



Awareness of Saudi Population about the Role of the Emergency Rooms

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ABSTRACT

Background: The hospital Emergency department (ED) is one of the most important components of the health delivery system. **Objectives:** To investigate the public awareness of the ERs in KSA, what the public knows about the provided services, and if they know the difference between the outpatient clinic and ERs. **Methods:** It is a cross-sectional descriptive community-based study carried out on 977 male and female, young and adult participants from all age groups, in different areas of the Kingdom of Saudi Arabia, during the period from 1st January to 31st July 2019. Data was collected through filling the pre-designed online questionnaire which guided us to the needed data. We utilized the SPSS program version 16. The X^2 test was used as a test of significance, and differences considered significant at p -value less than 0.05. **Results:** Most of the participants (87.5%) reported that they know the difference between the outpatient clinic and ER. The majority (68.1%) of subjects said that ERs is meaning rapid and unplanned medical care, 17.3% said any needed health care is available there, 12.2% said that it means insufficient medical care and only 2.5% said it means availability of physician at any time for any purpose. As regards evaluation to the provided services in ERs; 32.5% of cases said it was very good followed by 28.5% good, 19.8% excellent, 10.2% accepted and 10% reported it was bad services. There were significant relations between the awareness and age ($p=0.03$) and education level ($p=0.003$), but no relation was found with the gender of the participant ($p>0.5$). **Conclusion:** In our study, Most of the participants reported that they know the difference between the outpatient clinic and ERs. The majority of subjects said that ERs is meaning rapid and unplanned medical care and/or availability of physician at any time for any purpose. There were significant relations between the awareness and age and education level, but insignificant relation was found with the gender of the participant.

Keywords: Emergency department (ED), Emergency rooms (ERs), Awareness, Knowledge, Outpatient clinic, Satisfaction

INTRODUCTION

The Accident and Emergency (A and E) Department, which is also referred to as the Emergency room (ER), Emergency ward (EW), or Casualty Department is a medical treatment facility that specializes in the acute care of patients who present without prior appointment [1]. It is of significance and is the vital entry points of patients into the healthcare facility of the hospital all around the world [2]. Emergency medicine (EM) is the medical specialty which concerns with evaluation, management, and prevention of unanticipated illnesses and injuries [3]. EM is a relatively newly established specialty, which has spread as a specialty in developed and developing countries [4,5]. It is involved in diagnosing and treating all types of emergencies which leads to an overlap between the services provided by physicians of most other specialties and those provided by the EM physician [6]. Across the years, the general public in

the U.S. has become more aware of this specialty, though early studies conducted there have shown a relative lack of knowledge of what EM physicians actually are, what they can and cannot do and their scope of practice [6]. In 1968, the American College of Emergency Physicians (ACEP) was established in the U.S., which was followed by the recognition of Emergency medicine (EM) as a specialty status in 1979 and board certification in 1980 [7].

The Emergency department (ED) is considered the crucial link between pre-hospital and in-hospital medical care, where professional care always offered all the time to everyone in need [8]. It is a front door for a hospital where a huge number of patients visit the department in order to access immediate treatment. By providing 24 hours' non-stop service throughout the year, it is considered as the busiest department compared to other departments available in the hospital [9]. Emergency care is one delivered in the first few hours after the onset of an acute medical condition, e.g., a childbirth complication, heart attack, injury, or any health problem that reaches an acute stage and poses a threat to life [10]. Studies conducted in different parts of the world, irrespective of the prevailing health care system indicate that the growth in the use of emergency departments (EDs) comes mostly from patients who come to the ED with complaints that can be treated in Primary health care (PHC) centers [11]. Emergency department (ED) visits have increased dramatically over the past 2 decades, often for conditions that could be treated more effectively in a lower-cost, primary care setting [12]. Over the past decade, there was an increase in the utilization of public EDs in Saudi Arabia. For example, the number of visits made to the Ministry of Health EDs rose from 9 million visits in 2000 to about 18 million visits in 2009 [13].

