

# Factors Affecting Patients' Decision about Length of Hospitalization at Intensive Care Units

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## ABSTRACT

**Background:** Hospitals are essential place for managing patients especially critically ill cases, therefore staying in hospital provide needed services that result in well prognosis.

**Objectives:** the study aimed to identify what factors that affecting patients' decision about length of hospitalization at intensive care units.

**Methodology:** A purposive sampling (non-probability sampling) was used to select the samples of the study which were (162) inpatients in the selected hospitals staying at coronary care unit and respiratory care unit. The patients should be conscious, adult and staying in intensive care units. To achieve the objectives of the study a constructed questionnaire was used. Collection of data conducted through interview techniques with the patients from 15<sup>th</sup> March to 15<sup>th</sup> May 2021, informed consent from the patient were obtained. The data analysis was carried out using (SPSS), version 23. Statistical procedure for the data analysis include (Frequency, percentage and chi-square) was applied.

**Results:** The results shows that the most environmental factors that effect on patients' decision reported by patients were (Fear from strange environment, Crowded patient and relative, and Noises). And most psych-social factors were (Thinking about death in hospital, little explanations about disease, and Not able to sleep in hospital). Also the results indicates that most significant factors related to treatment and communication were (Fear from machines, tides with too much tubes, and Inadequate examination).

**Conclusions:** The study conclude there is no significant association between Factors that affecting patients' decision and demographic characteristics, also the study concluded many factors effects that affecting patients' decision about period of hospitalization most of the environmental factors that effect on patients decision was noises and alarms while the psycho-social events was thinking about death in hospital with related for factors related to treatment and communication was fear from machines.

**Keywords:** Factors, Patients, Decision, Hospitalization

## INTRODUCTION

Recent events in the world as general such as the pandemic of Covid-19, patients and their family having stress about staying in hospital as well as many factors in the hospitals such as environmental, emotional, and psychosocial factors. These factors may effect on patients decisions to stay or discharge form hospital. Events that cause stress are known as stressors. An internal or external event or condition that has the potential to cause physiologic, emotional, cognitive, or behavioral alterations is referred to as a stressor<sup>1</sup>. The term "staying in hospital" refers to the length of time spent in the hospital. Stressors may have an impact on the length of time spent in the hospital. Hospitalization is influenced by a number of factors, including the complexity of the case, the efficiency of hospital care, and the form of admission and release rules<sup>2</sup>. The length of hospital stays can also be used as an indirect indicator of resource consumption and efficiency in a hospital setting, having direct consequences for healthcare policies and strategy. Physicians and nursing staff play an important role on patients decision regarding period of hospitalization regarding communication with patients, the

language used and the nature of treatment and informing the patient of the health condition. The study aimed to assess the stressors that affecting patients' decision about period of hospitalization at intensive care units.

## METHODOLOGY

The qualitative design descriptive study was used to assess the stressors that effect on patients decision about period of hospitalization at four hospitals in Kirkuk city (Azadi Teaching Hospital, Kirkuk General Hospital, Gynecology and Obstetrics Hospital and Al-Shifa'a 14 Hospital). From the period 1<sup>st</sup> January 2021 until 1<sup>st</sup> January 2022. A purposive sampling (non-probability sampling) was used to select the samples of the study which were (162) inpatients in the selected hospitals staying at coronary care unit and respiratory care unit. The patients should be conscious, adult and staying in intensive care units. To achieve the objectives of the study a constructed questionnaire was used consist of: part one 4 items (demographic data), part two 6 items (clinical data), part three 9 items (factors related to environmental

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factors), part four 8 items (factors related to psycho-social factors), and part five 9 items (factors related to treatment and communication). Collection of data conducted through interview techniques with the patients from 15<sup>th</sup> March to 15<sup>th</sup> May 2021, informed consent from the patient were obtained. The data analysis was carried out using (SPSS), version 23<sup>3</sup>. Statistical procedure for the data analysis include (Frequency, percentage and chi-square) was applied.

