

Rate and causes of discharge against medical advice from a university hospital emergency department in Iran: an ethical perspective

Sanaz Rouhbakhsh Halvaei¹, Hojat Sheikh Motahar Vahedi², Ayat Ahmadi³, Maryam Sadat Mousavi⁴, Alireza Parsapoor⁵, Ali Reza Sima⁶, Amir Ahmad Shojaei⁵, Ehsan Shamsi-Gooshki^{5*}

1. Researcher, Medical Student at Faculty of Medicine, Tehran University of Medical Sciences, Tehran, Iran.

2. Associate Professor, Faculty of Medicine, Shariati Hospital, Tehran University of Medical Sciences, Tehran, Iran.

3. Assistant Professor, Knowledge Utilization Research Center, Tehran University of Medical Sciences, Tehran, Iran.

4. Researcher, Medical Ethics Supervisor, Medical Ethics and Professionalism Office, Shariati Hospital, Tehran University of Medical Sciences, Tehran, Iran.

5. Assistant Professor, Medical Ethics and History of Medicine Research Center, Tehran University of Medical Sciences, Tehran, Iran; Department of Medical Ethics, Faculty of Medicine, Tehran University of Medical Sciences, Tehran, Iran.

6. Assistant Professor, Digestive Disease Research Center, Digestive Disease Research Institute, Tehran University of Medical Sciences, Tehran, Iran.

Abstract

Discharge against medical advice (DAMA) is a common problem in the health-care system. It imposes risks to both patients and medical staff and could be the subject of ethical deliberation. This cross-sectional study was conducted in 2017 on 400 patients who were discharged against medical advice from the emergency ward of Shariati Hospital, Tehran, Iran. Patients' information was collected using clinical records and telephone calls. The collected data were analyzed using STATA software. DAMA rate was 12% in the emergency department of Shariati Hospital. Male gender was found to be a risk factor for DAMA (OR: 1.90; CI (95%): 1.44 - 2.52; $P < 0.0001$). In addition, younger patients were more likely to leave hospital against medical advice (p -value: 0.04). The more common reasons for DAMA were feeling better, long delay in diagnostic and therapeutic procedures and the hectic ambience of the emergency ward.

Patients' self-discharge is a multi-dimensional phenomenon that is affected by patients' characteristics, medical conditions and hospital circumstances. It raises some ethical concerns, mainly due to a conflict between patients' autonomy and beneficence. It is helpful for the medical staff to create an effective relationship with patients who are at higher risk of DAMA, in order to increase their compliance and prevent the consequences of leaving hospital against medical advice.

Keywords: Discharge against medical advice (DAMA); Emergency department; Iran; Medical ethics.

*Corresponding Author

Ehsan Shamsi Gooshki

No.23, 3rd floor, 16Azar St., Keshavarz Blvd., Tehran, Iran.

Tel: (+98) 21 66 41 96 61

Email: shamsi@tums.ac.ir

Received: 27 Jan 2020

Accepted: 22 Sep 2020

Published: 28 Sep 2020

Citation to this article:

Rouhbakhsh Halvaei S, Sheikh Motahar Vahedi H, Ahmadi A, Mousavi MS, Parsapoor A, Sima AR, Shojaei AA, Shamsi-Gooshki E. Rate and causes of discharge against medical advice from a university hospital emergency department in Iran: an ethical perspective. *J Med Ethics Hist Med.* 2020; 13: 15.

Introduction

Discharge against medical advice (DAMA) or self-discharge occurs when a patient chooses to leave hospital before the treating physician recommends discharge. According to the policies of Shariati Hospital, a request for leaving hospital against medical advice is considered only if a related form has been filled and signed by the patient or his/her legal representative. DAMA reflects a patient's non-compliance with the physician's advice for continued inpatient care. The high number of patients leaving hospital against medical advice can be a sign of their discontent or a problem of considerable importance. Discharge against medical advice is a distressing problem for physicians and other health professionals throughout the world as it disrupts the doctor-patient relationship. Patients discharged against medical advice are less likely to form an established relationship with their physician and may have unsatisfactory medical outcomes. Investigating the causes and predictor variables can be useful in planning to reduce the DAMA rate and to increase patients' satisfaction (1). These patients may be susceptible to serious health consequences as a result of inadequate treatment. Previous studies have shown that morbidity and mortality rates are higher among patients who were discharged against medical advice in comparison with regularly-discharged patients (2). In addition, DAMA patients are an at-risk group for readmission and they may require more invasive and complicated therapeutic procedures after being readmitted. Therefore, they increase health-

care costs (1). Patients who leave hospital against medical advice have to confront an additional source of distress, which is the reason why they decided to self-discharge in the first place. Discharge against medical advice can pose an ethical dilemma for medical staff. The conflict between the principle of beneficence and patients' autonomy is the most prominent ethical dilemma in DAMA. The importance of beneficence or doing good to patients has been emphasized throughout the history of medicine, for example in the Hippocratic Oath and the Declaration of Geneva (3). This principle has been one of the most crucial factors in developing the physician-patient relationship, and anything that disrupts it may threaten a favorable outcome for patients. (4) The principle of patient autonomy is based on the right of every individual to make informed decisions about their personal issues and patients' responsibility in managing their own health. It is the absolute right of the patient to have a free choice and make decisions about receiving health-care services, and to choose when, where and how to be treated (5). Presently, there is a shift from the previously accepted paternalistic approach in medical practice toward shared decision-making or even a completely patient-centered model due to the increasing health literacy level and social awareness of health issues. When a patient decides to leave hospital against medical advice, the main ethical conflict for health-care providers is between the principles of autonomy and beneficence, that is, protecting patients from harm. The question is, which of them should take precedence? It is obvious that there is no

