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ORIGINAL STUDY

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Factors Associated With Discharge Against Medical Advice Among Patients Attending the Emergency Departments in Babylon Governorate

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Abstract

Background: With the increasing number of patients leaving the emergency department against medical advice, morbidity, mortality, and readmission rates have risen, placing a strain on the healthcare system.

Objectives: This study aimed to identify the demographic characteristics and the reasons why patients left against medical advice among those attending the emergency departments of teaching hospitals in Babylon Governorate.

Materials and Methods: A descriptive cross-sectional study was conducted in Babylon Governorate, encompassing three hospitals. using a convenience sample of patients who left the hospital against their physician's advice. Data were collected between August 2024 and February 2025 using a semi-structured questionnaire covering the reasons for and characteristics of patients who left the hospital against their physician's wishes. Ethical approvals were obtained from the administrations of the three hospitals, as well as from the Scientific Committee of the College of Nursing at the University of Hilla.

Results: The study included 510 patients who left the hospital against medical advice. Nearly two-thirds of the participants were male (66.7%), and more than three-quarters (76.7%) were from rural areas. Approximately two-thirds of the patients left without being aware of the potential risks. Respiratory diseases (30.4%) were the most common medical condition, followed by heart disease (21.6%), traffic accident injuries (15.5%), hypertension (12.9%), urinary tract infections (12%), and appendicitis (7.6%). Regarding the causes of (DAMA) the most common reason was the patients' low economic status (40.8%), followed by difficulty communicating with medical staff (27.5%).

Conclusion: The study showed that the majority of males and approximately two-thirds of patients are unaware of the potential risks. The low social status and difficulty communicating with medical staff may be the primary reasons for this. Healthcare providers and educators need strong communication skills.

Keywords: Discharge against medical advice, Babylon Hospitals, Emergency Department

1. Introduction

The term "discharge against medical advice" (DAMA) refers to cases in which patients leave a healthcare facility without their doctor's approval. It is also defined as a patient leaving before completing the treatment plan recommended by the medical team. The prevalence of DAMA worldwide ranges from 0.7% to 2.2% in general medicine departments and from 0.07% to 20% in emergency departments [1]. The majority of readmission patients readmitted at post-discharge include those who discharged against the recommendation of their doctors [2]. It has been demonstrated that the rate of readmission within 30 days after discharge in DAMA is 40%–100% higher than the readmission rate in patients who followed through with their treatment [3].

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Furthermore The incidence of discharge against medical advice is rampant, and this problem has a plethora of adverse effects on patients and care providers. Moreover Discharged patients who leave against medical advice are more prone to complications and mortalities as they are discharged without being provided with full treatment and care [4–7]. One of the most active departments within hospitals is the emergency department, and in this environment, the situation of incomplete emergency care and patient dissatisfaction with the quality of services received frequently results in the rise of cases of discharge against medical advice [8]. Besides that, In addition, demographic features of the patient and his/her trust in healthcare services may also be the contributors to this phenomenon [9]. Increased rate of discharge against medical advice can be mitigated by early identification of high-risk individuals and by assisting in guaranteeing that high-risk patients leave the hospital safely [10].

Besides, the number of hospital discharge against medical advice can be minimized through revisiting hospital practices that pre-determine such cases [11]. Discharge against medical advice reasons have been categorized into two groups: those associated with living in the hospital setting and those that are in association with the interaction between the patient and the medical staff [12]. The emergency department (ED) has the largest number of patients most of whom are in critical conditions. Research has also revealed that the availability of medical services in the ED can have a great impact on the entire hospital care quality [12]. The cases presented in emergency department are mostly severe and research has indicated that the availability of medical services in the emergency department greatly enhances the level of healthcare services in the hospital [13]. Consequently Research has found out that discharge against medical advice is linked to unfinished medical care and socioeconomic circumstances, and might have adverse consequences on the health outcomes of patients [14, 15].

