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Original Research

Determinants of Discharge against Medical Advice among Paediatric Patients in a Tertiary Hospital in Nigeria: A Retrospective Observational Study

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Abstract

Background:
Discharge Against Medical Advice (DAMA) among children represents a significant public health issue in low- and middle-income countries. DAMA occurs when a patient leaves the hospital contrary to the physician's recommendation. This action can hinder effective healthcare delivery and may lead to increased rates of morbidity and mortality. The aim of this study was to assess the prevalence and underlying reasons for DAMA among paediatric patients at a tertiary healthcare facility in Nigeria.
Methodology: A descriptive retrospective study was carried out from October 1, 2020, to September 30, 2022, at the Department of Pediatrics, Federal Teaching Hospital, Ido-Ekiti, Ekiti State, Nigeria. Data such as age, gender, diagnosis, duration of hospital stay, insurance status, and the highest educational attainment and occupation of both parents were retrieved from the admission record book. These data were analyzed using proportions and Pearson's chi-square (χ^2) test. A p-value of less than 0.05 was considered statistically significant.
Results: The prevalence of DAMA was 3.4%, with 30 cases recorded out of 875 admissions. A higher proportion of those discharged were females (18 out of 30; 60.0%), and the majority (27 out of 30; 90.0%) belonged to the lower socioeconomic class. Sepsis, malignancy, malaria, and sickle cell anaemia collectively accounted for 80.2% of the diagnoses. The most common reason for DAMA was financial constraint, cited in 15 out of 30 cases (50.0%). Notably, none of the patients had health insurance.
Conclusion: Financial constraints were identified as a leading cause of paediatric DAMA in our environment. Given that none of the affected patients were enrolled in any health insurance scheme, there is a need to raise public awareness about the benefits of health insurance.

Keywords: Discharge Against Medical Advice; Nigeria; Paediatric Patient; Tertiary Health Facility.

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Introduction

Children under the age of eighteen are generally not legally empowered to make independent healthcare decisions, except in rare cases of legal emancipation or guardianship. Consequently, decisions regarding their medical care, including discharge from hospital settings, rest primarily with parents or guardians. Discharge Against Medical Advice (DAMA), which occurs when a patient leaves the hospital contrary to a physician's recommendation, is a growing public health concern and is particularly prevalent in low- and middle-income countries (LMICs), where barriers to healthcare access and delivery are pronounced, as well as in underserved communities within high-income countries [1,2].

DAMA in children poses serious health risks. It often leads to suboptimal treatment outcomes, increased morbidity and mortality, and higher healthcare costs due to the likelihood of readmission [3,4]. Reported prevalence rates of DAMA vary widely, from as low as 0.96% to as high as 7.5%, with the highest rates observed in the neonatal age group [5-10].

Multiple factors contribute to DAMA, including financial constraints, dissatisfaction with the hospital environment, perceived poor prognosis, self-assessment of recovery, and lack of confidence in the care provided [10-14]. Studies from Nigeria noted that financial hardship is the predominant reason why caregivers DAMA [5,7-9]. This reflects the broader socioeconomic challenges affecting healthcare access. With an estimated 40% of the population living in poverty [15], and over 70% of healthcare expenses paid out-of-pocket due to limited health insurance coverage (less than 5% enrolled) [16], many families are unable to afford prolonged hospital stays.

While DAMA has been extensively studied in adult populations, there is a dearth of research focusing on paediatric cases. This study seeks to address this gap by examining determinants of paediatric DAMA in a Tertiary Hospital in Nigeria. The findings aim to contribute to the literature and inform strategies to reduce DAMA and improve pediatric care outcomes in similar settings.

Materials and Methods

Study Area: The study was carried out at the Department of Pediatrics, Federal Teaching Hospital, Ido-Ekiti (FETHI), Ekiti State, Nigeria. FETHI is one of the public tertiary health facilities in Ekiti state, Southwest, Nigeria. It serves the health needs of the state and as a referral centre to neighbouring states like Ondo, Kwara, Kogi, and Osun. The department runs both inpatient and outpatient services with functional Newborn Unit, Children outpatient Unit, and Emergency Paediatric Unit (EPU).

Study Design: A retrospective observational study

Inclusion criteria: All cases admitted into either the EPU or directly to the paediatric ward between October 1, 2020 – September 30, 2022.

Exclusion criteria: No exclusion criteria were applied.

