a master program, neither has it been submitted anywhere for publication”.

Toyosi Ogunfowora


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CERTIFICATION BY SUPERVISORS

I hereby certify that this research project was carried out by Toyosi Ogunfowora, a student of the Centre for Child and Adolescent Mental Health, University of Ibadan, under our supervision.

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DEDICATION

This work is dedicated to God Almighty for his grace and mercy.

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Figure 1: A flowchart illustrating the recruitment of participants 24

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KEY TO ABBREVIATIONS (ACRONYMS)

1. ID: Intellectual Disability
2. ASD: Autism Spectrum Disorder
3. ADHD: Attention Deficit Hyperactivity Disorder
4. SUD: Substance Use Disorder
5. ODD: Oppositional Defiant Disorder

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ABSTRACT

Background: Dropout is a common clinical phenomenon among outpatients. It has been defined as a total disengagement from treatment without either clinical resolution of symptoms or agreed treatment plan (Mitchell, 2007). Noncompliance with follow-up could be quite challenging among persons 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 (Omigbodun, 2001).

Aim: The study is aimed at finding the dropout rate and clinical characteristics of patients who drop out in the first year from follow up from a child and adolescent mental health clinic.

Methodology: This study was carried out at the child and adolescent mental health clinic of the University College Hospital, Ibadan, Nigeria. It is a cross-sectional study of mixed method type, comprising of a quantitative phase followed by a qualitative phase. Ethical clearance for the study was obtained from the Ethical Review Committee of the University of Ibadan/University College Hospital and a verbal voluntary consent was taken from participants of the in-depth interview. A total of 113 new patients who presented between January 2017 and December 2018 and who met the inclusion criteria were recruited for the quantitative part by purposive sampling. Out of those who dropped out of treatment, 25 participants were selected by simple random sampling for an in-depth interview. Socio-demographic questionnaire and discussion guide for the in-depth interview were the instruments used. 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: The participants were mostly (58.4%) males and adolescents between 10 and 19 years. The rate of dropout among the participants was 95.6%. The rate of dropout was found to increase with time. The socio-demographic characteristics of participants had no significant association with dropout. Patient's diagnosis ($p=0.107$) or presence of comorbidity ($p=0.290$) was also not associated with dropout. However, type of treatment received was significantly associated with dropout ($p = 0.040$). The commonest reason for dropout was no improvement in clinical condition. Other reasons for dropout were feeling of being well, financial constraint, far distance between residence and hospital and belief that cause of illness was spiritual.

Conclusion: 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 was very high which requires prompt intervention. Majority of those who were contacted on phone were appreciative and showed willingness to re-initiate treatment, hence could motivate treatment continuation. There is need for a wider health insurance coverage, which incorporates mental health treatment, in order to cater for financial challenges of accessing care. Furthermore, integrating mental health into the primary health care would provide accessible and affordable mental health services for all. Larger studies are required to assess for possible predictors of dropout among children and adolescents which could not be gotten from this study.

Keyword: Dropout, Psychiatric care

CHAPTER ONE

INTRODUCTION

1.1 Background

Treatment adherence has been defined as the “extent to which a person’s behavior, following a prescribed diet, taking medication, and lifestyle changes corresponds to agreed recommendations from a healthcare provider” (Sabate, 2003). Treatment adherence entails medication adherence, adherence to non-pharmacological treatments and also to clinic appointments. In broad terms, adherence can be said to be either medication adherence or appointment adherence. There is a need for persons with chronic illnesses to adhere to treatment and clinic appointments. However, medication adherence has received more attention than appointment adherence in recent times. Appointment non-adherence can be said to be missed appointments, partial adherence or dropout (Mitchell, 2007). Missed appointment refers to patients who do not turn up on scheduled appointment dates with or without prior information. When patients miss their appointments and later reschedule such appointment are referred to as partially adherent. Dropout is therefore total disengagement from treatment without either clinical resolution of symptoms or agreed treatment plan (Mitchell, 2007). Noncompliance with follow-up could be a challenge among persons with mental health problems and specifically in children and adolescents, because they depend on their parents/caregivers to keep clinic appointments. Considering the fact that the mainstay treatment in child and adolescent psychiatry involves both pharmacotherapy and psychosocial intervention, there is need to be retained in treatment especially for effective psychosocial intervention.

Dropout however is a common clinical phenomenon among outpatients and according to Swift et al (2017), patients are more likely to drop out of drug treatment than psychological intervention and about every 1 in 5 persons will drop out of psychological therapy (Swift and Greenberg, 2012).

Dropout phenomenon is not limited only to psychiatry and it has been reported in other chronic diseases as well (Ashaye and Adeoye, 2008; Huisman *et al.*, 2010).

1.2 Problem Statement

Mental illness is prevalent among the general population (Gureje *et al.*, 2006). In South-West Nigeria, Gureje et al reported a lifetime prevalence of 12.1% and a prevalence of 5.8% over a 12-month period (Gureje *et al.*, 2006). Among children and adolescents, Polanczyk et al in a meta-analysis of 41 studies conducted in 27 countries reported the prevalence of mental illness to be 13.4% among children and adolescents (Polanczyk *et al.*, 2015). Also, Ogonna et al reported the prevalence of mental illness among adolescents in a 10-year period to be 9.9% (Ogonna *et al.*, 2020). In addition, the prevalence of mental illness was reported to be 37.0% by Abdullateef et al among children and adolescents attending public primary schools in Zaria (Abubakar-Abdullateef, Adedokun and Omigbodun, 2017). Considering that mental disorders are often chronic in nature, continuity of care becomes crucial for an effective delivery of mental health service. Missing appointments is significant in psychiatry practice because it is an indicator of an eventual dropout (Mazzotti and Barbaranelli, 2012). A previous review stated that about twenty percent of psychiatric patients miss their scheduled appointments (Mitchell, 2007). It has been reported that the high non-attendance rates found in psychiatric clinics might be a sign of deteriorating mental health in such individuals which may indicate that they are more unwell and with poor social functioning (Killaspy *et al.*, 2000). They also have a greater

chance of dropout even subsequent times (Killaspy *et al.*, 2000). If the current treatment coverage that is below expected is added, missed appointments further drains on available resources and compromises quality of care (Omigbodun, 2001).

Studies have been done to assess dropout rate even in non-psychiatric settings and dropout was reported to be high. Ashaye et al assessed dropout rate among patients attending glaucoma clinic in Ibadan and reported a rate of 60.5% (Ashaye and Adeoye, 2008). Among HIV-infected patients receiving care at a treatment facility, dropout rate was reported to be 38.1% (Blutinger *et al.*, 2014). Also, a rate of 56% was reported among hypertensive patients attending outpatient clinic with increased likelihood among those who currently smoke, who have low academic attainment and duration of illness below 5 years (Busnello *et al.*, 2001). However, in psychiatric outpatient clinics, studies are mostly among adult patients with mental disorders (Vanable *et al.*, 2002; Khazaie, Rezaie and de Jong, 2013; Akhigbe *et al.*, 2014). Studies done among patients attending children and adolescents psychiatric clinic are fewer (Lai *et al.*, 1997; Wergeland *et al.*, 2015; Örengül and Görmez, 2017). The rate of dropout among attendees of a child psychiatry outpatient clinic was reported to be 40% (Cottrell *et al.*, 1988). After analysis of data from 234 patients from a County hospital in a community setting, Compton et al reported a dropout rate of 64% (Compton et al., 2006). Similarly in Nigeria, Akhigbe and colleagues studied a cohort of 310 patients attending outpatient clinic over 3 months period and reported that about 17% - 46% of patients do not come back for their first outpatient appointments (Akhigbe *et al.*, 2014).

1.3 Justification

Outpatient treatment in psychiatry provides both pharmacotherapy and psychotherapy for most psychiatric patients and importantly in child and adolescent psychiatry where treatment is multidisciplinary. High dropout rates have been reported in various settings and it has shown to have significant effect on treatment outcome. Among 425 patients attending the psychiatric clinic of a general hospital in India, 59.9% of patients dropped out after the first visit. Highest rate were found among epilepsy and those with intellectual disability (Gill, Singh and Sharma, 1990).

Nevertheless, there is dearth of studies with respect to dropout among children and adolescents attending psychiatric outpatient clinic in Nigeria. Having the 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 is aimed at providing local data on the prevalence of non-attendance and subsequent dropout in child and adolescent psychiatry service. It was also expected that the qualitative interview will provide in-depth understanding into the factors responsible for dropout among children and adolescents with mental illness.

1.4 Research Questions

1. What is the dropout rate of patients attending psychiatric outpatient clinic?
2. What are the socio-demographic factors affecting dropout from clinic?
3. What are the clinical factors affecting clinic dropout?
4. What are the possible reasons for clinic dropout among children and adolescents?

