

Investigation of Rate and Effective Factors on Discharge against Medical Advice in Psychiatric Patients Over a 10-Year Period

Dear Editor

American Medical Association (AMA) has a higher rate in the psychiatric ward than in other clinical wards. AMA increases both the patient's and the hospital's costs of delivering clinical care. In the present study, the frequency and effectiveness of AMA factors were identified in the first encounter during a 10-year period using a large sample size.

This study used a cross-sectional design with retrospective hospital information system (HIS) data that was collected from Ibn-e-Sina Psychiatric Teaching Hospital in Mashhad, Iran, between 2010 and 2020 (research plan code: 951350). The present study was approved by the Ethical Committee of Mashhad University of Medical Sciences (code: IR.MUMS.MEDICAL.REC.1398.913). All first encounters with hospitalized patients in the HIS were extracted. The dependent variable was discharged AMA. The independent variables were socio-demographic, admission and discharge time, living place, hospitalization, and reasons for AMA.

The demographics were obtained using descriptive statistics. The patients' characteristics were compared using the Chi square test. Odds ratios (ORs) with a 95% confidence interval (CI) were reported for each independent variable. Most P values were two-sided, and $P < 0.05$ was considered statistically significant.

During the study period, AMA discharge accounted for 17% (3823 patients) of the total discharges (22468 patients) from the case hospital. Being male was associated with an increased risk for discharge AMA (OR=0.508, 95% CI=0.480-0.538). Age was significantly associated with AMA ($P < 0.001$).

The variables including admission time, admission shift, and season of admission were higher in discharge AMA than in non-AMA ($P < 0.001$). However, there was no statistically significant positive relationship between AMA and admission with holidays.

The results showed a significant relationship between AMA and discharge year ($P < 0.001$). There was a considerable growth in the rate of AMA. A significant difference was found between AMA and discharge with holidays. The AMA had a significant relationship with season of discharge ($P < 0.001$), hour of discharge ($P < 0.001$), and discharge shift ($P < 0.001$).

The results indicated a significant one-sided relationship between the "Province of residence" and AMA ($P = 0.007$). "Living in Khorasan province" was associated with an increased risk for discharge AMA ([OR=1.202, 95% CI=1.021-1.108] versus [OR=0.995, 95% CI=0.965-0.980] for Non-Discharge Against Medical Advice [Non-DAMA]). Moreover, "living in Mashhad" had a higher risk of AMA ([OR=1.222, 95% CI=1.151-1.084] versus [OR=0.984, 95% CI=0.961-0.972] for Non-DAMA).

The findings indicated a significant relationship between the "Province of residence" and AMA ($P < 0.001$). Moreover, the findings of the present study demonstrated a positive relationship between the size of the city in which the patient lived and AMA. The patients residing in large cities and towns experienced the most frequent AMAs.

Besides, a statistically significant relationship was found between insurance organizations and AMA ($P < 0.001$).

The most frequent AMA was related to Health Service and Armed Forces Insurance Organizations. Complementary insurance coverage was associated with an increased risk of AMA ([OR=1.911, 95% CI=1.386-1.628] versus [OR=0.927, 95% CI=0.822-0.873] for Non-DAMA).

There was a significant difference between "admission priority" and AMA. AMA rate in emergency admission ($n=2215$, 57.90%) was higher than non-emergency admission ($n=1608$, 42.10%). There was

