ORIGINAL ARTICLE

Bali Medical Journal (*Bali Med J*) 2019, Volume 8, Number 1: 120-127
P-ISSN.2089-1180, E-ISSN.2302-2914

Published by DiscoverSys

The factors associated with discharge against medical advice: Comparing older and younger patients in ShahidBeheshti Hospital Complex, Kashan-Iran

Afsaneh Kojaie Bidgoli,[1] Yadollah Abolfathi Momtaz,[2*] Marzieh Khamehchian,[3] Tahere Mansouri,[4] Vahidreza Borhaninejad[5]

ABSTRACT

Background: This study was conducted to compare the rate of discharge by personal wishes and its causes in older and younger patients.

Methods: This descriptive analytical study was conducted on 35549 patients discharged from Shahid Beheshti Hospital Complex in Kashan, Iran, from April 2014 to April 2015. The patients discharged by their own wishes were divided into the older group (60 years old and above) and the younger group (age 20-59). The reasons for their discharge were assessed and compared. And then in each group, the reasons for their discharge were assessed ane then results compared in two group.

Results: The rate of hospital discharge by personal wishes was 4.81% in the study population, with 28.11% of cases pertaining to older patients and 71.88% of cases to younger patients.

Conclusions: According to the results obtained, marital status, education, duration of hospitalization and admission department can affect discharge by personal wishes in both older and younger patients. Certainty about recovery is one of the factors associated with discharge by personal wishes in both older and younger patients.

Keywords: Discharge against medical advice, older adults, hospital

Cite this Article: Bidgoli, A.K., Momtaz, Y.A., Khamehchian, M., Mansouri, T., Borhaninejad, V. 2019. The factors associated with discharge against medical advice: Comparing older and younger patients in ShahidBeheshti Hospital Complex, Kashan-Iran. *Bali Medical Journal* 8(1): 120-127. DOI:10.15562/bmj.v8i1.828

[1]Ph.D. Gerontology Candidate, Iranian Research Center on Aging, the University of Social Welfare and Rehabilitation Sciences, Tehran, Iran.
Kojaiibidgoli@yahoo.com
[2]Iranian Research Center on Aging, University of Social Welfare and Rehabilitation Sciences, Tehran, Iran. Malaysian Research Institute on Ageing, Universiti Putra Malaysia, Serdang, Selangor, Malaysia
yabolfathi@gmail.com,
[3]MA nursing, Shahid Beheshti Hospital, Kashan University of Medical Science and Health Services, Kashan, Iran.
mkhamehchian61@yahoo.com
[4]Ph.D. Gerontology Candidate, Iranian Research Center on Aging, the University of Social Welfare and Rehabilitation Sciences, Tehran, Iran.
Mansoori87@yahoo.com
[5]Ph.D. Gerontology, Iranian Research Center on Aging, the University of Social Welfare and Rehabilitation Sciences, Tehran, Iran.

*Corresponding to:
Yadollah Abolfathi Momtaz, Iranian Research Center on Aging, University of Social Welfare and Rehabilitation Sciences, Tehran, Iran. Malaysian Research Institute on Ageing, Universiti Putra Malaysia, Serdang, Selangor, Malaysia
yabolfathi@gmail.com