**RESULTS**

**Table 1:** Certain socio-demographic characteristics of the study sample with association between Factors that affecting patients' decision (N=162)

Variables	F.	%	X <sup>2</sup>	p
<b>Age</b>				
20-29 years	17	10.5	2.34	0.452 NS
30-39 years	40	24.7		
40-49 years	49	30.2		
50 y and more	56	34.6		
Total	162	100.0		
<b>Gender</b>				
Male	85	52.5	1.357	0.243 NS
Female	77	47.5		
Total	162	100.0		
<b>Income</b>				
Sufficient	46	28.4	1.24	0.67 NS
Barely sufficient	80	49.4		
Insufficient	36	22.2		
Total	162	100.0		
<b>Occupation</b>				
Employee	49	30.2	1.2040	0.606 S
Housewife	55	34.0		
Worker	34	21.0		
Retired	16	9.9		
Military	8	4.9		
Total	162	100.0		
less than 2 days	64	39.5	0.20	0.75 NS
more than 2 days	98	60.5		
Total	162	100.0		
<b>Type of admission</b>				
from physician	59	36.4	1.204	.000 HS
from emergency	80	49.4		
from hospital clinics	23	14.2		
Total	162	100.0		
<b>Number of Hospitalization</b>				
first time	62	38.3	0.678	0.022 S
second time	53	32.7		
three time and more	47	29.0		
Total	162	100.0		
<b>Type of disease</b>				
acute disease	99	61.1	1.54	0.677 NS
chronic disease	63	38.9		
Total	162	100.0		
<b>Admission site</b>				

CCU	111	68.5	0.32	0.969 NS
RCU	51	31.5		
Total	162	100.0		

**Do you have desire to discharge from hospital**

Yes	111	68.5	1.67	0.032 NS
No	51	31.5		
Total	162	100.0		

(Table 1) demonstrates that the association.

**F. = Frequencies, % = Percentages**

These were significant between factors affecting patients decision and (Occupation, number of hospitalization) and highly significant with (type of admission) at p value 0.05.

**Table 2:** Mean of score and significant for factors related to environment

No.	Items	Mean of score	Significant
1	Noises and alarms around me	4.3185	HS
2	Contaminated environment with blood and other solution	2.7531	S
3	Fear from strange environment	4.5395	HS
4	Hot or cold environment	2.6728	S
5	Privacy not provided	2.6914	S
6	Improper lighting of hospital	2.4444	S
7	Bad odors in hospital	3.0679	S
8	Crowded patient and relative	4.4037	HS
9	Movement of physician and nursing staff	2.6173	S

F= frequency, %= percentage, MOS= Mean of Score, NS= Not Significant = (1 - 2.3), S= Significant (2.4 - 3.7), HS= High Significant (3.8 - 5)

(Table 2) This table indicates that the most significant environmental factors were (Fear from strange environment, Crowded patient and relative, and Noises) respectively.

**Table 3:** Mean of score and significant for factors related to psycho-social events

No.	Items	Mean of score	Significant
1	There is little explanations about disease	3.9753	HS
2	Patients and their relative crying around me	2.9012	S
3	Thinking about death in hospital	4.0506	HS
4	Not able to sleep in hospital	3.5494	S
5	Restrict in my place	3.0309	S
6	Being alone in hospital	3.0988	S
7	Therapy are cost to me	3.0000	S
8	Strange language used by nurses	2.9012	S

(Table 3) This table showed that the most significant psych-social factors were (Thinking about death in hospital, little explanations about disease, and Not able to sleep in hospital).

**Table 4:** Mean of score and significant for factors related to treatment and communication

No.	Items	Mean of score	Significant
1	Fear from machines	3.9012	HS
2	Less communication with the health care staff	2.7222	S
3	physicians and nurses too hurry	2.4074	S

4	Not having Physician and nurses introduces them selves	2.4568	S
5	too much medication	2.5741	S
6	tides with too much tubes	2.8827	S
7	Vague prognosis	2.6543	S
8	Inadequate examination	2.7901	S

(Table 4) This table indicates that the most significant factors related to treatment and communication was (Fear from machines, tides with too much tubes, and Inadequate examination).

## DISCUSSION

The results demonstrate the socio-demographic characteristics of the whole study samples shows the high percent from patients at age (40-49 years years). Also the results show most samples were male. This result is agreement with study conducted by<sup>4</sup> Orsini, J and others mention their study about factors influencing triage decisions in patients referred for ICU admission and find most of patients age were 51 - 64 years and represent (44.7%) and 57.4% were male.

