

# Assessment of patient satisfaction with the services provided by emergency wards at hospitals affiliated to Hormozgan University of Medical Sciences

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## Original Article

### Abstract

**Introduction:** Today, patient satisfaction with the emergency services is considered as one of the main indices for the quality of hospital care service. The purpose of this study is to determine the rate of patient satisfaction referring to the emergency wards of hospitals affiliated to Hormozgan University of Medical Sciences (HUMS).

**Methods:** This descriptive-analytic cross-sectional study was carried out from March to September 2012, using a questionnaire designed to indicate the level of patient satisfaction with medical and non-medical services provided by the hospitals affiliated to HUMS. The collected data were analyzed by SPSS statistical software using t-test and analysis of Variance.  $P < 0.05$  was considered as significant.

**Results:** The results indicated that, in general, 87.4% of the patients were satisfied with the emergency services. The highest level of satisfaction was related to nursing behavior (92.6%), physician attention and behavior (89%) and responsibility toward patients (88%), whereas the lowest level directed to the quality of meals and cleanliness of the ward and sanitation services (48% and 66.2% respectively). None of the background variables such as gender, age, marital status and occupation was statistically significant to general patient satisfaction ( $P > 0.05$ ).

**Conclusion:** According to the significant differences of satisfaction in hospitals across the province in terms of geographical characteristics, more attention to the planning and equitable distribution of resources can be effective in reducing dissatisfaction. Moreover, attention to the environment, welfare and emergency support will play a significant role.

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### Introduction:

Nowadays, using patient satisfaction for the assessment of healthcare services has become a

reality. In this way, paying attention to the satisfaction of the healthcare recipients has increasingly turned to an important priority for providers of healthcare services (1). The assessment

of patient satisfaction leads to the detection of existing issues, finding required solutions and taking necessary measures. This ultimately allows for permanent improvement of healthcare (2). The most common and serious reason for patients to refer to hospitals is their referral to emergency wards (3). However, emergency wards compared to other hospital wards encounter challenges resulting in reduction of patient satisfaction (4). On the other hand, the quality of the services offered in this ward represents the status of the general services provided by the whole hospital. There are different results about patient satisfaction of the services offered by emergency wards reported in different studies (2-6). The present study aimed to determine patient satisfaction from the services offered by emergency wards at hospitals affiliated to Hormozgan University of Medical Sciences (HUMS) in 2012 so that awareness from the existing status appropriate steps may be taken to improve the quality of services toward achievement of organizational goals.

## Methods:

This cross-sectional descriptive-analytical study was carried out on 363 patients referred to emergency wards at hospitals affiliated to HUMS throughout Hormozgan province from 20 March 2012 to 20 September 2012. Since there was no estimation of patient satisfaction, by considering  $P=0.5$ , confidence of 95% and precision of 5%, the sample size was calculated 384 patients. But in practice, 363 patients were questioned. With regard to the prior statistical data showing the number of people referred to the emergency wards of the hospitals under study, the sample size for each hospital was determined by stratified sampling and the cases for each hospital were randomly selected during the study.

Data were collected by a questionnaire containing the background specifications and 15 questions related to satisfaction from the quality of the services offered by emergency ward. Responses to each question included a 5-point Likert scale (Completely satisfied (4), Satisfied (3), Neither (0), Dissatisfied (2) and Completely dissatisfied (1)). Ultimately, completely satisfied and satisfied choices were considered as satisfied, and

dissatisfied and completely dissatisfied choices were considered as dissatisfied. Then they were used for conclusion and discussion. Statistical analysis was performed by SPSS 19. The description of qualitative data carried out using frequency tables and quantitative data were described by calculation of mean and standard deviation. To analyze the relationship between satisfaction and two-state categorical variables such as gender and marital status Independent sample test was used, and ANOVA was used for more than two variables. Level of significance was considered 0.05.

## Results:

Out of 363 patients referred to emergency wards of the hospitals affiliated to HUMS 170 subjects (46.4%) were male and 193 subjects (52.7%) female. The mean age was  $33.41 \pm 14.74$ . The youngest and oldest subjects were 15 and 79 years old, respectively. The maximum numbers of referred patients (35%) were from 25-35 year-old age-group and the least frequency was from 45-55 age-group (5.7%). From the view point of marital status, 257 ones (70.6%) were married and 107 (29.4%) unmarried. From the view point of educational level, the maximum frequency belonged to those with under high school diploma (38%) and the least frequency held by those who had master degree or above (2%). And finally, from the view point of occupational status, the frequency of housewives was in maximum (124 subjects, 34.3%) and the least frequency belonged to retired ones (10 subjects, 2.8%) as shown in Table 1.

