

Assessment of Health Care Providers Knowledge about Six Sepsis Pathway at Intensive Care Unit in al-Hussein Teaching Hospital in Al-Muthanna City

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Abstract:

Introduction: Sepsis is a life-threatening condition that occurs when the patient's imbalance reaction to an infection causes harm to the body's own organs and tissues. Using Six Sepsis pathway is very important to decrease mortality to 50 percentage. Previous research has found many challenges to the performance of sepsis pathway, with the medical and nursing workers identifying conflicting views.

Methodology: Quantitative design (a descriptive Study) has been carried out to assess health care providers' knowledge about six sepsis pathway at intensive care unit in al-Hussein teaching hospital in Al-Muthanna city. Non-probability sampling has been performed on 40 health care providers for the present study. The sample is assigned to the study according to the following criteria: Both gender of health care providers who are worked at intensive care unit in Al-Hussein teaching Hospital. There had at least one year of experience at unit. The data is collected through the utilization of developed questionnaire (Arabic version) and by means of self-report given the form to each nurse who is included in the present study. The investigator met the nurses in the hospital to get agreement to participate in the study and to clarify the study questionnaire. The validity of the instrument has been established through a panel of 10 experts. The pilot study has been carried out on 10 health care providers who work in intensive care unit. Reliability has been performed for determined internal consistency of the instrument.

Results of study. The study shows that 70% don't have knowledge regarding six sepsis pathway. There is no significant relationship between the demographic characteristics of the study sample, ages and gender and marital status and the health care provider knowledge. While the education level and job description show a significant relationship with a P-value equal or less than (0.05). With health care providers overall knowledge.

Conclusion: Overall, this study describes the knowledge of health care profession. The study indicated that the nurses had comparatively lower knowledge than physicians regarding six sepsis pathway. While the education level and job description show a significant relationship with a P-value equal or less than (0.05). With health care providers overall knowledge.

Recommendation: Engaging critical care professions in special training courses for improve knowledge and practices concerning six sepsis steps.

Key words: *assessment, knowledge, sepsis, intensive.*

I. INTRODUCTION

Sepsis is a life-threatening condition that occurs when the patient's imbalance reaction to an infection causes harm to the body's own organs and tissues. Using Six Sepsis pathway is very important to decrease mortality to 50 percentage. Previous research has found many challenges to the performance of sepsis pathway, with the medical and nursing workers identifying conflicting views. (Wiewel, et al., 2016; Breen and Rees, 2018 and Labib, 2019). In the UK, extreme sepsis is likely to account for around 37 000 deaths per year. Five years after the release of international care packages for the Surviving Sepsis Campaign, in the treatment of patients with serious sepsis, care levels are reached in less than one in seven patients. (Daniels, et al., 2011 and Robson, et al., 2008). Surviving The Many services were given by the Sepsis Campaign. Aimed to increase awareness and to provide education among professionals in the health sector. Indeed, evidence has shown that education and training are increasing the training of all health care practitioners. Sepsis understanding and the use of protocols. For the administration of

patients with Sepsis, particularly in intensive care units (Nucera, et al., 2018; National Guideline Centre, 2016; Freitag, et al., 2016 and Torsvik, et al., 2016). Intensive care unit health care providers in close contact with critically ill patients must have sufficient awareness of sepsis and its way to prevent life-threatening reaction and condition of patients. The life-threatening organ dysfunction caused by a unregulated host response to infection has recently been redefined as sepsis. It has remained an exceedingly lethal condition for decades, in which accurate diagnostics and clinical decision-making are far from ideal (Raeven, et al., 2018). Reliable, prompt delivery of more complex tasks to save lives, It needs greater knowledge, faster identification and initiation of fundamental treatment, and more productive collaboration between Clinicians and nurses who were involved in the original septic evaluation With a patient. As a life-threatening condition linked to a high rate of Mortality and quality of treatment for sepsis patients are paramount. Because of Concerns about early evaluation and initiation of effective evaluations (Kumar, et al., 2015 and ARISE, 2014).

II. METHODOLOGY

The aims of the study

1. To Assessment of health care providers knowledge about six sepsis pathway
2. To find out the relationship between health care providers knowledge and their demographic characteristic.

Design of the Study :Quantitative design (a descriptive Study) has been carried out to Assessment of health care providers knowledge about six sepsis pathway at intensive care unit. From 1of December 2019- to 27 January 2021.

Setting of the Study :The study has been carried out in Al-Hussein Hospital in Al-Muthanna city. The sample collected in the (Intensive care unit) of hospital.

The Sample of the Study: Non probability sampling has been performed of (40) s health care providers for the present study. The sample is assigned to the study according to the following **criteria:** Both gender of nurses who are worked at intensive care unit in Al-Hussein teaching Hospital. There had at least one year of experience at unit.

Collection of Data: utilization of developed questionnaire and by self-report method . The investigator met the nurses in the hospital to get agreement to participate in the study and to clarify the study questionnaire. The data collection process started in the (February) to (30th March).

The Study Instrument: The instrument tools is developed in a form of a questionnaire through an intensive review of relevant literature and studies. The instrument is composed of two main parts as follows: **first Part socio demographic data of sample:** which is consist of (6) items, they include age, gender, marital status, education level for health care provider , and the training course. **second part: assessment health care professionals knowledge (questionnaire):** Consist from multiple choice questions: this section consist of (30) questions multiple choice. Item are measured on four answer and rate, as True =2, false=1.

