

## Mothers Satisfaction with Triage Nursing Care System for their Children in Pediatric Emergency

Hanan T., Elbahnasawy<sup>1</sup>, Mohamed F., Elmomani<sup>2</sup>, Samya A., Elnagar<sup>3</sup>, and Hadeel M., Taleb<sup>4</sup>

Pediatric Nursing, El-Menoufya University, Egypt<sup>1&3</sup>, Adult Nursing-Isra University, Jordan<sup>2&4</sup>, Critical Nursing<sup>4</sup>

---

**Abstract:** Mothers satisfaction is considered an important indicator of quality care from the perspective of the consumer and has been widely studied in many setting. However, few studies have examined mother's satisfaction with emergency nursing services in the particular area of triage. **Aim:** This study aims to assess the mother's satisfaction with triage nursing care system for their children in pediatric emergency. **Design:** Descriptive design was used in this study. **Setting:** Pediatric Emergency Department in Jordan university hospital. **Sampling:** A systematic random sampling method with criteria (triage level III, IV and V) were used in this study, 240 children with their mothers were randomly chosen. **Tools:** Consumer Emergency Care Satisfaction Scale (CECSS); this instrument was used. **Findings:** Most of mothers were age of 30 years and two thirds of them highly educated and working mothers. Concerning of children ages third of them were 1-3 years old, while half of them were male and two thirds of them complained from pain during their attendance at the pediatric ED. Two thirds of nurses were female for shift applying triage and half of them were 3-5 years of experience, while most of them had a bachelor degree. Half of children were classified as level IV or semi urgent. The majority of mothers had a higher degree of satisfaction with pediatric ED nursing care but the teaching items around half and two thirds of them had satisfaction in the all items. Regarding to professional qualities of nurses half of mothers saw that the nurses efficient, professional and personal quality of caring nurses. Regarding welcome nurse to the mothers and their children were less than half described it as very good. Positive relations between the mothers' satisfaction and nurses socio-demographic characteristics as education and their experience. There were statistical significant differences regarding satisfaction. **Recommendations:** Use of different triage scale and more qualified personnel performing triage to safety risk for the pediatric patients. Triage nurses require excellent communication and assessment skills as well as knowledge of the legal and professional principles that underpin their practice. Continuing training on triage systems for nurses will improve staff capacity building in Jordan and elsewhere in the pediatric ED. There should be continuing evaluation of the effectiveness of triage training programmes on the perceptions, practice and knowledge of triage nurses. Developing an educational program for pediatric nurses to improve their communication skills and thus improve the way of conveying information to and from pediatric patients.

**Keywords:** Mothers satisfaction, Children, Nurses, Triage, Pediatric Emergency Department.

---

### I. Introduction

Triage is a dynamic process as the patient's condition may change rapidly. It is a system of clinical risk management used to manage patient flow safely when clinical need exceeds capacity. It enables the patient to be allocated the most appropriate assessment or treatment area and/or clinician (1).

Pediatric triage plays an important part in mixed emergency departments where non-pediatric trained nurses need a system that is quick, easy, reliable and reproducible. Derived from the French verb 'to sort', triage is a form of assessment, determining the patients' clinical priority using subjective and objective evidence to categories patients in the Emergency Department(ED) (2).

Triage can occur at any and every step of the patient journey from pre-hospital care, to ED and the pediatric wards. A major aim is to give the patient the right care, at the right time and in the right place. Ideally, triage tools should be quick, valid, reproducible and dynamic to reflect the patient's changing condition. They should also be strongly predictive of clinical outcome and resource utilization (3).

Triage is the first point of clinical contact for all children presenting to the Emergency Department and the point at which care begins. children are seen by doctors or taken in for tests or further examination in the order of urgency for medical attention set by the triage nurse (4).