Received: 2018-07-17
Accepted: 2018-10-14
Published: 2019-4-1

INTRODUCTION

Discharge against medical advice (AMA)occurs when a patient decides to leave the hospital before the treating physician recommends discharge. Discharge AMA is a debilitating problem in hospitals and health centers that may construe a potential index for identifying problems in health centers and their care services.[1] About 1% to 2% of hospitalized patients are discharged by their personal wishes and against medical advice, and this rate may be higher in some health centers.[1-4] In the US, about 500 thousand patients are discharged bypersonal wishes every year.[5] The rate of discharge by personal consent is reported from 0.4% to 4.4% in intensive care units in the US.[6] Discharge by personal wishes has become an interesting subject of research since it causes more adverse consequences and readmissions in patients.[7] The first study conducted on this subject reported high rates of discharge AMA in psychiatric hospitals.[8] Some studies showed a higher rate of readmission in patients discharged by AMA from maternity, neonatal, internal and emergency departments compared to patients discharged by the treating physician's recommendation.[4,6,9-12] The readmission of patients discharged by personal wishes not only imposes heavy costs on the health system but also delays medical interventions, which is crucial especially in the case of patients with acute problems.[13] The results of a study conducted by Hwang et al. (2003) showed that readmission within 15 days of discharge is seven times higher in patients discharged by personal wishes compared to other hospitalized patients with the same disease.[11] Quoting Alfandre (2009) in a review study of medical documents, Link et al. reported the one-year mortality rate after hospital discharge to be 15.7% in 57 patients discharged AMA from a teaching hospital in Virginia.[14] Nonetheless, some studies have reported fewer medical complications in patients discharged by their own personal wishes compared to patients discharged by a given medical schedule; they believed that these patients experience better health than others.[5] There are a few studies conducted to estimate medical expenses which patients discharged AMA impose on medical systems.[14] In one study, Aliyu (2002) collected data on patients discharged by personal wishes in 30 days following their discharge and found that the cost of readmission increases by 56% in these patients

compared to their first admission.[15] The discharge of patients with personal consent might indicate the deficiency of the medical system.[6] Discharge AMA is an ethically challenging subject for many physicians.[7] The rate of discharge with personal consent varies in different location of medical and disease diagnosis centers. The rate of discharge with personal consent is 6% in suburban hospitals, 13% in inner-city hospitals, 0.1% in maternity hospitals and 51% in patients with conditions such as anorexia nervosa. Other factors associated with the discharge of patients with personal consent include young age, male gender, membership of minority groups, poor socioeconomic status, insurance, abuse, psychological disorders and living in suburban areas. In addition, financial obligations, the feeling of recovery and receiving social supports can also be considered factors affecting discharge by personal wishes.[16]

Studies conducted on the subject of discharge AMA are mostly based on local experiences and examine a few participants and have a short follow-up and cannot provide comprehensive information. Obtaining information about the reasons for discharge with personal consent from patients and health care providers is essential to find practical strategies for reducing the incidence of discharge with personal consent.[7] Considering the growing population of older adults and the prevalence of chronic diseases in them, the majority of visitors to health centers comprise of older adults. According to the results obtained by Jaipaul (2003), older patients are often happier than younger patients to stay in hospitals. Their consent is a factor causing their reduced rate of discharge with personal consent.[17] Age is a factor that affects discharge AMA. The results of a study conducted by Frank (2000) showed that the rate of hospital discharge with personal consent is higher in younger than older patients.[2] In spite of this higher rate in younger patients, Gabayan et al. (2015) reported that older patients discharged from hospitals with their personal consent are more likely to be readmitted within a week of discharge than others.[18] Since many studies consider old age a risk factor for early readmission, conducting a study with the aim of estimating the rate of discharge AMA in older patients seemed necessary, because, considering the high vulnerability of older adults and the added complications of diseases in them, hospital discharge with personal consent can delay medical interventions in them and cause more acute complications. Moreover, the cultural differences between Iran and other countries can separate them in terms of the rate of hospital discharge AMA in older patients. Given the lack of studies on the differences between younger and olderpatients in terms of the factors affecting hospital discharge AMA, the present study was conducted to compare the rate of discharge with personal consent and its reasons in older patients to patients from other age groups.

Research design and methods

The present descriptive analytical study was conducted at Shahid Beheshti Hospital Complex in Kashan, Iran, on patients discharged with their personal consent from April 2014 to April 2015. A totalof 35,549 patients were discharged from the hospital during this period,with 1713 discharged against medical advice. Only 1213 of the patients discharged AMA wereover age 20 and thus entered the study. These patients were then divided into two groups based on age. The older age group included patients over 60 years of age and the younger age group included patients aged 20-59 years old.

