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Seventeen Years of Specialist Child and Adolescent Mental Health Services in Nigeria: Evolution of Clinical Presentations at a Tertiary Teaching Hospital

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Research Article

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Abstract

Background

Specialist child and adolescent mental health (CAMH) services in low-resource settings have developed in the context of limited specialist capacity, delayed recognition and fragmented referral pathways. The University of Ilorin Teaching Hospital (UITH), Nigeria, provides an opportunity to examine how the clinical profile of patients reaching specialist CAMH care changed as a dedicated service was established and developed.

Methods

We synthesised three successive UITH evidence windows: a published audit before establishment of a dedicated CAMH unit (2002–2006; n = 94), a medical audit of the first five years (2007–2011) of the dedicated unit (n = 73), and a retrospective review of clinical records from January 2012 to December 2024 (n = 200). The historical studies were used as contextual comparators rather than pooled as a single patient-level dataset. Contemporary diagnoses were coded according to ICD-11 and descriptive statistics were used.

Results

Mean age at presentation was 16.38 ± 2.49 years in 2002–2006, 12.64 ± 3.69 years in the first five years of the dedicated unit and 12.03 ± 4.26 years in 2012–2024. Schizophrenia accounted for 50% of diagnoses in the pre-unit audit and 30% in the early-unit audit, compared with 19.5% in the contemporary cohort. The early-unit audit reported mental retardation in 28.8% and ADHD in 11%; in 2012–2024, disorder of intellectual development accounted for 28%, ADHD 6% and autism spectrum disorder 5%. Among contemporary patients, 45% accessed orthodox psychiatric care only, while traditional healing, religious healing and mixed pathways accounted for 9.5%, 8% and 16%, respectively; 21% were undocumented.

Conclusions

Across successive UITH service eras, the population reaching specialist CAMH care was younger and diagnostically broader in the later periods than in the pre-unit audit. The findings describe changing specialist service utilisation rather than changes in population prevalence. Continued investment in early identification, referral networks, multidisciplinary capacity and culturally responsive pathways to care is warranted.

INTRODUCTION

Child and adolescent mental health (CAMH) disorders are common and may impair educational attainment, relationships and functioning across the life course. Recent global guidance continues to emphasise that mental health conditions often emerge early, while access to age-appropriate services remains inadequate, particularly in low- and middle-income countries [1–3]. Yet specialist CAMH services remain scarce in many low- and middle-income countries (LMICs), where large treatment gaps coexist with shortages of trained professionals, fragmented referral systems, financial barriers and culturally mediated pathways to care. In many settings, specialist psychiatric services remain organised primarily around adults, increasing the likelihood that children and adolescents reach specialist care late or only when difficulties have become severe.

Nigeria reflects many of these constraints. Recent African evidence continues to demonstrate a substantial burden of mental health difficulties among young people, alongside persistent limitations in access to professional care. A 2024 meta-analysis of 63 studies involving 55,071 young people across sub-Saharan Africa found substantial pooled prevalence estimates for depression, anxiety, attention problems, conduct disorder and post-traumatic stress, while also highlighting heterogeneity and methodological limitations in the evidence base [4–6]. Although epidemiological and primary-care studies demonstrate substantial psychiatric morbidity among children and adolescents, recognition and referral by frontline services remain inconsistent. Families may also move through several sources of help, including primary healthcare, paediatric services, traditional healers and religious providers, before reaching specialist psychiatric care. Consequently, the clinical population seen at a tertiary CAMH service represents not simply the distribution of mental disorders in the community, but the combined effects of recognition, referral, accessibility and help-seeking.

The development of specialist CAMH services at UITH provides a particularly useful institutional history. UITH is a tertiary teaching hospital in Ilorin, North-Central Nigeria, serving as a psychiatric referral centre for Kwara State and neighbouring areas. Before the establishment of a dedicated child and adolescent psychiatric service, children and adolescents were seen within adult psychiatric facilities. The pre-unit audit conducted from January 2002 to December 2006 identified 94 patients aged 7–19 years. The mean age was 16.38 ± 2.49 years; 82% were aged 14–19 years, while only one patient was younger than seven years [7]. Schizophrenia accounted for 50% of diagnoses, followed by delirium (15%) and seizure disorders (9%).

The historical audit also showed how strongly the service was dependent on hospital-based referral. Forty percent of patients were referred from the general outpatient department and 29% from internal medicine and paediatrics, whereas referrals from social welfare institutions were uncommon [7]. Sixty-four percent were managed as outpatients and 36% as inpatients. The authors noted that the absence of a dedicated child psychiatric facility could itself have influenced the observed case mix: children with developmental or less disruptive disorders may have been less likely to be referred when no child-friendly specialist facility existed. They also identified poor attendance, stigma, inadequate resources and shortages of specialised personnel as important constraints.