Validity of the Study: The validity of the instrument has been established through a panel of 10 experts.

Reliability of Instrument: The pilot study has been carried out 10 of health care providers who work in intensive care unit reliability has been performed for determined internal consistency of the instrument, person correlated coefficient has been computed for each determination. The results have indicated that the correlation coefficient was $r = 0.81$ at the level (r equal or more than 0.70) for (30) items which was statistically acceptable.

Data analysis: statistical data analysis approaches are used in order to analyze and evaluate the results of the study: **Descriptive Data Analysis** Approach Such approach an consisted of the following: Statistical tables (Frequencies and percent) which are: Mean of scores (MS) A mean of score less than (1.5) is considered fail. A mean of score more than (1.5) is considered pass .

Inferential Data Analysis ANOVA .

III. RESULTS

The study reveals that (60%)of the study sample are within age group (20-30) years old, regarding of gender the result of study show that more than half of the study sample are males. Also the study show that most of study sample (72.5%) are married . regarding education level the study results show the majority of study (27.5%) are graduated from nursing institute. while the study show (25%) of sample are graduated from nursing college(22.5%) are graduated from Medicine college. The study result show more than half of study sample are nursing staff . And about the training course regarding sepsis and six sepsis pathways the result indicated that high percentage (72.5%) of present sample are not engaged to training course table (1). also the study show that that (70%) don't have knowledge regarding six sepsis pathway table (2) . There is no significant relationship between the demographic characteristics of the study sample, ages and gender and marital status and the health care provider knowledge. While the education level and job description show a significant relationship a t P-value equal or less than (0.05) . With health care providers overall knowledge table (3).

Table (1): Descriptive Statistics for the demographic Characteristics for the Studied Sample

Demographic Data	Groups	Freq.	%
Age / Years	20 to 30	24	60.0
	31 to 40	14	35.0
	41 to 50	2	5.0
	Total	40	100.0
Gender	male	26	65.0
	female	14	35.0
	Total	40	100.0
Marital Status	Married	29	72.5
	Single	11	27.5
	Total	40	100.0
Educational Level	Medicine	9	22.5
	Anesthetics	2	5.0
	assistance anesthetics	5	12.5
	Nursing school	2	5.0
	Nursing Institute	11	27.5
	Nursing College	10	25.0
	Master degree	1	2.5
	Total	40	100.0
Job Description	physician	8	20.0
	Anasthiologist	3	7.5
	Nurse	24	60.0
	Assistant anasthetics	5	12.5
	Total	40	100.0
course about sepsis	yes	11	27.5
	no	29	72.5
	Total	40	100.0

(Freq.): Frequency, (%): percentage,

Table (2) Distribution of the study sample by their overall knowledge regarding six sepsis pathway

Overall assessment	Freq.	%	M.s.	S.d
Fail	28	70.0	1.4561	.10968
Pass	12	30.0		

(M.s) mean of score 1.5 , (SD) stander deviation

Table (3) Mean difference ANOVA between the overall knowledge and Demographic data

Demographic data	Classification	Overall knowledge			F	Sig.
		fail	pass	Total		
age	20 to 30	19	5	24	1.304	.273
	31 to 40	7	7	14		
	41 to 50	2	0	2		
	Total	28	12	40		
gender	male	18	8	26	1.173	.353
	female	10	4	14		
	Total	28	12	40		
Marital status	Married	19	10	29	.587	.856
	Single	9	2	11		
	Total	28	12	40		
education level	Medicine	2	7	9	2.258	.036
	Anesthetics	2	0	2		
	assistance anesthetics	5	0	5		
	Nursing school	2	0	2		
	Nursing Institute	6	5	11		
	Nursing College	10	0	10		
	Master degree	1	0	1		
	Total	28	12	40		
Job Description	physician	2	6	8	3.882	.002
	Anasthiologist	3	0	3		
	Nurse	18	6	24		
	Assistant anesthetics	5	0	5		
	Total	28	12	40		
course about sepsis	Yes	8	3	11	1.729	.112
	No	20	9	29		
	Total	28	12	40		

IV. DISCUSSION

Nucera , et al., (2017) has concluded in their study which conducted on 132 nurses and 49 physicians to assessed Physicians’ and nurses’ knowledge in management of sepsis that the majority of study regarding age was at group (31-40) of nurses and at (41-50) of physicians . The present study agree with Breen and Rees (2018) who find in their study that main factors that led to delays in the treatment of sepsis were knowledge deficits. Where they found most of the health care workers do not have the knowledge regarding six sepsis pathway the result supported Roberts, et al., (2017) concluded in their study that 70% participants were male. Also the same study disagree with course about sepsis in which their result indicated that (98%) knew of the existence of the sepsis protocol and training course. Bajracharya , et al., (2020) has concluded in their study which conducted on 200 health care professionals To determine and compare the knowledge of Sepsis among professionals in health care siting in which show that major factors effected on clinical management and outcome of patient sepsis is nurses knowledge and awareness and this dependent on the education of health care provider , experience years and training courses .

V. CONCLUSIONS

Overall, this study describes the knowledge of health care profession the study indicated that the nurses had comparatively lower knowledge than physicians regarding six sepsis pathway While the education level and job description show a significant relationship a t P-value equal or less than (0.05). With health care providers overall knowledge.

VI. RECOMMENDATION

1. Engaging critical care professions in special training course for improve knowledge and practices concerning six sepsis steps.
2. Collaborating as a health care team to developed policies and protocols regarding sepsis.

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