1.5 Aim

To find the dropout rate and identify the clinical characteristics of patients who drop out in the first year of follow-up from a child and adolescent mental health clinic.

1.6 Objectives

1. To determine the rates of drop-out among children and adolescents attending Child and adolescent psychiatric clinic at University College Hospital, Ibadan.
2. To assess the predictors of dropout among patients attending Child and adolescent psychiatric clinic at University College Hospital, Ibadan.
3. To explore the reasons for drop-out among patients attending Child and adolescent psychiatric clinic at University College Hospital, Ibadan.

CHAPTER TWO

LITERATURE REVIEW

2.1 Definition of dropout

Majority of patients who are scheduled for a follow-up visit have diagnosis of an enduring mental health disorder, and thus, monitoring of symptom remission as well as prevention of a relapse becomes necessary. Reported rates of dropout have depended on the type of service provided e.g. outpatient or inpatient services (Olfson *et al.*, 2009); type of treatment received e.g. psychotherapy or pharmacotherapy or both (Swift and Greenberg, 2012); characteristics of the patients e.g. drug users, patients with depressive illness, patients with schizophrenia (Yokopenic *et al.*, 1983; Zhang *et al.*, 2015) among others.

Treatment dropout has been defined in various ways by different individuals using various criteria. It was defined by Mitchell as total disengagement from any follow-up (Mitchell, 2007). In China among those on methadone treatment, Zhang et al defined it as missing medication intake for at least 14 days or more (Zhang *et al.*, 2015). According to Melo et al in a prospective study among 295 patients in Brazil, dropout was defined as having abandoned treatment if patient fails to return within four months after the first consultation following a recommendation for at least another visit (Melo and Guimarães, 2005). Olfson et al have also defined it as quitting treatment before the provider's decision to do so (Olfson *et al.*, 2009). In the opinion of Gordon et al, dropout was defined as an appointment that was not kept or cancelled at least 48 hours prior (Gordon *et al.*, 2010). Cottrell et al among outpatients attending a child and adolescent psychiatric clinic in London divided dropout into early and late. Cottrell et al defined early dropout as those who attended only one appointment while late dropout were those who attended more than one clinic appointment and subsequently stopped despite an arrangement for continuity of treatment (Cottrell *et al.*, 1988). Johnson opined that dropout should be from the therapist's perspective since the

therapist would be able to judge the appropriateness of termination of treatment (Johnson, Mellor and Brann, 2008). As for Tansellar et al dropout was defined as patients who had failed to return to the hospital for their next appointment without their clinician's consent, and did not re-initiate treatment within 90 days (Tansella *et al.*, 1995).

2.2 Dropout among psychiatric patients

Dropout has been reported among outpatients in different medical specialties (Mason, 1992). However, dropout has been reported to be high in psychiatric practice, up to twice compared with other specialties (Killaspy *et al.*, 2000). This high rate could possibly be due to peoples' beliefs and attitude towards the mentally ill which could negatively impact on their clinic attendance (Akhigbe, 2012). Among adolescents, dropout is one of the common barriers to receiving mental health treatment (Branson, Clemmey and Mukherjee, 2013). Olfson and colleagues studied 1664 patients for a 12-month period in a household survey and reported that one-fifth of the patients terminated treatment prematurely (Olfson *et al.*, 2009). Also, more than 70% of the dropout occurred after the first or second visit (Olfson *et al.*, 2009). Wang surveyed 3556 users of mental health services in a 12-month period and examined the rate of dropout by different health professionals. Wang reported that individuals whose mental health service was provided by family doctors or general practitioner had the lowest rate of dropout at 11.8%. Drop -out rate was highest among psychiatrists with a rate of 22.7% and 21.9% was reported among patients being treated by psychologists (Wang, 2007).

Cottrell et al reported in a study that 16% of child and adolescent referrals do not present to a psychiatrist because parents were against the referral. However, among those who presented to the psychiatrist, the rate of dropout was 40% among child psychiatry outpatients attendees (Cottrell *et al.*, 1988). Gordon et al studied 2903 attendees of a child

and adolescent clinic over a 5-year period and reported a dropout rate of 13% (Gordon *et al.*, 2010). In a cross-sectional study of 313 patients with Schizophrenia at a Nigerian hospital, Adelufosi *et al* reported a defaulting rate of 20.4% among outpatients (Adelufosi *et al.*, 2013). Makanjuola explored clinical and socio-cultural parameters among 318 new psychiatric patients at Ilesa, Nigeria. It was reported that by 6 months, about half of the participants had defaulted from treatment. Defaulting was reported to be more likely among those who have not consulted a religious or traditional home prior to hospital presentation (Makanjuola, 1985). Adeponle *et al* followed up 81 patients after discharge from a psychiatric facility for 3 months in order to explore reasons for default. Adeponle *et al* found that the rate of default was high and that almost half (49.4%) of the patients had defaulted from follow-up in 3 months (Adeponle *et al.*, 2009).

2.3 Demographic factors associated with dropout

The association between patients' demography and dropout has been reported by several researchers. However, findings have not been consistent from the studies. While Issakidis *et al* reported no significant association between patients' demographic factors and drop out in an outpatient clinic for anxiety disorders (Issakidis and Andrews, 2004), others have reported associations between age, sex, marital status and treatment dropout (Berghofer *et al.*, 2000; Edlund *et al.*, 2002; Reneses, Muñoz and López-Ibor, 2009).

The role of gender in dropout has also varied within studies. Olfson *et al* explored predictors of mental health treatment dropout in a household survey in the United States and reported that men were less likely to drop out of treatment when compared to women (Olfson *et al.*, 2009). Similarly, Berghofer *et al* examined the utilization behavior of mental health care among 272 patients in Austria over a one year period and reported that male gender is indicative of continuity of treatment (Berghofer *et al.*, 2000). In contrast, Reneses *et al* in a

case control study of 789 patients attending an outpatient mental health clinic, male sex was reported as a predictor for dropping out of treatment (Reneses, Muñoz and López-Ibor, 2009). Nevertheless, Akhigbe et al in a retrospective study of 310 patients who accessed psychiatric services over a 4-month period reported no relationship between sex and dropout (Akhigbe *et al.*, 2014).

Among patients attending an outpatient psychiatric service, it was reported by Olfson et al that young age is a predictor for dropout among adolescents in the United States (Reneses, Muñoz and López-Ibor, 2009). Similar finding was reported by Edlund et al among a community sample in United States and Ontario, that young age is associated with treatment dropout from psychiatric care (Edlund *et al.*, 2002). In contrast to this, O’Keefe et al in a study which assessed dropout among 406 adolescents receiving therapy for depression reported that older adolescents are more likely to drop out of treatment (O’Keefe *et al.*, 2018). This was attributed to the development of need for autonomy and dependence which may sometimes conflict with therapy.

Studies have also not given consistent findings about marital status and dropout. Although, Akhigbe et al reported that single status predicted missed appointments (Akhigbe *et al.*, 2014) and Reneses et al have reported that living alone is a risk factor for dropout (Reneses, Muñoz and López-Ibor, 2009), Bornstein and colleagues have argued that patients who are married are likely to drop out of mental health care compared with unmarried patients. Bornstein and colleagues attributed it to the support of their partners which would be necessary for continuous care compared with single patients who may become more dependent on their therapists and more likely to comply with treatment recommendations (Bornstein, 1993). In a similar vein, Olfson and colleagues reported that married-cohabiting individuals are more likely to drop out of mental health care compared with those who are unmarried (Olfson *et al.*, 2009).

2.4 Socio-economic and Environmental factors associated with dropout

Adelufosi et al among 313 patients with Schizophrenia in Abeokuta reported that patients who lived more than 20km away from the hospital were likely to drop out of clinic compared with patients who lived less than 20km from the hospital (Adelufosi *et al.*, 2013). Adelufosi et al further reported that financial constraint was the reason for loss to follow up in 50% of patients which may be likely due to lack of transportation (Adelufosi *et al.*, 2013). Also, among Nigerian patients, financial difficulties are made worse by the out-of-pocket method of healthcare financing for mental health services, which places a financial burden of patients' care on relatives (Adelufosi *et al.*, 2013). Makanjuola explored socio-cultural parameters among psychiatric patients in Ilesha, Nigeria and also found that the distance between the home and healthcare facility was related to presentation as well as continuity of treatment (Makanjuola, 1985). Makanjuola therefore proposed that mental health services should be provided at primary health care centers which are overseen by community psychiatric nurses and community psychiatric health personnel. In such centers, psychiatric follow-up care would also be provided (Makanjuola, 1985). Furthermore, Gordon et al reported that one of the best predictors of missed appointments are living at a distance more than 30miles from the hospital (Gordon *et al.*, 2010).