Studies suggest that factors associated with the frequent use of ED include sociodemographic characteristics of patients such as their age, gender, level of education, marital status, income, and insurance coverage [14]. Medical factors include health status, type of health complaint, and the severity of illness [15]. Studies assessing the public awareness of Emergency medical services (EMS) have been conducted in many parts of the world. A study conducted among 1534 people in the Western Region of the Kingdom of Saudi Arabia showed that 33% of the people were unaware of the number to call in case of a medical emergency [16].

Up to our knowledge, there are no sufficient previous studies to measure public awareness about the role of the Emergency rooms (ERs) in Saudi Arabia. This information is important to improve the public information about the ERs, and improve the overall satisfaction of the community from the provided services.

So, we conducted this study to investigate the public awareness of the ERs in KSA, what the public know about the provided services, and if they know the difference between the outpatient clinic and ERs.

SUBJECTS AND METHODS

Type and Period of the Study

It is a cross-sectional descriptive community-based study carried out on 977 male and female, young and adult participants from all age groups, in different areas of the Kingdom of Saudi Arabia, during the period from 1st January to 31st July 2019.

The sample size was calculated using the sample size equation: $n = z^2 p(1-p) / e^2$, considering the target population more than 1000, and study power 95%. Systematic random sampling technique was followed. Data was collected through filling the pre-designed online questionnaire which guided us to the data of socio-demographic characteristics such as age, sex, educational status, and marital status, it also included questions about their awareness about the difference between the outpatient clinic and ERs, the meaning of ERs in their mind and their evaluation to the provided services in ERs.

Ethical Considerations

The questionnaire included a brief introduction to the participants by explaining the aims and benefits of the study. Anonymity and confidentiality of data were maintained throughout the study. Record retention in the password-protected computer for at least 7 years. There was no conflict of interest.

Data Management and Statistical Analysis

We utilized the Statistical Package for Social Sciences, version 16 (SPSS Inc., Chicago, Illinois, USA) to analyze the study data. Descriptive statistics were employed. Chi-square test was used. p-value considered significant if less than 0.05.

RESULTS

The majority (44.6%) of the participants aged 21-30 years, 54.1% were females, 75.6% had university or more education, about half (49.9%) were not working, 42.4% were employed, 51.3% were singles and 45.4% were married. There were 20.6% having health insurance, 63.2% were eligible for free treatment in special hospitals. (Table 1).

Table 1 Socio-demographic characteristics of the studied population, KSA, 2019 (N=977)

Variable	No.	Percentage (%)
Age Group		
<21	154	15.8%
21-30	436	44.6%
31-40	228	23.3%
41-50	100	10.2%
>50	59	6.0%
Gender		
Female	529	54.1%
Male	448	45.9%
Educational Level		
Primary	16	1.6%
Secondary	198	20.3%
Preparatory	24	2.5%
University or more	739	75.6%
Marital Status		
Single	501	51.3%
Married	444	45.4%
Widow/divorced	32	3.2%
Working Status		
Private work	39	4.0%
Not working	488	49.9%
Retired	36	3.7%
Employed	414	42.4%
Average Family Income/Month		
<5000	189	19.3%
5000-9000	258	26.4%
9000-19000	351	35.9%
>19000	179	18.3%
Having Health Insurance		
No	776	79.4%
Yes	201	20.6%
Eligible for Free Treatment in Special Hospitals		
No	360	36.8%
Yes	617	63.2%
Type of That Hospital		
National guard hospital	37	3.8%
Army forces hospital	195	20.0%
Security forces hospital	78	8.0%
Other hospitals	304	31.1%

Table 2 illustrates the knowledge about the emergency rooms among the studied population. It is clear from the table that, the majority of cases 87.5% reported that they know the difference between the outpatient clinic and ER. As regards knowledge about the emergency room among the studied population especially what it is mean; the majority of subjects 68.1% said that ER is meaning rapid and unplanned medical care, 17.3% said it any needed health care is available, 12.2% said it insufficient medical care and only 2.5% said it means availability of physician at any time for any purpose. As regards evaluation to the provided services in ERs; 32.5% of cases said it was very good followed by 28.5% good, 19.8% excellent, 10.2% accepted and 10% reported it was bad services (Table 2).