The patients who wished to be discharged AMA completed a personal consent form with the help of their nurses. This form was designed by the researcher after consultation with professors and hospital authorities and consisted of two parts, including a part on background variables such as age, gender, marital status, education, hospitalization department, admission date, duration of hospitalization and reasons for discharge, and another part that examined the reasons for discharge with personal consent and consisted of items on certainty about recovery, personal and family problems, financial problems, dependence on the family, traveling, delays in doctor's visits, delays in the nursing procedures, inappropriate treatment by the medical personnel, delays in radiology services, delays in laboratory tests, poor hospital environment, poor nutrition, poor equipment and poor patient hygiene in the hospital.

Data were analyzed in SPSS-11.5 using descriptive and inferential statistics.

RESULTS

Of the 35,549 patients discharged from Shahid Beheshti Hospital Complex of Kashan in 2014, 1713 patients had left the hospital with their personal consent and against medical advice; of this figure, only 1213 were older than 20 and were thus selected for participation in the study. The patients discharged with their personal consent were then divided into a 20-59-year-old group and another group aged 60 and over and the two groups were then compared.

The rate of discharge AMA in 2014 as 4.81% in the examined population, with 28.11% being older

(age 60 and above) and 71.88% younger (age 20-59). With respect to gender, the results showed a high-errate of discharge AMA in the male patients in the 60-and-over age group (53.5%) compared to the female patients belonging to this age group (46.5%). In the younger age group, however, the rate of discharge AMA was higher in women (66.1%) compared to (than in men (33.9%). The results of the Chi-square test showed a significant relationship between gender and hospital discharge with personal consent (P<0.001).

The rate of discharge AMA was assessed in six departments of this hospital complex, including the maternity, internal, surgery and emergency departments and the ICU, .with the emergency department (43%), maternity department (28.4%), internal department (13.4%), surgery department (10.6%) and ICU (4.6%) having the highest rates of hospital discharge with personal consent in 2014. The highest rate of discharge with personal consent in the older age group was observed in the emergency department (56%) and the lowest in the maternity department (0.9%). In the younger age group, the highest rate was observed in the maternity department (39.1%) and the lowest in the ICU (2.4%). The results of the Chi-square test presented in Table 1.showeda significant relationship between discharge AMA and hospital department in both age groups (P<0.001).

The rate of discharge AMA by marital status was also assessed in this study in three groups, including married; single; other. The rate of discharge AMA was higher in married (92.8%) single (7.1%) patients. The married patients also had the highest rate of personal consent in both the older and younger age groups. The results of the Chi-square test presented in Table 1.showeda significant relationship between marital status and discharge AMA in both age groups (P<0.05).

The patients discharged AMA were also followed-up with in terms of education and were

Table 1 The demographic characteristics of the patients discharged with personal consent and against medical advice in the older (60 and above) and younger (20 to 59) age groups

		Older Age Group (60 and above)	Younger Age Group (20 to 59)			
		341	1077	P-Value	X^2	df
Gender	Female	158(5.46%)	575(1.66%)	P<0.001	39.41	1
	Male	182(5.53%)	295(9.33%)			
Hospital Department	Internal	70(5.20%)	93(7.10%)	P<0.001	196.78	4
	Surgery	42(3.12%)	86(9.9%)	P<0.001	196.78	4
	Emergency	191 (56%)	331(38%)	P<0.001	196.78	4
	Maternity	3 (0.9%)	341(1.39%)	P<0.001	196.78	4
	ICU	35 (3.10)	67(4.91%)	P<0.001	196.78	4
Marital Status	Single	7(2.8%)	63(8.6%)	P<0.002	12.29	2
	Married	241(8.96%)	668(4.91%)	P<0.002	12.29	2
	Other	1(0.4%)	0	P<0.002	12.29	2
Education	Illiterate	103(2.60%)	36(4.6%)	P<0.001	268.058	3
	Below High School Diploma	54(6.31%)	219(39%)	P<0.001	268.058	3
	High School Diploma	14(2.8%)	196(9.34%)	P<0.001	268.058	3
	Higher Education	0	110(6.19%)	P<0.001	268.058	3
Duration of Hospitalization	Less than one day	45(1.17%)	140(8.19)	P<0.001	39.99	2
	One to five days	160(8.60%)	513(7.72%)	P<0.001	39.99	2
	More than five days	58(1.22%)	53(5.7%)	P<0.001	39.99	2
Season	Spring	80(5.23%)	224(8.25%)	P=0.547	2.125	3
	Summer	38(1.11%)	114(1.13%)	P=0.547	2.125	3
	Fall	108(7.31%)	250(8.28%)	P=0.547	2.125	3
	Winter	115(7.33%)	281(3.32%)	P=0.547	2.125	3

