

ORIGINAL ARTICLE:
**REASONS FOR DISCHARGE AGAINST MEDICAL ADVICE
IN A TERTIARY HOSPITAL IN A DEVELOPING COUNTRY**

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Running title: Discharge against medical advice in a developing Country

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Conflict of Interest

The authors declare no conflicts of interest

ABSTRACT

Background: Discharge Against Medical Advice (DAMA) is a global health problem in hospitals with negative effects on individuals, healthcare workers and healthcare system.

Objective: The study sought to explore the reasons why patients opted for a discharge against medical advice in a tertiary hospital in a developing country.

Methods: The study employed a mixed method approach. Quantitative retrospective data collection and qualitative semi-structured in-depth interview were used to explore the reasons why patients sought to DAMA from a Federal tertiary hospital in Nigeria. Study reviewed records of DAMA patients from 1st January 2020 to 2nd January 2021 with a checklist and conducted semi-structured, in-depth interview via telephone with them.

Results: More of the DAMA patients were males (20%), aged between 29-38 years, unemployed and had at least secondary level of education. The mean duration of hospital stay prior to DAMA was 3.3 ± 1.4 days. DAMA was more prevalent among patients with febrile illnesses or trauma from road traffic accident. The reasons for DAMA were due to patient, staff and hospital-related factors. Patient-related factors were leading factors underlying patient request for DAMA.

Conclusion: DAMA was due to patient, staff and hospital-related factors. These can inform strategies for early recognition of patients with the tendency to DAMA in order to prompt individualised support.

INTRODUCTION

Discharge Against Medical Advice (DAMA) is a critical and well recognized worldwide phenomenon in medical practice which occurs in both in-patient and out-patient units¹. This phenomenon has continuously posed some serious challenges to not just the individuals but also the physicians and the hospital at large, as many patients continue to leave the hospital yearly against the advice of their healthcare provider^{2,4}. It is commonly viewed as a scenario where patients opt to disengage from the hospital before treatment completion and contrary to the recommended medical plan of the managing physician^{2,5,6}.

Despite the fact that this act is not often beneficial to the patient's health, individuals or their authorized surrogates who refuse treatment have legal and ethical backing⁷. This action may lead to deteriorating health condition, increased mortality due to negative treatment outcomes, higher readmission rate and negative financial implications⁸⁻¹².

Factors associated with DAMA can be broadly categorized into the following: environmental /hospital related factor which include the cleanliness of the environment, availability of adequate and diagnostic tools etc, medical (healthcare) staff factors which include attitudes and conduct of the healthcare

provider, poor access to skilled and qualified physicians and patients' factors which may include hopelessness with regards to the disease, socioeconomic status, preference for alternative therapy, mental instability, patients' inability to afford hospital expenses, prolonged hospital stay, patients' limited medical knowledge, family issues, doubt or mistrust of doctors, patients' dissatisfaction with hospital services¹³⁻¹⁸. Additionally, boredom, personal and family problems, tediousness of medical environment, lack of significant or slow improvement in medical conditions and dullness have been implicated as contributing factors for DAMA¹⁹.

The rate of occurrence or uptake of DAMA among patients in tertiary hospitals vary across nations but is higher in the developing countries^{20,21}. Reported incidence of DAMA in the USA was 1.44%¹⁴, while 0.53% was reported in a rural community hospital in Canada^{21, 22}. In Iran, it was 10.3%, while the estimates from Nigeria ranged from 2% to 5.7%²⁰. The variations in the incidence of DAMA cut across centres, cultures and social backgrounds^{8, 20}. This fact is corroborated by reported rates from different states in Nigeria such as Enugu (1.8%), Benin (1.94%), Port Harcourt (6.12%) and Ife (0.96%)^{8,23}. These rates are perceived to be low because of underreporting by health facilities and lack of a centralised patient tracking system in developing countries like Nigeria.