Maintaining a stable contact with patients since their admission to the hospital is crucial as the risk of patient discharge against medical advice is a significant factor that can lead to deterioration in patient satisfaction [16]. In addition to other factors such as the absence of consultants or inadequate medical care, seeking a second medical opinion is also a contributing factor [17, 18]. Several studies have reported that prolonged stays in the emergency department are a significant factor in DAMA [19–21]. Furthermore, patients who are admitted through the emergency department, not seen by an attending physician at the time of admission, admitted on specific days, or those who are uninsured, homeless, or have serious comorbid conditions (such as psychiatric illness, intravenous drug addiction, HIV, hepatitis C, gastrointestinal bleeding history, or acute alcohol intoxication) are more likely to leave against medical advice [22]. Numerous studies have identified a variety of factors associated with patients leaving against the advice of physicians, including male sex, financial constraints, advanced age, educational level, physician-related factors such as differing clinical diagnoses, and nurse-related factors such as poor service and low quality of care [23].

This study aims to identify demographic and clinical characteristics, as well as factors associated with discharge against medical advice, in the Emergency Departments of Teaching Hospitals in the Babylon Governorate.

2. Materials and methods

This study employed a descriptive cross-sectional design and targeted patients who presented to the emergency departments of three teaching hospitals in central Babylon Governorate (Marjan Teaching Hospital, Imam Al-Sadiq Hospital, and Al-Hilla Surgical Teaching Hospital) and who were discharged against physician advice from August 2024 to February 2025.

Ethical approval was obtained from the relevant institutional scientific committee before data collection. Data were collected from a convenience sample of patients using a semi-structured questionnaire developed based on previous studies. The questionnaire has two parts. The first one is related to demographic information (age, gender, educational level, place of residence, and monthly income). The second part is associated with the health status of the patient, his medical diagnosis and awareness of the consequences of leaving against medical advice, as well as the reasons for his discharge. The sample size was calculated using a population-based ratio equation based on a prevalence rate of 0.5 due to the paucity of local studies, with an accuracy level of 0.05 at a 95% confidence level (Z=1.96). The proposed sample size was 384 participants. In order to strengthen the study and consider non-cooperation among some cases, 510 patients were selected.

3. Statistical analysis

The data were analyzed using the software of statistical package and science (SPSS version 26). Descriptive statistics (frequencies and percentages) were used to describe the trend of hospital discharges against medical advice. The chi-square test was also performed to investigate a relationship between hospital discharges and the demographic variables. The degree of statistical significance was determined at $p < 0.05$.

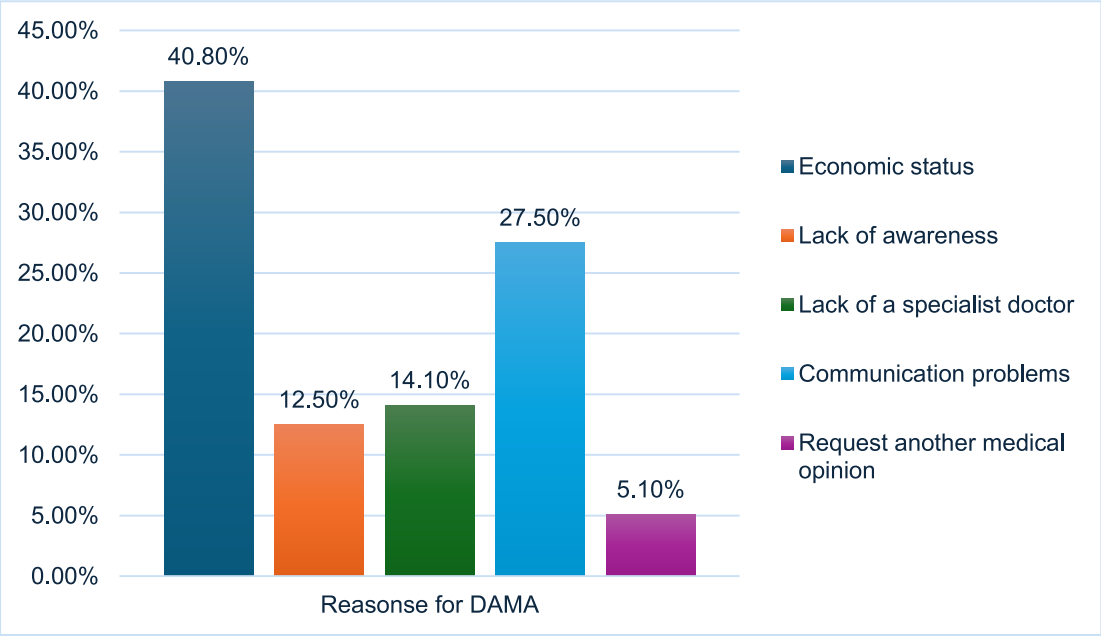

Fig. 1. Distribution of patients by reasons for discharge against medical advice.