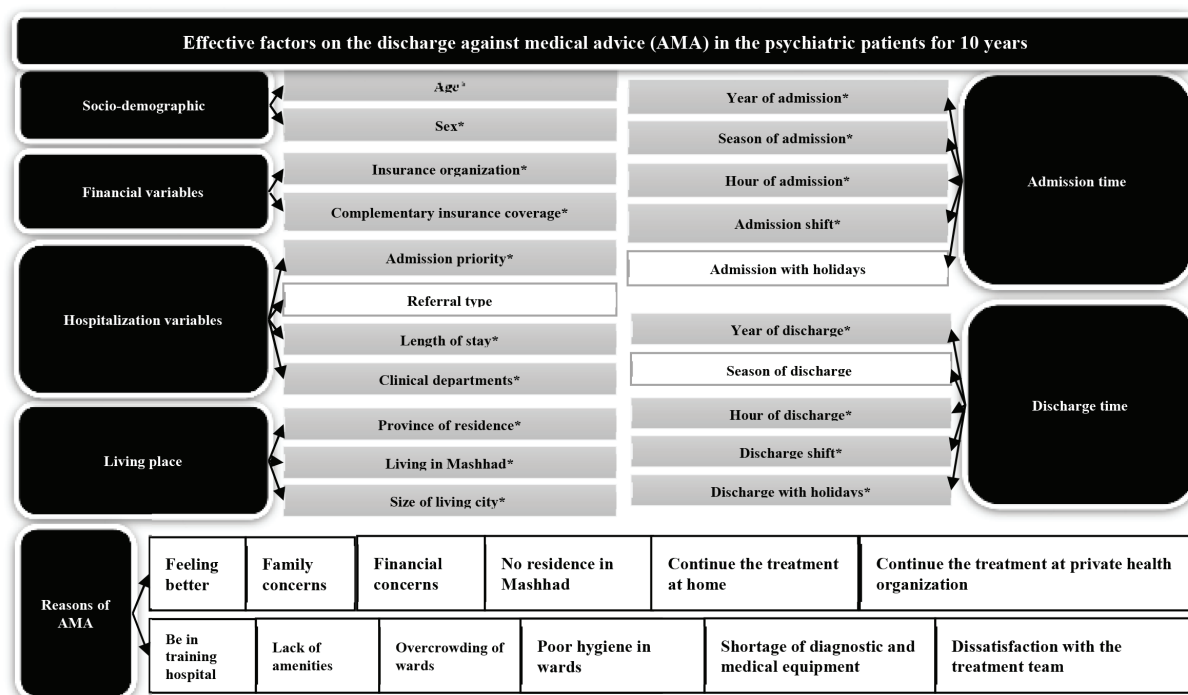


Figure 1: The figure illustrates the effective factors of the American Medical Association (AMA) in psychiatric patients for 10 years.

a significant relation between AMA and “clinical departments” ($P < 0.001$). The majority of the AMA was discharged from the adult-male psychiatry department (41.5%), followed by adult-female psychiatry, girls’ pediatric psychiatry, and quit addiction. There was no significant difference between “Referral type” and AMA. The risk of AMA increased with length of stay < 6 hours compared to ≥ 6 hours ([OR=3.167, 95% CI=2.3871-3.494] versus [OR=0.576, 95% CI=0.521-0.637] for Non-DAMA). Figure 1 shows the effective factors on AMA in psychiatric patients during a 10-year period.

The findings of the present study highlighted the characteristics of psychiatry patients who were discharged from the hospital with AMA. The frequency of AMA was 17%. In contrast to the findings of the present study, the rate of DAMA was reported as 34% in a psychiatric hospital in northern Iran.¹ It seemed that the AMA rate was different in various populations.² In addition, it was found that there was a significant association between AMA and male sex as well as young age. This finding was consistent well with previous studies.^{3,4} A rising rate of AMA was observed. The prevalence of mental disorders increased from 1999 to 2014, by about 1.12-fold,⁵ which might have contributed to AMA in the study population.

The results of this research indicated a positive relationship between AMA, admission, and discharge time. Brook and colleagues reported night and evening shifts were associated with AMA.²

Moreover, the present findings indicated a significant relationship between AMA and the type of the patient’s insurance. It was found that the place of living and AMA were associated with each other. However, the findings were not significant. Furthermore, clinical wards of “quit addiction” had a large number of AMAs.

The majority of grounds for the AMA were related to the patient’s s, including feeling better, financial problems, family issues, the physical condition of the hospital, and ineffective therapy.

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Authors’ Contribution

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of the work; the acquisition, analysis, or interpretation of data for the work; and drafting the work or reviewing it critically for important intellectual content; and final approval of the version to be published; and agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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Zahra Ebnehoseini¹, PhD;  Hediye Khorasani², MSc; Zahra Koohjani³, MSc; Mina Zibaei⁴, MSc; Amir Deghatipour⁵, MSc; Ali Saghebi¹, MD; Ali Reza Ebrahimi¹, MD; Masoumeh Boroujerdi¹, BSc; Mohammad Reza Mehri¹, MD; Hamed Tabesh⁶, PhD 

¹Psychiatry and Behavioral Sciences Research Center, Mashhad University of Medical Sciences, Mashhad, Iran;

²Department of Health Information Technologies, Emam Reza Hospital, Mashhad University of Medical Sciences, Mashhad, Iran;

³Department of Health Information Technologies, Unit of Economic Health, Mashhad University of Medical Sciences, Mashhad, Iran;

⁴Department of Health Information Management, Shahid Hasheminejad Hospital, Mashhad University of Medical Sciences, Mashhad, Iran;

⁵Department of Health Information Management, Ibn-e-Sina Hospital, Mashhad University of Medical Sciences, Mashhad, Iran;

⁶Department of Medical Informatics, School of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran

Correspondence:

Hamed Tabesh, PhD;

Mashhad University of Medical Sciences, At the end of Shahid Fakouri Blvd., In front of Fakouri 94, Postal code: 91778-99191, Mashhad, Iran

Tel: +98 51 38798385

Email: TabeshH@mums.ac.ir

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