Being a middle-income country (MIC), the healthcare delivery system in Nigeria receives low budgetary allocation of about 3.5% to 7% against the 15% recommended by WHO²⁴. Additionally, the country has a poorly functioning referral system leaving about 60 – 90% of patient self-referred from one health facility to where they believe they can attain higher quality and standard of healthcare²⁵. These tendencies affect continuity of care and contribute to higher rates of DAMA¹. Exploring the factors associated with DAMA in this setting will provide basis for adequate understanding of the problem with an intent to reduce the rate of occurrence to the barest minimum. This will evidently result in increased quality of care which will eventually result in patients' satisfaction and facilitate the achievement of universal health coverage. This study explored the factors associated with DAMA in a Federal tertiary hospital in the south-south zone of Nigeria.

METHODS

This study was conducted in the Federal Medical Centre, Yenagoa (FMC Yenagoa), a tertiary healthcare centre in Bayelsa State. The state is one of the 36 states of Nigeria with a projected population of 2,633, 466²⁶. This southernmost state in Nigeria is bounded by both Delta State and Rivers State. The residents are mainly rural dwellers who engage in fishing on a subsistence and commercial level due to the riverine and estuarine setting of the terrain. FMC Yenagoa is a foremost healthcare centre in the state which was initially established in 1957 as a district hospital and is situated in the capital city, Yenagoa. It is a 425-bed institution with 2,216 regular staff. The hospital provides specialty care in the field of Medicine, Obstetrics & Gynecology, Intensive Care Unit (ICU), Mental Health, Physiotherapy, Dialysis, Dental and

Maxillofacial Surgery, Anatomical Pathology, Chemical Pathology, Hematology and Blood Bank, Medical Microbiology, Paediatric, Orthopaedic and Ophthalmology

The study design was a facility-based retrospective study which used a mixed method approach. The study population included adults who were duly admitted into various wards in FMC Yenagoa over a 13 months period (between 1st of January 2020 to 2nd January 2021) but opted for DAMA. These patients were expected to complete the DAMA form before their exit and study population were drawn from those filled for DAMA forms within the study period.

A purposive heterogeneous maximum variation sampling technique was deployed to select participant for the qualitative interview from the list of all cases of DAMA within the study time frame who had functional phone numbers on their folders at the centre. Interviews continued until data saturation was achieved.

Information such as the socio-demographic characteristics (age, sex, marital status, religion, occupation), working diagnosis and duration of admission of the patients, unit/ward of admission, as well as their medical history (for history of substance abuse or psychiatric disorder) was collected using checklists and through health records, clinical records and nursing unit reports of all patients admitted to the different wards of the FMC, Yenagoa who subsequently decided to DAMA. Cases of DAMA were defined as patients who left the hospital against the opinion of the managing physicians and who had some form of documentation regarding this in their case files. The case notes of these patients were retrieved from the medical records department and reviewed in detail.

The qualitative data for this study was collected with a semi-structured, in-depth interview guide via telephone interview. The interview guide covered questions relating to the circumstances associated with the patients' decision to DAMA. It was based on pre-acknowledged reasons for DAMA by previous hospital patients and potential causes mentioned in the literature. The interviews were digitally recorded in addition to the notes taken by the interviewer.

Data on sociodemographic characteristics of the patients were summarized as frequency counts and percentages and presented in tables. The recorded information was transcribed into notes and coded accordingly using qualitative software for data management (NVivo 10.x64). The coding of the interview transcripts involved reading each transcript and putting like elements of text into common themes and sub-categories, which were then systematically reviewed to establish core concepts and themes. After the identification of the broad themes, all interviews were reviewed again for the presence of each theme and to further characterize the range of responses within each theme. Selected extracts from the themes were reported in a prose or narrative form, along the

identified themes. Representative quotes were abstracted during the analytic process and some vivid and compelling extracts selected from each theme and quoted verbatim to bring out salient points in the participants' responses.

