

Patients' Satisfaction with Triage Nursing Care in Selected Hospitals in Makkah Al-Mukaramah

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Abstract: Background: Patient satisfaction is considered an important indicator of the quality of care from the perspective of the consumer. Satisfied patients are more likely to comply with treatment and take an active role in their own care. However, few studies have examined patient satisfaction with emergency nursing services in the particular area of triage. Triage is the process of determining the priority of emergency patients' treatments based on the severity of their condition. **The study aims** to assess patients' satisfaction with triage nursing care in selected hospitals in Makkah Al-Mukaramah. This is a comparative descriptive study which was conducted in two emergency departments in selected hospitals in Makkah Al-Mukaramah: Al-noor Specialty Hospital which applies triage nursing care and King Faisal Hospital which does not apply triage care. Convenience sampling yielded one hundred patients, 50 from each hospital. Data were collected from March to May 2012. Patients' satisfaction was assessed by using a Consumer Emergency Satisfaction Scale (CESS). **The results** of this study revealed that 60% of the triage group were satisfied with their visit to the emergency department compared to 26% of the non-triage group. There was a statistically significant difference regarding the mean of total nursing care between the triage and non-triage groups. Significant correlations between patients' satisfaction of total care and total education and their age, gender, presence of pain and waiting time were found. **It is recommended** to apply triage nursing care in all hospitals in Makkah Al-Mukaramah.

Keywords: Emergency Department, Patients' satisfaction and Triage nursing care

I. Introduction

Satisfaction can be defined as the extent of an individual's experience compared with his or her expectations. Evaluating to what extent patients are satisfied with health services is clinically relevant, as satisfied patients are more likely to comply with treatment, take an active role in their own care, continue using medical care services, stay within a health provider and maintain a specific system. In addition, health professionals could benefit from satisfaction surveys which identify potential areas for service improvement. Furthermore, health expenditure could be optimized through patient-guided planning and evaluation⁽¹⁾

Satisfaction is not a pre-existing phenomenon waiting to be measured, but a judgment people form over time, as they reflect on their experience. Patients' satisfaction with health care received becomes a priority issue. Satisfied patients are more likely to seek and comply with prescribed treatment regimens⁽²⁾. Patients' participation is being increasingly linked to improvements in the quality of health care and improved health outcomes. There is an increasing impetus for shared decision making and person-centered care. Patient satisfaction is considered an important indicator of the quality of care from the perspective of the consumer and has been widely studied in many settings. However, few studies have examined patient satisfaction with emergency nursing services in the particular area of triage.⁽³⁾

The word "triage" comes from the French word *trier*, which means to sort or to select. Triaging for medical purposes dates back to the days of Napoleon, probably around 1792, when triaging large groups of wounded soldiers was necessary. An effective triage system helps nurses to ensure that patients seeking emergency care "receive appropriate attention, in a suitable location, with the requisite degree of urgency" and that emergency care is initiated in response to clinical need rather than order of arrival^(4,5).

Triage is the process of determining the priority of emergency patients treatments based on the severity of their condition and priority of emergency transport. Its aim are to promote patients' safety and ensuring that resources allocation and timing of care is requisite to the degree of illness. An effective triage system classifies patients into groups according to acuity of illness or injury and aims to ensure that the patients with life threatening illness or injury receive immediate intervention and greatest resource allocation. Triage is an ongoing process involving continuous assessment and reassessment⁽⁶⁾.

Triage nurses must also be able to identify useful cues from large amounts of information in order to perform triage safely. The triage nurse is responsible to rapidly identify and respond to life-threatening

conditions and to make judgment about the potential for life-threatening states. The allocation of a triage category is made on the basis of necessity for time-critical intervention to improve patient outcome, eliminate a potential threat to life or relieve suffering. The decisions made by a triage nurse are a pivotal factor in the initiation of emergency care. Therefore the accuracy of triage decisions has a major influence on the health outcomes of patients^(7,8).