clear-cut answer and that each case has to be examined individually (4), but overall, physicians' obligations are to improve their patients' health and well-being. Physicians should make every effort to promote informed decision-making by discussing the likely harms and benefits of leaving hospital or choosing alternatives for inpatient treatment. An informed decision is one that is made with a full understanding of risks, benefits and alternative plans. To that end, it is critical for the physician to talk to the patient directly and negotiate to make the patient's hospital stay more tolerable. Determining the cause of the patient's dissatisfaction is a suitable starting point. Broadly speaking, clinicians faced with these cases should first evaluate the patients' decision-making capacity and then assess the external factors that have influenced their decision, and finally encourage and facilitate after-care (6). Informed consent is one of the most critical steps that must be taken in caring for patients who opt for DAMA. Obtaining informed consent also involves an evaluation of patients' decision-making capacity (2). It should be mentioned that legal issues may arise in the context of DAMA. According to a study conducted by Devitt et al., although most health-care professionals believe that documenting a discharge against medical advice may protect them from the consequences of legal actions, they may be sued for medical malpractice. The treating physician should first perform a thorough and well-documented physical examination including an assessment of the severity of illness and the risk of a premature discharge.

The physician should confirm that the patient's decision to leave hospital is informed and not forced by risks, benefits, and alternative plans. Overall, good medical practice and thorough documentation are the best legal protection (7). Finally, it is the physician's responsibility to minimize the probability of harms that DAMA patients may be susceptible to through effective education and follow-up schedule. This study aims to evaluate and discuss the ethical aspects of main causes and also the rate of DAMA in one of the referral university hospital in Tehran.

Method

This is a cross-sectional study that has been conducted in 2017. The research was carried out in the emergency ward of Shariati Hospital, which is a tertiary, referral, university teaching hospital in Tehran. DAMA contributing factors were identified through comprehensive literature review, and a question list was created using the results of previous theses and articles on similar subjects. The question list contained demographic characteristics (sex, age, literacy, economic status, etc.), reasons for DAMA (which were categorized into three sections: individual factors, factors related to medical staff, and factors related to the physical and structural features of the hospital) and post-discharge care. Furthermore, three questions were designed to estimate how medical staff deals with DAMA cases. Finally, patients' post-discharge plans and actions were recorded. The content validity of the question list was

confirmed through an expert panel including medical ethicists, head of the emergency department, and head nurse of the emergency ward. Utilizing a hospital inpatient database, all patients who had been discharged against medical advice from the emergency ward of Shariati Hospital in 2017 were identified. Assuming a 3% prevalence of DAMA based on previous studies, a precision of 0.04% and an α level of 0.05, the sample size was calculated to be 400 for this cross-sectional study. A population of 400 patients was chosen as a sample group via stratified random sampling, while the wards were considered as strata. Demographic and clinical information for 400 selected patients were extracted from clinical records. Next, a telephone interview was conducted with all the 400 patients in the sample group in order to find out the reason why they had decided to leave hospital against medical advice. Interviewees were allowed to choose one reason in each category. All the interviewees were assured of the confidentiality of their information and they participated in the research program willingly. Patients under 18 or those whose decision-making capacity was affected by mental or psychological disorders were excluded. In addition, patients who had been unwilling to cooperate were excluded and replaced by DAMA cases. Demographic variables such as age and sex of an equal number of patients who were discharged according to their physician's advice was compared with the study group.

The research methodology was fully approved by the TUMS Research Ethics

Committee (IR.TUMS.VCR.REC.1397.095).

Statistical analyses were performed via STATA 12.1 statistical software using descriptive statistics (frequencies and percentages). Statistical significance was defined as a *p*-value smaller than 0.05.

Results

During the 12-month study period, 16767 patients were admitted to the emergency department of Shariati Hospital, 12% of whom were discharged against medical advice (a total of 2053 patients). The rate of DAMA varied between 12 - 14% per month during the first half of the year, but this rate dramatically soared to 20% in September and dropped to 5 - 6% at the end of the year.

The response rate of the telephone interview was 88.1% ($n = 400$ out of 454). Fifty-four people (11.8%) were eliminated and replaced by another person because of their unwillingness to cooperate, and 26 patients (5.7%) stated that they were unwilling to participate because of their patient's death.

Those discharged against medical advice were more likely to be male compared with those who did not (OR = 1.90; CI (95%): 1.44-2.52; *P*-value < 0.0001). In addition, younger patients (under 35 years old) were more likely to leave hospital against medical advice (*P*-value = 0.04).

The mean age and standard deviation of the sample group were 54.15 and 19.8 respectively, while the mean age and standard deviation were 58.22 and 21.39 in the control group.