4. Results

Fig. 1 explains the most common reasons for leaving the hospital against medical advice. The most common reason was a low economic status (40.8%), indicating the importance of financial considerations in the decision to leave among patients. More than one quarter of patients reported problems or difficulties in communication with healthcare providers (27.5%), while lack of specialization was 14.1%, and lack of patient awareness was 12.5%. The least influential (5.1%) was seeking a second medical opinion. Therefore, the financial stress associated with receiving healthcare should be reduced' communication skills among healthcare providers should be developed; and specialized medical staff should be provided to mitigate this problem.

Table 1 presents some of the main findings. 510 patients were discharged from the emergency department against medical advice. Of these patients, 340 were male (66.7%) and 170 were female (33.3%), with a male to female ratio of 2:1. Patients ranged in age from 18 to 70 years, with a mean age of 33.9 years (standard deviation of ±10.5).

As for place of residence, more than three-fourths of the 391 patients (76.7%) were from rural areas, while less than a quarter of the participating patients 119 (23.3%) were from urban areas.

Regarding the educational level, the illiteracy rate was 33.7%, the primary education 22.5%, the intermediate education 18.8%, preparatory education 12.2% and university education 12.8%. These results reflect the major challenges to access to education.

Table 1. Demographic characteristics of study patients (n = 510).

Demographic characteristics		N (%)
Sex	Male	340 (66.7%)
	Female	170 (33.3%)
	Total	510 (100%)
Age (Years)	18–29	219 (42.9%)
	30–39	164 (32.2%)
	40–49	67 (13.1%)
	50–59	38 (7.5%)
	60 and more	22 (4.3%)
	Mean (± SD)	33.9 (10.5) (±)
Place of residence	Urban	119 (23.3%)
	Rural	391 (76.7%)
Education level	Illiterate	172 (33.7%)
	Elementary	115 (22.5%)
	Intermediate	96 (18.8%)
	Preparatory	62 (12.2%)
	University	65 (12.8%)
Monthly income	Enough	93 (18.2%)
	Not enough (insufficient)	359 (70.4%)
	Enough and more	58 (11.4%)

Regarding monthly income, the study found that 359 patients (70.4%) reported that their monthly income was insufficient. 93 patients (18.2%) reported that their income was sufficient, while 58 patients (11.4%) reported that their income was acceptable or even more than enough.

Table 2 shows the distribution of clinical cases for 510 patients. The most common condition was febrile illness/respiratory infection at 30.4%, followed by heart disease at 21.6%. Traffic accident injuries came in third at 15.5%. Hypertension and urinary tract infections accounted for similar proportions (12.9% and 12%, respectively). The least common condition was

Table 2. Distribution of cases according to the clinical condition.

Clinical Condition	No. of patient	%
Febrile Disease/Respiratory Infection	155	30.4
Cardiac Disease	110	21.6
Appendicitis	39	7.6
Injuries from a Road traffic accident	79	15.5
Hypertension	66	12.9
Urinary tract infection	61	12
Total	510	100

appendicitis at 7.6%, indicating a variety of symptoms with a higher concentration around respiratory infections and heart problems.

Table 3 shows that only 159 (31.2%) patients out of a total of 510 patients were aware of the risks and side effects of going against medical advice. While 351 (68.8%) patients were not aware of these risks. In terms of the distribution of risk knowledge by educational level, we found that patients with higher education were more aware of the risks. For example, 54 (83.1%) patients with university education were aware of the risks, while only 15 (8.7%) illiterate patients were aware of these risks. Also, the results indicate a strong, statistically significant relationship between the studied variables, as the p-value (>0.0001) reflects the rejection of the null hypothesis.