Triage decisions can be divided into primary and secondary decisions. Primary triage decisions relate to the assessment of patients, allocation of a triage category and patient deposition, while secondary triage decisions relate to the initiation of nursing interventions in order to expedite emergency care and promote patient comfort. The triage nurse is the first person that a patient encounters when presenting for emergency care. The triage nurse should be highly skilled in interpersonal and communication skills. S/he has a responsibility to be polite, professional and reassuring while eliciting the information s/he requires to make a triage decision.⁽⁹⁾ Patients and their families should have access to information regarding the triage process. This information should include a simple explanation of the principles of triage, how the patient has been categorized, their expected waiting time and the reason for delays in waiting times.⁽¹⁰⁾

It is important to have a reliable triage system in place which allows for rapid and accurate assessment of patients. The goal of the triage nurse is to accurately assess an ill patients to assign a triage level to guide the appropriate emergency department area for effective evaluation and management. Triage nurses should keep in mind the use of a standardized approach to triage assessment of the patients.⁽¹¹⁾ Once the patient arrives in the ED, the triage process begins. The patients are sorted or classified according to their presenting symptoms. Stable patients are directed to obtain specific demographic information about them and initiate the written or electronic record. The patient is then directed to be evaluated. Stable patients are sent to the triage nurse, who then completes the remainder of the triage assessment. Unstable patients are taken directly to a treatment room for advanced care.⁽¹²⁾

A precise and accurate triage process is critical. The comprehensive triage process supports a rapid assessment and prioritization of patients performed by an educated and experienced nurse. The comprehensive triage process includes evaluation and classification of all incoming patients to the ED, initiation of first aid measures, ordering diagnostic studies and procedures according to prescribed triage protocols.^(13,14) More recently, a five-level system has been suggested for pediatric patients which is similar to the adult five-level acuity classifications: critical, emergent, urgent, non-urgent and fast track.⁽¹³⁾

II. Subjects and Methods

A-Subjects

Design: This study is a correlation descriptive study, that was used to assess patients' satisfaction with triage nursing care system in Emergency Department.

Setting: Two hospitals in Makkah Al-Mukaramah :

- 1- Al-Noor speciality hospital: This hospital applies triage nursing care system.
- 2- King Faisal hospital: This hospital does not apply a triage system .

Sample: A convenience sample was drawn from patients who attended the ED from March 2012 to May 2012. The study included 50 patients from Al-Noor hospital, which applies the triage system, and 50 patients from King Faisal hospital, which does not apply the triage system.

Tools: Two tools were used in this study. The first tool was a questionnaire sheet that was developed by the researchers to collect socio-demographic data about the patients involved in this study, it included age, gender, presence of pain and chronic illness. The second tool was Consumer Emergency Care Satisfaction Scale (CECSS). The CECSS was used to examine patient satisfaction with triage nursing care. This tool consists of 12 items which reflect the assessment of nursing care, while teaching is recorded in 3 items. The CECSS also contains four negatively worded filler items to minimize response set bias. It was classified into five-point Likert-type rating scale demonstrating the degree of satisfaction with each statement. Possible responses ranged from strongly disagree (1) to strongly agree (5). A higher score represents a higher degree of satisfaction with ED nursing. A total score of more than 60% indicated satisfaction, while a score less than 60% indicated dissatisfaction⁽¹⁴⁾. A pilot study was conducted on 10 patients. Minor modifications were made to the questionnaires as a result. Validity and reliability of the questionnaires were also tested.

Data collection: Interviews were conducted with patients and a simple explanation about the aim of the study was given. Those who agreed to participate were involved in the study before being charged from the ED. They completed the questionnaire before their medical consultation to ensure that the satisfaction scores obtained were related to the triage nursing care and not any other nursing care received in the ED.

B-Methods: The researchers collected data from the Emergency Department at Al-Noor specialty hospital which applies a Triage system and King Faisal Hospital which does not apply a triage. Approval was taken from the Hospitals' managers and from the head of the Emergency Departments before starting to collect data.

Statistical analysis: SPSS software package version 15 was used for the statistical analysis. Simple frequencies mean, standard deviation, Chi square and P test were used when appropriate.