Ethical clearance was obtained from the Research and Ethics Committee of the University of Port Harcourt (UPH/CEREMAD/REC/MM74/102, dated 18th March 2021) and the Research Ethics Committee of FMC, Yenagoa (FMCY/REC/ECC/2021/February/296). Verbal consents were also obtained from the respondents via the telephone.

RESULTS

Records obtained from the discharge register of the FMC, Yenagoa over the study period showed that a total of 162 patients made the decision to DAMA. However, only 53 patients met the eligibility criteria and had phone numbers on their folders. Out of the 53, a total of 30 respondents participated in the in-depth telephone interviews while 5 declined from participating in the study, 2 numbers remained switched off and 7 contact numbers were incomplete. The interview was stopped when no new information was gathered.

As shown in the table 1, this study comprised of 16 males (53.3%) and 14 females (46.7%), while overall age of respondents ranged from 18 to 88 years. The mean age of the patients who decided to DAMA was 39.8 ± 19.4 years. Many of the respondents (40%) completed secondary level while 6.7% had no formal education.

Table 1: Socio-demographic composition of patients that DAMA (N = 30)

Variables	Frequency	Percentage
Age category		
18 years	2	6.7
19 – 28 years	5	16.7

29 – 38 years	10	33.3
39 – 48 years	5	16.7
49 – 58 years	5	16.7
59 – 68 years	2	6.7
69 – 78 years	0	0.0
79 – 88 years	1	3.3
Sex		
Male	16	53.3
Female	14	46.7
Level of Education		
None	2	6.7
Primary	7	23.3
Secondary	12	40.0
Tertiary	9	30.0
Religion		
Christian	22	73.3
Muslim	5	16.7
Traditional	3	10.0
Occupation		
Student	4	13.3
Farmer	3	10.0
Trader	6	20.0
Civil servant	5	16.7
Self employed	2	6.7
Unemployed	10	33.3

The records showed that patients in the Male Medical Ward (MMW), Male orthopaedic ward (MOW), and Female Medical Ward (FMW) recorded the highest incidence of DAMA at 20% each (table 2).

Table 2: Categories of patients requesting DAMA

Variables	Frequency	Percentage
Ward of Admission		
Male medical ward	6	20.0
Male orthopaedic ward	6	20.0
Female medical ward	6	20.0

Emergency ward	3	10.0
Obstetrics and gynaecology	3	10.0
Female orthopaedic ward	3	10.0
Female surgical ward	2	6.7
Male surgical ward	1	3.3
Medical Condition		
Febrile illness	5	16.67
Injury from RTA	4	13.33
Head injury/trauma	3	10.00
CVDs and Hypertension	3	10.00
Ulcer and abdominal Pains	2	6.67
Appendicitis	1	3.33
Trauma to the neck	1	3.33
Diarrhoea	1	3.33
Body Pain	1	3.33
Facial palsy	1	3.33
Inability to walk	1	3.33
Breast cancer	1	3.33
prostate cancer	1	3.33
Thrombosis	1	3.33
Haemorrhoid	1	3.33
Stab wound	1	3.33
Facial injury	1	3.33
Hypochondrial pain	1	3.33

CVD = Cardiovascular disease, RTA = road traffic accident

Slightly more males (53.3%) opted for DAMA than female patients (46.7%). Patients who presented to the hospital with fever had the highest rate of DAMA, 5(16.7%). This was followed by those who sustained an injury by their involvement in a road traffic accident (RTA) 4 (13.3%). Most of the factors related to DAMA were patient related (table 3).

Table 3: Thematic analysis of factors associated with DAMA

Codes	Sub-themes
Experience in the hospital.	Patient-related factor
Lack of funds.	Patient-related factor
State of health at the time.	Patient-related factor