Published by DiscoverSys | *Bali Med J* 2019; 8(1): 120-127 | doi: 10.15562/bmj.v8i1.828

Table 2 The reasons given by the older and younger patients for leaving the hospital against medical advice

Older Age Group (60 and above)		Younger Age Group (20 to 59)	P-Value	X^2	df
Certainty about recovery	122(8.35%)	462(53%)	P<0.001	29.06	1
Personal and family problems	66(4.19%)	153(5.17%)	P=0.448	0.575	1
Dependence	35(3.10%)	61(7%)	P=0.058	3.59	1
Travelling	12(3.5%)	45(2.5%)	P=0.892	1.74	1
Financial problems	9(2.6%)	41(4.7%)	P=0.105	2.62	1
Hospital environment	16(4.7%)	34(3.9%)	p-0.532	0.390	1
Poor hospital nutrition	7(1.2%)	19(2.2%)	P=0.892	0.019	1
The lack of equipment	5(1.5%)	14(1.6%)	P=0.861	0.031	1
Delays in radiology services	5(1.5%)	9(1%)	P=0.526	0.402	1
Poor patient hygiene in the hospital	4(1.2%)	23(2.6%)	P=0.120	2.416	1
Delays in laboratory tests	4(1.2%)	12(1.1%)	P=0.969	0.001	1
Delay in doctor's visits	19(5.6%)	30(3.4%)	P=0.09	2.873	1
Poor nursing services	5(1.5%)	14(1.6%)	P=0.861	0.031	1
Inappropriate treatment by the hospital personnel	0	4(0.4%)	p=0.666	1.569	3

divided into an illiterate group, a group without high school diploma, a group with high school diploma and another group with higher education. The highest rate of discharge AMA was observed in below high school diploma group (35.3%), followed by high school diploma group (28.7%),illiterate group (19%), and higher education group (15%). The highest rate of discharge AMA was observed in the illiterate group patients (60.2%) in the older age group and in the group without diploma (39%) in the younger age group. The results of Chi-square test presented in Table 1. Showed a significant relationship between education and discharge with personal consent in both age groups (P<0.001).

Discharge AMA was also assessed in terms of the number hospitalized days, including less than one day, one to five days, and more than five days. The highest rate of discharge with personal consent occurred between the first and fifth days of hospitalization (69.5%)in both age groups, followed by on the first day (19.1%) and after five days (11.5%). The results of the Chi-square test presented in Table 1.showeda significant relationship between discharge AMA and the number of hospitalization days in both age groups (P<0.001).

The highest rate of discharge AMA was 32.7% in the winter, (followed by) 29.6% in the fall, 25.1% in the spring, and 12.6% in the summer. The results of the Chi-square test showed no significant relationships between discharge with personal consent and the season in either age groups (Table 1.).

