Effect of Queue Management System on Patient Satisfaction in Emergency Department; a Randomized Controlled Trial

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Introduction

Patients' experience in hospitals affects their satisfaction.

The purpose of the present study was to assess the effect of applying a queue management system on patient satisfaction in emergency department waiting rooms.

Methods

he present prospective randomized single-blinded interventional study was performed from July to August 2020 and involved 236 patients that were divided into one intervention group and one control group, each consisting of 118 patients.

The mentioned patients' perception of the waiting time and satisfaction before being visited by an emergency medicine doctor was evaluated with and without applying the queue management system.
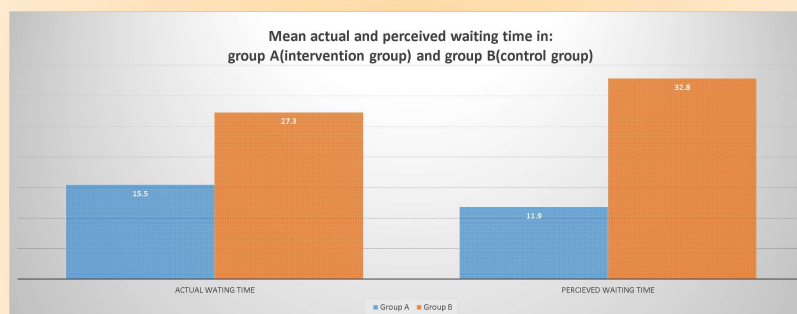

Mean actual and perceived waiting time in: group A(intervention group) and group B(control group)

Table-1: Distribution frequency of chief complaints between groups
Group A: Intervention group; Group B: Control Group

Chief complaints	Group A		Group B		P-Value
	Number	Percent	Number	Percent	
Fever	47	39.8	51	43.2	0.34
Respiratory	2	1.7	7	5.9	
Gastrointestinal	29	24.6	25	21.2	
Urinary	4	3.4	6	5.1	
Others	36	30.5	29	24.6	

Table-2: Distribution frequency of Parents' stress level on arrival
Group A: Intervention group; Group B: Control Group

Stress level	Group A		Group B		P-Value
	Number	Percent	Number	Percent	
No stress	0	0	0	0	0.41
Low	0	0	4	3.4	
Moderate	28	23.7	26	22	
high	48	40.7	52	44.1	
Extreme	42	35.6	36	30.5	

Table-3: Distribution frequency of patient's satisfaction level
Group A: Intervention group; Group B: Control Group

Satisfaction level	Group A		Group B		P-Value
	Number	Percent	Number	Percent	
Very poor	0	0	1	0.8	<0.001
Poor	0	0	11	9.3	
Average	0	0	54	45.8	
Good	16	13.6	49	41.5	
Excellent	102	86.4	3	2.5	

Results

The mean actual waiting time (15.5 ± 7.5 minutes) as well as the mean perceived waiting time (11.9 ± 7.4 minutes) for the intervention group were significantly lower than those of the control group with the values of 27.03 ± 8.5 and 32.8 ± 8.7 minutes, respectively (p < 0.001).
The mean perceived waiting time was significantly less than the mean actual waiting time (11.9 min vs 15.5 minutes) for the intervention group (p < 0.001).
The level of satisfaction in the intervention group was significantly higher than that of the control group (p < 0.001).

conclusion

It can be proposed that the application of a queue management system in the emergency department waiting rooms can reduce the actual and perceived waiting times and increase the patient satisfaction.

Reference

Bidari A, Jafarnejad S, Alaei Faradonbeh N. Effect of Queue Management System on Patient Satisfaction in Emergency Department; a Randomized Controlled Trial. Arch Acad Emerg Med. 2021; 9(1): e59.
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