Prolonged stay/tired of staying.	Patient-related factor
Pressure to return to a duty or activity.	Patient-related factor
Other persons other than patient involved in decision making.	Patient-related factor
Sought other alternate health care option.	Patient related factor
Inadequate diagnosis.	Patient related factor
Poor services.	Patient related factor
Poor attitude and behaviour of physician or medical staff.	Medical staff factor
No respect from physician and other medical staff.	Medical staff factor
Inadequate attention given by physician and other healthcare workers.	Medical staff factor
No communication about diagnosis	Medical staff factor
Low level of expertise by physician and other healthcare workers.	Medical staff factor
View on facility/ward of admission.	Hospital environment factor
Unconducive hospital environment.	Hospital environment factor
Ill equipped hospital.	Hospital environment factor
Lack of comfort in the hospital.	Hospital environment factor

The emergent themes from the study were coded into three groups: patients factors (lack of funds, state of health at the time, prolonged stay/tired of staying, pressure to return to a duty, other persons involved in decision making, preference for alternate health care), medical staff factor (low level of expertise by physician and other healthcare workers, poor attitude and behaviour of physician or medical

staff, inadequate attention given by physician and other healthcare workers, no communication about diagnosis, inadequate diagnosis and poor service) and hospital environment factor (view on facility/ward of admission, unconducive hospital environment, ill equipped, lack of comfort in the hospital). Table 4 provides further insights into the patient-related factors associated with DAMA.

Table 4: Patient-related factors associated with patient’s decision to DAMA

Sub-themes	Illustrative Responses
Experience in the hospital that led to request to be discharged against medical advice.	<p>“There was no improvement in my condition then” Respondent 2 (Female, 26 years).</p> <p>“There was no good response to me there. When I had this problem on my hand from accident and was going through pain, the doctors there didn’t want to show up.....one doctor will come and say one thing and another doctor will come and say another thing before they managed to attend to me. I was not happy. ...I had to just leave because I was not having that good medical attention from them” – Respondent 7 (Male, 32 years)</p>

	<p>“...They refused to treat me. I reported the doctors to the secretary of FMC, there was no reasonable action. So my husband took me and the baby by force to another place” – Respondent 8 (Female, 32 years)</p>
	<p>“The hospital is trying but they don’t carry out tests, they start to treat you first without carrying out test, it is after you have spent much money before they will say this... Sometimes, I will buy things they will not use it and they didn’t refund the money” Respondent 11 (Female, 25 years)</p>
	<p>“I made the decision to leave because in that hospital people die a lot.....I think the treatment is not good enough....” Respondent 20 (Female, 52 years)</p>
<p>Connection between decision to be discharged against medical advice and lack of funds.</p>	<p>“I was feeling better and no money to buy the drugs.....” Respondent 4 (Male, 27 years)</p> <p>“It is a medical centre, they don’t charge so much so it’s not about the money. It’s them attending to me to my own satisfaction....” Respondent 26 (Male, 18 years)</p>
	<p>“No it is not about money, I went there for something and I wasn’t getting it” – Respondent 23 (Male 64 years)</p>
<p>Under pressure to return to duty or activity.</p>	<p>“Yes, I have 5 children and nobody to take care of them apart from my husband” – Respondent 19 (Female, 40 years)</p> <p>“Not at all” – Respondent 21 (Male, 48 years)</p> <p>“No it’s just that my family want to be with me at that time” Respondent 5 (Female, 23 years)</p>
<p>Decision related to prolonged hospital stay (so felt fatigued and tired staying in one place).</p>	<p>“I was strong and didn’t see why I needed to stayI was tired, don’t like to stay in the hospital for so long. Since I felt better, decided to go” – Respondent 14 (Female, 65 years)</p> <p>“I am okay and wanted to go home, therefore I decided to sign against medical advice” – Respondent 17 (Male, 88 years)</p>
<p>Others involved in making decision to be discharged against medical advice.</p>	<p>“My family and I” – Respondent 2 (Female, 26 years)</p> <p>“I took the decision alone” – Respondent 7 (Male, 32 years)</p> <p>“Yes, my brother. My brother was angry with how they refused to attend to me” – Respondent 18 (Male 39 years)</p>
<p>Connection between decision and state of health at the time.</p>	<p>“Yes, I needed urgent help. I was just sitting down doing nothing.....the pain was too much” – Respondent 25 (Female, 56 years)</p>

“I was in critical condition (prostate enlargement) and they were delaying” – **Respondent 30 (Male, 32 years)**

Consider diagnosis made inadequate.