Totally, about 87% of the patients referred to the emergency wards of the hospital affiliated to HUMS were satisfied with the quality of the services provided by the facilities. For most of the provided services the satisfaction was reported from "completely satisfied" to "satisfied". The highest rates of satisfaction were reported for "satisfaction from nursing cares", satisfaction from the behavior of the emergency physicians with the patients" and "satisfaction from the accessibility when needed" respectively with the frequency of 92.6%, 89% and 88% respectively. However, the lowest rates of satisfaction were reported for the quality of meals and cleanliness of the ward and sanitation services

(48% and 66.2% respectively). Table 2 shows the status of satisfaction associated with the emergency

services.

**Table 1. Demographic information about the subjects of the study**

Variable	Frequency	Percentage (%)	
Age	25>	124	33.6
	25-35	129	35
	35-45	38	10.3
	45-55	21	5.7
	55>	41	11.1
Level of education	Illiterate	64	18.4
	Under diploma	132	38
	Associate degree	108	31
	Bachelor	36	10.4
	Master	7	2
Sex	Male	171	46.7
	Female	195	53.3
Marital Status	Single	107	29.4
	Married	257	70.6
Profession	Employee	51	14.1
	Labor	46	12.7
	University student	18	5
	Self-employed	58	16.1
	Retired	10	2.8
	Housewife	124	34.3
	Unemployed	54	15
Hospital	Children's Hospital (1)	40	10.8
	Shariati (2)	17	4.6
	Minab (3)	33	8.9
	Parsian (4)	18	6.9
	Bandar Lengeh (5)	125	33.9
	Haji Abad (6)	24	6.5
	Bastak (7)	12	3.3
	Jask (8)	32	8.7
	Qeshm (9)	21	5.7
	Bandar Khamir (10)	7	1.9
	Roudan (11)	-	-
	Shahid Mohammadi (12)	40	10.8

In the present study, no statistically significant difference was reported by men compared with women, unmarried compared with the married ones, different age groups and the occupations ( $P > 0.05$ ). However, there was significant difference between the subjects of the study from the view point of the level of education ( $P = 0.042$ ).

Moreover, in table 3, significant difference was observed between total satisfactions from the quality of emergency services provided by different hospitals ( $P < 0.001$ ).

A more precise investigation through Post hoc test showed that there was a significant difference

between hospitals of Bastak and Shariati, on one hand, and other hospital in the study from the view point of total satisfaction of the emergency services ( $P < 0.05$ ) on the other. They possessed a better quality of services compared to the services provided by Children's hospital, Minab, Parsian, Bandar Lengeh, Haji Abad, Jask, Qeshm, Bandar Khamir and Shahid Mohammadi. The lowest satisfaction rates in the study belonged to the services offered by Minab and Jask hospitals.

**Table 2. Satisfaction from the healthcare services provided by emergency wards of the hospitals affiliated to HUMS**

Satisfaction	Completely		Satisfied		Neither		Dissatisfied		Completely dissatisfied	
	Frequency	%	Frequency	%	Frequency	%	Frequency	%	Frequency	%
Good conduct, working speed and precision of the staff at admission and discharge	148	40.4	170	46.4	16	4.4	24	6.6	8	2.2
Waiting for the first visit by a physician	121	33.2	185	50.7	20	5.5	32	8.8	7	1.9
Accessibility to physician when needed	113	31.5	176	49	22	6.1	36	10	12	3.3
Physician's comments at the time of treatment and discharge	116	32.2	180	50	27	7.5	30	8.3	7	1.9
Good conduct of emergency physicians and their communication with patients	147	40.8	173	48.1	15	4.2	21	5.8	4	1.1
Nursing care	180	49.9	154	42.7	17	4.7	6	1.7	3	0.8
Nurses' comments and trainings	155	42.6	161	44.2	29	8	14	3.8	3	0.8
Accessibility of the patients to nurses	162	45.6	150	42.3	23	6.5	13	3.7	5	1.4
Quality of meals	63	19	96	29	95	28.7	25	7.6	51	15.4
Cleanliness of the ward and sanitation services	97	26.6	144	39.6	37	10.2	36	9.9	49	13.5
Hospital's environment and weather	90	24.7	164	44.9	41	11.2	42	11.5	27	7.4
Cleanliness and accessibility of sheets and blankets	101	27.7	149	40.8	25	6.8	51	14	38	10.4
The security of hospital	127	35.3	148	41.1	41	11.4	28	7.8	15	4.2
The representative of the related insurance company	93	26.6	144	41.1	64	18.3	30	8.6	18	5.1
Procurement of medication and medical equipment	98	27.4	152	42.5	38	10.6	47	13.1	22	6.1

