Understanding Caregivers' Awareness of ADHD in Children at Ahmadu Bello University Teaching Hospital, Kaduna State

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ABSTRACT

Attention Deficit/Hyperactivity Disorder (ADHD) is a common neurodevelopmental condition affecting children's attention, behaviour, and learning. In many low and middle income settings, caregivers often lack adequate awareness about ADHD, leading to delayed recognition, mislabeling of symptoms, and late presentation for care. This study aims to assess levels of awareness, knowledge, and misconceptions about ADHD among caregivers of children attending the Paediatrics and Paediatric Neurology clinics at Ahmadu Bello University Teaching Hospital (ABUTH), Kaduna State. A cross sectional survey design will be used to collect data from caregivers using semi structured questionnaires and, where applicable, brief structured interviews. Findings will inform the need for targeted health education, caregiver oriented counselling, and policy interventions to improve early identification and support for children with ADHD in this setting.

KEYWORDS: *Attention Deficit/Hyperactivity Disorder (ADHD), ,Caregiver awareness, Children with ADHD, Paediatric clinic, Ahmadu Bello University Teaching Hospital (ABUTH), Kaduna State, Knowledge and perception, Misconceptions, Health education.*

INTRODUCTION

Attention Deficit/Hyperactivity Disorder (ADHD) is characterized by persistent patterns of inattention, hyperactivity, and/or impulsivity that significantly impair a child's academic, social, and family functioning. Globally, ADHD is one of the most frequently diagnosed neurodevelopmental disorders in childhood, yet many cases remain unrecognized or misunderstood, especially in resource limited regions. In Nigeria, growing evidence suggests that ADHD is under recognized and under treated, with caregivers often attributing symptoms to naughtiness, poor parenting, or spiritual causes rather than a medical condition.

Ahmadu Bello University Teaching Hospital (ABUTH) in Zaria, Kaduna State, serves as a major referral centre for paediatric and neurological care in the North West geopolitical zone of Nigeria. A recent 5 year retrospective review at the ABUTH Paediatric Neurology clinic identified children with established ADHD diagnoses, underscoring the presence of this condition in the region. However, little is known specifically about how well caregivers understand ADHD, how they perceive its causes, and what barriers they face in accepting or seeking treatment. This gap calls for a focused investigation into caregivers' awareness of ADHD in children attending ABUTH.

This study, therefore, seeks to understand caregivers' awareness of ADHD, including their level of knowledge, sources of information, common misconceptions, and their perceived roles in the care of children with ADHD. The findings will provide evidence to guide the development of caregiver centered educational programmes and support services within the hospital and surrounding communities.

STATEMENT OF THE PROBLEM

Despite the documented presence of ADHD in paediatric neurology clinics at ABUTH, many children with ADHD like symptoms may not be brought to the hospital until significant behavioural, academic, or social difficulties arise. In some settings, caregivers attribute excessive activity and inattention to normal child development, bad temperament, or spiritual influences, which delays clinical evaluation and effective intervention. In low resource environments, limited public health education about ADHD, stigma, financial constraints, and lack of trained personnel further compromise early recognition and management.

Within the context of ABUTH, there is currently no published study that specifically describes the awareness levels of caregivers of children with ADHD or suspected ADHD. Without understanding caregivers' knowledge, attitudes, and beliefs, it is difficult to design effective community education and hospital based interventions. This study addresses this gap by examining caregivers' awareness of ADHD among children attending paediatric services at ABUTH, Kaduna State.

OBJECTIVES OF THE STUDY

1. General objective

To assess the level and determinants of caregivers' awareness of Attention Deficit/Hyperactivity Disorder in children attending Ahmadu Bello University Teaching Hospital, Kaduna State.

2. Specific objectives

- To determine the proportion of caregivers who can correctly identify ADHD and its major symptoms.
- To identify common sources of information about ADHD among caregivers.
- To describe caregivers' perceptions of the causes and consequences of ADHD.
- To explore caregivers' attitudes towards treatment options (including medication and psychosocial interventions).
- To identify factors associated with better or poorer awareness of ADHD (such as education level, previous exposure to ADHD information, or prior contact with a healthcare professional).

RESEARCH QUESTIONS

- What proportion of caregivers of children attending ABUTH have heard of ADHD?
- How do caregivers describe the symptoms of ADHD, and how accurate are these descriptions?
- What are the main sources from which caregivers obtain information about ADHD?
- What are caregivers' beliefs about the causes and long term outcomes of ADHD in children?
- What are caregivers' attitudes towards treatment, including medication, behavioural therapy, and school based interventions?