Table 1- The characteristics of DAMA cases

Variables	Groups	Sample Group	
		N	Percent
Gender	Male	236	59%
	Female	164	41%
Age	18 - 35	93	23.25%
	36 - 60	145	36.25%
	Above 60	162	40.5%
Marital Status	Married	290	72.5%
	Not Married (Single, Divorced, Widow)	110	27.5%
Economic Status	Low	80	20%
	Medium	225	63.75%
	High	65	16.25%
Education Level	Illiterate	29	7.25%
	Primary	111	27.75%
	High school diploma	201	50.25%
	Secondary education	59	14.75%
Payer Status	Self-pay	52	13%
	Medicaid pending	348	87%
Domicile	Tehran	352	88%
	Other	48	12%
Smoking	Smoker	127	31.75%
	Non-smoker	273	68.25%
Drug Abuse	Yes	34	8.5%
	No	366	91.5%
Consumption of Psychiatric Medication	Yes	26	6.5%
	No	374	93.5%
History of Previous Hospital Admission	Yes	246	61.5%
	No	154	38.5%
History of Previous Admission in Shariati Hospital	Yes	82	20.25%
	No	318	79.5%
Admission Time	Day shift	193	48.25%
	Night shift	207	51.75%
Discharge Time	Day shift	192	48%
	Night shift	208	52%
Responsible Medical Service inside Hospital Emergency Department	Emergency service	222	55.5%
	Internal Medicine Service	110	27.5%
	Neurology service	27	6.75%
	Surgery/orthopedics/urology	41	10.25%

Our findings showed that 63.96% (n = 142) of the patients who had received emergency services were discharged against medical advice during night shift. However, DAMA was more common during day shift among those receiving other types of services (n = 112, 62.9%).

Table 3 depicts the chief complaints of patients discharged against medical advice. Pain (abdominal pain, chest pain, etc.) had been the most common complaint among those patients.

Table 2- The chief complaints of patients discharged against medical advice

	N	Percent
Abdominal pain	80	20%
Chest pain	37	9.25%
Pain *	48	12%
Nausea/vomiting/diarrhea/constipation	22	5.5%
Fever	21	5.25%
Trauma (multiple/single/blunt/penetration)	51	12.75%
Bleeding**	26	6.5%
High blood pressure/tachycardia	20	5%
Dyspnea	20	5%
Loss of consciousness/lethargy/seizure	33	8.25%
Plegia / Paresis	26	6.5%
Skin lesions	16	4%

* includes any kind of pain except abdominal and chest pain

** includes GI bleeding, hematuria, hemoptysis, active bleeding of wounds or mucosa

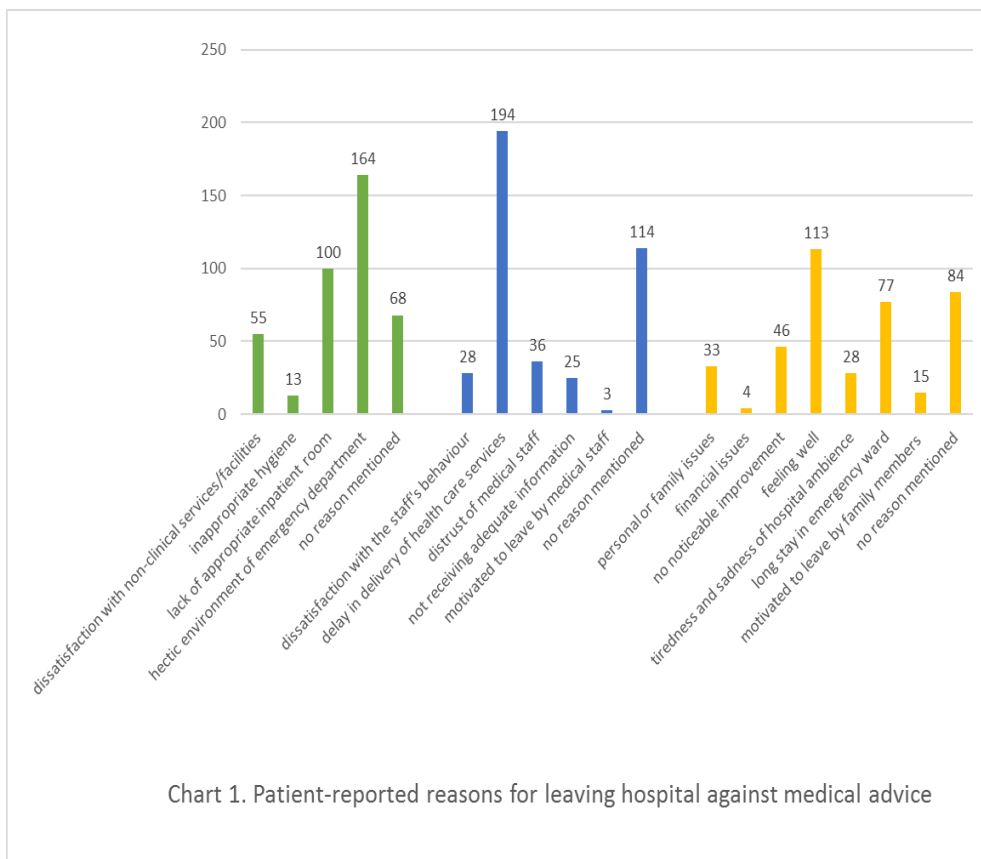


Chart 1. Patient-reported reasons for leaving hospital against medical advice

All the patients admitted in the emergency ward had been visited by a doctor within 30 minutes. The mean waiting time in the sample group was 14.78 minutes. The mean hospitalization time in the emergency ward

was 13.8 hours in DAMA cases.

