



**Factors Affecting Discharge against Medical Advice (AMA), among
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Shahindej**

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Outpatient Patients of Shahid Rasi Hospital of Shahindej**

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ABSTRACT

Introduction: Discharge against Medical Advice (AMA) is a process where the patient leaves the hospital, sooner than the stipulated time and before completing the course of treatment, which may indicate some problems in the hospital or the quality of provided healthcare. Hence, in this study, the causes of discharge against medical advice at Shahid Rasi Hospital of Shahindej have been studied.

Methods: This descriptive-analytical cross-sectional study was conducted to assess the reasons of discharge against medical advice, among inpatients and outpatient patients of Shahid Rasi Hospital of Shahindej. Sampling was done by a systematic randomized method, and 111 patients discharged against medical advice were selected as sample, since 21 March 2017 to 21 June 2017. Data were collected using a questionnaire, which its validity and reliability was verified. The data were analyzed using SPSS 20, and the statistical tests, t-test and one way ANOVA at a significant level of $P < 0.05$.

Results: In this study, among 111 patients, 93 patients (83.8%) referred to the emergency department, 35 (31.5%) were male and 76 (68.5%) were women. The factor of patient-related reasons has the most score (18.75), and show that its higher impact on discharge against medical advice and hospital-related reasons has the lowest scores (9.26). Among the factors related to the patient, the most score related to the questions of enough satisfactory feeling and the willingness to continue home therapy at home is with the mean of 2.67, and frustration with the current condition and improvement of the disease



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with the mean of 1.97. Gender, education, and residence had a significant relationship with discharge against medical advice.

Conclusion: discharge against medical advice is associated with various factors, knowing these factors reduces side effects and re-costs, and conducting targeted counseling leads to reasonable decision-making from patient.

Key words: Discharge against Medical Advice, Patient, Hospital, Inpatient and Outpatient Patients



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1. INTRODUCTION

In health system for more than two decades, providers and healthcare organizations, including hospitals have conclusion that customers need to be satisfied, the number of patients who discharge the hospital with a personal desire, or in other words, against medical advice can be a sign of patients' dissatisfaction and a significant problem [1, 2]. Leaving with personal consent or discharge against medical advice, the main problems in inpatient conditions, is a process that the patient leaves the hospital sooner than the stipulated time and before completion of the course of treatment, and now assigned about 2% of the total hospital discharges in the world [3, 4]. Various factors are involved in increasing the number of discharge cases with personal satisfaction, including demographic variables, mental health variables, accompanying physical illnesses and experience of previous inpatients, lack of satisfaction with hospital services, non-payment of costs, family problems, lack of significant improvement in the process of treatment, belief in traditional medicine, long stay in hospital, feeling of recovery and place of living (urban or rural) [5, 6]. The relationship between satisfaction and quality of care provided is complex and influenced by patient, physician, and service provider's center. Patient's expectation from a care that you will receive has an important effect on satisfaction and the lack of compliance between the expectation of the patients and the received service is associated with a decrease in satisfaction. In addition, the level of satisfaction may vary among people from different social classes and cultural groups, as well as in different people in terms of age and gender, and in various services and types of care [3, 4, 7]. On the other hand, discharge with personal satisfaction in the emergency department and acute care is very important given the necessity of receiving the necessary and timely medical measures [8]. When patient, in contrast to the physician's advice, leaves the hospital sooner than the stipulated time, it exacerbates the illness and increases the risk of re-admission of the patient in the hospital, so that discharge with personal satisfaction is the most factor of predicting hospitalization again within the first 15 days after leaving hospital and possibly up to 25% people who have been discharged with personal satisfaction from the hospital are re-hospitalized. The rate of re-hospitalization in the first 7 days in patients who were discharged with personal satisfaction is 14% and in other