Canadian Pediatric Triage Categories' assign children to five priority categories that reflect the urgency with which care is required: Triage level I critically ill children who are dying or having life threatening condition and need immediate resuscitation. Triage level II other critically ill children or emergent. Triage level

III urgent children who must be seen in the ED and should be re-evaluated during the waiting period 30 minutes. Triage level IV less-urgent children who need to be seen in ED and can wait for a certain period of time as 60 minutes. Triage level V non-urgent patients who may safely wait for a long period to be seen or triaged for care to a clinic or primary health care provider (5).

Consumer/mothers satisfaction is considered an important indicator of quality care from the perspective of the consumer and has been widely studied in many settings. The effect of triage on reducing waiting times is well documented. Waiting times in the ED affect patients' satisfaction with care but may also have serious complications that adversely affect health outcomes. So, prolonged waiting times at triage sites are the most common reason for patients and families' dissatisfaction with ED care (6).

The triage nurse's basic job is to evaluate patients and determine the severity of illness or injury. It is process for sorting injured people into groups based on their need for or likely benefit from immediate medical treatment. Nurses must communicate with mothers, listen to the health problems for their children and ask pertinent questions (7).

## **II. Aim of the study**

This study aims to assess the mother's satisfaction with triage nursing care system for their children in pediatric emergency.

## **III. Research questions:**

1. Are the mothers satisfied from nursing care and their teaching?
2. Is there a relation between the mother's satisfaction and nurse's education and their experience?

## **IV. Subjects and Methods**

### **Research design:**

Descriptive design was used in this study.

### **Technical Design:**

#### **Setting:**

Pediatric emergency department in Jordan university hospital. This hospital applies triage nursing care system from 9 am until 9 pm after this period doesn't apply triage system in pediatric emergency. Jordan university hospital follows the Canadian Pediatric Triage Categories'.

### **Sample:**

A systematic random sampling method with criteria (triage level III, IV and V) were used in this study, 240 children with their mothers were randomly chosen from the total children were visited the pediatric emergency department in the same period in the previous year was estimated around 1170 child. This means that, in order to reach the desired sample size, every third child was recruited. The first child and time (a.m. or p.m. shift) was selected randomly. were approached to participate over a period of 2 months.

### **Tools of data collection:**

Consumer Emergency Care Satisfaction Scale (CECSS); this instrument was developed by Davis in 1988 (8) and revised in 1997 was used. The researchers were used it to examine mother's satisfaction with the use of triage nursing care for their children, it included the following:

- a) Socio-demographic data for mothers, their children and nurses. The first recorded mother's demographic data, including age, educational level and occupation. The second recorded child age, gender, presence of pain, past medical and surgical history, category of illness/injury, and types of specific nursing intervention received. The third nurse's demographic data as gender, work experience in pediatric ED and educational level.
- b) Nurses recorded according children triage categories, types of nursing intervention such as base line assessment (vital signs) and specific intervention (airway assessment and fever management) and waiting time from 15 minutes till 90 minutes.
- c) Assessment of nursing care is demonstrated in 12 items while teaching is recorded in 3 items. The CECSS also contains four negatively worded filler items to minimize response set bias .For each item,

respondents indicate on a five-point Likert-type rating scale the degree to which they agree with each statement. Possible responses range from strongly disagree 1 point to strongly agree 5 points. A higher score represents a higher degree of satisfaction with ED nursing. The scoring method had the total possible score ranging from 15 to 75 (15 items). A total score more than 45 indicates mothers satisfaction, and scores less than 45 indicate dissatisfaction. Scores on the caring subscale (12 items) have ranged from 12 to 60, with scores more than 36 indicating satisfaction. Scores on the teaching subscale (3 items) have ranged from 3 to 15 and a score of more than 9 indicates satisfaction.

d) Assessment of mothers satisfaction related to personal qualities of nurse (Efficient, Professional, Knowledgeable, Privacy respected and Treated every one equally), professional qualities of nurse (Caring, Helpful, Calm and Genuine), welcome nurse to children and their mothers (Very Good, Good, Nothing, Bad and Very bad) and general environment (Comfortable, Quiet, Disturbing, Clean and Unclean).

e) Record of the overall mother's satisfaction regarding pediatric ED visited. Three questions regarding of mothers visiting experience to pediatric ED.