The most common reasons given for discharge with personal consent including certainty about recovery (48.9%), personal problems (18.1%), dependence on the family (7.9%), traveling (4.7%), financial problems (4.1%), poor hospital environment (4.1%), delays in doctor's visits (4%), poor patient hygiene in the hospital (2.2%), poor nutrition (2.1%), the lack of equipment (1.6%), poor nursing services (1.6%), delays in radiology services (1.2%), delays in laboratory tests (1.2%) and inappropriate treatment by the hospital personnel (0.2%). The results pertaining to the reasons for discharge showed that certainty about recovery was the most common reason given for discharge AMA in both age groups. The results of the Chi-square test presented in Table 2. Showed that, of all the reasons given, only the feeling of recovery was significantly related to discharge with personal consent (P<0.001).

DISCUSSION

The rate of discharge against medical advice was 4.81%in this study. In a cohort study conducted by Choi et al. (2011) on 656 patients in a Vancouver hospital followed up with for a year, the rate of discharge AMA was 16.1%.[13] In another cohort study conducted between 1990 and 2009 in the state of Manitoba, Kraut (2013) reported the rate of discharge AMA as (was) 1.11%.[19] In a study conducted by Sheikh-Mounesi et al. (2014), the rate of discharge AMA was reported as 34.4% in the psychiatric ward of a hospital in Mazandaran province of Iran.[20] The disparity in these findings can be explained by the fact that the rate of discharge AMA is affected by various variables and by noting the difference in the study populations.

The older age group in the present study was responsible for 28.1% of cases of discharge AMA

in this hospital complex. The rate of discharge AMA was highest in the older age group after the20-30-year-old age group (24.8%). In a study conducted by Franks et al. (2000), discharge with personal consent was less frequent in the older age group compared to the other age groups.[2] The results obtained by Weingart (1998) showed that the frequency of discharge AMA was higher in the younger than in the older patients.[6] Compared to the other studies cited, the present study reported a higher rate of discharge AMA in the older age group. A safe environment with adequate medical equipment appropriate for older age groups is one of the main priorities in the treatment of older patients. A poor hospital environment can be considered one of the reasons for the relatively higher rate of discharge AMA in older patients observed in the present study. Since this study has not examined the diagnosis of patients discharged AMA, no comments can be made at this relatively higher rate.

Given the significant relationship observed between gender and discharge with personal consent, discharge AMA was found to be more prevalent in men than in women in the older age group. In the younger age group, however, discharge AMA was more prevalent in women than in men. The results obtained by Alfandrein 2013[14] and by Choi in 2011[13] reported higher rates of discharge with personal consent (were found) in the male gender. The higher rate of discharge AMA in the older men reported in the present study is similar to the findings of the cited studies. This rate could be due to men having greater financial problems and obligations toward their families, which make them be more inclined than women to get discharged from the hospital early. Moreover, the greater support provided to ill older men by their spouse and children further encourages them to leave the hospital (early). Moreover, women adhere tomedical recommendations and practices more than men and this obligationmakes older women be more likely to stay their full course in the hospital. The present findings, however, are inconsistent with those of the cited studies with respect to the younger age group. The high rates of discharge AMA among the female participants aged 20-59 might be due to their concerns about family issues. A culturally inappropriatehospital environment can also be another factor for the greater tendency among women of this age group to get discharged with their own consent.

The rate of discharge AMA in each department was also assessed in this study. Discharge with personal consent was significantly more frequent in the emergency department in the older age group and in the maternity department in the younger group. In a study conducted by Duno (2003), the highest (and lowest) frequency of discharge (AMA) was observed in internal ward (and) rehabilitation ward, respectively.[21] In line with the present findings, in a study conducted by Vahdat (2010), the emergency ward had the highest rate of discharge AMA.[22] Due to the special circumstances in emergency wards,these units have the highest number of referrals. The quality of services provided in the hospital emergency ward is considered an indicator of patient satisfaction with the hospital.[23] The high rate of discharge AMA from the emergency ward can be due to issues within the hospital, such as the lack of space; facilities;and equipment required for admitting emergency patients. In addition, the shortage of geriatricians and the lack of a geriatric ward in emergency departments are also conducive to the discharge of a greater number of older patients with personal consent. To confirm this finding,-studies are required on the rate of discharge with personal consent in geriatric wards managed by geriatricians. The chronic and debilitating diseases of old age in patients approaching the end of their life make their children and caregivers unwilling to prolong their patient's hospital stay after the critical phase of their illness has passed in the emergency ward and they, therefore, seek to be discharged with personal consent.