UITH established its dedicated child and adolescent psychiatric unit in March 2007 [7]. The first medical audit of the new unit, reported at the 2012 IACAPAP World Congress, described 73 patients during the unit's first five years. The mean age was 12.64 ± 3.69 years, with patients aged 4–17 years. Mental retardation accounted for 28.8%, schizophrenia for 30% and ADHD for 11%; 70% had comorbid seizure disorders. The audit also reported poor attendance and under-utilisation, with referral, utilisation, attendance and follow-up identified as continuing challenges. [8]

More than a decade later, a contemporary review of UITH records covering January 2012 to December 2024 provides an opportunity to examine whether the clinical profile reaching specialist care continued to evolve. The contemporary cohort comprises 200 children and adolescents aged 0–19 years. The current study records diagnoses according to ICD-11 and includes pathway-to-care information, allowing the historical service trajectory to be considered alongside contemporary diagnostic and help-seeking patterns.

The present study therefore uses three successive evidence windows to examine the evolution of specialist CAMH presentations at UITH. The 17-year service trajectory refers to the period from establishment of the dedicated unit in March 2007 through December 2024; the 2002–2006 audit is included as a pre-unit contextual baseline. The purpose is not to estimate population prevalence or to infer causality from temporal differences. Rather, it is to describe how the composition of the specialist caseload changed across the development of a dedicated service and to consider what these changes imply for CAMH service planning in Nigeria.

Objectives

The primary objective was to describe the evolution of the clinical profile of children and adolescents reaching specialist CAMH care at UITH across successive service eras. Secondary objectives were to describe the contemporary diagnostic profile and pathways to care among patients seen from January 2012 to December 2024 and to identify implications for the organisation and strengthening of specialist CAMH services in Nigeria.

METHODS

Study design and setting

This was a retrospective descriptive study with historical contextualisation. The contemporary component was a review of clinical records of children and adolescents presenting to the Department of Behavioural Sciences, UITH, from January 2012 to December 2024. The historical component comprised two previously reported UITH audits: the pre-unit audit covering January 2002 to December 2006 and the first medical audit of the dedicated CAMH unit. The three evidence windows were treated as successive service eras rather than as a single longitudinal patient-level dataset.

Contemporary population and case selection

The contemporary study included children and adolescents aged 0–19 years who presented to the psychiatric service during January 2012–December 2024 and had a documented diagnosis. A total of 200 records met the inclusion criteria. Sex and socioeconomic variables were inconsistently documented and were therefore not used in the analysis.

Data extraction

Data were retrieved from patient case files. Extracted variables were age at presentation, primary diagnosis and pathway to care prior to specialist presentation. Pathways were classified as: (1) orthodox psychiatric care only; (2) traditional healing; (3) religious healing; (4) mixed orthodox and non-orthodox pathways; and (5) not stated.

Diagnostic classification

Diagnoses in the contemporary cohort were assigned according to the International Classification of Diseases, 11th Revision (ICD-11) [9]. Where comorbidities existed, the primary diagnosis listed in the clinical file was recorded. Historical diagnostic terminology is retained when reporting the earlier audits because those studies used the classifications available at the time.

Historical evidence windows

The first historical window was the published audit of children and adolescents seen at UITH from January 2002 to December 2006, before establishment of the dedicated unit. The second was the published conference abstract reporting the first medical audit of the dedicated unit's five-year experience. The source confirms 73 patients and describes the facility as five years old, but does not explicitly print calendar start and end dates; for the present synthesis, this period is designated 2007–2011 to provide a non-overlapping service-era framework following the unit's establishment in March 2007 [8].

Analysis

Contemporary data were summarised using means and standard deviations for continuous variables and frequencies and percentages for categorical variables by using the statistical package for social science (SPSS version 25). Historical and contemporary findings were compared descriptively. No pooled statistical test of temporal trend was undertaken because the evidence windows differed in design, available variables, diagnostic terminology and service context.

Ethics

This study was conducted in accordance with the declaration of Helsinki. Institutional ethical approval was obtained from the University of Ilorin Teaching Hospital- Health Research and Ethics Committee (approval number NHREC 02/05/2010) for the contemporary retrospective review. Identifiers were omitted and anonymised clinical records were used. The historical studies were previously published reports and were used only as contextual evidence.