III. Results

Regarding patients' demographic data (table 1), the average age of patients was 41.5 ± 1.85 in the triage group, while it was 38.5 ± 2.41 in the non-triage group. Slightly more than half of the sample (54% and 52%) of both the triage and the non-triage group were males. Forty two and 56% of the triage and the non-triage group respectively had pain. Presence of a chronic illness was reported by half of the triage group and 62% of the non-triage group.

Figure (1) shows the percentage of patients who received baseline assessment and those who received specific nursing care. Nearly two thirds of the triage and non-triage group (64% and 66% respectively) received baseline assessment compared to 36% of the triage group and 34% of the non-triage groups who received specific nursing interventions.

Regarding waiting times, figure (2) illustrates that 58% of the triage group waited for less than 15 minutes and 8% who waited for 45 to 60 minutes. Sixteen percent of the non-triage group reported a waiting time of 15 to 30 minutes and 52% reported a waiting time of 45 to 60 minutes. The mean of the waiting time was 20.42 ± 12.69 minutes in the triage group and 39.70 ± 13.14 minutes in the non-triage group. There were statistically significant differences regarding the mean of waiting time between both groups.

Table (2) presents patients' satisfaction regarding nursing care and health teaching. Nearly two thirds (68%) of the triage group reported that the nurse understood when listening to their problems compared to half of the non-triage group. 'The nurse is busy to spend time talking with me' was reported by 38% and 68% of the triage and the non-triage group respectively. Equal percentage (72%) of the triage group reported that the nurses were gentle when performing painful skills and understood how they felt, compared to 48% and 28% respectively of the non-triage group. The mean of the satisfaction with total nursing care was 24.56 ± 1.85 in the triage group and 22.24 ± 1.94 in the non-triage group. There were statistically significant differences regarding the mean of the satisfaction with total nursing care between the triage and the non-triage groups. 68% of the triage group reported that, the nurse instruct them about home self-care, and told me what to expect at home compared to 34% and 36% of the non-triage group respectively. The mean of total teaching was 4.96 ± 0.93 and 4.1 ± 0.78 in the triage and the non-triage group respectively. Statistically significant difference was found between the two groups.

Satisfaction with nurses and the general environment were illustrated in table (3). Nearly one third of the triage group (32%) mentioned that the nurse was genuine compared to only 10% of the non-triage group. 34% and 34% of the triage group reported that, the nurse is efficient and 32% mentioned that the nurses respect privacy compared to equal percent of 14% of the non-triage group who reported the same response. Nearly one quarter of the triage group (24%) mentioned that the nurse warmly welcomed them on admission compared to 20% the non-triage group and 40% of the triage group mentioned that they received a fair welcome compared to 30% of the non-triage group. Thirty two percent and 18% of the triage group mentioned quiet and disturbing environment respectively compared to 20% and 26% of the non-triage group who reported quiet and disturbing environment respectively. There were statistically significant differences regarding satisfaction with the environment.

As for the overall patients' satisfaction with their experience at the emergency department, table (4) shows that 60% of the triage group were satisfied with their emergency visit compared to 26% of the non-triage group and there was a statistically significant difference. Equal percentage (38%) of both triage and non-triage group were satisfied with the services. Twenty six percent and 46% of triage and non-triage group respectively reported satisfaction with the environment and there was a statistically significant difference. Slightly more than two thirds of the triage group (68%) mentioned the need to increase the number of staff to enhance emergency services compared to 36% of the non-triage group. Statistically significant difference was found regarding the efforts to enhance emergency.

Table (5) shows the correlations between Patients' satisfaction of total care / total education received by nurses and their age, gender, presence of pain, presence of chronic illness and waiting time. It was evident that there were significant correlations between patients' age and pain, significant correlations were also found between patient gender, pain and waiting time. It was clear that there are significant correlations between total education, patients' pain and waiting time. Total nursing care, patients' illness and waiting time also shows statistically significant correlations.