#### **Pilot study:**

A pilot study was carried out on 10 children with their mothers and 5 nurses from the pediatric emergency department in Jordan University Hospital. It was conducted to test clarity and simplicity of questions and to check the most common topics related to the study. Necessary modifications were done by exclusion of some items which is not clear to the participants. Children with their mothers and nurses who shared in pilot study were excluded from main study sample.

#### **Operational Design:**

##### **Ethical considerations:**

Personal communication was done with mothers and nurses to explain the purpose of the study and assure their best possible cooperation. The researcher emphasized to mothers and nurses that the study was voluntary and anonymous. They had the full rights to refuse to participate in the study or to withdraw at any time without giving any reason.

##### **Field work**

- Preparation of data collection tools was carried out over a period of two months from the first April 2013 to the end of May 2013.
- Triage nurses were asked to complete the nurse demographic sheet. Mothers who agreed to participate completed the questionnaire, before their children were discharged from the pediatric ED. They completed the questionnaire before their medical consultation to ensure that the satisfaction scores obtained were related to the triage nursing care and no other nursing care received in the ED
- The Pediatric Emergency Department (PED) chosen for the study was in Jordan university hospital. There was a high attendance rate in the PED, which was fully staffed on a 24-hour basis. Triage was managed in the daytime till 9 pm after this period doesn't apply triage system in pediatric emergency. All children are triaged by the emergency triage nurse and a triage category assigned to each child according to Canadian Pediatric Triage Categories'.

##### **Statistical design:**

The statistical analysis of data was done using the excel program and the statistical package for social science (SPSS) program version 11. The first part of data was a descriptive one. Data were revised, coded, and statistically analyzed using the proportion and percentage, also one way Anova analysis.

## **V. Results**

Table(1) showed that 81.6% of mothers were ages of 30 years or more, 60% of them were highly educated and 56.7% were working mothers, while 32.5% of children their ages were 1-3 years old, also 52.3% were male. While 76.7% of them complained of pain during their attendance at the pediatric ED. Also 8.4% had chronic illnesses such as cystic fibrosis and bronchial asthma.

Table (2) explained that 67.5% of the triage nurses were females for shift applying triage. Also 20% of nurses had less than 3 years' of experience and were 35.8% had 5 years' experience. The majority of them in triage nurses were 74.2% had Bachelor degree.

Table (3) illustrated that 38.4% of children were classified as level III or urgent and level IV or semi-urgent were 50.8%. Around 51.7% of children had received specific nursing intervention in the form of airway

management and fever management with triage compared to 41% of children received base line assessment as vital signs. Regarding waiting time around 50.8% of children waited for less than 30 min compared to 32.5% of children wait for a period between 30 minutes to less than 60 minutes.

Table (4) explained the mother's satisfaction with caring and teaching. Concerning caring, the percentage of satisfaction ranged from 84.2% in the first item (The nurse performed his/her duties with skill) and similar in sixth item (The nurse was understanding when listening to my child problem) to 91.7% in eighth item (The nurse was as gentle as he/she could be when performing painful procedures to my child.) and 86.7% in tenth item (The nurse gave me a chance to ask questions). In general the percentage of mother's satisfaction in the triage group was higher. Regarding teaching, also the mothers were satisfied with the three items of this section, (The nurse gave me instructions about caring for my child at home), (the nurse told me what problem to watch for my child), and (the nurse told me what to expect at home). These percentages were 72.5%, 57.5% and 60.9% respectively for children with triage group. **Table (4) answered the research question number one.**

Table (5) shows the mothers satisfaction about nurse and general environment. Regarding to professional qualities of nurses 53.3% of mothers saw that the nurses efficient and professional. Regarding to personal quality of nurses, 51.7% of mothers were satisfied about caring. Regarding welcome nurse to the mothers and their children were 47.5% described it as very good. Around 10% with triage described welcome nurse to them as very bad. Concerning to environment, the mothers had different satisfaction levels regarding comfort, quietness and cleanliness 15%, 17.5%, and 15.8%, versus disturbance and uncleanliness 38.3% and 13.3%, respectively.