In contrast to this, Adeponle et al in a study in Kaduna did not find any significant association between the distance of patient's residence from the hospital and defaulting from follow-up (Adeponle *et al.*, 2009). Adeponle et al also reported that the commonest reason for defaulting from follow-up was feeling of being well while other reasons were financial difficulty, adverse effects of medications, and stigma of the illness (Adeponle *et al.*, 2009). Adeponle et al further explained the role of poor finances in default as it indirectly affects other factors such as distance between the home and hospital as well as the belief of being

divinely healed. Adeponle et al added that the promise of one-time healing being peddled by religious and traditional healers have been made to thrive by poverty. Adeponle et al concluded that psycho-education for patients and their relatives could improve the need to be regular with follow-up appointments (Adeponle *et al.*, 2009). According to Melo et al in a prospective study of 295 patients, continuity of treatment will be challenging without appropriate transportation which is regarded as a fundamental resource (Melo and Guimarães, 2005). Melo et al therefore emphasized the importance of providing mental health services close to people's place of domicile and providing transportation for economically challenged individuals (Melo and Guimarães, 2005).

From a meta-analysis of 27 studies, de Haan et al reported that low socio-economic status and ethnic minority are risk factors for dropout among patients (de Haan *et al.*, 2018). McCabe et al however reported that household income and acculturation did not predict dropout among children receiving outpatient therapy in a community mental health center (McCabe, 2002). Jack-ide in a qualitative study among service users attending an outpatient psychiatric clinic in the Niger-Delta region of Nigeria reported that stigma and discrimination are the main barriers to sustaining treatment (Jack-Ide and Uys, 2013).

2.5 Patient factors associated with dropout

Several factors related to patients' behavior has been reported to play a significant role in dropout. Akhigbe et al reported that living alone and aggressiveness predicted missed appointment among a cohort of patients attending outpatient mental health clinic in Nigeria (Akhigbe, 2012). In addition, having received previous treatment for a mental disorder and having co-morbidity was reported to be associated with less likelihood to miss a first appointment (Akhigbe, 2012). Ruggeri et al interviewed a cohort of outpatients attending a

community mental health service in Italy. Ruggeri et al reported that for patients who are not psychotic, dissatisfaction with service was one of the main reasons for dropout (Ruggeri *et al.*, 2007).

In order to assess treatment dropout among school-aged children attending an ADHD clinic, Schneider et al examined 73 children and found that the severity of behavioural symptoms and ADHD medication status predicted treatment dropout (Schneider *et al.*, 2013). Also, O’Keeffe et al reported that adolescents with antisocial behavior significantly predicted dropout. This was explained by the tendency of adolescents with higher antisocial behavior to find therapy less tolerable and therefore, drop out. O’Keeffe however reported that depression, anxiety, self-harm, obsessive-compulsive symptoms and comorbidity were not associated with dropout (O’Keeffe *et al.*, 2018). In contrast, Issakidis et al reported that depressive disorder or depressive symptoms were associated with a higher likelihood of dropout (Issakidis and Andrews, 2004). Wergeland et al explored the predictors of treatment dropout among 182 children attending a cognitive behavioural therapy effectiveness trial and found that patients whose parents rated their internalizing symptoms as high were likely to drop out of treatment (Wergeland *et al.*, 2015).

2.6 Parental factors associated with dropout

The role of parents/caregivers in support and care of persons with mental illness is very significant, especially in resource-constrained settings (Gureje and Alem, 2000). Adeponle et al in a study involving 81 patients in Northern Nigeria elucidated the importance of family involvement in the treatment of persons with mental illness (Adeponle *et al.*, 2009). Adeponle et al suggested that engaging the family during treatment may improve follow up as well as post-discharge adherence (Adeponle *et al.*, 2009). Schneider et al reported that

single parent families strongly predicted treatment dropout among children receiving mental health care for Attention Deficit Hyperactivity Disorder (Schneider *et al.*, 2013). Schneider *et al.* further emphasized the need to identify parental factors which could result in discontinuation of treatment among children and provide appropriate support that is needed to such parents (Schneider *et al.*, 2013). Similarly, Cottrell *et al.* also reported that among attendees of child psychiatry outpatient clinic, dropout was associated with parental separation (Cottrell *et al.*, 1988). O’Keeffe *et al.* reported that parental wellbeing as well as parenting style did not predict dropout among adolescents receiving therapy for depression (O’Keeffe *et al.*, 2018).

According to Wergeland *et al.*, high parental rating of internalizing symptoms and low rating of treatment credibility were strong predictors of dropout. It was added that it is important to ensure treatment credibility and support parents with internalizing symptoms in order to help their children remain in treatment (Wergeland *et al.*, 2015). McCabe *et al.* in a study predicting premature termination of therapy among children of Mexican-American parents reported that low level of parental education, parents who believe that increasing discipline is the way to handle emotional and behavioural problems often terminate treatment early (McCabe, 2002). reported that household income has no association with treatment dropout; however, parental education was reported to be a strong predictor of dropout (McCabe, 2002). In addition, parents who expected their child to recover rapidly were more likely to drop out after the first consultation (McCabe, 2002). Dover *et al.* in a retrospective study of patients attending a community child and adolescent clinic reported that presence of a mental illness in the caregiver, especially depression is related to default from treatment (Dover, Leahy and Foreman, 1994). This is also supported by Gordon *et al.* in the study of attendees of a child psychiatric clinic where it was reported that maternal depression is one of the predictors of dropout (Gordon *et al.*, 2010). Okewole *et al.* reported in a study of that

patients often have parents who have a mental disorder which supports the genetic aetiology of mental disorders. This increases the burden of care for the parents which in turn might play a role in dropout from treatment (Okewole *et al.*, 2011).

2.7 Clinical factors associated with dropout

Some studies have reported that patients with diagnosis of Schizophrenia as well as other psychoses are likely to be retained in psychiatric care (Rossi *et al.*, 2002; Ruggeri *et al.*, 2007). In contrast to this, Berghofer *et al.* in the United States have reported that patients with Schizophrenia had a higher dropout rate compared with other psychiatric conditions (Berghofer *et al.*, 2000). This possibly was said to be due to differences in the model of psychiatric care in different locations. Previous mental health treatment has been linked to a lower risk of dropout from psychiatric care (Yokopenic, Clark and Aneshensel, 1983). In a prospective study conducted by Rossi *et al.* to identify characteristics associated with dropout in a community psychiatric service, it was reported that those who drop out of treatment are usually younger patients with psychoses who perceived their treatment as satisfactory (Rossi *et al.*, 2002).

Aromaa *et al.* surveyed 5160 Finnish population and reported that stigma and discrimination reduce the use of mental health services but in persons with severe depression, there is an active use of mental health services (Aromaa *et al.*, 2011). However, Wang, in the survey of 3556 Canadian patients over 12 months reported that individuals who reported having had a mood disorder or having had substance dependence have a higher likelihood of terminating treatment prematurely (Wang, 2007). In a similar vein, Issakidis *et al.* reported that comorbid depression or presence of depressive symptoms were strong predictors of dropout from treatment (Issakidis and Andrews, 2004). Patients with anxiety and personality

disorders have been reported to likely drop out of treatment (Olfson *et al.*, 2009). The presence of a psychiatric comorbidity was reported by Olfson *et al.* to be associated with an increased likelihood of dropout (Olfson *et al.*, 2009). It has been reported that patients receiving pharmacotherapy alone or in combination with psychotherapy, had a lower tendency to drop out compared with those who only received group or individual psychotherapy (Reneses, Muñoz and López-Ibor, 2009).

2.8 Clinician factors associated with dropout

Olfson and colleagues reported that short duration of interaction reduces the opportunity to develop rapport, trust, and participation with the patient (Olfson *et al.*, 2009). It was therefore advised that the first two clinic visits should ensure patient engagement, initiation counseling, diagnostic evaluation and highlighting the consequences of dropout with respect to patient care. McCabe and colleagues from their finding reported that ethnic match between client and therapist; perception of stigma, as well as therapist's directiveness has no association with treatment dropout (McCabe, 2002). Nevertheless, Mason examined reasons of dropout in a Belfast hospital and reported that conflicts of opinion among the managing team concerning patient's management often results in dropout (Mason, 1992).

2.9 Consequences of dropout

Missed appointments compromises quality of care, results in poor treatment outcomes and drains financial resources. It was reported that the outcome with respect to symptomatology and disability among patients who dropped out of care is worse than that of patients who terminated service in agreement with their healthcare professionals (Ruggeri *et al.*, 2007). Outpatient clinic default especially has been reported to be associated with worse

treatment outcome (Killaspy *et al.*, 2000). According to Boggs *et al.*, examining the longitudinal course of outcome for two groups of families enrolled in a treatment program for disruptive behavior disorder in their children revealed that; long term outcomes were consistently better among those who completed treatment compared with those who dropped out (Boggs *et al.*, 2004).