Reasons for DAMA as stated by DAMA cases are illustrated in Chart 1. As mentioned earlier, these reasons are categorized into 3 main groups: individual

factors (shown in yellow), factors related to the medical staff (shown in blue), and factors related to the structural and physical features of the hospital (shown in green).

According to chart 1, the more common reasons why patients decided to leave hospital against medical advice had been feeling better, long delay in diagnosis, therapeutic procedures and hectic environment of the emergency ward.

About 25 % (n = 100) of the patients mentioned lack of appropriate inpatient room as the reason why they opted for DAMA, and 73 % (n = 292) pointed to delay in delivery of health services as well.

Interviewees were allowed to choose one reason in one, two or all categories. Forty-eight percent (48%) of the patients mentioned a reason in each of the three categories (a total of 3 reasons), and 37.5% of them chose a reason in two categories, while only 14.5% of the patients stated just one reason for their DAMA. There was no patient who had decided to leave hospital against medical advice just because of “dissatisfaction with non-clinical services” or “inappropriate hygiene”. In other words, these factors had always been accompanied by other reasons in DAMA cases.

Roughly half of the patients who mentioned no “noticeable improvement” as a reason for self-discharge, also did not trust in their caring physician (52.17%).

Almost all the patients who mentioned “long stay in the emergency ward” as a reason for self-discharge were also dissatisfied on account of delay in delivery of health-care

services.

Only 3 (0.75%) DAMA cases claimed that they were only dissatisfied with the structural and physical features and had no complaint about the medical staff and no individual reasons.

The mean age of the patients who mentioned structural and physical features as a reason for DAMA was lower than those who did not mention this factor (mean difference = 15.82 years).

According to the data analysis, 39.19% of the patients who had received care service from emergency specialists did not mention any factors related to medical staff as their reason for DAMA; conversely, this percentage was 11.82% and 12.02% for internal and surgical service, respectively. Roughly a third of those whose caring physicians were emergency specialists were dissatisfied due to delay in delivery of health-care services, while this percentage was 65.45% and 78.05% in internal and surgical wards, respectively.

About three quarters of the patients admitted because of dyspnea mentioned one reason in all categories. However, this percentage was lower among patients with other chief complaints.

Patients answered three questions about their physicians’ approach to their DAMA request. The first question was whether the caring physician had made an effort to discourage them from DAMA, to which 70.5% (n = 282) gave a positive response. The second question was whether the physicians discussed the alarming signs of

their illness and educated the patients on how to deal with them. According to the patients' responses, only 39.5% (n = 158) of the patients had received the appropriate education before leaving hospital against medical advice. Ultimately, responses to the final question indicated that only 38.25% (n = 153) of the physicians asked their patients about their post-discharge decisions and plans for continuing their treatment.

As can be seen in chart 2, 47.75% (n = 191) of the patients were re-admitted in either a private or a public hospital. In addition, 4% (n = 16) of the patients went back to Shariati Hospital after discharge against medical advice. However, 25% (n = 100) of the patients were cured without undergoing any treatment, and 18.5% (n = 74) of the DAMA cases continued their treatment through outpatient care.