Table (6) illustrated that the over all mothers' satisfaction concerning the pediatric ER visited. Mothers belonging to the shift where applied triage were satisfied 68.3% versus 31.7% not satisfied respectively. The mothers liked the service in pediatric ED were 49.2% and 33.3% liked the nurse behavior. The mothers hopes the waiting room should be large were 37.55 & 35.8% of them thought the doctors should be present all time.

Table (7) It showed that the positive relations between the mothers' satisfaction and nurses socio-demographic characteristics as education and their experience. There were statistical significant differences regarding satisfaction. **Table (7) answered the research question number two.**

**Table (1) Distribution of mothers characteristics and their children according to demographic data (No=240).**

Characteristics	Group with triage	
	No	%
<b>Mother</b>		
<b>Age</b>		
20-	10	4.2
25-	34	14.2
30 or more	196	81.6
<b>Education</b>		
Read and write	22	9.2
Secondary	74	30.8
High education	144	60
<b>Employee</b>		
Working	104	43.3
Not working	136	56.7
<b>Child</b>		
<b>Age</b>		
< 1	70	29.2
1-3	78	32.5
4-6	60	25
7 or more	32	13.3
<b>Gender:</b>		
-Male	126	52.5
-Female	114	47.5
<b>Presence of pain</b>		
-Yes	184	76.7
<b>Chronic illness:</b>		
-Yes	20	8.4
<b>Chronic illness</b>		
Bronchial Asthma	2	.8
DM	2	.8
Congenital Heart disease	2	.8
Kidney disease	2	.8
Cystic Fibrosis	12	5
None	220	91.8

**Table (2) Distribution of nurse's characteristics according to demographic data.**

Characteristics of Nurses	No	%
<b>Gender:</b>		
-Male	78	32.5
-Female	162	67.5
<b>Educational level</b>		
-One year Emergency nursing	20	16.7
-Diploma	178	74.2
-Bachelor degree	40	8.3
-Master degree	2	.8
<b>Work experience in PED</b>		
<3 years	48	20
-( 3-5year)	122	50.8
-(6-10year)	40	16.7
-(11-15year)	30	12.5

**Table (3) Distribution of children according to triage category, nursing intervention and waiting time (No=240).**

Items	No	%
<b>Triage Levels:</b>		
-Level III urgent	92	38.4
-Level IV semi-urgent	122	50.8
-Level V non urgent	26	10.8
<b>Nursing Intervention</b>		
1-Base line assessment(vital signs)	82	34.2
2-Specific intervention	124	51.7
-airway assessment	8	3.3
-fever management	26	10.8
<b>Waiting times:</b>		
<30min.	122	50.8
-30- <60min.	78	32.5
-60-90min.	40	16.7

**Table (4) Distribution of mothers satisfaction regarding to caring and teaching (No=240).**

Items	Group with triage	
	Satisfied	
	No	%
<b>Caring:</b>		
1-The nurse performed his/her duties with skill	202	84.2
2-The nurse seemed to know something about my child illness/problems.	148	61.7
3-The nurse knew what treatment my child needed	154	64.2
4- The nurse explained procedures before they were done to my child	178	74.2
5-The nurse explained things in terms I could understand	180	75
6-The nurse was understanding when listening to my child problem	202	84.2
7- The nurse seemed genuinely concerned about my child pain and fear.	192	80
8- The nurse was as gentle as he/she could be when performing painful procedures to my child.	220	91.7
9- The nurse seemed to understand how my child felt.	196	81.7
10- The nurse gave me a chance to ask questions	208	86.7
11- The nurse appeared to take time to meet my child needs.	164	67.3
12- The nurse made sure that all my questions were answered.	188	78.4
<b>Teaching:</b>		
1-The nurse gave me instructions about caring for my child at home	174	72.5
2-The nurse told me what problems to watch for my child.	138	57.5
3-The nurse told me what to expect at home	146	60.9