Adeponle *et al.* in a study among psychiatric patients reported that those who defaulted from follow up had worse clinical outcome and social functioning. Adeponle *et al.* provided the way forward as the provision of specialized outreaches targeting follow-up default because it has been reported to reduce the rate of relapse, improve social and occupational functioning, and enhance service satisfaction. In addition, the development of community psychiatric services, suitable for low income countries is therefore desirable. Also, Nelson *et al.* examined re-hospitalization rates among 542 patients who were discharged from psychiatric care and reported that patients who defaulted completely after discharge had two times chances of being re-hospitalized than patients who presented for at least one follow up visit before defaulting. Annually, Nelson *et al.* reported a one in ten chance of re-hospitalization among those who kept appointments and a one in four chance for those who did not (Nelson, Maruish and Axler, 2000).

CHAPTER THREE

METHODOLOGY

3.1 Study Area

The study was carried out at the Child and Adolescent Psychiatry unit of the University College Hospital, Ibadan. The University College Hospital is located in Ibadan, Oyo State, South-West Nigeria. Its development was commenced in 1953 and it was formally commissioned in 1957. It is a tertiary healthcare facility with full complement of medical and surgical specialties which include psychiatry unit, hematology unit, dermatology unit, orthopedic unit etc. The Child and Adolescent psychiatry unit is exclusively dedicated to the care of children and adolescents with mental health challenges. The unit started in 1999 with an outpatient clinic service and it became a department in November, 2009. The department provides psychiatric services involving inpatient care, outpatient care, emergency services, liaison services with pediatric neurology and oncology, community services at the juvenile correctional home and school mental health service at the University of Ibadan.

3.2 Study design

This was a cross-sectional study, which was of mixed method design comprising of a quantitative phase followed by a qualitative phase. The quantitative part was used to assess the rate of dropout and its predictors while the qualitative part focuses on various reasons why patient dropout of clinic follow up.

3.3 Study Population

The study was carried out among children and adolescents presenting at the outpatient clinic of the Child and Adolescent unit between January 2017 and December 2018 as well as their parents and/or caregivers.

3.31 Inclusion criteria

1. Patients who are less than 20 years
2. Patients who had a diagnosis of a mental health disorder as recorded by a psychiatrist
3. Individuals who have been given a follow-up appointment

3.32 Exclusion criteria

1. Patients whose medical records are missing and cannot be traced with cards
2. Patients whose caregivers' phone numbers are not valid, hence could not be contacted.

3.4 Sample Size

All new patients who attended the Child and Adolescent Mental Health outpatient clinic from January 2017 to December 2018 and who met the inclusion criteria were recruited.

3.5 Sampling technique

First phase (Quantitative): Purposive sampling was used in which all new patients within the time frame of study (January 2017 – December 2018) were recruited. The case folders for all the new patients were selected to prevent selection bias. The list of new cases between the duration of study was checked at the medical records and compared with the clinic record with the nurses to ensure that all cases were selected in order to prevent misclassification bias.

Second phase (Qualitative): Out of the participants who dropped out (from the quantitative phase), twenty-five were selected by simple random sampling using a table of random numbers. An in-depth interview using a narrative explanatory model was conducted among parents/caregivers of the selected patients.

3.6 Study procedure

First phase (Quantitative): The total number of new patients who attended the Child and Adolescent Mental Health outpatient clinic from January 2017 to December 2018 was gotten from the records department of the Child and Adolescent psychiatry department. The pattern and rate of outpatient clinic attendance as well as associated factors was determined retrospectively from the medical records. For this study, dropout was defined as patients who had failed to return to the hospital for their next appointment without their clinician's consent, and did not re-initiate treatment within 90 days based on the definition proposed by Tansella et al (Tansella *et al.*, 1995).

Second phase (Qualitative): Twenty-five of the patients who were found to have dropped out from the quantitative phase were selected randomly using a table of random numbers. An in-depth interview was then conducted among the parents/caregivers of the selected patients. A verbal consent was taken via a phone call, followed by an in-depth interview to explore understanding of dropout, possible reasons for clinic dropout, and clinical condition of the patient after dropout. The interview was conducted via a phone interview in either English or Yoruba language and was transferred to a pass worded computer of the researcher. Calls were made in a private room. Data on the phone was cleaned immediately before leaving the private room to ensure confidentiality was maintained. For those who refused to consent to the interview, another participant was randomly selected as a replacement by the researcher.

3.61 Data collection

Appropriate information was extracted from the medical record of selected participants. A semi-structured questionnaire was administered via a telephone to determine reasons for dropout.

3.62 Study instruments

The following instruments were used for data collection:

First phase (Quantitative): A socio-demographic questionnaire which was modified from a 40-item School Health Questionnaire by Omigbodun et al, 2004 was used. It has both English and Yoruba versions. However, the English version was used since the researcher who extracted data was proficient in English. The questionnaire was used to obtain information about the personal life, school and family. Such information includes age, gender, type of family, parents' education among others. The clinical characteristics of participants like diagnosis, comorbidity, duration of follow-up, re-initiation of care after dropout and type of treatment received were also gotten.

Second phase (Qualitative): A discussion guide designed by the researcher to further explore possible reasons why patients miss appointments or dropout of service. This was used to conduct the key informant interview.

3.7 Data management and 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 chart.

Chi square test 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.

3.8 Ethical consideration

Ethical clearance for the study was obtained from the Ethical Review Committee of the University of Ibadan/University College Hospital. Permission was also sought from the Head of Department. For the qualitative part, a verbal voluntary consent was taken from participant's caregiver for the in-depth interview. The study was explained to the respondents and they were told that participation 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. (Appendix I)

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

3.8.1 Confidentiality

All information collected in this study was given code numbers and no name was associated with the information gotten. This ensured that no information was linked to participants in any way. Every effort was made to keep research records private and participants were assured of the confidentiality of their responses. Access to data was strictly limited to the researcher. Data stored in computers and associated hardware was password-protected.

3.82 Voluntariness

Participation in the study was entirely voluntary as no participant was coerced into taking part in any aspect of this project. It was made clear to all participants that they have a right to withdraw from the research at any time without any negative consequences with respect to their care in the clinic. Throughout the study, measures were taken to assure all participants' respect, dignity and freedom.

3.83 Beneficence

Participants were informed that data generated from this study will be used to plan how to improve clinical services and reduce dropout rates from child and adolescent psychiatric services.

3.84 Non-Maleficence/Risks

The study posed minimal risks to the participants since the procedure was not invasive. Participants were also assured that their participation will pose no risks to their health or affect their subsequent clinic visits.

CHAPTER FOUR

RESULTS

4.1 Quantitative findings

This quantitative part involved a total of 113 children and adolescents who met the inclusion criteria for the study. Figure 1 shows the flow chart of participants' recruitment.

4.11 Socio-demographic profile of participants

Table 1 shows the personal profile 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 less than 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.

Predominantly, ninety-six (85.0%) of the participants were Yoruba, four (3.5%) were Ibo, three (2.7%) were Hausa and ten (8.8%) were from other ethnic groups. Eighty (70.8%) of the participants were from Christian homes while thirty-three (29.2%) were from Islamic homes.