“The diagnosis is not correct; I know it is asthma. If it is ulcer, I will be feeling it in my chest. My father had ulcer so I know the symptoms.....” – **Respondent 10 (Female, 23 years)**

DISCUSSION

Findings from this study revealed that among the 162 duly admitted patients that made the decision to DAMA from various wards in the FMC, Yenagoa between January 2020 to January 2021, only 53 patients had complete documentation with regards to parameters like educational qualifications, religious affiliations, marital status, contact details (especially telephone contact) and reasons for taking DAMA. Similar findings have been previously reported in the study of Akinbodewa et al.²⁷ as well as that of Fadare et al.⁵ which stated that complete documentation was found in only 54% of all patients that were DAMA. This as described by Akinbodewa et al.²⁷, can be because of little or no attention paid to the details in DAMA processing by the healthcare workers as they may be overtly reliant on the signature of the patients as a reason to be exonerated from legal penalty in the event of litigation.

Among adults who obtained DAMA within the period under review, more males opted for DAMA compared with their female counterparts. This is like findings in the study of Akinbodewa et al.²⁷ and other previous studies^{4, 5, 28, 29}. Though, Paul and Gautam³⁰ in their study showed that there was no gender bias related to DAMA, a Pakistani study by Hasan et al.³¹ demonstrated that females were slightly more likely to request for DAMA. The preponderance of DAMA among males could be linked to the social responsibility on men who according to societal expectation should

care for their families, their higher risk-taking attitude in making decisions and less likelihood of compliance with the medical staff's prescriptions when compared with women³². Some studies indicate that the phenomenon of DAMA is common in the middle age groups from 30-60 years⁴.

The lower mean age of DAMA cases in this study with respect to other previous studies^{5,33} could be because the largest age sub-group in the study was that of patients aged between 29 – 38 years.

The economic status as well as educational level of individuals also influence their decision to DAMA as patients with lower economic value and educational level were most likely to DAMA. In this study, prevalence of DAMA was found to be higher among the unemployed (33.3%) and patients with at most secondary level of education (40.0%) while the least (6.7%) occurred among those with no formal education. Contrary to these findings, Taghizadieh et al.³⁴ reported that DAMA is more among patients with lower educational level, while Vahdat et al.³³ stated that 55.6% of people who decided to DAMA were either illiterate or had under high school education. However, the higher prevalence of DAMA among enlightened individuals could be linked to their high level of expectation, demand for communication, inclusiveness in their care, respect and courtesy as well as their high rate of dissatisfaction in comparison with low-educated people, all of which leads to

clamour for hospital discharge³⁴. Also, the financial well-being of the individuals as well as the state of health plays a vital role in deciding for DAMA as many of the unemployed individuals may have opted to this based on financial constraints and the consequences of extending their stay at the facility.

While most of these LTMCs are non-communicable and may not pose significant risk to others in the community if these patients retire home or seek local remedies, the higher likelihood to DAMA may be due to the difficulties patients with LTMCs have in this situation³⁵.

Specific conditions like febrile illnesses or trauma were dominant in this study. This is in contrast with findings of Fadare et al.⁵ where majority of the DAMA cases in South-West Nigeria were cardiovascular diseases (14.7%) and diabetes mellitus (13.7%). Mitra et al.³⁶ also reported that patients in critical conditions were more prone to DAMA, while Mohseni et al.²⁹, in Iran did estimate the rate of DAMA in emergency departments to be 11.8%, with one of the main reasons for this issue identified as overcrowding nature of the emergency departments. Like this study, Ogunrewo et al.³⁷ showed that trauma from motorbike and motor vehicle accidents accounted for over 80% of the etiology of patients who decided to DAMA in their study.