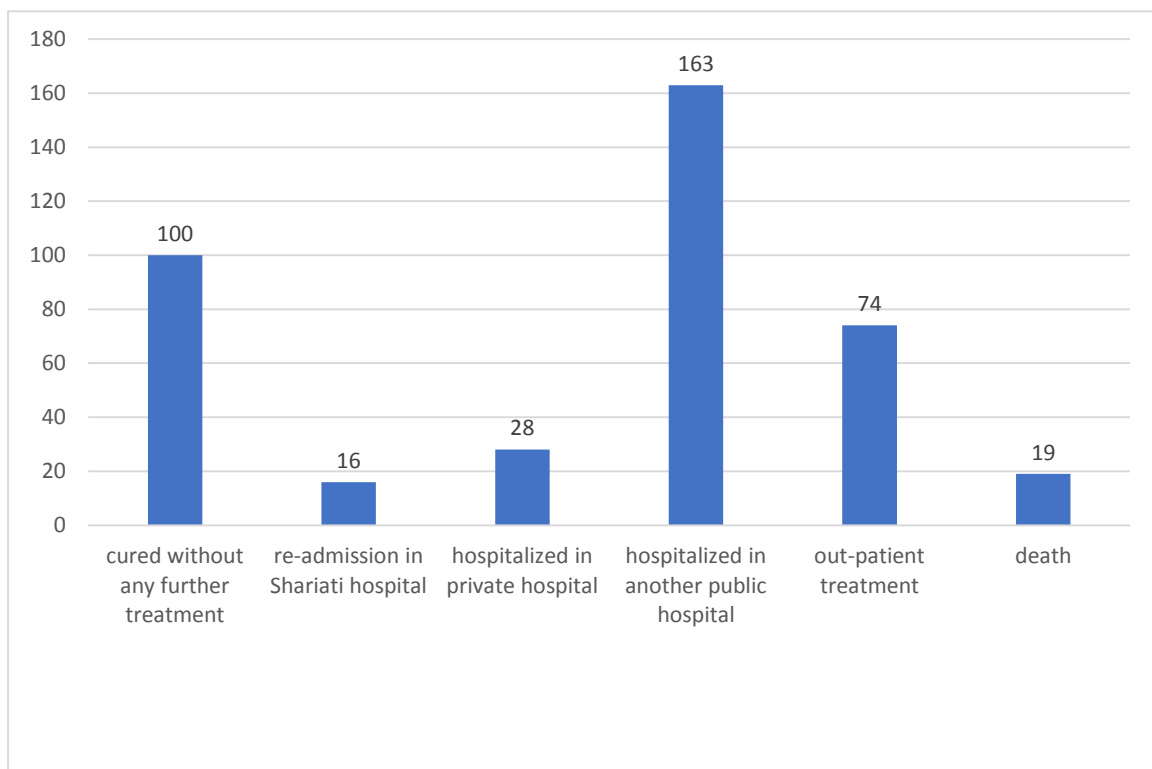


Chart 2- Patients' decision after DAMA

During the interview, it was revealed that 4.75% (n = 19) of the patients had passed away; among these, there were 2 who had been motivated by the medical staff to leave hospital and receive palliative care at home instead of being hospitalized. Among the DAMA cases who had passed away, 42% had left hospital because they were tired of

being hospitalized. Furthermore, it is noteworthy that 90% of the patients with terminal illnesses who died after DAMA had been dissatisfied with the structural and physical features of the hospital.

Sixty-four percent of the patients who had opted for DAMA because they started to feel

better were cured without any further treatment. Moreover, 25.66% of them continued their treatment through outpatient care. In other words, 89.66% of the patients who decided to be discharged against medical advice because of feeling better did not experience adverse complications or re-admission.

Discussion

Discharge against medical advice generates challenges to emergency department physicians, who should make a balance between respect for patients' autonomy and the necessity for complete evaluation. In this study we examined the characteristics of patients and their reasons for DAMA from an emergency department. More than a tenth of the patients admitted in the emergency ward of Shariati Hospital were discharged against medical advice. This rate is high compared to previous Iranian studies, which reported a prevalence ranging from 3.24% to 10.3% (8, 9). One research on DAMA rates in different wards of a hospital found that the emergency department is one of the hospital units with the highest prevalence of DAMA (9, 10). Thus, the higher DAMA prevalence in this study can be due to the fact that it was conducted exclusively in the emergency department. The rate of DAMA in a similar study conducted by Shirani et al. in an Iranian emergency department was 20% (11). There are many contributing factors to the higher DAMA rate at emergency departments. Incompatibility of the perceived necessity for emergency admission between patients, and the

Emergency Medical Service and personnel of the emergency ward may be one factor contributing to the higher DAMA rate in emergency departments. Furthermore, according to the EMS protocols in Iran, patients who demand urgent medical care may not be referred to the hospital of their choice; therefore, they prefer to be transferred to other hospitals after relative improvement. For instance, they may wish to continue treatment with their trusted doctor or be admitted in a hospital in their neighborhood. Another significant finding is the considerable higher rate of DAMA in September. This is the time of the year when new residents begin their training and senior residents graduate. Previous research has shown the potential effect of this large changeover on patient care, so that in the UK they call it the "Killing Season"; in North America it is called the "July Effect". Although there is no previous study that compares the relationship between the rate of DAMA and the "July Effect", Young et al. showed that mortality increases and efficiency decreases in hospitals because of the "July Effect" (12). As a result, higher DAMA rates during September in our study may be attributable to residents' changeover in this month.

As mentioned before, there is a statistically significant correlation between male gender and DAMA. In other words, male gender can be considered as a risk factor for self-discharge. The results of many studies conducted in Iran and other countries (1, 2, 9) as well as the results of a review of the existing studies (9) have confirmed that male patients are more likely to leave hospital

against medical advice. This finding may be attributable to the social and financial responsibilities of men in the family as well as their risk-taking attitudes (10). It should be mentioned that the lower DAMA rate among women can also be attributable to the Iranian culture. Although the written consent of the father or spouse is not essential for DAMA, they have considerable influence in the decision-making of female patients.

According to the results, DAMA is more prevalent among younger patients. This finding is correlated with those of previous studies (1, 3, 13-16). Also, a review article that studied 61 previous articles (9) showed that young age is a predictor factor for DAMA. This can be attributable to young patients' risk-taking tendency for refusing complete treatment. According to the results, the mean age of the patients who mentioned the structural and physical features of the hospital as their self-discharge reason was lower; in other words, younger patients have higher expectations regarding the physical features of the hospital. This finding can also provide another explanation for the higher prevalence of DAMA among young patients. According to the statistical analysis, there is a significant correlation between older age and previous hospitalization (P -value: 0.0001), that is, elder patients are more acquainted with hospital routines and environment. This finding can also explain why younger patients are more likely to opt for DAMA.

Patients' reasons for DAMA were not correlated with age, sex, marital status, socioeconomic status, domicile, history of smoking, addiction and identified

psychological disorders. In contrast, a study conducted by Manouchehri et al. indicates that men leave hospital against medical advice mostly due to personal and familial reasons, while the reason for women's DAMA is often dissatisfaction with hospital facilities (17).