Data collection: The study was conducted over 2 years (October 1, 2020 – September 30, 2022). The case notes of the children admitted either into the EPU or directly to the paediatric ward were retrieved. Data extracted from the case notes included age, gender, diagnosis, duration of hospital stay, and insurance status. Additionally, the highest educational level and occupation of both parents were extracted to determine the socioeconomic class using Oyedeji's socioeconomic classification scale [17]. The documented reasons for DAMA were also noted. The data collected was initially entered into a pre-designed excel spreadsheet.

Ethical consideration: Confidentiality was maintained by limiting data access to the lead investigator. Ethical approval for the study was granted by the Human Research and Ethics Committee of FETHI, under protocol number ERC/2025/07/10/1305A.

Data analysis: The data obtained was entered into Statistical Package for Social Sciences (SPSS) data view on personal computer and analyzed using SPSS (version 21). Analyses were performed using proportions and percentages as applicable. Categorical variables were compared using Pearson's chi-squared tests. p-value of less than 0.05 was accepted as statistically significant.

Results

Out of the 875 patients admitted during the study period, 30 (3.4%) were discharged against medical advice, with children aged 5 to 15 years accounting for most of these cases as illustrated in figure 1.

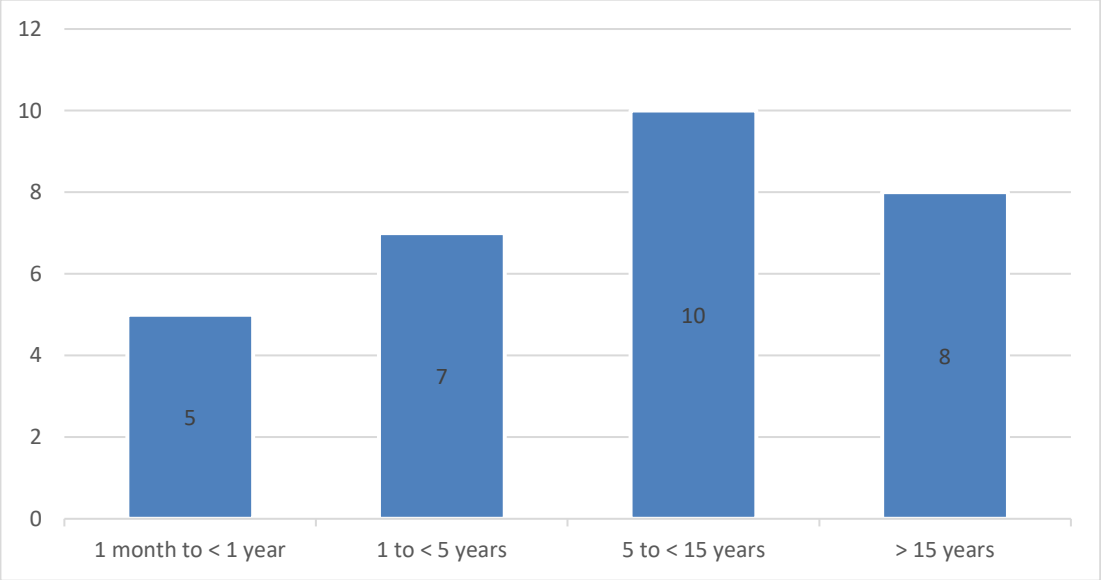

Figure 1: Distribution of cases by age group

Table 1 shows that a higher proportion of DAMA cases occurred among females with the majority belonging to lower socio-economic groups. None of the patients had health insurance coverage.

Table 1: Distribution of cases by gender, socioeconomic class and health insurance

Variable	Frequency	Percentage (%)	χ2	P
Gender				
Male	12	40.0		
Female	18	60.0	1.2	0.247
Socioeconomic class				
Lower	27	90.0	43.8	0.0001
Middle	3	10.0		
Upper	0	0.0		
Patient on health insurance				
Yes	0	0.0		
No	30	100.0	30.0	0.0001

Sepsis, malignancy and malaria were the 3 major diagnoses among patients that DAMA. (Table 2)

Table 2: Clinical diagnosis in patients

Clinical diagnosis	Frequency (%)
Sepsis	10 (33.4)
Malignancy	7 (23.4)
Malaria	4 (13.4)
Sickle cell anaemia	3 (10.0)
Burns	1 (3.3)
Chronic glomerulonephritis	1 (3.3)
Type 1 diabetes	1 (3.3)
Congenital hydrocephalus	1 (3.3)
Infective endocarditis	1 (3.3)
Congenital rubella syndrome	1 (3.3)

The higher number of DAMA cases were recorded within the first three days of admission. (Table 3)