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patients is 7% [3, 9]. By early leaving of patients, treatment is discontinued and the patient's state may become worse or worse conditions to be happened for him such as death or complications to be occurred for him that not to be compensated in the long run. However, if the patient refers again to the hospital due to the severity of the illness, this re-occurrence can be discussed and considered in the cycle of treatment costs in the whole country [5]. Recognizing the mentioned factors and paying attention to the principle of customer orientation and satisfaction of service recipients is the goals of modern management. Hospital managers should be able to access and analyze and interpret information in a section of time, and by making timely and accurate decision direct hospital services based on patients' needs and satisfaction, and they should use specific strategies to increase patients' satisfaction and better recognition of their tastes [10]. On the other hand, governmental hospitals do not have the right to choose a patient and should accept any referral. In addition to receiving patients, they must offer the highest quality, fastest, and cheapest treatment, and none of them will be legally, ethically and professionally violated [11]. Studies about leaving the hospital with personal satisfaction date back to the early 1960s. In the study by Wingert et al. in Boston Educational Hospital, they concluded that young men and those without medical insurance, as well as those who had not physician immediately on their clinic, left the hospital with personal satisfaction, and 54% one week after leaving hospital were hospitalized again [5]. According to the studies conducted in Tabriz's hospitals in 2011, the rate of leaving hospital with personal satisfaction is estimated 6.5% that by implementing interventional studies, this rate decreased to 2.8% in three months [12]. In a study conducted by Rangraz and Jeddi in Kashan's hospitals, discharge rate with personal satisfaction compared with other countries was reported more, and the main reason was the issues related to the patients themselves, which is consistent with the results of the present study [3]. Findings in the studies of Vahdat showed that among all departments of the hospital, the section under supervision with 59.3% and the emergency department with 23.3% has had the highest rate of discharge with personal satisfaction [13]. The results obtained from Mitchell's Toronto Hospital show that 28 percent of cases of leaving hospital has been with personal satisfaction of patients' dissatisfaction from factors and treatment team and



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other factors such as family problems, sense of uniformity, boredom and fatigue, and not like hospital space are mentioned as other reasons of leaving the hospital with personal responsibility. In Iran, the lack of satisfaction from diagnostic and therapeutic measures is about 38% of the reason for leaving the hospital with personal responsibility [14]. A case study of Huang and colleagues in Toronto, Canada, which conducted with the aim of investigating the rate of re-hospitalization in patients who left the hospital against advise of physician showed the rate of re-hospitalization in the study group occurs 15 days after the discharge, among the factors, being male and having experience of alcohol abuse was an important predictor of re-hospitalization within 15 days after discharge, which was higher in the study group than the control group [5].

According to the issues raised regarding discharge with personal satisfaction and paying attention to the principle of customer-oriented and satisfaction of service recipients and preventing re-work in the cycle-costs of treatment of the country, highlights the importance of this issue more and more, and Shahindezh is one of the developing cities in the province, and similar studies have not been done in this city. Therefore, this study is conducted to determine the factors affecting discharge with personal satisfaction in inpatient and outpatient patients.

2. MATERIALS AND METHODS

This descriptive-analytic cross-sectional study was conducted to evaluate the reasons of patient's discharge with personal satisfaction in inpatient and outpatient patients of Shahid Rasi Hospital in Shahindezh. The research environment is Shahid Rasi Hospital that includes emergency departments, internal departments of women and men, surgery, children, ICU, CCU and dialysis. Data collection was completed using a questionnaire and during discharge. The questionnaire consists of three dimensions, patient-related reasons, and hospital-related reasons, reasons related to the status of hospital, and it has 27 questions, scoring questionnaire is as a five-point Likert scale. Sampling was done using systematic random sampling and sample size was obtained 111 people using the Morgan table, which included all patients discharged in the first quarter of 2017. Validity and reliability of the form related to the reasons of discharge were assessed and approved by the Ministry of Health with personal satisfaction [15]. Regarding ethical issues, the



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names of patients, departments and physicians were not extracted. Finally, the data were analyzed using SPSS20 software, t-test and one way ANOVA tests at a significant level of $P < 0.05$.

3. FINDINGS

The results of this study showed that out of 111 patients (83.8%), 93 patients were referred patients to the emergency department. (31.5%), 35 people were men and (68.5%) 76 people were women. Most of the subjects were 20-30 years old with (22.5%) 25 people, 49 people were illiterate (44.1%) 66 people were married (59.5%) and 79 people (72.2%) were residents of the city and 32 people (32.8%) were residents of the village (Table 1).

Table 1: Results of the demographic variables of the participants in the study

Gender		Number	Percent
		35	35.5
		76	68.5
Age	Less than 12	22	19.8
	12-20	12	10.8
	21-30	25	22.5
	31-40	15	14.4
	41-50	9	8.1
	51-60	9	8.1
	More than 60	18	16.2
Education level	Illiterate	49	44.1
	Reading and writing	34	30.6
	Diploma	7	6.3
	Academic	15	15.5
	Married	22	19.8
	Single	66	59.5
	No subject	23	20.7
Place of residence	City	79	71.2



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	Village	32	28.8
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Table 2: Score of discharge areas with personal satisfaction

Dimension	Mean	SD
Patient-related reasons	18.75	4.51
Hospital staff-related reasons	13.77	5.15
Reasons related to the status of hospital	9.26	3.49

Higher scores in the dimension of patient-related reasons (18.75) indicate a higher impact on hospital discharge with patient's personal satisfaction, and the reasons related to the status of hospital (9.26) have the lowest score (Table 2).

