

Original Article

A Profile of Individuals Accompanying Patients in the Emergency Department: An Analysis of 5046 Cases

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ABSTRACT

Background: There has been no comprehensive study on identifying the sociocultural characteristics and the factors affecting the number of relatives and/or friends accompanying patients. The purpose of this study was to identify these sociocultural characteristics and the factors affecting this.

Materials and Methods: The research was designed as a cross-sectional, one-to-one interview study. A study population representing one in three patients aged over 18 years and presenting consecutively to the emergency department over a 1-month period was constituted with systematic sampling. A sample size of at least 4483 patients was planned with a 1% margin of error and 90% power.

Results: Two thousand nine hundred and fifty (58.5%) of the 5046 patients included in the study were male. Patients' mean age was 38.4 ± 17.4 years (median 34 years). At least one friend or relative accompanied 3690 (73.1%) patients, and the mean number of accompanying individuals was 1.50. A higher level of accompaniment and a higher mean number of accompanying individuals were determined in patients presenting to the emergency department outside working hours, with altered mental state, attending hospital for the first time, with chronic disease, requiring hospitalization, in illiterate patients, in patients who had not studied at university, in patients aged 65 or over, and in patients presenting to hospital and the emergency department for the first time compared to other parameters (<0.01 for all). **Conclusion:** The number of people accompanying patients increases with sociocultural factors such as gender, age, literacy, and education level. In addition, similar increase can be observed with patients coming to emergency department by ambulance or having a chronic disease or arrive with lost consciousness.

KEYWORDS: *Accompanying patients, emergency department, individuals, profile*

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INTRODUCTION

It is natural for friends and relatives to accompany patients with health problems requiring presentation to the emergency department, out of a sense of responsibility and concern for the participant during the hospital process. Patients arriving at the emergency department by their own means are generally outpatients and may present either alone or accompanied. Friends and relatives accompanying patients reaching the emergency department by ambulance often arrive at the hospital in a separate vehicle.

The number of individuals accompanying patients varies. Significant factors affecting the number of

accompanying individuals particularly include pediatric patients attending the emergency department, whether the patient is conscious or unconscious, whether the patient has previously been to hospital and/or the emergency department, the patient being sufficiently educated to express himself, and severity of the disease.^[1]

These patient-related factors also affect the degree of proximity of the accompanying individuals and the

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place from where they set out. These are generally the home, workplace, shops, places where they are present as guests, and places of rest or entertainment. Generally, even if people do not know the patients, they accompany the patient to the hospital to help them. A limited number of studies on this subject have involved pediatric patients, while we encountered no studies in the literature concerning friends and relatives accompanying adult patients. Sociocultural factors can also affect the accompaniment of patients presenting to the emergency department with an emergency condition.

The purpose of this study was to examine the numbers and characteristics of relatives accompanying patients presenting to the emergency department, and to discuss the level of patient accompaniment, factors affecting this, the level of taking time off work to accompany patients, and the probable work and productivity losses that such interruption may cause.

MATERIALS AND METHODS

The research was designed as a prospective, cross-sectional study. It was performed in Istanbul, where 18.6% of the population of Turkey is registered, between April 1, 2016, and April 30, 2016, at an emergency medicine clinic receiving a mean 500 presentations a day. Consecutive patients aged 18 and over and presenting to the emergency department during a 1-month period represented the study population. Patients in the pediatric age group were not included in the study, because the emergency department that conducted study serves only adult patients. Predicting that a mean 15,000 patients would arrive at the emergency department over a 1-month period, a sample size of at least 4483 was planned with a 1% margin of error, and 90% power to determine the characteristics of relatives accompanying patients presenting to the emergency department in a 1-month period. A sample was enrolled consisting of one patient in three using systematic sampling. The patients chosen on the basis of the sampling, and accompanying relatives if any, were informed about the study and gave informed consent to participate. Patient data and consent in the case of unconscious participants were obtained from first-degree relatives.

Patients and relatives younger than 18, requiring emergency intervention or surgery, experiencing communication problems due to language difficulties, who were foreign nationals, or who refused to participate were excluded from the study.

Random patients presenting to the emergency medicine clinic without relatives, who agreed to participate in the survey and who were lucid and in an appropriate clinical

condition were asked about the means of their arrival at the emergency department, any disease in their histories, how many times they had visited our hospital and clinic, and their education level. If accompanying friends or relatives were present, these were asked about their numbers, degree of proximity, and where they had come from, and the answers were also recorded onto the study questionnaire.

The data were analysed using the Statistical Package for Social Sciences (SPSS) for Windows, version 15.0 (SPSS, Chicago, Illinois). Analysis results for descriptive statistics were given as number and percentage for categorical variables and mean, standard deviation, and minimum and maximum for numerical variables. Differences between categorical variables in more than two independent groups were tested using Chi-square analysis. Comparisons of numerical variables in two or more independent groups were performed using Student's *t*-test and one-way ANOVA when normal distribution conditions were established and using the Mann–Whitney U-test and the Kruskal–Wallis test when normal distribution was not established. Subgroup comparisons were performed with Tukey's parametric test and the nonparametric Mann–Whitney U-test and were interpreted with Bonferroni correction.