RESULTS

Three-era evolution of the specialist CAMH caseload

Table 1
Evolution of the UITH specialist CAMH caseload across successive service eras

Characteristic	2002–2006 Pre-unit	First 5 years of dedicated unit (2007–2011)*	2012–2024 Contemporary cohort
Sample size	94	73	200
Age range	7–19 years	4–17 years	0–19 years
Mean age, years	16.38 ± 2.49	12.64 ± 3.69	12.03 ± 4.26
Schizophrenia	50%	30%	19.5%
Intellectual disability / developmental disorder†	1% mental retardation	28.8% mental retardation	28% disorder of intellectual development
ADHD	Not reported	11%	6%
Autism spectrum disorder	Not reported	Not reported	5%
Seizure disorders	9%	70% comorbid	10.5% primary diagnosis

* The source of the 2007–2011 column describes the dedicated unit as five years old and reports 73 patients; the present synthesis uses 2007–2011 as a non-overlapping designation. † Terminology reflects the original sources; the contemporary cohort used ICD-11. The 70% figure in the early-unit audit refers to comorbid seizure disorders and is not directly comparable with the contemporary 10.5% primary diagnostic category.

In Table 1 above, the three service eras show a progressive reduction in the recorded mean age of patients reaching specialist care. Mean age was 16.38 ± 2.49 years in the 2002–2006 pre-unit audit, 12.64 ± 3.69 years in the first five years (2007–2011) of the dedicated unit and 12.03 ± 4.26 years in the contemporary 2012–2024 cohort. The pre-unit cohort was heavily weighted towards older adolescents: 82% were aged 14–19 years and only one patient was younger than seven years [7].

The diagnostic profile also changed. Schizophrenia accounted for 50% of diagnoses in the pre-unit audit and 30% in the early-unit audit, compared with 19.5% in the contemporary cohort. The early dedicated-unit audit reported mental retardation in 28.8% and ADHD in 11%. In the contemporary cohort, disorder of intellectual development was the most frequent recorded diagnosis (28%), followed by schizophrenia (19.5%), seizure disorders (10.5%), secondary psychotic syndromes (8.5%), ADHD (6%), autism spectrum disorder (5%) and depressive disorders (3%).

The historical and contemporary figures should not be interpreted as a formal incidence or prevalence trend. They come from successive audits with different designs and diagnostic frameworks. Nevertheless, the descriptive pattern is consistent with a specialist caseload becoming younger and broader as dedicated CAMH provision developed.

Contemporary diagnostic profile

Table 2
Diagnostic profile of the contemporary cohort, 2012–2024 (N = 200)

Primary diagnosis	n	%
Disorder of intellectual development	56	28.0
Schizophrenia	39	19.5
Seizure disorders	21	10.5
Secondary psychotic syndromes	17	8.5
Attention-deficit/hyperactivity disorder	12	6.0
Autism spectrum disorder	10	5.0
Depressive disorders	6	3.0
Other diagnoses	39	19.5
Total	200	100.0

In Table 2, the 200-patient contemporary cohort had a mean age of 12.03 ± 4.26 years. Disorder of intellectual development was the most frequent recorded diagnosis (56/200; 28%), followed by schizophrenia (39/200; 19.5%), seizure disorders (21/200; 10.5%), secondary psychotic syndromes (17/200; 8.5%), ADHD (12/200; 6%), autism spectrum disorder (10/200; 5%) and depressive disorders (6/200; 3%). The remaining 39 patients (19.5%) had other diagnoses.

Contemporary pathways to care

Table 3
Pathways to care among the contemporary cohort, 2012–2024 (N = 200)

Pathway before specialist presentation	n	%
Orthodox psychiatric care only	90	45.0
Traditional healing	19	9.5
Religious healing	16	8.0
Mixed orthodox + non-orthodox pathways	32	16.0
Not stated / undocumented	43	21.0
Total	200	100.0

In Table 3 above, Orthodox psychiatric care was the only documented pathway for 90 patients (45%). Traditional healing was recorded in 19 (9.5%), religious healing in 16 (8%), and mixed orthodox/non-orthodox pathways in 32 (16%). The pathway was undocumented in 43 records (21%). Thus, one-third of the cohort had documented involvement of traditional, religious or mixed pathways before specialist presentation, while a further one-fifth had no documented pathway.

DISCUSSION

This 17-year synthesis provides a service-level view of how the population reaching specialist CAMH care at UITH changed across the development and maturation of a dedicated service. The most striking descriptive findings are the lower recorded mean age in the later service eras, the decline in the relative prominence of schizophrenia, and the emergence of a broader diagnostic profile in which neurodevelopmental disorders are prominent alongside continuing severe psychiatric illness.