Table 1. Distribution of patients according to demographic data

Characteristics	Triage group		Non triage group	
	n=50	%	n=50	%
Age :				
• 20 < 35 years	16	32	18	36
• 35 < 50 years	17	34	9	18
• 50 - 65 years	17	34	23	46
Gender:				
• Male	27	54	26	52
• Female	23	46	24	44
Presence of pain				
• Yes	21	42	28	56
• No	29	58	22	44
Presence of chronic illness:				
• Yes	25	50	31	62
• No	25	50	19	38
Types of chronic illness				
• Respiratory	17	34	14	28
• Hematological?	15	30	15	30
• Diabetes	15	30	14	28
• Renal	3	6	7	14

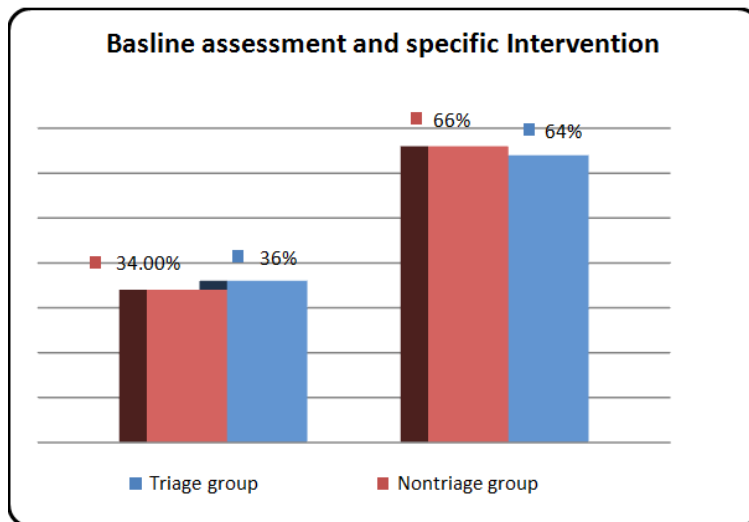


Figure (1) Distribution of patients according to whether they received baseline assessment or specific nursing interventions

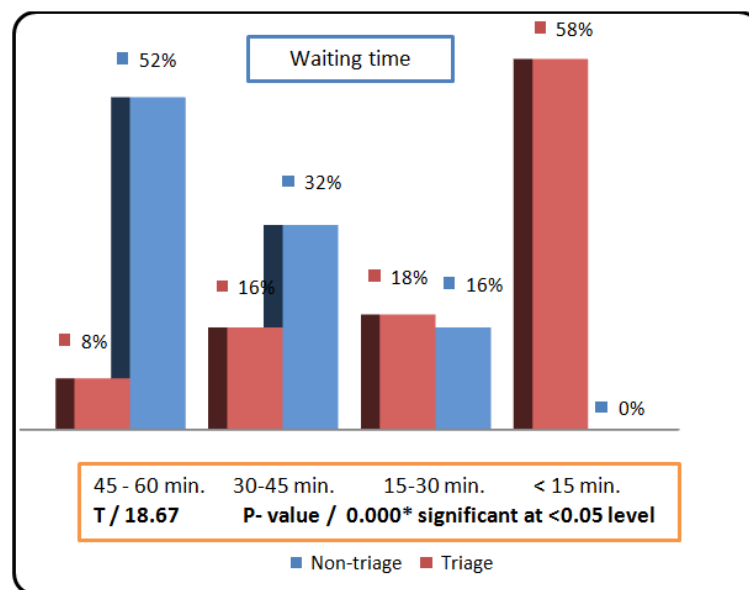


Figure (2) Distribution of patients according to waiting time

Table 2. Distribution of patients according to satisfaction about nursing care and health teaching .