Table 3: The effect of place of residence on discharge personal satisfaction in patient-related reasons with unpaired t-test

Variable	Number	Mean	Standard error	SD	CI%95	
City	79	17.73	0.44	3.89	-5.27	-1.76
Village	32	21.25	0.88	4.99	-1.50	-1.36
T=-3.52		Df=109		p-value=0.001		

The comparison of the average score of patient-related reasons in urban and rural residents showed that the average discharge with personal satisfaction in the rural population referring was significantly higher than urban population, which is statistically significant (p = 0.001).

Table 4: The effect of gender on discharge with personal satisfaction in the dimension of patient-related reasons using unpaired t test

Variable	Number	Mean	Standard error	SD	CI%95



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Female	35	19.09	0.86	5.06	2.32	-1.34
Male	76	18.59	0.49	4.25	2.46	-1.48
T=-0.534		Df=109		p-value=0.050		

There is no significant difference between the gender and the average score of the patient-related reasons. Table (4)

Table 5: Relationship between education and discharge with personal satisfaction in the dimension of patient-related reasons using one-way ANOVA

	Sum of squares	Df	Mean of squares	F	significance
Intergroup	660.58	5	132.116	8.811	0.001
Within-group	1574.355	105	14.994		
Total	2234.937	110			

The results of one-way ANOVA showed that there is a significant relationship between the education gap and discharge with personal satisfaction in the dimension of the patient-related reasons, and patients with higher education have more willingness for discharge with personal satisfaction.

Table 6: Relationship between marital status and discharge with personal satisfaction in the dimension of patient-related reasons using one-way ANOVA

	Sum of squares	Df	Mean of squares	F	significance
Intergroup	203.59	2	101.798		
Within-group	2031.34	108	18.809	5.412	0.006
Total	234.937	110			

The results of one-way ANOVA showed that there is a significant relationship between the marital status and discharge with personal satisfaction in the dimension of the patient-



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related reasons, and patients who were married had more willingness for discharge with personal satisfaction.

Among the factors related to the patient, the highest score related to the questions of enough satisfactory feeling and the willingness to continue treatment at home is with a mean of 2.67 and disappointment to the current condition and improvement of the disease is with a mean of 1.97.

Among the factors related to the patient, the lowest score related to the questions of the desire to visit private centers is with a mean of 1.09 and fear of continuing treatment with a mean of 1.21.

4. DISCUSSION AND CONCLUSION

Based on the results of this study, the patient-related reasons have the most impact and the reasons related to the status of hospital have the least impact on discharge with personal satisfaction. Among the factors related to the patient, the highest score, respectively, relates to the questions of enough satisfactory feeling, and the desire to continue treatment at home and disappointment to the current conditions and improvement. Among the variables affecting patient-related reasons, men had more willingness for discharge with personal clearance than women. Patients with higher education compared to illiterate patients had more willingness for discharge with personal satisfaction. Married people had more willingness for discharge with personal satisfaction. Another remarkable point in this study is the discharge with personal satisfaction of residents of the village compared with the residents of the city, which the villagers had more willingness for discharge with personal satisfaction.

The dimension of patient-related reasons with a mean of 18.75 indicates the highest impact on early leaving of hospital. And hospital-related reasons with a mean of 9.28 have the lowest score and impact. Comparing the mean of patient-related reasons in rural patients is significantly more than urban population ($p = 0.001$). Among the factors related to the patient, the highest score related to the questions of enough satisfactory feeling and the willingness to continue treatment at home is with a mean of 2.67 and disappointment to the current condition and improvement of the disease is with a mean of 1.97.



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Based on the results of this study, the mean of score of discharge with personal satisfaction in men is lower than women, and there is no significant difference between the gender and the mean of score of the patient-related reasons ($p = 534$). In the study of Rudpeyma et.al, there was no relationship between male and female gender and discharge with personal satisfaction that is consistent with the results of the present study [16], while some studies have described male gender as a risk of factor of discharge with personal consent [1, 3, 17, 18]. The highest mean age of these patients was 21-30 years old (22.5%), which is consistent with other studies, most of whom were discharged with personal satisfaction [17, 19-22]. It may be possible to justify that men are more likely to be discharged with personal satisfaction due to being employed and having job worries and family dependency.