Figure 1: A flowchart illustrating the recruitment of participants

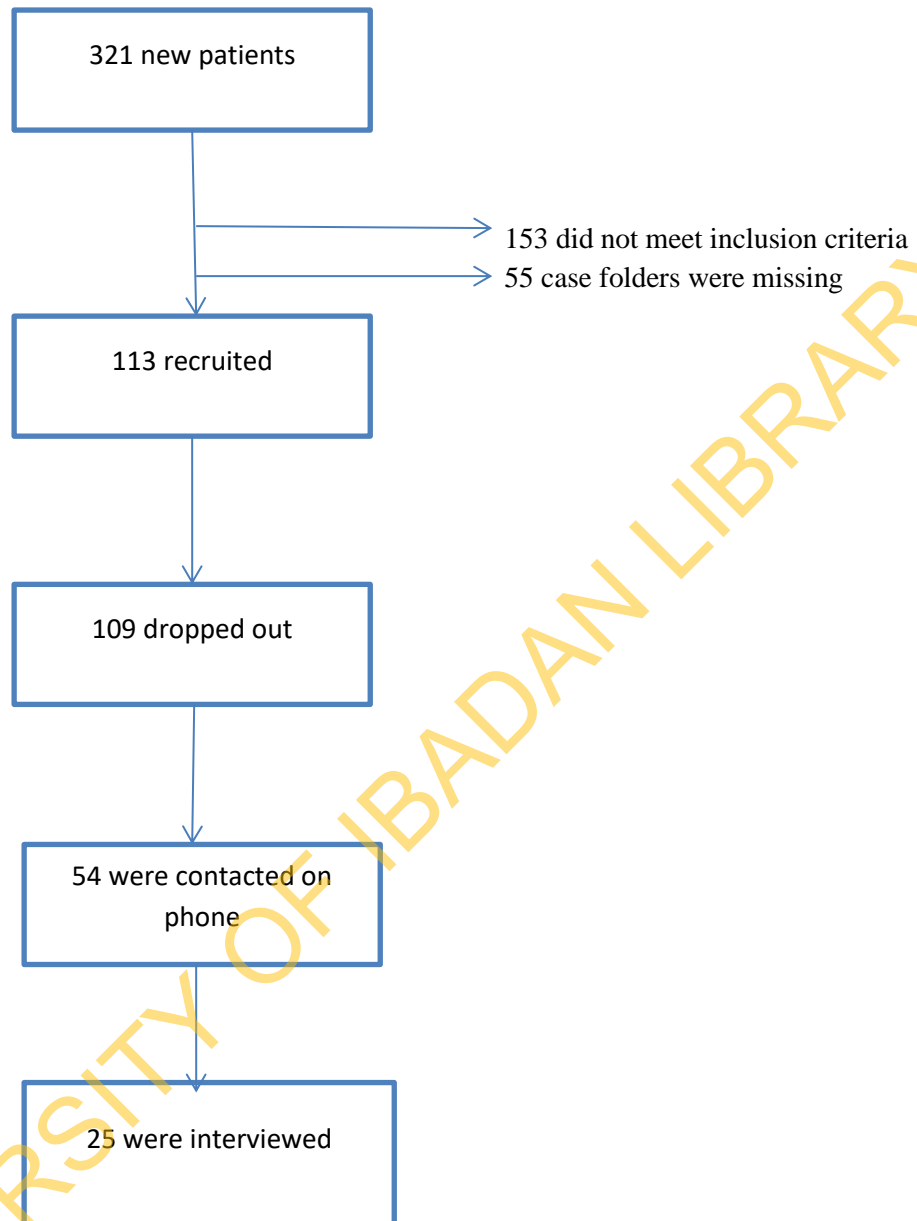


Table 1: Personal profile of participants (N=113)

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	54	47.8
Secondary	41	36.3
Tertiary	16	14.2
Missing	2	1.8
Ethnicity		
Yoruba	96	85.0
Ibo	4	3.5
Hausa	3	2.7
Others	10	8.8
Religion		
Christianity	80	70.8
Islam	33	29.2

Frequency: no of subjects, mean age: 11.09 ± 4.49

4.12 Family profile of participants

Table 2 shows the family profile of the study participants. Ninety-three (82.3%) of the participants were from monogamous family, sixteen (14.2%) lived in a polygamous family and four (3.5%) were products of single parenting. One hundred and two (90.3%) Most of the participants belong to a family where the mother had not more than five children while eight (7.1%) came from a family of more than five children. Eighty-six (76.1%) of the participants came from a family where the father had not more than five children while eight (7.1%) are from families where the father had more than five children.

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. Forty-three (38.1%) of the participants' father had tertiary level of education, twenty-five (22.1%) of the participants' father had secondary education, three (2.7%) of the participants' father had primary education and 1 (0.9%) of the participants' father had no formal education. Forty (35.4%) of the participants' mother had tertiary level of education, eighteen (15.9%) of the participants' mother had secondary education, thirteen (11.5%) of the participants' mother had primary education and 2 (1.8%) of the participants' mother had no formal education. Forty-seven (41.6%) of the participants' father had skilled occupation, thirty-eight (33.6%) of the participants' father had semi-skilled occupation, Nine (8.0%) of the participants' father had unskilled occupation and two (1.8%) of the participants' father were unemployed. Thirty-seven (32.7%) of the participants' mother had skilled occupation, thirty-four (30.1%) of the participants' mother had semi-skilled occupation, twenty-five (22.1%) of the participants' mother had unskilled occupation and two (1.8%) of the participants' mother were unemployed. Sixty-nine (61.1%) of the participants lived with both parents while forty-four (38.9%) lived with relatives or non-related

caregivers. One hundred and two (89.5%) participants lived within Ibadan while eleven (9.6%) lived outside Ibadan.

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Table 2a: Family profile of participants (N=113)

Variables	Frequency (n)	Percent (%)
Family Type		
Monogamous	93	82.3
Polygamous	16	14.2
Single Parent	4	3.5
Number of Mothers' Children		
1-5	102	90.3
Above 5	8	7.1
Missing	3	2.7
Number of Fathers' Children		
1-5	86	76.1
Above 5	8	7.1
Missing	19	16.8
Birth order among fathers' children		
Oldest	39	34.5
Others	74	65.5
Birth order among mothers' children		
Oldest	50	44.2
Others	63	55.8
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

Frequency: no of subjects

Table 2b: Family profile of participants (N=113)

Variables	Frequency (n)	Percent (%)
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
Missing	41	36.3
Mother's level of education		
No formal education	2	1.8
Primary education	13	11.5
Secondary education	18	15.9
Tertiary education	40	35.4
Missing	40	35.4
Father's Occupation		
Skilled	47	41.6
Semi-skilled	38	33.6
Unskilled	9	8.0
Unemployed	2	1.8
Missing	17	15.0
Mother's Occupation		
Skilled	37	32.7
Semi-skilled	34	30.1
Unskilled	25	22.1
Unemployed	2	1.8
Missing	15	13.3
Who participant lives with		
Both parents	69	61.1
Others	44	38.9
Location of residence		
Within Ibadan	102	90.3
Outside Ibadan	11	9.7

Frequency: number of participants

4.13 Clinical characteristics of participants

Tables 3 and 4 show the clinical parameters of the study participants. Among the participants, 37 (32.7%) had intellectual disability which was the commonest diagnosis. Intellectual disability was also the commonest psychiatric comorbidity found among 9 (8%) of the participants. Epilepsy was the most common medical comorbidity among 15 (13.3%) of the participants. Twenty-four (21.2%) of the participants had psychiatric comorbidity, 34 (30.1%) participants had medical comorbidity and 6 (5.3%) had both psychiatric and medical comorbidities. Fifty-six (49.6%) of the participants received pharmacotherapy with psychosocial treatment (49.6%) while fifty-seven (50.4%) participants received psychosocial treatment alone. One hundred and nine (95.6%) of the participants dropped out of treatment and all did not reinitiate treatment till the time study was carried out.

Table 3: Clinical parameters of the study participants (N=113)

Variables	Frequency (n)	Percent (%)
Diagnosis		
ID	37	32.7
ASD	13	11.5
ADHD	10	8.7
Depression	8	7.1
Psychotic disorders	6	5.4
Elimination disorders	8	7.1
Anxiety disorder	2	1.8
Conversion disorder	3	2.7
Dyscalculia/Dyslexia/LD	6	5.4
SUD	1	0.9
Tic disorder	2	1.8
Epilepsy	4	3.5
Somatoform	1	0.9
Others	12	10.5
Psychiatric comorbidity		
ID	9	8.0
ADHD	5	4.4
ASD and ID	1	0.9
Depression	3	2.7
Enuresis	3	2.7
LD	1	0.9
ODD	1	0.9
Pseudo-seizure	1	0.9
Medical comorbidity		
Epilepsy	15	13.3
CP	4	3.5
Others	15	13.3
Type of treatment		
Biopsychosocial	56	49.6
Psychosocial	57	50.4
Duration to drop out		
Within the first 30 days	75	66.4
After the first 30 days	38	33.6

Table 4: Comorbidity profile of participants (N=58)

Diagnosis	Number	Percent(%)
ADHD	5	4.4
ID	9	8.0
ASD	1	0.9
Depression	3	2.7
Enuresis	3	2.7
LD	1	0.9
ODD	1	0.9
Pseudoseizure	1	0.9
Cerebellar dysfunction	1	0.9
Atrial Septal defect	1	0.9
Retroviral Infection	1	0.9
Lennox gestaust syndrome	1	0.9
Myopia	1	0.9
Otitis media	1	0.9
Sinusitis	1	0.9
Talipes equinovarium	1	0.9
Urinary tract infection	1	0.9
Visual impairment	1	0.9
Cerebral Palsy	3	2.7
Epilepsy	13	11.5
Blindness	1	0.9
Hyperthyroidism	1	0.9
Down's syndrome	3	2.7

4.14 Prevalence of drop-out among children and adolescents attending outpatient clinic

The prevalence of drop-out among the study participants was 95.6%. Of the 113 participants involved in this study, 109 participants dropped out.

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4.15 Event analysis of dropout

Table 5a shows the frequency of participants' visit before dropout. Fifty (44.2%) of the participants who dropped out did not come for follow up after the initial assessment and twenty-seven (23.9%) participants came only once after the initial assessment.