The findings confirmed the existence of a significant relationship between the rate of discharge AMA and marital status. In both age groups, this rate was higher in the married patients than the single patients. In line with the present findings, Sheikh-Mounesi (2014) reported a higher rate of discharge with personal consent in the psychiatric ward in the married patientscompared to the single patientsbut did not find the relationship between the two variables to be significant.[20] Older single people might use hospital admission as a way to escape their loneliness and isolated life. It can, therefore, be argued that single patients are more willing to prolong their hospital stay.

With regard to education, the present findings showed higher rates of discharge AMA in the illiterate olderpatients and also in the younger patientswithout a high school diploma. The relationship between these variables was found to be significant. Just as in the present study, Sheikh-Mounesi (2014) found the highest rate of discharge AMA in patients with high school education and the lowest rate in patients with university education, although they found no significant relationships between the two variables.[20] In contrast, in a study conducted by Noohi et al. (2011), the rate of discharge with personal consent was higher in

the educated patients compared to the uneducated ones.[23] One reason for seeking discharge AMAis the hospitalphobia caused by feelings of anger, worry, anxiety, and depression. The patients' lack of knowledge as a result of their poor education increases the incidence of such feelings. In addition, if the physicians do not acknowledge these feelings due to their lack of communication with the patients, the patients become more willing to leave the hospital early.

In the present this study, most cases of discharge with personal consent occurred between the first to fifth days of hospitalization in both age groups. A significant relationship was observed between the duration of hospitalization and discharge AMA. In line with the present findings, Hwang (2003) also found the highest rate of discharge with personal consent occurred between the second and fifth days of hospital stay. Their study also confirmed the significant relationship between the duration of hospitalization and discharge AMA.[11] In contrast, in Vahdat's study (2010), the majority of discharges with personal consent occurredin patients with one-day or fewer duration of stay.[22] Southern (2013) also reported a significant relationship between shorter hospital stays and the tendency to get discharged AMA.[5] In another study, Ebrahim et al. (2007) argued that patients discharged AMA have a shorter hospital stay compared to those discharged with medical advice given that their conditions are often less dire.[4] Prolonged hospital stay and its subsequent fatigue can cause the tendency to seek discharge with personal consent. Moreover, the lack of clarification about the treatment procedures required and the acuteness of the disease on the first day reduce the patients' willingness to leave the hospital early. Patients who stay more than five days in the hospital are often those in critical and incurable conditions and both they and their families are less willing for discharge. Nevertheless, the hospital environment can also affect the patient's decision to complete the treatment stages. In some cases, the patient's stay in the hospital is recommended by the medical personnel without taking into account the patient's disease and treatment and is only affected by the hospital's administrative processes. In such circumstances, the patients may prefer to leave the hospital with their own consent.

In this study, the highest rate of discharge with personal consent occurred in the winter while the lowest occurred in the summer in both age groups. In Sheikh-Mounesi's study (2014), the highest rate was observed in the winter, but the lowest rate in the fall. In line with the present findings, their study also showed no significant relationships between discharge AMA and season.[20] The admission of patients in different seasons is usually affected by the outbreak of certain communicable diseases. The outbreak of communicable diseases faces hospitals with a shortage of facilities and leads to patient dissatisfaction and consequently discharge with personal consent. The admission of elective patients also decreasesin the summer due to summer vacations, and the rate of discharge with personal consent is thus also affected.

As for the reasons for discharge AMA in the two age groups, the present study found that certainty about recovery was the most common reason in both groups ($p<0.001$). Personal and family problems were the next most common reason given by both groups for discharge with personal consent; however, no significant relationships were observed between these two variables.