Table 4 shows that, overall, 76.5% of participants reported receiving sufficient medical explanation regarding the necessity of staying in the hospital, while 23.5% reported receiving insufficient explanation, indicating a notable gap in patient communication. Among those who received sufficient explanation, the proportion was higher among males (85%). The findings were statistically significant ($p < 0.0001$).

5. Discussion

Discharge against medical advice is a significant problem for healthcare providers, particularly in developing countries. This phenomenon remains a critical issue in healthcare, impacting patient outcomes and the utilization of hospital resources. This study aimed to explore the factors associated with DAMA and their correlates among patients attending emergency departments in three referral teaching hospitals in the center of Babylon Governorate (Marjan Teaching Hospital, which mainly treats medical cases, Imam Al-Sadiq Hospital, and Al-Hillah Surgical Teaching Hospital).

Among a convenient sample of 510 patients who insisted on leaving against medical advice, who attended the emergency departments and agreed to participate in the study, males were predominant (male to female ratio, 2:1). However, this result opposes other studies [28, 29]. men in our society have a social responsibility and are more prone to noncompliance as compared to women. Moreover, it is reported that young age groups do not accept medical advice and are less adherent to medication, leading to incomplete treatment; thus, they are more susceptible to DAMA in our society [26, 27].

Attention should be paid to this high-risk group to reduce this problem by improving health services to a high-quality standard of care, mitigating conflicts, reducing waiting times in the emergency department (ED), conducting proper physical examinations, ensuring the availability of necessary medications, ensuring the presence of consultants, and preventing verbal abuse. This policy fosters a proper environment for patients. As for the factors that contribute to discharge from the hospital against medical advice (DAMA), the results of our study show that financial constraints play a crucial role in patients' decisions, with approximately 40% of patients making this decision due to the difficulty of affording healthcare. This finding is consistent with other studies that identified socioeconomic factors, particularly financial constraints, as a major factor in patients being discharged before completing the recommended treatment [23, 35, 36].

In fact, patients often perceive hospital costs as exorbitant, leading them to make decisions that may negatively affect their health and treatment outcomes. In addition to economic factors, patient-related factors, including demographic characteristics, are among the most influential factors in the phenomenon of early hospital discharge [22, 27]. Furthermore, the low level of trust between patients and doctors in some regions significantly impacts treatment adherence, which may lead to DAMA [32]. In contrast, Lebanese patients have a high level of trust in their doctors and high satisfaction with healthcare services [33]. This finding is not directly consistent with the results of our study, which showed that 27.5% of patients in our sample experienced poor communication with healthcare providers. This was identified as a reason for discharge against medical advice (DAMA). Our study found that most patients lacked sufficient information about the consequences and side effects that could happen to them when they leave against medical advice, to the point that two-thirds of patients did not have any awareness of the side effects of DAMA. Increasing effective communication between healthcare providers, mainly physicians and nurses, can increase patient satisfaction and improve patient-centered, high-quality healthcare services as reported by other quantitative and qualitative studies [16, 27]. These studies explain that poor awareness and health illiteracy were essential factors related to living against medical advice.

Table 3. Distribution of patients according to educational level and their knowledge of the risks and side effects of DAMA.

	Did you know the potential side effects and risks of leaving at your own risk?			
Educational level	Yes	No	Total	P-value
Illiterate	15 (8.7%)	157 (91.3%)	172 (33.7%)	<0.0001
Elementary	24 (20.9%)	91 (79.1%)	115 (22.5%)	
Intermediate	29 (30.2%)	67 (69.8%)	96 (18.8%)	
Preparatory	37 (59.7%)	25 (40.3%)	62 (12.2%)	
University	54 (83.1%)	11 (16.9%)	65 (12.7%)	
Total	159 (31.2%)	351 (68.8%)	510 (100%)	

Table 4. Distribution of participants by gender with regard to the adequacy of medical explanation before making the decision to leave the hospital.