Table 5b shows the rate of dropout per time. Seventy-five (66.4%) participants dropped out in the first month, eighteen (15.9%) dropped out at 3 months, six (5.3%) participants dropped out at 6 months, four (3.5%) dropped out at one year and ten (8.8%) dropped out after a year.

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Table 5a: Frequency of visit before dropout (N=109)

Number of visit before dropout	Frequency (n)	Percent (%)
0	50	44.2
1	27	23.9
2	15	13.3
3	6	5.3
4	4	3.5
5	3	2.7
6	-	-
7	1	0.9
8	3	2.7
9	1	0.9

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Table 5b: Rate of dropout based on duration (N=109)

Duration	Frequency (n)	Percent (%)
1 month	75	66.4
3 months	18	15.9
6 months	6	5.3
1 year	4	3.5
More than a year	10	8.8

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4.16 Association between drop out and personal characteristic of participants

Table 6 shows the drop-out rate across the personal profile of the study participants. There was no significant association between dropout and sex ($p = 0.086$) or age of the patient ($p = 0.596$). Also, dropout among participants was not associated with level of education ($p = 0.673$), ethnicity ($p = 0.391$) or religion ($p = 0.191$).

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Table 6: Drop-out across personal profile of participants

Variables	Drop Out		Statistic	
	Yes	No	χ^2	p-value
Sex				
Male	62 (93.9)	4 (6.1)	2.953	0.086
Female	47 (100)	0 (0.0)		
Age				
< 10years	40 (97.6)	1 (2.4)	0.282	0.596
10 – 19 years	65 (95.6)	3 (4.4)		
Education Level				
Primary	52 (96.3)	2 (3.7)	0.791	0.673
Secondary	39 (95.1)	2 (4.9)		
Tertiary	16 (100)	0 (0)		
Ethnicity				
Yoruba	92 (95.8)	4 (4.2)	0.734	0.391
Others	17 (100)	0 (0.0)		
Religion				
Christianity	76 (95.0)	4 (5.0)	1.711	0.191
Islam	33 (100)	0 (0.0)		

4.17 Association between dropout and family characteristics of participants

Table 7 shows the relationship between drop-out and family profile of the study participants. There was no association between drop-out and family type ($p = 0.892$). Also, there is no significant association between dropout and number of father's children ($p = 0.533$), mother's children ($p = 0.568$) or birth position ($p = 0.780, 0.859$). Likewise, who patient lives with ($p = 0.337$) or patient's place of residence was not significantly associated with drop-out ($p = 0.504$).

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Table 7: Drop-out across family profile of participants

Variables	Drop Out		Statistic (Fischer's)	p-value
	Yes	No		
Family type				
Monogamous	89 (95.7)	4 (4.3)	0.228	0.892
Polygamous	16 (94.1)	1 (5.9)		
Single Parent	3 (100)	0 (0)		
Father's children				
1 – 5 children	82 (95.3)	4 (4.7)	0.389	0.533
Above 5	8 (100)	0 (0.0)		
Mother's children				
1 – 5 children	98 (96.1)	4 (3.9)	0.326	0.568
Above 5	8 (100)	0 (0.0)		
Paternal birth order				
Oldest	37 (94.9)	2 (5.1)	0.078	0.780
Others	72 (96.0)	3 (4.0)		
Maternal birth order				
Oldest	48 (96.0)	2 (4.0)	0.032	0.859
Others	61 (95.3)	3 (4.7)		
Parent's marital status				
Married	70 (94.6)	4 (5.4)	0.523	0.470
Others	39 (97.5)	1 (2.5)		
Patient's living status				
With parent	67 (97.1)	2 (2.9)	0.922	0.337
With others	42 (93.3)	3 (6.7)		
Location of residence				
Within Ibadan	98 (96.1)	4 (3.9)	0.477	0.504
Outside Ibadan	11 (100)	0 (0.0)		

4.18 Association between dropout and clinical characteristics of participants

Table 8 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 ($p\text{-value} = 0.040$).

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Table 8: Drop-out across clinical parameters of participants

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

*p-value < 0.05 indicates significance

4.2 Qualitative Findings

In-depth interviews were conducted for 25 participants out of who dropped out. All those who were interviewed were caregivers/parents of the patients. Recurring themes associated with reason for dropout, challenges of accessing services, perception of follow up were identified in each of the in-depth interview transcript narratives. The thematic analysis resulted in 10 main themes:

5.1 Perception of psychiatric follow-up

Many participants do not know what psychiatric follow-up is.

Some described follow-up as continuity of care after initial assessment

“Follow-up means a continuous visit or a follow up of the initial treatment or therapy that has been given” - Father of a 9 year old with conversion disorder.

Others said that it is for monitoring

“What I understand by that is that you monitor and make sure that ailment that the child was brought for has gone and also to watch the response of the child to the treatment given” – Father of a 14 year old with primary enuresis.

5.2 Duration of follow-up

Most of the participants have stopped follow-up care for at least a year

“It’s been long about 2 years ago” – Father of a 16 year old with seizure disorder.

Most cannot remember when last the patient came for follow-up

“It’s been long I can’t really remember” – Mother of a 6 year old with Attention Deficit Hyperactivity Disorder (ADHD).

5.3 Need to contact clinician before stopping follow-up

Most of the participants did not contact their clinician before defaulting

“No, I didn’t tell them” – Father of a 7 year old male with ADHD.

One caregiver claimed that they were advised to go to another hospital where they currently attend follow up.

“Not exactly, they advised us to leave then because there was an industrial action” – Uncle of a 17 year old male with a psychotic disorder.

Some caregivers said it was not necessary

“Well we had a very long clerking the day we came and they gave us a diagnosis we were supposed to go on parent training like they said because I was made to understand that it’s in extreme cases that they actually need any form of medication for oppositional defiant disorder which was what their diagnosis was and when I came for parent training you were on strike, then I read up a lot on it and I knew that if I don’t have an extreme case what I actually need is a regulated environment and a lot of self-regulation from what I read” - Mother of a 8 year old with Oppositional Defiant Disorder (ODD).

5.4 Reasons stated for interruption of care

Most of the participants reported no improvement in the child’s health condition

“She still does it; she’s like 12-13 years old now. I have no idea of why they stopped; the mother would be the one to tell you about that. But 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.

Others reported that patient now feels well

“She is now doing well and back to school” – Mother of a 8 year old with oppositional defiant disorder

Financial constraint was the reason for some participants

“They tried a lot for us it was mainly because I had no money” – Mother of a 5 year old with intellectual disability.

Distance between the home and hospital played a role for some participants

“Well because of the distance and the stress” – Mother of a 6 year old with ADHD.

Some parents gave no reason – For instance, mother of a 13 year old with Conduct Disorder

Some reported that the cause of child’s illness was spiritual; therefore, there was no need for hospital care.

“I don’t know much but we believe it is spiritual, not a hospital thing” – Sister of a 15 year old with Schizophrenia

Others reported that patient is well, therefore, unnecessary

“No, it’s because God has taken control, you people have really influenced her she’s working towards reading psychology she counsels her classmates she comes home and say mummy I can read it from my classmate’s character that she’s depressed; I called her she didn’t want to tell me initially then I did some things and she opened up to me and she was crying. You people don’t know what you’ve done for me once she’s home we will come and say big thank you, honestly am so happy you’ve really influenced her a lot” - Mother of a 8 year old with ODD.

5.5 Challenges faced during follow-up

Many did not state any specific challenge

Others reported that money and/or distance were the main challenges

“Yes because of money and distance” - Mother of a 6 year old with ADHD.

5.6 Efforts made to address challenges of follow-up

Most of the participants reported no effort at ensuring follow up is ensured

Some said that they were trying to increase their financial strength

“I’m trying to work for more money” – Father of a 7 year old with ADHD.

5.7 Further contacts for problems of concern after dropout

Many did not contact anyone for the child’s condition

“No, I’ve been relying solely a lot on reading” - Mother of a 8 year old with ODD.

Some went back to the place of referral

“I went back to the private hospital where I was referred to University College Hospital and the doctor said that it will go” – Mother of a 10 year old with ADHD.

Some claimed that they have been praying about it

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

5.8 Continuity of medications/therapy after dropout

Most of the participants did not continue medication/therapy

“No” - Mother of a 14 year old with intellectual disability.

Some reported that patients still continue taking medication/therapy

“She gets the speech therapy required in her special school daily” – Father of a 3 year old with Autism Spectrum Disorder

“Yes, we haven’t changed it” – Mother of a 10 year old with Tics disorder

One participant reported a haphazard use of medication

“Yes, she takes it once in a while now when she’s in the mood, she’s in the hostel now am so happy in fact I’ll bring her one of these days to come and say thanks” – Mother of a 12 year old with depression.