Alfandre (2009) proposed the feeling of recovery, personal and family problems and sources of support as the reasons for discharge AMA.[24] Hwang (2003) reported personal and family problems, the feeling of recovery, dissatisfaction with the treatment and getting tired of the hospital environment as some of the factors associated with discharge AMA,[11] which agrees with the present findings. Franks proposed financial resources, type of insurance, income leveland belonging to minority groups as some of thereasons for discharge with personal consent.[6] In another study, Tabrizi et al. (2014) reported family problems such as work-related problems as one of the main reasons for discharge with personal consent.[25]

A major limitation of this study lies in its method of data collection; the reasons for discharge AMA were gathered only by asking for the patients' own opinion, while it might have been better to use the doctors' and medical personnel's opinions as well. Another limitation is failing to take account of the severity of the disease in patients discharged with personal consent. Moreover, since the study was performed in a teaching hospital, the results may not be extendable to non-teaching hospitals. Other limitations include the completion of the personal consent form by family members in the case of the older patients, which might have hindered the conveyance of the actual reasons for discharge with personal consent.

CONCLUSION

The rate of patient discharged AMA (was) affected by many variables. Compared to other studies, this study showed a high rate of discharge AMA in older patients.

Similarly, the rate of discharge AMA was higher in married patients with poorer education in both

the older and the younger age groups. The highest rate of discharge AMAoccurredbetween the first and fifth days of hospitalizationin both age groups. The results confirm the effect of hospitalization ward on discharge AMA. Discharge with personal consent was more common in male patients in the older age group and more common in female patients in the younger age group. Certainty about recovery is was the main reason for seeking discharge with personal consent in both age groups. Since certainty about recovery is was considered a factor involved in seeking discharge with personal consent in both age groups, it is essential for the medical personnel to make proper distinctions between a real feeling of recovery and a false one and to inform the patients about this distinction too.

Despite the absence of a significant relationship between personal and family problems and discharge AMA in both older and younger patients,this factor was the most frequent reason for discharge with personal consent after certainty about recovery. Social workers are therefore integral to hospitals for aptly identifying and resolving the patients' personal and family problems. Moreover, an emphasis on proper communication between the medical personnel and the patients, especially the older patients, can help reduce the rate of discharge with personal consent.

Understanding the factors affecting patients' discharge AMA in healthcare facilities can help the timely prevention of adverse complications, especially in older patients. Due to the complex and lengthy process of treatment in older patients, studies should be conducted to compare hospitals with and without geriatric departments in terms of rate of discharge with personal consent in older patients.

ACKNOWLEDGMENTS

The authors express their sincere gratitude to Iranian Research Center on Aging affiliated with University of Social Welfare and Rehabilitation Sciences, Tehran, Iran for their financial support of the present study. Also,the authors appreciate Dean, manager, and nurses of the Kashan Shahid Beheshti Hospital Complex for contributing their kind cooperation with us in conducting this research.

CONFLICT OF INTEREST

Author declares there is no conflict of interest regarding all aspect of the study.