**Table 3. Distribution of satisfaction from healthcare provided at emergency wards of the hospitals affiliated to HUMS**

Demographic Factors		Completely satisfied		Satisfied		Dissatisfied		Completely dissatisfied		P-value
		Frequency	%	Frequency	%	Frequency	%	Frequency	%	
Sex	Male	58	34.1	92	54.1	20	11.8	0	0.0	0.758
	Female	66	34.2	100	51.8	26	13.5	1	0.5	
Age	25 >	38	30.9	66	53.7	19	15.4	0	0.0	0.808
	25-35	41	32	73	57	13	10.2	1	0.8	
	35-45	16	42.1	17	44.7	5	13.2	0	0.0	
	45-55	9	42.9	9	42.9	3	14.3	0	0.0	
	56 >	11	27.5	22	55	7	17.5	0	0.0	
Marital Status	Single	33	33.1	57	53.8	16	15.1	0	0.0	0.669
	Married	91	35.7	133	52.2	30	11.8	1	0.4	
Occupation	Employee	19	37.3	28	54.9	3	5.9	1	2	0.325
	Labor	17	37.8	20	44.4	8	17.8	0	0.0	
	School/University student	9	5	7	38.9	2	11.1	0	0.0	
	Self-employed	16	27.6	37	63.8	5	8.6	0	0.0	
	Retired	5	50	3	30	2	20	0	0.0	
	Housewife	42	34.1	65	52.8	16	13	0	0.0	
	Unemployed	14	26.4	28	52.8	11	20.8	0	0.0	
Education	Illiterate	28	45.2	28	45.2	6	9.7	0	0.0	0.042
	Under diploma	39	29.5	73	55.3	20	15.2	0	0.0	
	Diploma/Associate degree	42	39.3	54	50.5	11	10.3	0	0.0	
	Bachelor	11	30.6	21	58.3	3	8.3	1	2.8	
	Master and above	1	14.3	3	42.9	3	42.9	0	0.0	

**Table 4. Satisfaction score for the emergency services provided by the emergency wards of the public hospitals of Hormozgan province by geographical location**

Name of Emergency ward	Mean of satisfaction score	Standard Deviation	The lowest satisfaction	The highest satisfaction	The number of participants
Total	42.2	10.4	15	60	366
Children's hospital	43.7	10.8	20	60	39
Shariat	49.8	11.7	24	60	17
Minab	36.6	10.1	16	60	33
Parsian	43.7	12.6	22	60	17
Bandar Lengeh	42.6	9.1	15	60	125
Haji Abad	43	11.9	23	60	23
Bastak	52.7	7.1	39	60	12
Jask	37.3	7.7	21	52	32
Qeshm	42.2	10.8	31	56	21
Bandar Khamir	42.8	10.4	26	40	7
Shahid Mohammadi	42.8	10.4	16	60	40

### Conclusion:

The findings of the study showed that about 87% of the patients referred to the emergency wards at the hospitals affiliated to HUMS throughout the province were satisfied from the quality of the services provided at the centers (ranging from "satisfied" to "completely satisfied"). Studies reported satisfaction with the emergency services in a wide different range (2-6). The total satisfaction obtained from the present study is quite far more than the satisfaction reported from the hospitals affiliated to Tehran University of Medical Sciences (TUMS) (4), Mashhad University of Medical Sciences (2), Shiraz University of Medical Sciences (5), Lorestan University of Medical Sciences (6), Ardebil University of Medical Sciences (7) and Artesh University of Medical Sciences (8). On the other hand, the satisfaction reported with the emergency wards at the medical universities of Qazvin (9) and Tabriz (10) was higher than what reported in the present study.

A report from Morocco showed that just 66% of the patients referred to emergency wards were satisfied with the offered services (11). While a nationwide study in the United States reported satisfaction rate of more than 83% (10).

It is clear that a part of the above difference may be related to the quality of the services in each of the emergency wards. However, the factors which should not be ignored are those differences associated with the characteristics of the population

under study and also most importantly different methods used for the assessment of satisfaction.

In the present study, the lowest rate of satisfaction was assigned to satisfaction with general cleanliness and sanitation services of the emergency wards. This confirms the findings of Solhi et al who studied the emergency wards of teaching hospitals affiliated to Arak University of Medical Sciences (12). Some of the services which are easily detectable in emergency wards are inadequacy of service facilities (i.e. kitchen services and food distribution), general services and providing suitable sanitation services. Therefore, satisfaction may improve remarkably if the logistic authorities pay special attention to this kind of services which are preventable in the emergency wards. This, ultimately, may be useful for the improvement of the services provided at emergency wards.