5.9 Advantages and disadvantages of stopping follow-up

Most of the participants said that it has no benefit or adverse effect

“Not, at all” - Mother of a 10 year old with ADHD.

Some said that illness has worsened

“I won’t deceive you it’s getting worse but I’m planning to bring her back or take her somewhere else when I have money” - Father of a 16 year old with seizure disorder.

Some reported that it is beneficial

“He is gradually improving, though he is still out of school” – Sister of a 15 year old with Schizophrenia

5.10 Overall impression of assistance after stopping follow up

The only caregiver who took patient for psychiatric care after dropout described it as good

“It was good, the care at the University College Hospital was impressive and the private hospital too tried a lot” - Uncle of a 17 year old male with a psychotic disorder.

Many described the initial care before dropout as satisfactory but had no assistance after dropout

“Wonderful because it actually sets the ball rolling for me to know that this could actually be a very bad thing am dealing with if I don’t wake up to reality, if I didn’t come then I wouldn’t know the enormity or wouldn’t have heard of some-thing like oppositional defiant disorder and what it actually could do to a child and what it could does to learning, what it does to the future, what kills and actually that child may lack all through life” - Mother of a 8 year old with ODD.

CHAPTER FIVE

DISCUSSION, CONCLUSION AND RECOMMENDATION

This was a mixed method study of the sequential exploratory design comprising of a quantitative phase, which was followed by a qualitative phase. It was conducted among 113 children and adolescents attending the child and adolescent mental health outpatient unit of the University College Hospital, Ibadan.

5.1 Socio-demographic variables of the participants

The participants were mostly adolescents between 10 and 19 years. 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 (Ogun *et al.*, 2010). This could be because onset of mental disorders in adulthood often starts in adolescent (Kessler *et al.*, 2007). Another explanation could be that, because of the poor knowledge of neurodevelopmental disorders which often occur since childhood, there is late identification and presentation for treatment (Bishnu Prasad, Yao and Jingyi, 2019). More than half of the participants were males, which is similar to the finding of Oshodi et al, as well as Ogun et al in Lagos Nigeria, among users of a child and adolescent mental health service (Ogun *et al.*, 2010; Oshodi and Erinfolami, 2010). This may be due to sex differences in the prevalence and course of psychiatric disorders among children and adolescents (Cosgrove, Mazure and Staley, 2007). In addition, neurodevelopmental disorders have been reported to be commoner among males than females (May *et al.*, 2019). About half of the participants were in primary school, which shows a delay in educational milestone that could be due to the negative impact of the illness on their education. It is widely documented that neurodevelopmental disorders often pose numerous challenges to education such as disruptiveness, inability to complete learning outcomes and poor academic performance

(Yoro, Fourie and van der Merwe, 2020). Participants were mainly of Yoruba ethnicity; this is because the study was conducted in South-West Nigeria which is predominantly inhabited by Yoruba tribe. The participants were mostly from a Christian family, which is similar to the finding of Ogun et al in Lagos Nigeria where 79.7% of the participants were Christians (Ogun *et al.*, 2010).

The participants were mostly from monogamous family. This could be because the fewer number in a monogamous setting allows close communication and prompt health-seeking behavior. Most of the participants were not first of their parent's children, which is in contrast with the finding of Oshodi et al in Lagos Nigeria, where most participants were first or second birth positions (Oshodi and Erinfolami, 2010). The developmental milestones of children are often compared; therefore, birth order could have played a role in patient's presentation at the hospital. A comparison with an older child could have resulted in either an early or late presentation at the hospital for treatment. An early presentation for evaluation and treatment might result, if an older child, who has a normal development, serves as a guide for the parents in monitoring the development of younger siblings. Hence, a deviation prompts them to seek possible explanations, and might present at the hospital. On the other hand, if the older child has a delayed developmental milestone, comparing with a younger sibling could have an effect on the prompt treatment of the younger sibling as parents might delay presentation at the hospital. About two-third of the participants' parents were married. This could possibly account for the low prevalence of depression among the participants because, separated or divorce has been reported to be associated with internalizing disorders among children and adolescents (Wallenborn *et al.*, 2019). More than a third have fathers and mothers whose level of education was tertiary, which is in line with the finding of Ogun et al in Lagos Nigeria, which reported that substantial number (39.4%) of fathers of patients attending child and adolescent mental health clinic had tertiary education (Ogun *et al.*, 2010).

However, secondary education was the commonest (39.2%) for mothers of patients as reported by Ogun et al (Ogun *et al.*, 2010). Eighty-three percent of the participants have fathers who were employed which is in line with the findings by Ogun et al in Lagos Nigeria where 87.9% of the patients' fathers were employed (Ogun *et al.*, 2010). Eighty-four percent of the participants have mothers whose were employed. This is higher than the findings by Ogun et al Lagos Nigeria where 78.9% of participants' mothers are employed (Ogun *et al.*, 2010). More than half (61.1%) of the participants were living with both parents which might enable social support for the patients.

5.2 Clinical characteristics of study participants

Intellectual disability was the commonest diagnosis among the participants with a prevalence of 32.7%. Oshodi et al reported a similar finding in Lagos Nigeria, where the commonest diagnosis among patients attending a psychiatric outpatient clinic was mental retardation (intellectual disability) and epilepsy (Oshodi and Erinfolami, 2010). 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 (Oshodi and Erinfolami, 2010). 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 (Tuchman, 2017). Equal proportion of participants had either pharmacotherapy alongside psychosocial treatment or psychosocial treatment alone. Majority of the participants had outpatient care which could have effect on the doctor-patient therapeutic alliance and was not well built before patient dropped out of follow up care.

5.3 Dropout among the study participants

The rate of dropout in this clinic was 95.6% which is higher than the finding of Oshodi et al where a rate of 88.7% was reported among attendees of a child and adolescent psychiatric unit in Lagos Nigeria (Oshodi and Erinfolami, 2010). This higher rate could have been due to difference in the period of recruitment between the two studies. Oshodi et al recruited over a 15-year period which is a sufficient time for some patients who initially dropped out to reinstate treatment hence, no longer regarded as having dropped out of treatment. It has also been reported that studies which included first visits usually have a higher dropout rate (Reneses, Muñoz and López-Ibor, 2009).

The operational definition of dropout used could have been responsible for the findings in this study. The definition simply regarded whosoever fails to re-present at the child and adolescent psychiatry outpatient clinic within a 3-month period, as having dropped out of care. This is however untrue among the clinic attendees, because 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 among others. Also, a special school which has a mental health professional usually ensures follow-up care for its pupils at the school health clinic, thereby reducing the parental stress of bringing them, especially when they had no complaint. Another reason could be that some of the participants are being followed up at the paediatric neurology liaison clinic for ease and prevention of patients falling through the cracks of different specialists. This could be especially so considering the high rate of epilepsy found among the participants. The need to co-manage with neurologists therefore becomes necessary because such patients usually present to neurologists first, and are often referred subsequently for behavioural problems.

More than half of the participants dropped out within the first month of treatment, mainly after the initial assessment. This is similar to the findings of Adeosun et al in Lagos, Nigeria where 51% of the patients defaulted from clinic after their first appointment (Adeosun *et al.*, 2012). Beer et al also reported that over half of the sample of referrals to a school psychiatric clinic in England dropped out after the initial assessment (Beer, 1992). Most of the participants dropped out at the earlier stage of treatment which is in keeping with the findings of Oshodi et al in Lagos, Nigeria (Oshodi and Erinfolami, 2010). This could be because the doctor-patient relationship has not been well formed and some caregivers are yet to fully understand the mental health problems being dealt with. It is also worthy of note that the dropout rate in this study could have been influenced by an unrealistic expectation of cure among caregivers/parents which made them to default after being informed that their child's health condition is manageable rather than curable (Bellack and Mueser, 1986; Rief and Anna Glombiewski, 2017). The percentage of those who dropped out increased with subsequent clinic visits. In a study by Adeosun et al among attendees of a child and adolescent psychiatry outpatient clinic in Lagos Nigeria, as well as Beer among patients attending a school psychiatric clinic in England, dropout was similarly reported to have increased with the number of clinic visits (Beer, 1992; Adeosun *et al.*, 2012). This rate of dropout which increased with time is also in line with the findings of Akhigbe et al in Kaduna Nigeria (Akhigbe *et al.*, 2014). It probably could have resulted from the reluctance to represent when symptoms resolution seems to be slow or because the symptoms have resolved and there was no need for further care. A different explanation for this progressive rate of dropout might be due to the parental or caregivers' preference for alternative care, because, many parents still struggle with the stigma of mental illness. Therefore, they may explore non-orthodox centers during treatment.