Items	Triage group		Non triage group		
	Agree		Disagree		
	n=50	%	n=50	%	
Caring:					
1	The nurse performed his/her duties with skill	28	56	25	50
2	The nurse knew something about my illness	41	82	25	50
3	The nurse knew what treatment I needed	32	64	22	44
4	The nurse have been more attentive than he/she was	19	38	34	68
5	The nurse explained procedures before they were done	27	54	26	52
6	The nurse explained things in terms I could understand	31	62	19	38
7	The nurse understood when listening to my problem	34	68	25	50
8	The nurse was busy to spend time talking with me	19	38	34	68
9	The nurse seemed genuinely concerned about my pain,	26	52	23	46
10	The nurse was gentle when performing painful skills	36	72	24	48
11	The nurse seemed to understand how I felt	36	72	14	28
12	The nurse gave me a chance to ask questions	31	62	21	42
13	The nurse treated me as a number instead of a person	21	42	37	74
14	The nurse appeared to take time to meet my needs	36	72	22	44
15	The nurse made sure that all my questions were answered	32	64	26	52
16	The nurse was not very friendly	26	52	32	64
Mean of total Nursing care		24.56±1.85		22.24±1.94	
$\chi^2 / 35.00$					
P / 0.000*					
Teaching:					
1	The nurse instructed me about home self care	44	68	12	34
2	The nurse told me about my problems	27	54	17	34
3	The nurse told me what to expect at home	34	68	18	36
Mean of total Teaching		4.96±0.93		4.1±0.78	
$\chi^2 / 13.20$					
P / 0.004*					

N.B. Table shows positive responses only.

*Significant at ≤ 0.05 level

Table 3. Distribution of patients according to satisfaction about nurses and general environment.

Items	Triage group		Non triage group		χ^2	P	
	Satisfied		Satisfied				
	n=50	%	n=50	%			
1-Personal Qualities of Nurse:							
•	Caring	13	26	11	22	3.60	0.308
•	Helpful	11	22	11	22		
•	Calm	10	20	23	46		
•	Genuine	16	32	5	10		
2-Professional Qualities of Nurse:							
•	Efficient,					6.16	0.104
•	Knowledgeable	17	34	7	14		
•	Privacy respected	8	16	10	20		
•	Treated everyone equally	16	32	7	14		
3-Nurses welcomed the patients:							
•	Very Good	12	24	10	20	5.36	0.147
•	Good	20	40	15	30		
•	Bad	12	24	9	18		
•	Nothing	6	12	16	32		
4-Environment:							
•	Comfortable	11	22	15	30	16.8	0.002*
•	Quiet	16	32	10	20		
•	Disturbing	9	18	13	26		
•	Clean	14	28	12	24		

Table shows positive responses only.

*Significant at ≤ 0.05 level.

Table 4. Distribution of the overall patients' satisfaction with their ER experience.

Satisfaction about ER experience	Triage Group		Non triage group		χ^2	P
	n= 50	%	n=50	%		
1) Emergency visit						
• Good	30	60	13	26	6.02	0.049*
• Fair	12	24	22	44		
• Poor	8	16	15	30		
2)What did you like in ER?						
• Service	19	38	19	38	23.1 2	0.000*
• Environment	13	26	23	46		
• Nurse behavior	10	20	3	6		
• Flexibility	8	16	5	10		
3) Efforts to enhance emergency						
• Increase number of staff	34	68	18	36	43.0 4	0.000*
• Larger Waiting room	18	18	13	26		
• Increase number of equipment	8	8	14	28		
• ensure presence of doctors at all times	6	6	5	10		

N.B. Table shows positive responses only.

*Significant at ≤ 0.05 level.

Table 5. Correlations between patients' satisfaction with total care and total education and their age, gender, presence of pain, chronic illness, waiting time,

Items		Age	Gender	Pain	Illness	Waiting	Total care	Total education
Age	-	-						
Gender	r	0.058	-					
	P	0.568	-					
Pain	r	0.225*	0.162	-				
	P	0.025	0.108	-				
Illness	r	-0.106-	0.255*	-0.098-	-			
	P	0.295	0.010	0.330	-			
Waiting	r	0.010	-0.205*	-0.075-	-.186-	-		
	P	0.925	0.041	0.458	.064	-		
Total care	r	0.134	0.145	0.052	-.248*	0.411**	-	
	P	0.182	0.150	0.604	.013	0.000	-	
Total education	r	0.014	0.023	-0.231*	.141	0.209*	0.130	-
	P	0.890	0.821	0.021	0.161	0.037	0.196	-

* Correlation is significant at the 0.05 level.
 ** Correlation is significant at the 0.01 level.