RESULTS

Five thousand and forty-six patients were included in the study, 2950 (58.5%) were male and 2096 (41.5%) were female. The mean age of the patients was 38.4 ± 17.4 years (median 34 years, range 18–103 years). At least one friend or relative accompanied 3690 (73.1%) of the 5046 patients enrolled, while 1356 (26.9%) were unaccompanied.

Levels of accompaniment of patients presenting to the emergency department and the number of accompanying individuals were higher in this study for presentations outside working hours, for patients brought in due to altered mental state, those coming to hospital for the first time, those brought in by ambulance, for patients with chronic disease, patients requiring hospitalization, illiterate patients, patients without a university education, for those aged 65 and over, and for patients presenting to hospital and the emergency department for the first time (<0.01 for all) [Table 1]. Analysis on the basis of gender revealed a statistically significantly higher level of accompaniment of female patients than male patients, while no difference was observed between the sexes in terms of numbers of accompanying individuals.

A minimum of one and a maximum of eight individuals accompanied the 3690 patients with companions, with a mean value of 1.50. The most commonly

Table 1: Numbers of individuals accompanying patients and an analysis of the factors affecting these

	Number of patients	Number of patients with accompanying relatives (3690 patients) (%)	No relatives (1356 patients) (%)	P*	Mean number of accompanying individuals±SD	P** (CI)
Male	2950	1879 (63.7)	1071 (32.3)	<0.001	1.48±0.749	0.269 (-0.076/0.021)
Female	2096	1811 (86.4)	285 (13.6)		1.51±0.759	
Admission during working hours	1782	1204 (57.4)	578 (42.6)	<0.01	1.52±0.773	0.039 (-0.013/0.091)
Admission outside working hours	3264	2486 (67.4)	778 (32.6)		1.48±0.744	
Patients without AMS	4976	3626 (73.9)	1350 (26.1)	<0.001	1.48±0.738	<0.001 (-1.143/0.775)
Patients with AMS	70	64 (91.4)	6 (8.6)		2.44±1.006	
With chronic illness	3798	2633 (69.3)	1165 (30.7)	<0.01	1.79±0.884	<0.001 (0.368/0.472)
Without chronic illness	1248	1057 (84.7)	191 (15.3)		1.37±0.658	
Hospitalized	414	357 (86.2)	57 (13.8)	<0.001	1.72±1.176	<0.001 (-0.801/-0.569)
Discharged	4632	3333 (72.0)	1299 (28.0)		1.04±0.878	
Literate	4884	3550 (72.7)	1334 (27.3)	<0.001	1.07±0.906	<0.001 (0.536/0.903)
Illiterate	162	140 (86.4)	22 (13.6)		1.79±1.171	
University education	821	499 (60.8)	322 (39.2)	<0.001	0.77±0.757	<0.001 (-0.441/-0.323)
Primary education	4225	3191 (75.5)	1034 (24.5)		1.16±0.941	
Arrived by ambulance	439	406 (92.5)	33 (7.5)	<0.001	1.98±1.165	<0.001 (-1.088/-0.864)
Ambulatory	4607	3284 (71.3)	1323 (28.7)		1.01±0.851	
>65 years old	505	473 (93.7)	32 (6.3)	<0.001	1.89±1.023	<0.001 (0.791/0.977)
<65 years	4541	3217 (70.8)	1324 (29.2)		1.00±0.869	
First admission to hospital	1384	1070 (77.3)	314 (22.7)	<0.001	1.19±0.956	<0.001 (0.076/0.193)
Readmission to hospital	3662	2620 (63.4)	1042 (36.6)		1.06±0.910	
First admission to ED	2007	1546 (77.0)	461 (23.0)	<0.001	1.16±0.928	<0.001 (0.056/0.160)
Readmission to ED	3039	2144 (70.6)	895 (29.4)		1.05±0.920	

*Chi-square test, **t-test. CI=Confidence interval; AMS=Altered mental status; SD=Standard deviation; ED=Emergency department

Table 2: Distribution of patients in terms of numbers of accompanying individuals

Number of accompanying persons	Patients distribution (%)
1. Person	2336 (46.3)
2. People	965 (19.1)
3. People	324 (6.4)
4. People	53 (1.1)
5. People	8 (0.2)
6. People	2 (0.0)
7. People	1 (0.0)
8. People	1 (0.0)

observed number of individuals accompanying patients presenting to the emergency department was one (2336 patients, 46.3%) [Table 2].

At least one friend or relative arrived at the hospital from work to accompany 543 (10.8%) of the 3690 accompanied participants. Of these relatives leaving work to accompany patients, 425 (8.4%) received permission from their employers to do so, while 118 (2.3%) left work without permission.