5.4 Association between dropout and socio-demographic variables

Socio-demographic variables were found to have no significant relationship with dropout. This is in line with the findings of Issakidis et al among adolescents receiving treatment for anxiety disorder in an outpatient clinic in Sydney (Issakidis and Andrews, 2004). Family type and mother's level of education were not associated with dropout which is similar to the findings of Beer in England (Beer, 1992). Furthermore, patient's birth order, parents' marital status, who patient lives with, or place of residence has no association with dropout. Oshodi et al reported a similar finding, however, it is in contrast with Adelufosi et al who reported significant association between home distance from the hospital and dropout (Oshodi and Erinfolami, 2010; Adelufosi *et al.*, 2013).

5.5 Association between dropout and clinical parameters

There was no association between diagnosis and dropout among the participants which was also reported by Oshodi et al among 106 attendees of a child and adolescent psychiatry clinic in Lagos Nigeria (Oshodi and Erinfolami, 2010) and Dover et al in the United States (Dover, Leahy and Foreman, 1994). 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 (Edlund *et al.*, 2002). 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 (Cottrell *et al.*, 1988)

5.6 Reasons for dropout

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 (Grover *et al.*, 2018). In some chronic psychiatric conditions for example Schizophrenia, 30% of patients respond poorly to antipsychotics and about 7% show total non-response (Semple and Smyth, 2013). 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 in line with the finding of Grover et al where complete relief of symptom was reported as the second commonest reason for dropout (Grover *et al.*, 2018). Similarly, Mason reported that the perception that follow up is not necessary is a reason for dropout among attendees of outpatient clinics (Mason, 1992). 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 (Makanjuola, 1985).

Another commonly expressed reason for dropout was financial constraint which has also been reported among psychiatric patients in Benin, Nigeria by Akhigbe et al (Akhigbe, 2012). Because children and adolescents do not have a source of income, 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. Financial problem has also been identified by Omigbodun et al as a stressor of psychological distress among undergraduates in Ibadan Nigeria (Omigbodun *et*

al., 2006). Also, 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 (Makanjuola, 1985; Gordon *et al.*, 2010; Adelufosi *et al.*, 2013; Grover *et al.*, 2018). Adelufosi *et al.* reported that patients who lived more than 20km from the hospital are likely to drop out of treatment (Adelufosi *et al.*, 2013).

Aetiology of the illness was the stated reason by some of the participants as they believe that it was spiritual, hence, sought for a 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 believe that the cause of illness was evil spirit. Ogun *et al.* also reported unwillingness of caregivers to accept that the emotional or behavioural problems of the children are as a result of mental disorders (Ogun *et al.*, 2010). Few 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.

5.7 Limitations

This was a retrospective study which relied solely on records from the case folders. Nevertheless, some data were incomplete due to inconsistent recording patterns in the case folders. Furthermore, some individuals could not be contacted on phone and there was no alternative phone number. Also, the high rate of dropout in the study presented a small variability between those who dropped out and those who did not; hence, predictors of dropout could not be assessed.

5.8 Conclusion

This study has shown that dropout is a common phenomenon among children and adolescents receiving psychiatric care and the rate of dropout is very high. Socio-demographic and clinical characteristics of participants showed no significant association with dropout. Following interview, participants agreed that the services being provided at the clinic was satisfactory and the staffs were warm. However, lack of improvement in clinical symptoms and significant relief from symptoms were the commonest reasons for dropout. Other reasons for dropout were financial constraint, far distance from home to the hospital, belief that illness has a spiritual causation and transfer of care to a private facility.

5.9 Recommendation

Majority of those who were contacted on phone were appreciative and showed willingness to re-initiate treatment. Therefore, contacting patients who defaulted from clinic shows how committed the clinicians are to treatment course and could serve as a motivation to continue follow up. Furthermore, integrating mental health into the primary health care would provide accessible and affordable mental health services for all. Larger studies are required to assess for possible predictors of dropout which could not be gotten from this study.

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APPENDIX I

Consent Form

IRB Research approval number: UI/EC/20/0309

This approval will elapse on: 31/08/2021

Title of research: Dropout and its correlates among patients attending Child and Adolescent Mental Health Clinic at the University College Hospital, Ibadan.

Name and affiliation of the researcher of applicant: This study is being conducted at the Department of Child and Adolescent Mental Health, University of Ibadan.

Purpose of research: The purpose of this research is to assess the dropout rate and associated factors among patients attending child and adolescent mental health clinic at the University College Hospital, Ibadan.

The Procedure of the research: A review of case folders of patients who attended the child and adolescent mental health outpatient clinic from January 2017 to December 2018 will be done via a questionnaire. Selected participants for the qualitative part will have an in-depth interview using an interview guide.

Expected duration of research and of participants' involvement: In total, you are expected to be involved in this research once as at the time of interview. You should not spend more than 15minutes. This applies only to the qualitative aspect.

Risks, costs, and benefits to the participants: The study will not expose you to any risk or harm and your participation in this research will only take little of your time. It is hoped that this research will help to improve healthcare service delivery and reduce the rate of dropout..

Confidentiality: All information collected in this study will be given code numbers and no name will be recorded. This cannot be linked to you in any way; your name and an identifier will not be used in any publication and report from this study. As part of our responsibility to conduct this research properly, officials of ethical review board may have access to these records.

Voluntariness: Your participation in this research is entirely voluntary. If you choose not to participate, you will not be disadvantaged in any way. You can choose to withdraw from the research at any time.

What happens to research participants and communities when research is over: The findings of this study will be published in a newspaper bulletin, or Journal.

There is no apparent or potential conflict of interest.

Statement of the person obtaining informed consent: I have fully explained this research to the subjects and I have given sufficient information, including risks and benefits necessary to make an informed decision.

DATE: ----- SIGNATURE: -----

Statement of the person giving consent:

I have read the description of the research. I have also talked it over with the investigator to my satisfaction. I understand that my participation is voluntary. I know enough of the purpose, methods, risks, and benefits of the research study to judge that I want to take part in it. I understand that I may freely stop being part of this study at any time.

DATE: -----SIGNATURE: -----

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This research has been approved by the Ethics Committee of the University of Ibadan and the Chairman of this committee can be contacted at Biode Building, Room 210, 2nd floor, Institute for Advanced Medical Research Training, College of Medicine, University of Ibadan. E-mail: uiuchirc@yahoo.com and uiuchec@gmail.com

In addition, if you have any questions about your participation in this research, you can contact the principal investigator:

PLEASE KEEP A COPY OF THE SIGNED INFORMED CONSENT.

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APPENDIX II

Socio-demographic Questionnaire

Please fill the information or tick as appropriate. This is not an examination it is only to find out about you and your health.

SECTION A (Personal Information)

1. Sex: Male Female
2. Name of School.....
3. Class/Level.....
4. Date of birth
5. Age: (as at last birthday)
6. Address:
7. Phone number
8. Ethnic group:
9. Religion: Christianity Islam Others (specify)
.....

SECTION B (Family Information)

10. Family type: Monogamous Poly bus Others
(specify).....
11. Number of mother's children
12. Number of father's children
13. Patient's position among father's children?
14. Patient's position among mother's children?
15. Marital Status of Parent? Married Separated/Divorced Father is dead
Mother is dead Mother & Father are dead

16. Level of Father's Education:
17. Occupation of Father [Write the exact occupation]:
18. Level of Mother's Education:
19. Occupation of Mother [Write the exact occupation]:
20. Who does patient live with presently?
 Parent.....Mother.....Father..... Others.....

SECTION C (Clinical factors)

21. Diagnosis.....
22. Psychiatric comorbidity.....
23. Medical comorbidity.....
24. Date of first presentation
25. Dropout (Yes/No)
26. Date last seen at the clinic
27. Type of treatment: Pharmacotherapy Psychotherapy Both
 Others (e.g. speech therapy, social services).....
28. Form of management: Inpatient care Outpatient care
29. Number of follow-up visits attended before dropout
30. Re-initiation of care after dropout? Yes No

APPENDIX III

Discussion guide for in-depth interview

1. What do you understand by psychiatric care follow-up?
2. How long have you stopped coming for follow-up?
3. Did you contact your clinician before stopping follow-up care?
4. What are your reasons for interruption of care? (Explore clinical (e.g. staffs' attitude), socio-economic (e.g. funds), patient and clinician factors).
5. Do you find continuity of care challenging?
6. What efforts have you made to address the challenges above?
7. Have you contacted any psychiatrist/healthcare/non-medical professional for the problems of concern?
8. If yes to (5), who did you contact?
9. Since you stopped follow-up, a) Do you continue medications/therapy? B) Have you been admitted to the hospital for mental health problems?
10. If yes to (7), give details of when, where, number of times etc.
11. What are the advantages or disadvantages (if any) of stopping follow-up?
12. What is your overall impression on the assistance you received for your psychiatric problems after stopping follow-up care?