This study disagreement with (Younis et al., 2021; Ahmed et al., 2020) who found age between (20-29) lowest age group<sup>5,6</sup>, Unlike prior studies that looked at demographic characteristics, the majority of the participants in this study were men<sup>7,8</sup>.

Explanation of this result related for location of the hospital in the governorate center that find most of them from urban area. A survey study from Turkey and find the majority of samples were married and 60.0% from sample were have sufficient income. Also the result shows 34.0 % from sample were house wife, this result is agreement with Gold hill and others 2014 who found 40.0% from total sample were married<sup>9</sup>.

With regard to the period of hospitalization 60.5 % from sample were more than 2 days also the result shows (49.4 %) from patients were admission from emergency department. Ceylan and others (2016) make a point of mentioning if some parameters could be changed; the characteristics of prolonged ICU stays could be valuable<sup>10</sup>. Process of care, active relevance of ICU physicians, and length of hospital stay prior to ICU admission should all be considered. As a result, patients with a long stay and hence large expenses can be identified early. According to Toptas and colleagues (2018), the majority of patients were admitted for the second time, with 19.5 percent having multiple diseases (diabetes mellitus, hypertension, vasculitis, and so on), 16.8 percent having cerebrovascular diseases, 13 percent having gastrointestinal diseases, 9.5 percent having respiratory disease, cardiovascular diseases 9 percent, 8.7 percent having urogenital diseases, 6.8 percent having musculoskeletal diseases, and 4.9 percent having hepatobiliary diseases<sup>11</sup>.

Regarding environmental factors the results indicate that the mean of score of environmental factors were low significant in Improper lighting of hospital, while moderate significant contaminated environment with blood and other solution, Hot or cold environment, Privacy not provided, and bad odors in hospital. And high significant in noises and alarms around patients, fear from strange environment, crowded patient and relative. Cooper and colleagues (2016) concur with the findings, stating that Intensive Care Unit noise has been identified as a significant environmental source of sleep disruption. Light intensity on ICU usually reflects a 24 h circadian rhythm, bright lights from the nurses' station, lights that are not dimmed, and lights that are turned on at night can be quite disruptive to patients' sleep, and social isolation is frequently associated with the nature of the ICU experience<sup>12</sup>. On

the ICU, noise from alarms and equipment is constant. Alarm clocks, telephones, and intercoms should all be turned down to reduce noise pollution. Instead of a ring tone, some of the equipment, such as telephones or intercoms, could feature a flashing light or vibrating system. The environmental effect on "disturbed sleep pattern" was influenced not only by the daily schedule imposed by the ICU, but also by the ICU's characteristic of being a closed and high-complex unit, which presents novel coping situations<sup>13</sup>, according to Lemos and others (2002). As a result, we can deduce that patients may experience different amounts of stress during their stay in the ICU. Also the results indicates that the mean of score of environment was moderate significant in patients and their relative crying, restrict in place, being alone in hospital, therapy are cost, strange language used by nurses and high significant in there is little explanations about disease, thinking about death in hospital.

Features of patients' rooms and patient-family interaction, Ripplin et al., 2015. The design of a hospital environment has been found to influence patient-family interaction and social support. In a level 2 investigation, two ICU facilities with distinct architectures were compared. Patients in an ICU with a patient-centered design spent more time with their families than those in the other group<sup>14</sup>, according to the researchers. As a result, patient-centered ICUs offer a lot of opportunity for patient-family connection. (Mahmoudet al.2021; Andrade et al. 2017) evaluated the effects of several room elements on patients' perceptions of the potential of social support. These features included TV, art, a wide window, and a view. They discovered a link between the quantity of positive aspects in a patient's room and their perceptions of the chance of receiving social assistance<sup>15,16</sup>.

## CONCLUSION

**The study conclude that there is significant association between factors affecting patients decision and (Occupation, number of hospitalization) and highly significant with (type of admission). Also the study concluded that most of the environmental factors that effect on patient's decision was noises and alarms while the psycho-social events were thinking about death in hospital with related for factors related to treatment and communication was fear from machines.**

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**Competing Interest:** None.

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