**Table (5) Distribution of mothers according to their satisfaction regarding the nurse and general environment (No=240).**

<b>1-Professional Qualities of Nurse:</b>	<b>No</b>	<b>%</b>
-Efficient, Professional	128	53.3
-Knowledgeable	76	31.7
- Privacy respected	20	8.3
-Treated every one equally	16	6.7
<b>2-Personal Qualities of Nurse:</b>		
- Caring	124	51.7
- Helpful	82	34.2
- Calm	28	11.7
-Genuine	6	2.4
<b>3-Welcome nurse to patient:</b>		
-Very Good	114	47.5
-Good	76	31.7
- Nothing	20	8.3
-Bad	6	2.5
-Very bad	24	10
<b>4-General Environment:</b>		
-Comfortable	36	15
-Quiet	42	17.5
-Disturbing	92	38.3
-Clean	38	15.8
-Unclean	32	13.4

**Table (6) Distribution of the overall mother's satisfaction regarding pediatric ED visited (No=240).**

	<b>Group with triage</b>	
	<b>No</b>	<b>%</b>
<b>1-Are you satisfied when visit PER</b>		
-Very satisfied	164	68.3
-Not satisfied	76	31.7
<b>2-What did you like in PER?</b>		
-Service	118	49.2
-Environment	42	17.5
-Nurse behavior	80	33.3
<b>3-Efforts to enhance emergency experience</b>		
-Increase number of staff	20	8.3
-Waiting room should be large	90	37.5
-Increase number of equipment	44	18.4
-The doctors should be present All time	86	35.8

**Table (7): Relations between the mother's satisfaction and the nurse's socio-demographic characteristics as educational level and there experience.**

<b>Socio-Demographic Characteristic</b>	<b>%</b>	<b>Mothers Satisfaction Mean (±SD)</b>
<b>Educational level</b>		
- One year Emergency nursing	16.7	10.61± (1.17)
-Diploma	74.2	25.15± (21.74)
-Bachelor degree	8.3	3.30± (5.21)
-Master degree	.8	29.05± (31.6)
ANOVA	F =1.18	
P- value	.002	
<b>Work experience in PED</b>		
<3 years	20	5.71 (1.64)
-( 3-5year)	50.8	17.47 (2.61)
-(6-10year)	16.7	3.00 (1.44)
-(11-15year)	12.5	4.05 (1.25)
ANOVA	F=1.58	
P-value	.016	

SD: Standard Deviation  
 Statistical Significant (P<0.05)

## VI. Discussion:

Triage is an important first step in the patients hospital journey and fundamental to emergency department functioning. Pediatric triage plays an important part in mixed emergency departments where non pediatric trained nurses need a system that is quick, easy, reliable and reducible. (9)

Triage is a process of sorting and prioritizing patients for care. It is aimed to ensure that patients are treated in the order of their clinical urgency and that they receive treatment in a timely and appropriate manner. Patients and parents satisfaction with health care services reflects the quality of care provided and is frequently considered an important indicator of quality care (10).

Regarding to socio-demographic characteristics of the mothers and their children. The findings of the current study revealed that in (table 1); most of mothers were age of 30 years and two thirds of them highly educated and working mothers. Mothers today are better informed about many aspects of quality of care, and they often have choices about where to receive medical care and from whom. As a result, of being better informed about health care, they are likely to become more assertive and have higher expectations of both the quality and volume of health services to which they are entitled. Concerning of children ages third of them were 1-3 years old, while half of them were male and two thirds of them complained from pain during their attendance at the pediatric ED. These findings were agreement with **Garcia et al**, who stated that the majority of mothers aged from 25-30 years, but the high educational level was observed among fathers than mothers and illiteracy rate among mothers was 42.6%. Also, the mean age of children were 2.74+ 2.73 years, the number of female less than male children and most of them complained from pain during attendance of pediatric ED (11).