The number of DAMA cases who mentioned financial problems as the reason why they left hospital was lower in comparison with a similar study conducted in 2013(8). In Iran the Health Transformation Plan (HTP) became effective in 2014 to provide access to universal health coverage. This transformation plan protects people financially against health expenses and provides equity in access to the benefits of health services. The ultimate goal of this plan is delivering health-care services according to patients' needs and not their ability to pay (18). It can be concluded that the lower number of patients who mentioned financial problems for DAMA in this study can be attributed to the decrease in medical costs (19).

In this study, there was no significant difference between the rate of DAMA during day shift and night shift. However, in a study conducted by Vahdat et al., 76% of the patients decided to leave hospital against medical advice during night shift (14). The similar DAMA rates during day and night shift in this study may be related to the 24-hour presence of emergency medicine faculty specialists, who can better manage challenges compared to junior physicians.

Most patients decided to leave hospital against medical advice as a result of multiple factors. This finding shows that trying to

eliminate only one factor may reduce the DAMA rate significantly in this setting.

The percentage of patients who were satisfied with factors related to the medical staff was higher among those whose caring physicians were emergency specialists. Furthermore, these patients were less dissatisfied with delay in delivery of health-care services. These results may be due to the greater availability of emergency specialists in the emergency ward, which results in more effective doctor-patient communication and relationship. The crucial impact of communication on provision of quality health care, especially in high stress contexts such as emergency departments, is being increasingly recognized. Conversely, ineffective communication not only causes patients' dissatisfaction and anxiety, but also is a major cause of critical medical incidents (20). A study conducted by Slade et al. has argued that positive interpersonal relationship between patients and their physician including rapport and empathy results in more favorable clinical outcomes, such as mutually agreed treatment plans and better patient adherence (21). In our study, roughly 13% of the DAMA cases indicated either dissatisfaction with staff's behavior or not receiving adequate information as a major cause for their decision. In the high-stress, time limited context of the emergency department, communication is complex, interrupted, rushed, and error prone. In addition, the interdisciplinary nature of health care in emergency departments and the number of different clinicians may cause confusion and anxiety for patients. Sometimes, doctors and nurses wrongly

presume that a medical condition, test or treatment has been explained to the patients by the other party or previous shift's doctors, while it has not; therefore, they do not inform the patient about the treatment schedule and patients remain in a state of confusion (21). Thus, communication skills are particularly important for emergency departments staff due to their complicated situation and they should make an effort to improve their communication skills with both patients and other clinicians in the emergency department. Furthermore, empathy and rapport increase clinicians' efficiency in communicating with patients, which results in enhancement of patient satisfaction and overall health outcomes. Another 9% of the DAMA cases claimed distrust in medical staff as a reason for their decision. Audiey et al. have explained that patients' trust in their physician is related to having a longer relationship with them and trust in the health-care organization (22). Both of these elements seem unachievable in emergency settings; however, suitable doctor-patient relationship can be created even in short stays through effective communication.

Approximately 30% of the patients cited feeling well as the reason for leaving hospital, which is more than the rate reported by studies conducted in other countries (23, 24). This indicates the failure of the caring physician in convincing patients that they need to continue their treatment. This percentage was 28.4% in a similar study conducted by Pour Karimi et al. in Iran (25). Almost 90% of the patients who decided to DAMA because of feeling

well did not experience adverse complications, re-admission or mortality. However, the results of previous studies indicated that patients who opt for DAMA have increased 7-day and 28-day readmission rates, and that DAMA is associated with both increased short-term and long-term mortality (26-28). It can be concluded that Iranian physicians have adopted a defensive approach in order to reduce or prevent complaints or criticism. However, according to the “General Guideline of Professional Ethics for Members of the Islamic Republic of Iran Medical Council”, it is forbidden to encourage patients to use unnecessary services in order to defend oneself against possible legal action (29).

As mentioned before, 4.75% of the studied patients passed away after DAMA, all of whom were suffering from poor prognostic diseases, and almost all of them had been dissatisfied with the structural and physical features of the hospital. This indicates that the environment of the emergency ward is not suitable for end-stage patients. In addition, 83% of the patients who had been discharged against medical advice in our study were dissatisfied with environmental factors including non-clinical facilities, room, and also the hectic ambience of the emergency ward. Several studies have emphasized the importance of environment to patients’ health outcome (30). Discordance of admission capacity with the number of admitted patients and inadequate allocation of space to each patient arise discomfort and dissatisfaction among patients. Moreover, unavailability of

appropriate rooms for patients may invade their privacy during admission. Hence, providing a solution to address capacity may improve clinical outcomes.

In our study, 3 patients claimed that they left hospital because their managing physician had suggested that they do so. Motivating patients to leave hospital against medical advice deems contrary to professional decency. A closer look at these DAMA cases in our study showed that 2 of them suffered from incurable diseases and were at end stage, and were advised to seek palliative care as they would not benefit from being admitted in the hospital. In most developing countries including Iran, home care and hospices are not adequately established, and therefore physicians are not able to refer these patients to palliative and home care services.