From an adult-oriented service to a younger specialist caseload

The pre-unit audit provides a compelling baseline for understanding the later changes. Before March 2007, children and adolescents were managed within adult psychiatric facilities. The resulting cohort was predominantly adolescent: 82% were aged 14–19 years, and only one patient was younger than seven. Schizophrenia accounted for half of all diagnoses [7].

The historical authors themselves cautioned that this pattern could have reflected facility-imposed selection. They proposed that the absence of a dedicated child psychiatric unit may have reduced referrals of children with developmental or other difficulties when severe behavioural disturbance was absent [7]. They further argued that a child-friendly facility could attract referrals from departments and institutions responsible for children's care.

The subsequent reduction in mean age from 16.38 years before the dedicated service to 12.64 years during its first five years and 12.03 years in 2012–2024 is therefore clinically meaningful as a service-utilisation pattern. It is compatible with broader and potentially earlier recognition and referral, although the available data cannot establish that establishment of the unit caused the change. Other explanations include changes in diagnostic practice, awareness, referral behaviour and the underlying population reaching tertiary care.

Broadening of the diagnostic spectrum

The diagnostic composition also suggests a broadening of specialist CAMH practice. In the pre-unit audit, schizophrenia, delirium and seizure disorders dominated the recorded diagnoses. The early dedicated-unit audit still reported schizophrenia as the single largest category, but mental retardation and ADHD were prominent [8]. By 2012–2024, disorder of intellectual development was the most frequent diagnosis, while autism spectrum disorder and ADHD were clearly represented alongside psychotic and seizure-related conditions.

This shift should not be interpreted as evidence that severe psychiatric disorders have become unimportant. Schizophrenia remained the second most frequent diagnosis in the contemporary cohort, and secondary psychotic syndromes and seizure disorders contributed additional clinically complex presentations. Rather, the specialist caseload appears to have expanded beyond the predominantly severe, adult-type presentations that characterised the earlier period.

The emergence of neurodevelopmental conditions has important implications for the organisation of services. Assessment and management of intellectual developmental disorders, autism and ADHD require more than psychiatric prescribing. Speech and language services, psychology, occupational therapy, nursing, social work and educational collaboration may all be required. The historical UITH audit similarly identified shortages of specialised personnel, including speech therapists, child psychiatrists, psychologists, social workers and remedial teachers, as barriers to effective child psychiatric care [7].

Referral and pathways to care

The contemporary pathway findings demonstrate that specialist CAMH care at UITH exists within a pluralistic help-seeking environment. Although 45% of patients accessed orthodox psychiatric care only, 33.5% had documented traditional, religious or mixed pathways before specialist presentation, and the pathway was undocumented in a further 21%.

These findings should not be interpreted simply as evidence of competition between biomedical and non-biomedical systems. Traditional and religious providers may function as important first responders and gatekeepers within families and communities. Understanding these pathways may therefore offer opportunities for earlier recognition and referral, provided that engagement is culturally respectful and clinically appropriate.

The contemporary finding also resonates with the historical UITH experience. In the pre-unit audit, most referrals came from hospital-based primary-care-associated departments: 40% from the general outpatient department and 29% from internal medicine and paediatrics, while referrals from social welfare institutions were uncommon. The authors advocated stronger consultation-liaison relationships, outreach to schools and social welfare institutions, and education of parents, children, physicians and other healthcare providers [7]. The continuing importance of referral pathways more than a decade later suggests that service development cannot be limited to the specialist clinic itself.

Implications for service development

The trajectory at UITH suggests several priorities for specialist CAMH development in Nigeria. First, CAMH services should be embedded within stronger referral networks linking paediatrics, primary care, schools and social services. Second, the growth of neurodevelopmental presentations requires multidisciplinary capacity to develop alongside psychiatric expertise. Third, service development should include outreach and education rather than relying on tertiary clinics as passive endpoints for referral. Current WHO guidance similarly emphasises integrated networks involving primary care, schools, social care and community stakeholders, together with workforce development and collaborative care [10].

The pluralistic pathway findings also support a pragmatic approach to community engagement. Contemporary LMIC literature increasingly emphasises task-sharing and collaboration with non-specialists as practical strategies for expanding access where specialist CAMH workforces are small [11, 12]. Nigerian studies similarly demonstrate the importance of caregiver decisions and pluralistic pathways in access to specialist child mental health care [13, 14]. Rather than treating traditional and religious providers solely as barriers, services may explore appropriate referral relationships with community gatekeepers. Such engagement should preserve clinical safeguards while acknowledging how families actually seek help. Contemporary African CAMH literature also emphasises the need to strengthen locally responsive systems, governance and multidisciplinary capacity [15, 16].