Concerning to the socio demographic data of nurses the present study found that in (table 2); two third of nurses were female for shift applying triage and half of them were 3-5 years of experience, while most of them had a bachelor degree . This finding was supported by the research on nursing education and how it affects the quality of care by **Blegen et el** showed that baccalaureate-level nursing education was stronger on quality, defined as maximizing patient outcomes rather than minimizing threats to patient safety. They also found that higher educational attainment was associated with faster and more continuous learning during the first year of practice, and suggested that this relationship might decrease over time or might remain constant. However, these results are only generalizable to inpatient nursing care. In ED triage, nurses require additional skills and special educational preparation for their role (12). Also In contrast with **Bradman and Maconochie** who found that sixty one point eight percent of the nurses were 1-5 years of work experiences. But contradicted with qualification of nurses that most of nurses in his study had diploma degree (13).

Regarding to distribution of children according to triage category, nursing intervention and waiting time. Finding of the current study in (table 3); reflected that half of children were classified as level IV or semi urgent. Also half of them had received specific nursing care intervention compared one third of them received base line assessment while half of children with waited for less than 30 minute, compared with one third of them waited for a .period between 30 minutes to less than 60 minutes. These results are in agreement with the study of **Najwhomentionedthat32%**of ED patients were classified in this category. However, category 5(non-urgent) was represented in 40%of patients with triage comparedto20%ofpatients without triage (14). Also is supported **Meena and Ian** study triage in children mentioned that many US states have adopted as a level triage system to produce a uniform triage scale , stratifying patients in 5 groups from 1 ( most urgent ) to 5 ( least urgent) based on acuity and resources needed . Also mentioned that acuity is determined by stability of major organs and resources needs defined by triage nurse it based on 4 keys decision points is the patient dying, can the patient wait nursing intervention needs and patient vital signs, it based on physiological assessment and presenting complaint to assign triage level.(1)

In relation to mothers satisfaction regarding to caring and teaching in triage. The current study results revealed that in (table 4);the majority of mothers had a higher degree of satisfaction with pediatric ED nursing care but the teaching items around half and two thirds of them had satisfaction in the all items. Providing mother's education in triage is an important role for triage nurses, and they can give appropriate advice and interventions to meet the needs of their children, they can teach mothers simple path physiology about their illnesses to allay their fears. There is a growing need for mothers teaching in all nursing care settings. This finding was not supported by **Moussa and Mahmood** study the relationship between nurses burn out and mothers satisfaction with pediatric nursing care observed that two quarter of mothers were dissatisfied with nurses communication, children's need, expectation and nurses skills and competencies (15).In another study, **Pracht et al.**, claimed that patient education results in significant cost savings, better health, fewer complications and hospitalizations. Teaching also assists patients to develop their self-care abilities through increase knowledge, a more positive attitude and improved skills that enable them to maximize their functioning and quality of life (16).

According to the mother's satisfaction regarding the nurse and general environment. The findings of the current study indicates that in (table 5); regarding to professional qualities of nurses half of mothers saw that the nurses efficient, professional and personal quality of caring nurses. Regarding welcome nurse to the mothers

and their children were less than half described it as very good. This satisfaction supported by **Weissenstein**, study parents satisfaction with a pediatric practice in Germany reported that the parents as well as patients satisfaction is related to nurses listening carefully, that they feel understood, furthermore they understand the proposed therapy (17). While the study by **Ali and Al-Binali** who stated that the maternal satisfaction and awareness regarding pediatric services in Saudi Arabia observed that approximately 92% of mothers expressed their satisfaction regarding services provided by the nurses in pediatric ward and 86% from them satisfying regarding services provided by the emergency department (18). Also **O’Cathain et al**, who reported that most of parents and patients with inflammatory diseases were satisfied with health care provided (19). Also, **Powers and Bendall** reported that the satisfaction rate was 86% among parents of children's admitted to the pediatric ward (20).