Considering the importance of discharge against medical advice and its consequences for patients and health systems, it is necessary to minimize its incidence by adopting practical approaches. One of the most effective solutions is to improve the communication skills of the medical staff, which will result in improvement of the doctor-patient relationship (2, 31, 32). Another important approach is to expand the capacity of backup wards in order to increase patient flow and early evacuation of patients from the emergency department to final wards, and promote practical protocols to accelerate diagnostic and therapeutic measures. These interventions can decrease overcrowding of the emergency ward, which will result in providing a better environment for patients in this ward.

Another crucial subject in discharge against medical advice is how to accurately manage a DAMA case in a way that it would be as safe as possible. The first substantial step is to obtain an informed consent. In practice, obtaining informed consent consists of some essential steps including an evaluation of the patients' decision-making capacity and providing them with necessary information about their diseases, tests, treatment plans and the consequences of cessation of treatment in hospital (2). In our study, approximately 70% of the patients stated that they had not been informed by their managing physician about alarming signs and emergency situations in which they should rush to the hospital. They also claimed that they did not receive any information about alternative treatments available for them. This finding indicates that clinicians of emergency departments do not perform appropriately in obtaining informed consent and managing DAMA cases safely.

The main limitation of this study was lack of a control group to compare DAMA patients' socioeconomic and medical variables with those who were discharged regularly. Furthermore, interviewing with a control group would be beneficial to discovering and comparing the problems and dissatisfactions of patients who were discharged regularly with DAMA cases. It is crucial for future research to investigate DAMA risk factors. We have only investigated risk factors in terms of age and gender, while several other contributing factors may be important predictors of

DAMA at the emergency department.

Conclusion

This study's findings indicated that commitment to patient, commitment to self, and commitment to profession are integral components of occupational therapists' clinical competence. Professional commitment and ethical conduct are closely related to sense of responsibility. Hence, accommodating One of the commonest, most serious problems in the health-care system that involves both patients and physicians is discharge against medical advice. DAMA can also be considered as a potentially high-risk event leading to malpractice litigation. Physicians must be cautious in such cases since DAMA does not ethically or legally absolve their responsibilities as health-care providers. Therefore, a systemic approach should be adopted in order to reach a realistic compromise between maintaining patient autonomy and upholding beneficence. We hope that the findings of this study will raise awareness of the present status of DAMA, as well as the predictors and causes among policymakers and hospital managers. As a result, we are expecting these authorities to provide the necessary interventions and thus increase patient satisfaction.

Prevention of DAMA is clearly desirable, but certainly not easy. If the medical staff is capable of detecting patients who are high risk for DAMA, they will adopt the necessary measures to prevent it. In addition, identifying and ameliorating DAMA factors

that are related to the medical staff or hospital environment can significantly decrease the DAMA rate. A comprehensive explanation of the outcomes of DAMA to a patient who has decided to leave hospital and competent management of the situation may avert some self-discharges. Finally, providing clear instructions during a DAMA case is of paramount importance.

If a patient insists on leaving hospital against medical advice in spite of his/her physician's disapproval, it is the duty of the physician to make the discharge as safe and risk-free as possible. This is achievable through giving patients adequate information about their illness as well as helping them seek follow-up treatment after discharge.

Authors' Contribution

All authors reviewed the final manuscript.

Conflict of Interests

There is no conflict of interests to be declared.

References

1. Aliyu ZY. Discharge against medical advice socio demography: clinical and financial perspective. *Int J Cli Pract.* 2002; 56(15): 325-7.
2. Alfandre DJ. I'm going home: discharge against medical advice. *Mayo Clin Proc.* 2009; 84(3): 255-60.
3. Rancich AM, Pérez ML, Gelpi RJ, Mainetti JA. Analysis of the ethical principles in medical oaths used by medical schools of Argentina in relation to the hippocratic oath. *Gac Med Mex.* 1999; 135(3): 345-51.
4. Fadare JO, Jemilohun AC. Discharge against medical advice: ethico-legal implications from an African perspective. *South African Journal of Bioethics and Law.* 2012; 5(2): 98-101.
5. Parsapoor A, Bagheri A, Larijani B. Patient's rights charter in Iran. *Acta Med Iran.* 2014; 52(1): 24-8.
6. Kumar Bb, Kristy S. Discharge against medical advice: approaching a frustratingly common situation. [Cited 2020 September]; available from: <http://www.kumarmd.org/wp-content/uploads/2015/07/Discharge-Against-Medical-Advice-Approaching-a-Frustratingly-Common-Situation.pdf>
7. Devitt PJ, Devitt AC, Dewan M. An examination of whether discharging patients against medical advice protects physicians from malpractice charges. *Psychiatry Serv.* 2000; 51(7): 899-902.
8. Noohi K, Komsari S, Nakhaee N, Yazdi Feyzabadi V. Reasons for discharge against medical advice: a case study of emergency departments in Iran. *Int J Health Policy Manag.* 2013; 1(2): 137-42.
9. Mohseni M, Alikhani M, Tourani S, Azami-Aghdash S, Royani S, Moradi-Joo M. Rate and causes of discharge against medical advice in Iranian hospitals: a systematic review and meta-analysis. *Iran J Public Health.* 2015; 44(7): 902-11.
10. Noohi K, Komsari S, Nakhaee N, Yazdi Feyzabadi V. Reasons for discharge against medical advice: a case study of an emergency department in Iran. *Int J Health Policy Manag.* 2013;1(2): 137-42.
11. Shirani F, Jalali M, Asl-e-Soleimani H. Discharge against medical advice from emergency department: results from a tertiary care hospital in Tehran, Iran. *Eur J Emerg Med.* 2010; 17(6): 318-21.
12. Young JQ, Ranji SR, Wachter M, Lee CM, Niehaus B, Auerbach A. "July effect": impact of the academic year-end changeover on patient outcomes: a systematic review. *Ann Intern Med.* 2011; 155(5): 309-15.
13. Rangraz Jedi F, Rangraz Jedi M, Rezaeimofrad MR. Patients' reasons for discharge against medical advice in university hospitals of Kashan University of Medical Sciences in 2008. *Hakim Research Journal.* 2010;13(1): 33-9.
14. Vahdat S, Hesam S, Mehrabian F. Effective factors on patient discharge with own agreement in selected therapeutic training centers of Ghazvin Shahid Rajaei. *Journal of Holistic Nursing and Midwifery.* 2011; 20(64): 47-52.
15. Asgari M, Arab M, Rahimi-e Froushani A, Ebadi Fard-Azar F, Mousavi SMH. Surveying the factors affecting patient's discharge against medicine advice from emergency ward of Amir Alam Treatment-Teaching Hospital in Tehran. *Journal of Hospital.* 2013; 12(2): 19-28.