Table 3: Duration of stay on admission before DAMA

Days	Frequency	Percentage (%)	$\chi 2$	P
1-3	21	70.0	4.8	0.029
≥4	9	30.0		
Total	**30**	**100.0**		

Financial constraint was the reason for DAMA in half of the cases as illustrated in table 4

Table 4: Reasons for discharge against medical advice (DAMA)

Outcome	Frequency (%)
Financial constraint	15 (50.0)
Poor prognosis	3 (10.0)
Unavailability of people at home to take care of the other siblings	1 (3.3)
Parents did not give reason	2 (6.7)
Not documented	9 (30.0)

Discussion

Paediatric DAMA remains a major concern for pediatricians, as children are often dependent on their caregivers to access appropriate healthcare. The 3.4% prevalence observed in this study is higher than the 1.8% reported by Oyedeji et al. [18], but comparable to the 3.1%, 3.8%, 3.8%, and 4.1% reported by Ndu et al.[19], Eke et al. [9], Babatola et al. [5], and Olasinde et al.[8], respectively, in other Nigerian studies, likely reflecting the prevailing economic realities in the country. Higher prevalence rates of 7.4% and 7.5% reported in Bayelsa and Abuja [7,20], respectively, may be attributable to the inclusion of neonates in those studies. Similarly, high prevalence rates have been documented in Nepal and Iran, LMICs like Nigeria, where healthcare costs are predominantly paid out-of-pocket, resulting in substantial financial barriers to care [21,22]. This contrasts with developed, high-income countries such as Australia and Singapore, where access to comprehensive health insurance packages contributes to the lower DAMA rates reported there [23,24].

The higher prevalence of DAMA among older children in this study contrasts with findings from most previous studies, where infants and neonates were more frequently affected [5,7,18]. The exclusion of neonates in the present study may account for this difference. A higher proportion of females experienced DAMA in this study, which differs from reports from Ado-Ekiti and Benin, where males were more commonly affected [5,25]. Additionally, most DAMA cases occurred within the first three days of admission, consistent with previous Nigerian studies [5,9,20]. A plausible explanation is that financial resources are often depleted within this period, particularly when caregivers perceive little improvement in the child's condition despite incurring treatment costs, prompting them to leave before adequate care is completed.

Financial constraint emerged as the leading reason for DAMA in this study. This is likely related to the cost of hospital admission and medication, as caregivers predominantly bear these expenses out-of-pocket. None of the patients were enrolled in any form of health insurance. While the National Health Insurance Scheme (NHIS) was established to serve the formal sector, and the Community-Based Health Insurance Scheme (CBHIS) was designed to improve access for the poor and vulnerable [26], these objectives have not been fully realized. This underscores the need for government agencies and relevant stakeholders to intensify public sensitization on the benefits of these schemes and to facilitate enrollment, particularly for individuals in lower socio-economic classes. In this study, the majority of DAMA cases were from the lower social class, a finding consistent with reports by Eze, Ndu, and Onyiriuka [9,19,25].

Other reasons for DAMA were poor prognosis and the unavailability of people to care for other siblings at home. In most cases, the mother is saddled with the responsibility of staying with the child in the hospital, and her attention is also needed at home to take care of the other siblings. The caregiver's response of "no reason for wanting to DAMA" may be due to a lack of adequate communication of the child's condition by the healthcare workers to the caregiver, a hostile hospital environment, or a poor prognosis.

Sepsis was the major diagnosis in this study. This is not surprising as it is the major reason for admission to the study centre [27]. This is like the findings of Duru done in Bayelsa [7]. However, this is in contrast to the findings of Eze and Babatola, where severe malaria was the most common diagnosis in children that discharge against medical advice DAMA [5,9].

Strength and Limitation

While this study has highlighted the major causes of DAMA within the study setting, its retrospective design limits the ability to establish causal relationships. In many instances, the specific reasons for DAMA were not documented, which restricts the study's capacity to accurately identify and analyse the underlying factors contributing to these discharges. This gap in documentation may compromise the validity of conclusions drawn about the determinants of DAMA. Therefore, there is a clear need to improve documentation practices among healthcare workers.

Additionally, the single-centre nature of this research limits the generalizability of its findings. A multicentre study involving diverse healthcare settings would provide a more comprehensive understanding of the DAMA phenomenon among paediatric patients in Nigeria.

Conclusion

This study identified several key factors associated with DAMA in the local context, including financial constraints, poor prognosis and unavailability of people to take care of the other children at home. However, limitations such as the retrospective design, incomplete documentation, and single-center scope highlight the need for further, more comprehensive research.

Conflicts of interest: There are no conflicts of interest.

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