Regarding to the overall mothers satisfaction concerning the pediatric ER visited. The current study results revealed that (table 6); two thirds of mothers belonging to the shift where applied triages were satisfied versus one third not satisfied respectively. The mothers liked the service in pediatric ED were less than half and one third liked the nurse behavior. One third of the mothers hopes the waiting room should be large and thought the doctors should be present all time. This result agreement with **Ali and Al- Binali** who mentioned that the nurses services were graded excellent and the level of cleanliness of the ward graded between excellent and very good also most of them prefer that the treating physician should present all time (18). This is also supported by **Piggot** who stated that patients’ satisfaction could be described as their reaction to the setting, process and experience. These experiences are based on subjective standards and related to sets of values and expectations. Although expectations emerge repeatedly in literature as having a fundamental role in expressions of satisfaction (21). In another study, **Meena and Ian** who added that mothers satisfaction with health care services reflects the quality of care provided and is frequently considered an important indicator of quality care and a major outcome measure in quality improvement programmes (1).

Concerning relation between the mother's satisfaction and the nurse's socio-demographic characteristics. The finding of the current study indicates that in (table 7); there were positive relation between the mothers' satisfaction and nurse's socio-demographic characteristics as education and their experience. There were statistical significant differences regarding satisfaction. This result was supported by **Shelton** who found that triage nurse’s educational level and their experience were statistically significant predictors of customer satisfaction with emergency triage nursing care. The technical competence and gentleness of triage nurses were the attributes that produced the highest patient satisfaction score. All these studies point to the benefits of caring attitudes, skillfulness in performing duties and information giving, and suggest that patients’ and nurses’ characteristics may be associated with overall customers satisfaction ratings (22).

To date, there have been no studies in Jordan of mother's satisfaction with triage nursing care system.

## **VII. Conclusion:**

### **Based on the results of the present study, it concluded that:**

Most of mothers were age of 30 years and two thirds of them highly educated and working mothers. Concerning of children ages third of them were 1-3 years old, while half of them were male and two thirds of them complained from pain during their attendance at the pediatric ED. Two thirds of nurses were female for shift applying triage and half of them were 3-5 years of experience, while most of them had a bachelor degree. Half of children were classified as level IV or semi urgent. Also half of them had received specific nursing care intervention compared one third of them received base line assessment while half of children with waited for less than 30 minute, compared with one third of them waited for a .period between 30 minutes to less than 60 minutes. The majority of mothers had a higher degree of satisfaction with pediatric ED nursing care but the teaching items around half and two thirds of them had satisfaction in the all items. Regarding to professional qualities of nurses half of mothers saw that the nurses efficient, professional and personal quality of caring nurses. Regarding welcome nurse to the mothers and their children were less than half described it as very good. Two thirds of mothers belonging to the shift where applied triage was satisfied versus one third not satisfied respectively. The mothers liked the service in pediatric ED were less than half and one third liked the nurse behavior. One third of the mothers hopes the waiting room should be large and thought the doctors should be present all time. There were positive relation between the mothers' satisfaction and nurses socio-demographic characteristics as education and their experience. There were statistical significant differences regarding satisfaction.



### **VIII. Recommendations:**

#### **Based on the previous findings, it was recommended that:**

- 1- Use of different triage scale and more qualified personnel performing triage to safety risk for the pediatric patients.
- 2-Triage nurses require excellent communication and assessment skills as well as knowledge of the legal and professional principles that underpin their practice.
- 3-Continuing training on triage systems for nurses will improve staff capacity building in Jordan and elsewhere in the pediatric ED. There should be continuing evaluation of the effectiveness of triage training programmes on the perceptions, practice and knowledge of triage nurses.
- 4- Developing an educational program for pediatric nurses to improve their communication skills and thus improve the way of conveying information to and from pediatric patients.