16. Lelieveld C, Leipzig R, Gaber-baylis LK, et al. Discharge against medical advice of elderly inpatients in the United States. *J Am Geriatr Soc.* 2017; 65(9): 2094- 99.
17. Manouchehri J, Goodarzynejad H, Khoshgoftar Z, Sheikh Fathollahi M, Aghamohammadi Abyaneh M. Discharge against medical advice among inpatients with heart disease in Iran. *J Tehran Heart Cent.* 2012; 7(2): 72-7.
18. Sajadi H S, Ehsani-Chimeh E, Majdzadeh R. Universal health coverage in Iran: where we stand and how we can move forward. *Med J Islam Repub Iran.* 2019; 33: 9
19. Pahlevanpour V, Jabbari H, Jannati A. Determinants of discharge against medical advice before and after health system reform in Imam Reza hospital of Tabriz. [Cited 2020 September]; available from: <http://dspace.tbzmed.ac.ir:8080/xmlui/handle/123456789/22218>
20. Pun JKH, Matthiessen CMIM, Murray KA, Slade D. Factors affecting communication in emergency departments: doctors and nurses' perceptions of communication in a trilingual ED in HongKong. *International Journal of Emergency Medicine.* 2015; 8: 48
21. Slade D, Scheeres H, Manidis M, et al. Emergency communication: the discursive challenges facing emergency clinicians and patients in hospital emergency departments. *Discourse & Communication.* 2008; 2(3): 271-98.
22. Kao AC, Green DC, Davis NA, Koplan JP, Cleary PD. Patients' trust in their physicians. *J Gen Intern Med.* 1998; 13(10): 681-6.
23. Boniface Ikenna Eze B, Agu K, Nwosu J. Discharge against medical advice at a tertiary center in southeastern Nigeria: sociodemographic and clinical dimensions. *Dove Press.* 2010; 2: 27-31.
24. Jeremiah J, O'sullivan P, Stein MD. Who leaves against medical advice? *J Gen Intern Med.* 1995; 10(7): 403-5.
25. Pour Karimi SA, Mohseni Sararvi B, Bagherian Farahabadi E, Zamanfar D, Fallah M, Asadi Abokheily M. Studying the rate and causes of discharge against medical advice in hospitals affiliated to Mazandaran University of Medical Sciences. *Mater Sociomed.* 2014; 26(3): 203-7.
26. Yong TY, Fok JS, Hakendorf P, Ben-Tovim C, Thompson CH, Li JYZ. Characteristics and outcomes of discharge against medical advice among hospitalized patients. *Intern Med J.* 2013; 43(7): 798-802.
27. Hwang SW, Li J, Gupta R, Chien V, Martin RE. What happens to patients who leave hospital against medical advice? *CMAJ.* 2003; 168(4): 417-20.
28. Fiscella K, Meldrum S, Barnett S. Hospital discharge against advice after myocardial infarction: deaths and readmissions. *Am J Med.* 2007;120(12):1047-53.
29. Anonymous. [Rahnamaye omumie akhlaghe herfeyie shagheline herafe pezeshki va vabasteye nezam pezeshkie jomhourie eslamie Iran]. [Cited 2020 September]; available from: <https://irimc.org/-/سازمان-نظام-پزشکی-انتشارات/agenttype/view/propertyid/147>
30. Goodarzi H, Javadzadeh H, Hassanpour K. Assessing the physical environment of emergency departments. *Trauma Mon.* 2015; 20(4): e23734.

31. Kariman H, Khazaei AR, Shahrami A, Hatamabadi HR. Dealing with discharge against medical advice in emergency department. *Journal of Basic Applied Scientific Research*. 2013; 3(7): 785-91.
32. Atayee P, Askari M, Baloochi Beydokhti T, Zolfaghari H. Patients' reasons for discharge against medical advice from the perspective of patients in Gonabad's hospitals. [Cited 2020 September]; available from: http://research.gmu.ac.ir/rdsm_project.php?slc_lang=fa&sid=1&mod=project_profile&project_id=751&rds_id=