- What socio demographic or environmental factors are associated with higher levels of ADHD awareness among caregivers?

HYPOTHESES

- H_1: Caregivers with higher levels of formal education will have significantly higher awareness of ADHD than those with lower or no formal education.
- H_2: Caregivers who have prior contact with health workers or teachers trained in ADHD will have greater knowledge of the disorder than those without such contact.
- H_3: Caregivers who receive health education within the hospital setting will report more positive attitudes towards ADHD treatment than those who do not.

EXPECTED FINDINGS

It is expected that:

- A substantial proportion of caregivers will have heard of ADHD, but many will demonstrate only partial or inaccurate understanding of its symptoms.
- Misconceptions about causes (for example, spiritual or disciplinary explanations) will be common, especially among caregivers with lower education levels or limited prior contact with health professionals.
- Caregivers who have received information from doctors, nurses, or trained teachers will show higher levels of accurate knowledge and more positive attitudes towards treatment.
- Socio demographic factors such as education, urban/rural residence, and previous exposure to mental health education will be significantly associated with better ADHD awareness.

DETAILED METHODOLOGY SECTION

1. Study design

This study will adopt a cross sectional descriptive analytical design. A cross sectional approach will allow the investigation of caregivers' awareness, knowledge, attitudes, and beliefs about ADHD in children at a single point in time, while analytical tools will be used to explore associations between socio demographic factors and awareness levels. The study will be conducted among caregivers of children attending the Paediatrics and Paediatric Neurology clinics at Ahmadu Bello University Teaching Hospital (ABUTH), Zaria, Kaduna State.

2. Study setting

The study will be carried out at Ahmadu Bello University Teaching Hospital (ABUTH), Zaria, a tertiary level teaching hospital that serves as a major referral centre for paediatric and neurological care in the North West geopolitical zone of Nigeria. The study will focus on the paediatric outpatient clinic and the paediatric neurology clinic, where children with developmental, behavioural, and neurological concerns, including ADHD, are routinely evaluated.

3. Study population

The target population will consist of:

4. Inclusion and exclusion criteria

a) Inclusion criteria:

- Caregiver of a child aged 3–17 years attending the paediatric or paediatric neurology clinic at ABUTH.
- Caregiver who provides informed consent.
- Caregiver who is able to communicate in English, Hausa, or Pidgin (language used in the questionnaire will be adapted to these).

b) Exclusion criteria:

- Caregiver who is acutely unwell or unable to participate due to severe illness or distress.
- Caregiver who declines to give consent.

5. Sample size determination

The sample size will be calculated using a standard formula for cross sectional studies:
n=Z2p(1−p)d2n=d2Z2p(1−p)

Where:

- ZZ = 1.96 (corresponding to 95% confidence level)
- pp = estimated proportion of caregivers with awareness of ADHD (taken as 50% in the absence of local data, for maximum sample size)
- dd = desired margin of error (taken as 0.05)

Using these values, the minimum sample size will be approximately 384. However, to account for non responses and incomplete questionnaires, the sample will be increased by 10–15%, targeting a final sample of 420–450 caregivers.

6. Sampling technique

A systematic random sampling technique will be used to select participants from the outpatient attendance register. On selected days, every k th caregiver (where kk = total daily attendees ÷ target sample per day) will be approached and invited to participate. This method will ensure representation across different age groups, genders, and socio economic backgrounds while maintaining a degree of randomness.

7. Data collection tools

Data will be collected using a structured, pre tested questionnaire adapted from validated ADHD knowledge scales and caregiver information instruments in the literature. The instrument will be bilingual (English/Hausa) to enhance understanding and response accuracy.

The questionnaire will be divided into four sections:

a) Section A: Socio demographic characteristics

- Caregiver's age, gender, marital status, education level, occupation, monthly income, family size, and place of residence (urban/rural).

b) Section B: Awareness and knowledge of ADHD

- Whether the caregiver has heard of ADHD (yes/no).
- Their ability to describe key symptoms (inattention, hyperactivity, impulsivity) using open ended or multiple choice items.
- Recognition of ADHD as a medical disorder (versus "naughtiness" or "spiritual issue").

c) Section C: Beliefs and misconceptions

- Perceived causes of ADHD (e.g., poor parenting, genetics, spiritual factors, diet, vaccines).
- Beliefs about long term outcomes (academic failure, delinquency, "lifelong problem").
- Sources of information about ADHD (health worker, teacher, media, relatives, social media).

d) Section D: Attitudes towards treatment and care

- Willingness to seek hospital care when ADHD like symptoms are noticed.
- Attitudes towards medication (stimulants, non stimulants), behavioural therapy, school based interventions, and psychosocial support.
- Perceived stigma or fear associated with an ADHD diagnosis.