The first five-year audit showed that establishing a dedicated unit was an important step but did not eliminate under-utilisation and poor attendance [8]. The longer trajectory therefore suggests that specialist service development is an iterative process involving infrastructure, professional capacity, referral systems, community awareness and continuity of care.

Strengths and limitations

The principal strength of this study is the use of successive evidence from the same tertiary institution to reconstruct a long service-development trajectory. The 2002–2006 audit provides a pre-unit baseline, the early dedicated-unit audit captures the initial transition, and the contemporary 2012–2024 cohort provides current evidence from a substantially larger group of 200 patients. This historical continuity is unusual and gives the study value beyond a conventional single-centre retrospective case series.

Several limitations require emphasis. First, the study is hospital-based and cannot estimate the prevalence of mental disorders in the surrounding population. Second, the three evidence windows were

generated using different designs, diagnostic classifications and available variables; they therefore cannot be treated as a single longitudinal dataset, and formal statistical testing of temporal trends was not undertaken. Third, historical terminology differs from contemporary ICD-11 terminology, limiting direct diagnostic equivalence. Fourth, the contemporary review is retrospective and dependent on the quality of clinical documentation. In particular, 21% of pathway-to-care records were undocumented, meaning that the observed frequency of non-orthodox pathways may underestimate their true contribution. Finally, the study describes patterns of presentation and service utilisation rather than treatment effectiveness or long-term patient outcomes.

Interpretation of the 17-year pattern

Taken together, the evidence suggests that the specialist CAMH caseload at UITH has evolved from a service largely reached by older adolescents with severe psychiatric presentations toward a younger and diagnostically broader specialist population. The change is best understood as an evolution in the population reaching care rather than a direct measure of changes in community morbidity. The development of a dedicated service may have altered the threshold and routes through which children reached specialist care, but changes in awareness, referral practices, diagnostic recognition and broader social conditions may also have contributed.

The 17-year trajectory therefore illustrates an important principle for CAMH development in low-resource settings: increasing specialist capacity may reveal a broader burden of developmental, behavioural and psychiatric needs rather than simply increasing the number of patients with the disorders traditionally associated with psychiatric services. The service must evolve accordingly.

CONCLUSIONS

Across successive UITH service eras, the population reaching specialist CAMH care was younger and diagnostically broader in the later periods than in the pre-unit audit. The trajectory moved from a caseload weighted towards older adolescents and schizophrenia, through the early development of a dedicated service, towards a contemporary specialist population in which disorder of intellectual development and other neurodevelopmental conditions are prominent alongside continuing severe psychiatric illness. The findings describe service-level change rather than population prevalence or causality. Sustained progress will require early identification, stronger referral networks, multidisciplinary capacity, outreach and culturally responsive pathways to care.

Abbreviations

ADHD Attention Deficit Hyperactive Disorder

CAMH Child and Adolescent Mental Health

ICD-11 International Classification of Diseases, 11th Revision

IACAPAP International Association for Child and Adolescent Psychiatry and Allied Professions.

LMIC Low and Middle income Country

SPSS Statistical package for social sciences

UITH University of Ilorin Teaching Hospital

Declarations

Ethics approval and consent to participate:

This study was conducted in accordance with the declaration of Helsinki. Institutional ethical approval was obtained from the University of Ilorin Teaching Hospital- Health Research and Ethics Committee (approval number NHREC 02/05/2010) for the contemporary retrospective review. Identifiers were omitted and anonymised clinical records were used. The historical studies were previously published reports and were used only as contextual evidence.

Consent for publication:

All authors agreed to publish this manuscript.

Competing interests:

The authors declare no competing interests.

Authors' contributions

All authors (ABOO, MFTA, TTA, EE, ARF, SO, ANA, EO, OINB, OAA) contributed to the conception and/or design of the work, interpretation of findings, manuscript preparation and approval of the final version.

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Author Contribution

All authors contributed to the conception and/or design of the work, interpretation of findings, manuscript preparation and approval of the final version.

Data Availability

The underlying contemporary clinical dataset is not publicly available because it contains clinical information. Data may be made available by the corresponding author on reasonable request, subject to institutional and ethical requirements.

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Supplementary Files

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- UITH17YearEvidenceTimeline.docx