### **Acknowledgment**

The researchers gratefully acknowledge all nurses staff and physicians in the Pediatric Emergency Department in Jordan University Hospital for their cooperation.

### **References:**

- [1]. Meena P, and Ian M, Triage in children (2008) : 10:239-245
- [2]. Fendya DG. When disaster strikes—care considerations for pediatric patients. *J Trauma Nurse*, 2006; 13(4):161–65.
- [3]. Maningas PA, Hime DA, Parker DE. The use of the soterion rapid triage system in children presenting to the emergency department. *J Emerg Med*, (2006); 31(4): 353–59.
- [4]. Wallis LA, Carley S. Comparison of pediatric major incident primary triage tools. *Emerg Med J*, (2006); 23(6): 475–78.
- [5]. Gouin S, Gravel J, Amre DK, Bergeron S. Evaluation of the Pediatric Canadian Triage and acuity scale in a pediatric ED, (2005); *Am J Emerg Med*
- [6]. Kelly Worthington. Customer Satisfaction in the Emergency Department, *Emerg Med Clin N Am* 22 (2004) 87–102.
- [7]. Nasr A, Mikrogianakis A, McDowall D, Wales P. External validation and modification of a pediatric trauma triage tool. *J Trauma*, (2007); 62(3): 606–09.
- [8]. Davis, B.A., Bush, H.A. and Thomas, S.W. Measuring consumer satisfaction with emergency department nursing care. *Journal of Nursing Science*, 1997; 2(1-2):35-47.
- [9]. Fan J, Al Darrab A, Eva K, Fernandes CM. (2005): Triage scale in the emergency department: a systematic review. *Ann Emerg Med* 42(3):41.
- [10]. Lyons M, Brown R, Wears R. (2007): Factors that affect the flow of patients through triage. *Emerg Med J* 24(2):78-85
- [11]. Garcia Duran A, et al. Level of satisfaction and perceived quality in a day surgery unite of tertiary referral hospital (2003) : 95:851-862.
- [12]. Blegen M.A., Vaughn T.E. & Goode C.J. Nurse experience and education: effect on quality of care. *The Journal of Nursing Administration*, (2001); 31(1), 33–39.
- [13]. Bradman K, Maconochie I. Can PEWS be used as a triage tool in pediatric Aand E. *Arch Dis Child* 92, (2007); (supple 1): A10.
- [14]. Naj, Patient satisfaction with triage nursing care in Hong Kong, *Journal of Advanced Nursing*, (2005);50(5):498–507.
- [15]. Moussa M and MahmoodS. The relationship between nurse's burnout and mother's satisfaction with pediatric nursing care, *International journal of current research*, (2013); vol 5:1902-1907.
- [16]. Pracht EE, Tepas JI, Langland-Orban B, Simpson L, Pieper P, Flint LM. Do pediatric patients with trauma in Florida have reduced mortality rates when treated in designated trauma centers? *J Pediatr Surg*, (2008); 43(1): 212–21.
- [17]. Weissenstein A, Straeter A., & Villalon G. Parent satisfaction with a pediatric practice in Germany: A questionnaire –based study .*Italian, journal of pediatrics* (2011); 31-37.
- [18]. Ali M. Al-Binali. Maternal satisfaction and awareness regarding pediatric services at a tertiary hospital in Southwestern Saudi Arabia, *Saudi medical journal*, (2005); Vol. 27(2):235-237.
- [19]. O’Cathain A, Webber E, Nicholl J, Munro J, Knowles E. NHS direct: consistency of triage outcomes. *Emerg Med J*, (2003); 20(3): 289–92.
- [20]. Powers T.L. & Bendall D. The influence of time on changes in health status and patient satisfaction. *Health Care Management Review*, (2004); 29(3), 240–248.
- [21]. Piggot C.S. *Business Planning for Health Care Management*, 2nd ed. Open University Press, Buckingham (2000).
- [22]. Shelton P.J. *Measuring and Improving Patient Satisfaction* .Aspen Publishers, Gaithersburg, (2000).