REFERENCES

1. Smith DB, Telles JL. Discharges against medical advice at regional acute care hospitals. *American Journal of Public Healt*h. 1991;81(2):212-5.
2. Franks P, Meldrum S, Fiscella K. Discharges Against Medical Advice: Are Race/Ethnicity Predictors? *Journalof General Internal Medicine*. 2006;21(9):955-60.
3. Glasgow JM, Vaughn-Sarrazin M, Kaboli PJ. Leaving Against Medical Advice (AMA): Risk of 30-Day Mortality and Hospital Readmission. *Journal of General Internal Medicine*. 2010;25(9):926-9.
4. Ibrahim SA, Kwoh CK, Krishnan E. Factors Associated With Patients Who Leave Acute-Care Hospitals Against Medical Advice. *American Journal of Public Health*. 2007;97(12):2204-8.
5. Southern WN, Nahvi S, Arnsten JH. Increased Risk of Mortality and Readmission Among Patients Discharged Against Medical Advice. *The American Journal of Medicine*. 2012;125(6):594-602.
6. Weingart SN, Davis RB, Phillips RS. Patients Discharged Against Medical Advice from a General Medicine Service. *Journal of General Internal Medicine*. 1998;13(8):568-71.
7. Onukwugha E, Saunders E, Mullins CD, Prade FG, Zuckerman M, Weir MR. Reasons for discharges against medical advice: a qualitative study. *Qual Saf Health Care*. 2010;19(5):420-4.
8. Pages KP, Russo JE, Wingerson DK, Ries RK, Roy-Byrne PP, Cowley DS. Predictors and Outcome of Discharge Against Medical Advice From the Psychiatric Units of a General Hospital. *Psychiatric Services*. 1998;49(9):1187-92.
9. Baptist AP, Warrier I, Arora R, Ager J, Massanari RM. Hospitalized patients with asthma who leave against medical advice: Characteristics, reasons, and outcomes. *Journal of Allergy and Clinical Immunology*.119(4):924-9.
10. Cook CA, Booth BM, Blow FC, McAleenan KA, Bunn JY. *Risk factors for AMA discharge from VA inpatient alcoholism treatment programs*. J Subst Abuse Treat. 1994;11(3):239-45.
11. 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.
12. Reinke DA, Walker M, Boslaugh S, Hodge D, 3rd. *Predictors of pediatric emergency patients discharged against medical advice*. Clin Pediatr. 2009;48(3):263-70.
13. Choi M, Kim H, Qian H, Palepu A. *Readmission Rates of Patients Discharged against Medical Advice: A Matched Cohort Study*. PLoS ONE. 2011;6(9):e24459.
14. ALFANDRE DJ. "I'm Going Home": *Discharges Against Medical Advice*. Mayo Clin Proc. 2009;84(3):255-60.
15. Aliyu ZY. *Discharge against medical advice: sociodemographic, clinical and financial perspectives*. Int J Clin Pract. 2002;56(5):325-7.
16. Kraut A, Fransoo R, Olafson K, Ramsey CD, Yogendran M, Garland A. *A population-based analysis of leaving the hospital against medical advice: incidence and associated variables*. BMC Health Services Research. 2013;13:415-.
17. Jaipaul CK, Rosenthal GE. Are Older Patients More Satisfied With Hospital Care Than Younger Patients? *Journal of General Internal Medicine*. 2003;18(1):23-30.
18. Gabayan GZ, Sarkisian CA, Liang LJ, Sun BC. Predictors of admission after emergency department discharge in older adults. *Journal of the American Geriatrics Society*. 2015;63(1):39-45.
19. Kraut A, Fransoo R, Olafson K, Ramsey CD, Yogendran M, Garland A. *A population-based analysis of leaving the hospital against medical advice: incidence and associated variables*BMC Health Services Research. 2013:1-9.
20. Sheikhmoonesi F, Khademloo M, Pazhuheshgar S. Patients discharged against medical advice from a psychiatric hospital in Iran: a prospective study. *Glob J Health Sci*. 2014;6(3):213-8.

21. Duñó R, Pousa E, Sans J, Tolosa C, Ruiz A. *Discharge against medical advice at a general hospital in Catalonia*. General Hospital Psychiatry.25(1):46-50.
22. VAHDAT S, HESAM S, MEHRABIAN F. *Effective factors on patient discharge with own agreement in selected Therapeutic Training Centers of Ghazvin Shahid Rajaei*. 2011.
23. Noohi K, Komsari S, Nakhaee N, Feyzabadi VY. Reasons for discharge against medical advice: A case study of emergency departments in Iran. *International journal of health policy and management.* 2013;1(2):137.
24. Alfandre D. *Reconsidering against medical advice discharges: embracing patient-centeredness to promote high quality care and a renewed research agenda*. J Gen Intern Med. 2013;28(12):1657-62.
25. Tabrizi JS, Ranai A. Discharge against Medical Advice: an Interventional Study. *International Journal of Hospital Research*. 2014;3(2):89-92.