The chance of DAMA among orthopaedic male and female patients was high. This is higher than the findings in other studies of DAMA among orthopaedic patients in Ido-Ekiti (7.1%)³⁸, Calabar (5.9%)³⁹ and Makurdi (13.9%)⁴⁰. This high prevalence of DAMA in orthopaedic patients may be due to the high cost of treating fractures at hospitals or the widespread belief among Nigerians that traditional bone setters

are better than orthodox practitioner at treating fractures³⁸⁻⁴⁰.

Patients in this study were probed to further understand the reason behind their decision to DAMA. It was revealed that their disappointed expectation to be involved in their care plan and desire of a greater level of engagement than what was offered were reflected as the most prominent reason prompting their decision to DAMA. They were also concerned about the lack of any significant improvement in their health condition or a sense of improved health outcome and recovery from sickness upon admission in the facility, as well as a lack of funds, the rate of death among patients on admission and pressure to return to duty. According to the discovery of Taghizadieh et al.³⁴, feeling of recovery and financial problems were the statistically significant factors related to patients' factors for DAMA while some patients had the feeling that continual stay in the hospital would be ineffective. Mitra et al.³⁶ also discovered in their study that loss of hope for improvement may provoke a next of kin to request for DAMA and proceed to a low-cost setting or home for patients whose conditions remained status quo or deteriorated even after treatment in a hospital. Furtherance to this, Mohseni et al.²⁹ added that the most important causes contributing to DAMA included patient's perception of feeling of wellbeing and presence of financial problems while Noohi et al.³² in an earlier study reported that patients who already feel well have a higher tendency to request for DAMA.

Also, a Nigerian study conducted in the Southwestern region by Fadare et al.⁵ showed that financial constraints, progression of the disease condition and opting out for alternative/complimentary medical care were major determinants of DAMA.

The issue of financial constraints plays a major role in cases of DAMA as hospitals that serve low-income populations will most definitely have a higher index of DAMA^{19,31}. Noohi et al.³², added that patients' financial situation and their proclivity to be present at work may have influenced their decision while family problems, the need for handling personal affairs at home, concern about the situation of children⁴¹, also stand as major contributors.

Personal reasons adduced for DAMA in this study like widespread poverty, financial constraints, domestic problems, and lack of insurance coverage by most of our populace have been linked with increased rate of DAMA in previous report³¹. Other studies have reported that substance abuse, poor social support, psychiatric illness, and lack of health insurance are major personal determinants for DAMA^{8, 15, 23}. The National Health Insurance Scheme (NHIS) still has limited coverage especially across the informal sector and scope of services covered and available for the insured. As such, most of these patients in this setting face dire financial consequences with the prevalent out-of-pocket payment system^{37, 42, 43}. The poor financial risk protection remains a major barrier to universal health coverage and the delivery of quality healthcare in Nigeria as well as a major factor predisposing our patients to DAMA.

The implications of the findings of this study include the need for the local administrators to set up a system for early recognition of the patients with tendencies to DAMA, institute a more effective supervision and training of staff on the technical and interpersonal aspects of their duties as well as improve cleanliness of the hospital and its environment. Enhancing the involvement of patients in the care process

will empower and give them a voice as the system emphasizes patient-focused quality improvement.

Study limitations

A major limitation of this study was the small sample size. This did not allow for reasonable inferential statistics in the quantitative aspect of the study. Comparison between variables was done in the light of simple proportions without statistical testing. The record of DAMA patients was retrieved for this study but more than half of the patients who decided to DAMA had incomplete documentation in their folders with regards to parameters like educational qualifications, religious affiliations, marital status, contact telephone, and reasons for taking DAMA. This study did not explore the implications of DAMA on the patients and further care received by patients after leaving the hospital.

CONCLUSION

Cases of DAMA were higher among males from male medical and orthopaedic wards in the hospital. Reasons for DAMA were mostly patient-related, followed by medical staff related factors. Resilient systems of care premised on universal health coverage that can provide adequate assessment, tracking and response to the needs of individual patients should be the goal of stakeholders.

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