DISCUSSION

According to Turkish Statistical Institute data, 50.2% of the country's population is male, and the mean age of the population is 30, 4 years at the end of 2013.^[2] In this study, 58% of patients were male, and the mean age was 38. The higher mean age of the patients included in the study and the higher proportion of males compared to the general population may be associated with the study population consisting of patients aged 18 or over.

The presentation process of adult patients to hospital or the emergency department in the event of sudden-onset health problems is a cause of anxiety for them and for relatives. This anxiety creates a need in patients for individuals to accompany them. In relatives, the need to accompany patients during presentation to hospital or the emergency department develops from concerns over any development that may have an adverse impact on social relations. Factors such as the patient feeling alone and feeling the need for assistance from another individual give rise to the need for accompaniment. Relatives accompanying patients usually involve themselves in

the health-care process in emergency departments. They frequently ask various questions about the patient's medical condition, leading to a highly pressurized environment for all personnel. As the number of relatives increases, the number of people asking questions rises proportionally. Relatives may sometimes be more anxious than the patient. Emergency physicians may have to have more contact with relatives. It is important for most patients to be accompanied by family members at hospital. In addition, patients with companions also expressed greater satisfaction more satisfied those who were unaccompanied.

A 73% level of accompaniment is not unexceptional, even for adults. The mean number of accompanying individuals in this study was 1.50. The fact that not all patients were accompanied may be due to patients notifying relatives beforehand, making planned presentation to the emergency department, or regarding their condition as of low severity and therefore not informing anyone.

The generally high level of accompaniment of female patients in Turkey, with its majority Muslim population, may depend on Islamic factors, but no difference was determined in terms of gender among the accompanying individuals. This difference in the social status of women in Muslim countries may be responsible for this variation. Traditional factors such as the socioeconomic dependence of women and Islamic disapproval of women going out alone may also be involved.

Relatives of patients presenting to the emergency department also place various additional responsibilities on personnel. As the level of accompaniment increases, expectations of the examining physician in terms of overcoming concerns, receiving better quality health and care services, and receiving information about the patient also increase. As the number of individuals accompanying the patient rises, the process involved in partially overcoming concerns and providing information is prolonged, crowding increases, and the time that the emergency physician needs to set aside for other patients may be reduced. An increase in the number of accompanying individuals also has an adverse on the working conditions of other emergency department personnel in addition to the physician.^[3,4]

In this study, 10.8% of accompanying relatives who arrived directly from their places of work (8.4% receiving permission to do so) had to restrict their daily working activities. This results in a loss of productivity not only for the patient but also for relatives. Although more family members were accompanied during working hours, the level of accompaniment was lower. Interestingly, levels of accompaniment increased after

working hours. Transport problems in the metropolis, where much of the population resides, being lighter in the daytime may account for this. Although the higher level of accompaniment outside working hours can be explained by employers' permission not being required, the higher number of relatives during working hours cannot be explained.

The level of individuals accompanying patients is higher in the event of the patient having a history of chronic disease, being brought to the emergency department with loss of consciousness, or being brought in by ambulance. These three factors have been reported to be determinative of the severity of cases admitted to the emergency service.^[5] Some of these parameters are elements of scoring systems that measure the severity of disease.^[6-8] Relatives' levels of anxiety may, therefore, rise proportionally. Not only the level of accompaniment but also the number of companions is affected by the degree of severity perceived by relatives. Accompanying and counseling the patient represent the beginning of the treatment period. Family members wish to be informed about their patient's illness, the pharmacological care being given, and the patient's current condition and prognosis.^[9-11]

The level of accompaniment in this study decreased as patients' levels of education increased. The level of accompaniment of literate patients with no formal education was much higher than the general level of accompaniment, while the level of accompaniment of university graduate patients was lower than the mean general level. This is of particular importance. The number of accompanying relatives was much higher among uneducated patients. Number of accompanying relatives decreased as patients' education levels increased. This may be attributed to the patient feeling self-sufficient or to not informing relatives about having presented to the emergency department.

While some accompanying relatives had to leave their places of work due to the unavailability of other relatives, we also identified individuals who had left their places of work despite the presence of other accompanying relatives. The perceived need to leave work, with or without permission, even though others are already accompanying the patient, may reflect the idea that a single individual may be unwilling or unable to cope. The dilemma of patients without health insurance having to pay cash for services they will receive in the hospital may also trigger the idea that the presence of more than individual is required.

CONCLUSION

Patients admitted to ER accompanied by their relatives

and friends exhibit an increase in the number of people accompanying them that seem to be related to factors such as low education level, illiteracy, age above 65, and female gender. A similar trend is also observed with patients that come to ER by ambulance. Furthermore, the contributing factors to the increased number of relatives and/or friends accompanying the patients are those with a chronic disease or patients who lost consciousness. While loss of productivity on the part of an accompanying relative may be considered an adverse outcome, the positive effects on the patient must also be considered.

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Conflicts of interest

There are no conflicts of interest.

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