IV. Discussion

Patient satisfaction is an attitude a person's general orientation towards a total experience of health care. Satisfaction comprises both cognitive and emotional facets and relates to previous experiences, expectations and social networks. Patient satisfaction should form part of continuous improvement. It is a method of evaluating the quality of health services provided to patients. Patient satisfaction with emergency nursing services in the particular area of triage needs further studies. Triage is the process of determining the priority of emergency patients' treatments based on the severity of their condition. This study aims to assess patients' satisfaction with triage nursing care in selected hospitals in Makkah Al-Mukaramah.

The present study revealed that slightly more than one half of the patients in both triage and non-triage group were males. A statistically significant difference was found regarding the mean of waiting time between the triage and non-triage group. This may be explained by the fact that sorting and classifying patients in the emergency department helps the nurse to determine the priority of care. Nurses also are able to provide immediate nursing intervention according to the hospital policy. All of the those actions help in decreasing the waiting time and length of stay in ER.

This finding is congruent with the study of Choi YF et al., (2006) revealed that triage system improves the waiting time and processing time in busy EDs without additional staff. This improvement reflects improved efficiency of patient processing.⁽¹⁵⁾ The results of the current study contradict the results of Harding K.A (2012) who reported that the triage process ensured rapid service for a small number of urgent referrals, but made little difference to the waiting time of the vast majority of patients.⁽¹⁶⁾

Statistically significant differences were found between the triage and the non-triage group regarding the nursing care. Patients' satisfaction regarding nursing care was found in two thirds of the triage group and half of the non-triage group. Slightly less than three quarters of the triage group reported that the nurses were

gentle and understanding compared to slightly half and nearly one quarter of the non-triage group. This difference in patients satisfaction may have occurred because triage nurses explain and discuss important interventions with patients during their assessment. Nurses also directed the patients throughout the emergency visit and also gave them health teaching and immediate care.

The current findings are consistent with the study of Daniel I. (2012) which explored patient satisfaction with nursing care variable, answer, explain, trust, respect, courtesy and availability. These findings support the importance of the interpersonal aspect of nursing practice.⁽¹⁷⁾ The results of the current study are also consistent with previous studies that found that patients expect nurses to be: friendly, kind, quick to respond to patients' needs and to have adequate time to provide care Kane et al. (2007)⁽¹⁸⁾

The findings of this study revealed that, patients' characteristics, such as age, gender, presence of pain and previous illness are related to patient satisfaction of total care and education. These results are congruent with the findings of Bacon & Mark, (2009) who reported that there is a correlation between patients' satisfaction and cultural background, age, sex, and education.⁽¹⁹⁾ Other studies did not find any relationships between patient satisfaction and demographic variables Laschinger et al., (2011)⁽²⁰⁾. Patients' satisfaction in the present study was correlated to waiting time. As reported in the results of this study, a decrease in waiting time in the triage group led to an increase of the patients' satisfaction with nursing care provided.

V. Conclusion

Patients were generally satisfied with the care provided by the triage nurses. Measuring patient satisfaction with triage nursing care remains a major challenge for health care providers in emergency care settings. There is a significant difference to overall patient satisfaction with total nursing care and total education. Statistical significance correlation was found between the total care, total education and gender, presence of pain and waiting time.

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Triage: decide capital or not, emergency department capital or not

Is it A triage system or THE triage system

VI. Recommendations

1. Application of nursing triage in all hospitals in Saudi Arabia.
2. Developing an educational program for nurses working in non-triage hospitals so that they can learn to apply the triage system in Emergency Departments.
3. Enforcing patients' satisfaction as an indicator of the quality of nursing care provided in Emergency Department.
4. Further studies are needed to evaluate the effectiveness of triage nursing care in decreasing the health hazards resulting from delaying in nursing / medical interventions.

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