Table 2 knowledge about the emergency rooms among the studied population, KSA, 2019

Variables	No.	Percentage (%)
Do You Know the Difference between the Outpatient Clinic and ERs		
No	122	12.5%
Yes	855	87.5%
What is the Meaning of ERs in Your Mind?		
Rapid and unplanned medical care	665	68.1%
Any needed health care is available	169	17.3%
Insufficient medical care	119	12.2%
Availability of physician at any time for any purpose	24	2.5%
What is Your Evaluation to the Provided Services in ERs		
Good	278	28.5%
Very good	308	31.5%
Bad	98	10.0%
Accepted	100	10.2%
Excellent	193	19.8%

Regarding the relation between meaning of ERs and age group, sex and educational level of the studied population, our study found that there were significant correlations with age ($p=0.03$) and education level ($p=0.003$), but no relation found with sex ($p>0.5$) (Table 3).

Table 3 Relation between meaning of ERs and age group, sex and educational level of the studied population, KSA, 2019

Variables	Responses	What is the meaning of ERs in your mind?				Total (N=977)	p-value
		Rapid and Unplanned Medical Care (N=665)	Any Needed Health Care is Available (N=169)	Insufficient Medical Care (N=119)	Availability of Physician at Any Time for Any Purpose (N=24)		
Age group	<21	113	25	14	2	154	0.039
		17.00%	14.80%	11.80%	8.30%	15.80%	
	21-30	311	65	49	11	436	
		46.80%	38.50%	41.20%	45.80%	44.60%	
	31-40	138	47	36	7	228	
		20.80%	27.80%	30.30%	29.20%	23.30%	
41-50	61	23	14	2	100		
	9.20%	13.60%	11.80%	8.30%	10.20%		
>50	42	9	6	2	59		
	6.30%	5.30%	5.00%	8.30%	6.00%		
Sex	Female	362	80	76	11	529	0.243
		54.40%	47.30%	63.90%	45.80%	54.10%	
	Male	303	89	43	13	448	
		45.60%	52.70%	36.10%	54.20%	45.90%	
Educational level	Primary	5	3	5	2	16	0.003
		0.60%	1.20%	4.20%	8.30%	1.30%	
	Secondary	127	43	21	7	198	
		19.10%	25.40%	17.60%	29.20%	20.30%	
	Preparatory	15	3	6	0	24	
		2.30%	1.80%	5.00%	0.00%	2.50%	
University or more	517	120	87	15	739		
	77.70%	71.00%	73.10%	62.50%	75.60%		

According to the relation between Knowing the difference between the outpatient clinic and ERs and age group, sex and educational level of the studied population, our study reported no significant correlations with all of them ($p>0.05$) (Table 4).

Table 4 Relation between Knowing the difference between the outpatient clinic and ERs and age group, sex and educational level of the studied population, KSA, 2019

Variable	Responses	Knowing the Difference between the Outpatient Clinic and ERs		Total (N=977)	p-value
		No (N=122)	Yes (N=855)		
Age group	<21	23	131	154	0.468
		18.90%	15.30%	15.80%	
	21-30	59	377	436	
		48.40%	44.10%	44.60%	
	31-40	21	207	228	
		17.20%	24.20%	23.30%	
41-50	12	88	100		
	9.80%	10.30%	10.20%		
>50	7	52	59		
	5.70%	6.10%	6.00%		
Sex	Female	67	462	529	0.467
		54.90%	54.00%	54.10%	
	Male	55	393	448	
		45.10%	46.00%	45.90%	
Educational level	Primary	4	12	16	0.283
		2.50%	1.20%	1.60%	
	Secondary	30	168	198	
		24.60%	19.60%	20.30%	
	Preparatory	4	20	24	
		3.30%	2.30%	2.50%	
University or more	84	655	739		
	68.90%	76.60%	75.60%		