The results of one-way ANOVA showed that there is a significant relationship between education and discharge with personal satisfaction in the dimension of patient-related reasons. Patients with reading and writing literate level of 30.6% assigned the highest rate. Patients with higher education had more willingness for discharge with personal satisfaction. The results of the research project of the Clinical Office of Ministry of Health also showed that the educational level variable has a relatively strong relationship with the frequency of discharge with personal satisfaction, which is not consistent with the results of the present study [23].

Results of the research showed that the married group is 19.8% and single group is 5.59%. Considering the fact that there is a significant relationship between marital status and discharge with personal satisfaction in the dimension of patient-related reasons, it is different with Khorasani Zadeh's research, which statistically, a significant difference was not observed between gender and marital status in inpatients and outpatients patients. [14]. While in some studies, being single has been described as one of the risk of factors of discharge with personal satisfaction [14, 21, 22, 24, 25]. In the research of Vahdat in Qazvin, most of the discharged persons with personal satisfaction were married [13]. Which is consistent with the results of the study, but in another study, no relationship with the marital status is observed [26].



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The results of the studies show that discharge rate with personal satisfaction in the last three years (5.5%) is in inpatient patients. Other studies have shown that early discharge from a hospital with personal satisfaction in advanced countries, such as the United States form between 0.8% and 2.2% of all discharge cases, especially in educational hospitals [1, 27]. Also, early discharge with personal satisfaction in England, Canada and Nigeria is reported 1.8%, 1 to 4.2% [1, 7]. The reason for the differences and the results of these studies can be considered in the difference in the culture of the society under study. In the present study, the most important discharge factors with personal satisfaction is related to the patient's problems, such as enough satisfactory feeling and willingness to continue treatment at home which is consistent with the studies of the reasons of early leaving of hospital from the Shohada-e-Tajrish educational hospital in 2012 [9]. In the present study, the reasons related to the status of hospital were ranked second. Among the hospital departments of emergency department with (83.8%), 93 people had the highest rate of discharge with personal satisfaction which is consistent with the results of the study of Khorasani Zadeh with the purpose of discharge reasons with personal satisfaction in inpatient and outpatient patients of the medical-educational center of Kerman, 45% of cases have been discharge with personal desire to reasons related to hospital and 55% of cases have been discharge with personal desire related to personal reasons. In analyzing the results of the research that the most reason of discharge with personal satisfaction is the satisfactory feeling, disappointment to the current condition, dissatisfaction from medical services and the prolongation of hospitalization time or treatment, there is no consistent with the study of Vahdat and colleagues that the most important reason of discharge with personal satisfaction of patients is dissatisfaction from medical services, physicians' suggestion, and dissatisfaction with facilities and equipment [13]. According to the results, none of the patients mentioned the reasons for the early leaving of hospital before the completion of the treatment as not having insurance and insurance-related problems, and financial problems, which could be related to the implementation of the development plan of health system that its aim is to reduce the contribution of patients from cost of health services [28]. The average discharge with personal satisfaction in rural patients in the dimension of patient-related reasons has become significantly higher than



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urban patients. This difference may be due to the problem of the residence of the patient's companions, lack of communication skills, and lack of being native, lack of companionship, family issues, and personal problems.

The issue of discharge with personal satisfaction is related with many variables, such as structural factors, patient-related therapeutic, economic, hospital factors and etc. Awareness of these factors and the recognition of the risk of factors due to the implementation of clinical governance and accreditation in hospitals have great importance in preventing and reducing the mortality and adverse effects of discharge with personal desire and reducing costs. By consulting, the patient understands the risk and early leaving, and ultimately leads to a logical decision of the patient. Also, considering that in the present study, the highest discharge rate with the personal satisfaction is related to emergency department and since the emergency department is considered one of the most traffic and important departments of each hospital, so to provide more favorable and quality services to patients, it is necessary that hospital managers with cooperating of the medical staff provide the required measures. Since many patients enter the emergency department without any scheduling before and sometimes without any choice, it can be reduced from their dissatisfaction about the therapeutic process, the diagnostic-therapeutic equipment and the quality control of health care by informing them.

The limitation of the research was that the completed forms of leaving the hospital with personal responsibility containing information related to the reasons were not available. Information required was taken from the patients during the discharge orally or after the discharge by telephone from the companion of patients, which sometimes contained incomplete and conservative data that it specifies the necessity of designing software that could collect accurate information in this field.

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