The reasons for the higher rates of satisfaction reported with Bastak and Shariati hospital in comparison with other appropriate public hospitals of the province are divided into two groups. Firstly, the proper management and appropriate distribution of the services. And secondly, Shariati is a specialty hospital while Bastak hospital just provides services to the population in the same city.

The impact of the demographic characteristics of patients on their satisfaction from the services provided by emergency wards has been studied in earlier researches. However, they led to various findings in this regards (10). Some of them reported the impact of gender, age and level of education on

the rate of satisfaction (3,7) while some others found no impact (8). In more precise researches in Iran, Omidvari et al indicated that male elderly patients with lower education level were more satisfied from emergency services (TUMS hospitals) in comparison with other participants of the study while marital status had no effects on satisfaction (4). However, Sarchami and Sheikhi showed that young female patients were more satisfied from the services provided by the emergency wards of Qazvin hospitals compared to other participants (9). Taheri et al reported that the mean satisfaction of the female patients was more than male patients. Like our study, they found those with higher level of education less satisfied (insignificant) than those with lower level of education.

As discussed earlier, there are several possible causes for explaining the differences between the findings in various studies. The first cause may be the differences in the target population in each study. Different methods used for the assessment of satisfaction in various studies may be another explanation. For example, quantitative or qualitative methods for the assessment of satisfaction may have different results for the effectiveness or ineffectiveness of underlying factors. Therefore, it seems conducting researches for investigating patients' satisfaction from healthcare services still requires methodological amendments and reconsiderations. Moreover, it seems necessary to carry out future studies by the use of standardized questionnaires.

In total, the findings of the present study indicates that the provided services in different fields of medical care, nursing care, behavioral aspects, physical comfort and waiting time had relatively good satisfaction. However, there must be serious efforts to improve the food quality of the patients at emergency wards, special attention to sanitation services and cleanliness of the emergency wards throughout the province. At the end, it seems necessary to set up periodical monitoring of patients' satisfaction of the patients referred to the emergency wards and using the results as one of the indices of healthcare.

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### References:

1. Taylor C, Bengner JR. Patient satisfaction in emergency medicine. *Emerg Med J.* 2004;21:528-532.
2. Saadati Z. Satisfaction of clients referring to emergency wards of a teaching hospital in Mashhad city. *Faculty of Nursing and Midwifery Quarterly.* 2006;16:40-47. [Persian]
3. Roudbari M, Sanjarani F, Hosseini S. The patients' satisfaction of the function of Khatam-Al-Anbia emergency department at Zahedan. *Zahedan Journal of Research in Medical Sciences.* 2010;4:49-53. [Persian]
4. Omidvari S, Shahidzadeh Mahani A, Montazeri A, Azin SA, Harirchi AM. Patients' satisfaction with emergency departments. *Payesh.* 2008;2:141-152. [Persian]
5. Malekmakan L. Effect of intervention on patients' satisfaction of emergency ward in hospitals of Shiraz. *Journal of Jahrom University of Medical Sciences.* 2009;7:51-59.
6. Rezaei K. The patients' satisfaction of the emergency department of the Lorestan University of Medical Sciences. *Yakhteh.* 2003;3:33-38.
7. Entezari Asl M, Motamedi F. The satisfaction of those who recourse to the emergency department of the Ardebil university of medical sciences. *Ardebil University of Medical Sciences Journal.* 2004;3:20-27. [Persian]
8. Ebrahimnia M, Amerion A, Azizabadi M, Khodami H, Herdari S. Patients' satisfaction with emergency care services in military hospitals. *Jhosp.* 2009;8:14-23. [Persian]
9. Sarchami R, Sheikhan MR. Patients' satisfaction of the quality services in emergency departments. *Qazvin University of Medical Sciences Journal.* 2001;5:64-68. [Persian]
10. Jafari Rouhi Ah, Soleimanpour H, Gholipouri Ch, Salarilak Sh, Raoufi P, Vahidi R, et al. Emergency department patient satisfaction survey in Imam

- Reza Hospital, Tabriz, Iran. *Int J Emerg Med.* 2011;4:2.
11. Damghi N, Belayachi J, Armel B, Zekraoui A, Madani N, Abidi Kh, et al. Patient satisfaction in a Moroccan emergency department. *Int Arch Med.* 2013;6:20.
  12. Solhi H, Sirous A, Yaghoubi A, Mehrabian Z. The survey of medical services in emergency departments related to Arak University of medical sciences. The 1<sup>st</sup> Iranian Congress on Emergency Medicine: 2005 Dec 2022: Tehran; Iran.