Did you receive sufficient medical explanation regarding the necessity of staying in hospital before the decision to leave?	Male	Female	Total	P-value
Yes	289 (85%)	101 (59.4%)	390 (76.5%)	<0.0001
No	51 (15%)	69 (40.6%)	120 (23.5%)	
Total	340 (66.7%)	170 (33.3%)	510(100%)	

The presence of a culture of health in this study leads to one result, which is that despite giving all the information to the patients, they did not follow these instructions, therefore, most of the patients were unable to make decisions about their health [24, 30]. Literacy is viewed as a barrier, influence, and a by-product of other issues such as health, education, social policy, and excellent programs. A person's overall well-being is enhanced through health literacy. A person's level of literacy affects their decision-making and the actions they take in the family, workplace, and society [25, 31]. Patients must have a sufficient level of health literacy to interact with and communicate effectively with healthcare providers. Raising the level of awareness about this serious problem is considered an indicator of good quality health service that provides a pleasant environment for the patient and increases his/her compliance [31].

The top three reasons for LAMA are long waiting time (40.2%), the patient's condition improving and no longer needing to stay (32.5%), and dissatisfaction with the quality of the service provided (20.1%). 43.3% went to another hospital for the same condition. 20.6% were admitted to a hospital after LAMA [34]. Furthermore, our study found that a lack of understanding of medical conditions and treatment plans contributes to AMA discharges. inadequate communication between healthcare providers and patients can result in confusion and mistrust, prompting patients to refuse further treatments and discharge against medical advice.

Effective communication and patient engagement are, therefore, crucial in reducing the incidence of AMA discharges [37, 38]. In this study, febrile illnesses/respiratory infections were the leading cause of hospitalization then cardiac diseases/injuries caused by traffic accidents which recorded the largest proportion of patients in this study. This finding is in contrast to other studies indicating hyperglycemia as the main cause of this discrepancy and can be explained by differences in the prevalence of the disease in different countries [27]. Our results provide valuable and novel information in regards to LAMA cases in the emergency department, which will benefit healthcare authorities in the development of new policies to reduce the incidence of LAMA.

6. Conclusion

Leaving against medical advice is a serious health problem and is very common; particularly among young people with low levels of education. Most patients who leave against medical advice are not aware of the possible risks of this behavior. The primary reasons for their hospitalization were respiratory infections and fever; the leading reasons for leaving against medical advice were financial and communication problems with medical personnel. Therefore, it is necessary to improve communication skills between patients and staff, develop health education and awareness programs to help reduce or eradicate this problem.

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Ethics approval

This study was conducted in accordance with the principles of the Declaration of Helsinki. Official permission was obtained from the University of Hilla (Ref. No. 3057, dated 12/8/2024). Administrative approvals were also obtained from the three participating hospitals before data collection.

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Authors' declaration and declaration of generative AI in scientific writing

- Conflicts of Interest: None.
- I/We hereby confirm that all the Figures and Tables in the manuscript are mine/ours. Furthermore, any Figures and images that are not mine/ours have been included with the necessary permission for re-publication, which is attached to the manuscript.
- No animal studies are present in the manuscript (Only if the author did not use laboratory animal in his/her research).
- human studies are present in the manuscript (The manuscript includes human studies (ethical approval: the project was approved by the local ethics committee at the University of Hilla). Verbal consent was obtained from the patients).
- Author(s) signed on ethical consideration's approval (Authors who submit manuscripts reporting studies involving human participants, human data, or human tissue are required to sign this form).

Consent to participate

Informed consent was obtained from all individual participants included in the study.

Data availability

The datasets generated during and/or analysed during the current study are available from the corresponding author on reasonable request.

Author contributions

Conceptualization, Hasan Alwan Baiee; Methodology, Hasan Alwan Baiee and Ali Mohsen; Validation, Hasan Alwan Baiee, Ali Mohsen, and Ola Mosheb; Formal Analysis, Ali Mohsen; Investigation, Ali Mohsen and Ola Mosheb; Data Curation, Ali Mohsen and Ola Mosheb; Writing – Original Draft Preparation, Hasan Alwan Baiee; Writing – Review & Editing, Hasan Alwan Baiee, Ali Mohsen; Supervision, Hasan Alwan Baiee; Project Administration, Hasan Alwan Baiee.

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