DISCUSSION

The hospital emergency department (ED) is one of the most important components of the health delivery system. EDs worldwide are reportedly serving increasing numbers of patients who have a range of problems of variable urgency, from life-threatening to mild [17]. Nowadays, access to the Emergency department (ED) is available for two-thirds of patients admitted to hospitals in the United States [18]. A cross-sectional study was conducted among 977 of studied population, KSA. The study aims to investigate the public awareness of the EMs in KSA, what the public knows about the provided services, and if they know the difference between the outpatient clinic and ERs.

The function of the Emergency department (ED) is to receive, triage, support and provide urgent and immediate intervention to emergency conditions so it will lower the risks and increase the chances of better outcomes [19]. According to knowledge about the emergency room among the studied population especially what it is mean; the majority of subjects 68.1% said that ER is meaning rapid and unplanned medical care, 17.3% said it any needed health care is available, 12.2% said it insufficient medical care and only 2.5% said it means availability of physician at any time for any purpose. Similar to our results, in Arar, KSA another study was conducted among 355 male and female patients of all age groups attending the EDs found that 65.5% of patients said it means rapid and unplanned medical care, 16.9% any needed health care is available, 15.8% insufficient medical care and 2.3% said it means availability of physician at any time for any purpose [20].

The emergency department offers care for both mental and physical health conditions and links patients with the most appropriate providers and care settings for presenting their conditions [21]. An inpatient is someone who's been admitted to hospital for medical treatment. The main two ways that you could become an inpatient is through a hospital's ERs (Emergency rooms), or through a pre-booked surgery or treatment (like if you need a knee replacement) [22]. Outpatient care, on the other hand, is a medical service provider that does not require a prolonged stay at a facility. This can include routine services such as checkups or visits to clinics [23]. In our study the majority of cases 87.5% reported that they know the difference between the outpatient clinic and ER. Another study found that 89.6% of cases know the difference between the outpatient clinic and ER and 10.4% don't know the difference [20].

Evaluation of emergency department (ED) performance remains a difficult task due to the lack of consensus on performance measures that reflects high quality, efficiency, and sustainability [24]. As regards evaluation to the provided services in ERs; our study found that 32.5% of cases said it was very good followed by 28.5% good, 19.8% excellent, 10.2% accepted and 10% reported it was bad services. Also, another study reported; 32.7% said that the services were very good, 29.3% good, 17.2% excellent, 11.3% bad and 9.6% were accepted [20].

Regarding the relation between meaning of ERs and age group, sex and educational level of the studied population, our study found that there were significant correlations with age ($p=0.03$) and education level ($p=0.003$), but no relation found with sex ($p=0.2$). According to the relation between knowing the difference between the outpatient clinic and ERs and age group, sex and educational level of the studied population, our study reported no significant correlations with all of them ($p>0.05$).

CONCLUSION AND RECOMMENDATIONS

In our study, most of the participants reported that they know the difference between the outpatient clinic and ERs. The majority of subjects said that ERs is meaning rapid and unplanned medical care and/or availability of physician at any time for any purpose. There were significant relations between the awareness and age and education level, but an insignificant relation was found with the gender of the participant. So, we recommend health education to increase the public awareness about the role of the ERs, and what should be expected of it, so as to increase the satisfaction of the community of their provided service. Also, we recommend more detailed researches must be conducted.

DECLARATIONS

Authors' Contributions

All authors contributed to this project and article equally. All authors read and approved the final manuscript.

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Conflict of Interest

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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