Where necessary, a brief structured interview may be conducted to clarify open ended responses, especially for caregivers with low literacy. The questionnaire will be pilot tested among 20–30 caregivers at a primary health care facility in Zaria to check clarity, cultural relevance, and internal consistency.

8. Data collection procedure

- Data collectors will be trained research assistants (e.g., resident doctors, nurses, or postgraduate students) familiar with the study objectives and instruments.
- On each selected data collection day, the researchers will approach eligible caregivers after consultation with the paediatrician or resident doctor.
- Each caregiver will be informed about the study's purpose, procedures, voluntary nature, risks/benefits, and right to withdraw.
- After obtaining written informed consent, the caregiver will be interviewed using the structured questionnaire.
- The average time per interview will be approximately 15–20 minutes.
- All completed questionnaires will be checked daily for completeness and consistency.

9. Data management and analysis

- Data will be entered into a Microsoft Excel or SPSS database using double entry to minimize errors.
- Data cleaning will include checking for missing values, outliers, and logical inconsistencies.

Descriptive statistics will be generated as:

- Frequencies and percentages for categorical variables (e.g., proportion of caregivers aware of ADHD, common sources of information).

- Means and standard deviations or medians and interquartile ranges for continuous variables (e.g., age, education level, awareness scores).

Analytical statistics will include:

- Chi square tests or Fisher's exact test to examine associations between categorical variables (e.g., awareness level vs education level).
- Logistic regression to identify independent predictors of good ADHD awareness (e.g., education, prior contact with health workers, prior exposure to ADHD information). Adjusted odds ratios (AOR) and 95% confidence intervals will be reported.
- Results will be presented in tables and, where appropriate, in simple charts. All analyses will be conducted at a 5% level of significance ($p < 0.05$).

ETHICAL CONSIDERATIONS

- Ethical approval will be obtained from the Ahmadu Bello University Teaching Hospital Health Research and Ethics Committee (ABUTH/HREC).
- Written informed consent will be obtained from each caregiver after a clear explanation of the study purpose and procedures.
- Participation will be voluntary, and caregivers will be informed that they can withdraw at any time without affecting their child's care.

Confidentiality will be maintained by:

- Assigning coded identifiers to each questionnaire instead of names.
- Storing completed questionnaires in a locked cabinet and electronic data in password protected files.
- No direct treatment or intervention will be provided as part of the study; however, caregivers who express extreme distress or significant misunderstanding about ADHD will be referred to appropriate counselling or psychosocial support services within the hospital, where available.

DISCUSSION

Findings from this study will be discussed in relation to existing literature on ADHD awareness among caregivers in low and middle income countries. For example, studies in other Nigerian settings have shown that caregivers of children with ADHD often experience high levels of

burden and stigma, and that their knowledge of ADHD is frequently limited. Similar patterns may be anticipated at ABUTH, where public mental health education about neurodevelopmental disorders remains limited.

The role of health care professionals and teachers as key sources of ADHD information will be highlighted. Evidence from other regions suggests that targeted training programmes for teachers and clinic based education for caregivers can significantly improve knowledge and reduce stigma. This study will therefore provide a local evidence base for designing similar interventions at ABUTH and in surrounding communities.

IMPLICATIONS FOR PRACTICE AND POLICY

- Hospital based interventions: ABUTH could incorporate structured ADHD awareness sessions for caregivers during clinic visits, using simple language, posters, and short videos to explain core symptoms, causes, and management options.
- Community education: Collaborations with schools, religious leaders, and community health workers can help disseminate accurate information about ADHD and reduce harmful misconceptions.
- Policy recommendations: Findings can inform state and federal health policies aimed at integrating ADHD screening and caregiver education into primary care and school health programmes, especially in under resourced areas.

CONCLUSION

Understanding caregivers' awareness of ADHD at Ahmadu Bello University Teaching Hospital is essential for improving early recognition, reducing stigma, and promoting appropriate care for affected children. This study will generate locally relevant data on caregivers' knowledge, beliefs, and attitudes, serving as a foundation for targeted educational and psychosocial interventions. By empowering caregivers with accurate information, health care providers can enhance the quality of care and the long term outcomes of children with ADHD in Kaduna State and similar settings.

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