

# Effectiveness of an Educational Program on Nursing Staff Knowledge towards Priorities of Responsibilities at Emergency Unit in Imam Al-Hussein Medical City in Holly Karballah Governorate

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## Abstract

The study aims to determine the effectiveness of an education program on nursing staff knowledge toward priorities of responsibilities and to identify the association between nursing staff knowledge and demographic characteristics of (age, gender, education level and year of experiences). A pre-experimental design (one group pre-test –post-test design) has been used. The study has been carried out at Emergency Unit in Imam Al-Hussein Medical City in Holly Karballah Governorate at the period from (26th of September, 2020 to 18th of April, 2021) on a non-probability (purposive) sample consisting of (28 nurses) who work in the emergency unit. A questionnaire was built as a data collection tool and consisted of two parts: First part: The demographic characteristics of the nursing staff (age, gender, level of education, years of experience in hospital, years of experience in emergency and level of education, and second part includes : Knowledge of Nursing Staff about Priorities of Responsibilities at Emergency Unit, and consist of four domain. The validity of content of program and the study instruments were determined through a panel of (11) experts. The data analyzed by using Statistical Package for Social Sciences (SPSS) version 25 application of statistical analysis system. The study findings revealed that nursing staffs' knowledge regards Priorities of Responsibilities at Emergency Unit before application of the program was poor with a statistical mean equal to (1.28) and after implementing the educational program became good with a statistical mean equal to (1.78). The study show that there is a positive effect of the educational program on the nursing staff's knowledge, where p-value was (0.000) in two periods of measurements (pre-test and post-test). The study recommended the necessity of improving the knowledge of the nursing staff regarding the priorities of their responsibilities in the emergency unit by the activation of continuing medical education in correctly.

**Key word:** Educational program, Nursing staffs' Knowledge, Priorities of Responsibilities, Emergency Nurses, Emergency Unit.

## Introduction

Priorities of responsibility are basic and essential function, where it aims to ensure that patients who receive health care be achieved for them in the appropriate time and as quickly as possible<sup>(1)</sup>. Priority setting is a significant nursing skill and difficult skills to learn for newly trained nurses and a skill deficiency can have severe repercussions for patients. Priority setting are arranging patients' problems according to importance and severity<sup>(2)</sup>. Nurses are often responsible for caring for many patients and at the same time they

are required to prioritize nursing care. Priorities for nurses has been stated to be challenging. Therefore, the elements and processes involved need to be analyzed in order to decide what kind of education and assistance nurses require to assist them in setting priorities<sup>(3)</sup>. One of the priority setting strategies is the triage system, which the triage nurse is the first person to meet a patient and ranks them according to the severity of their disease. Through the study that was conducted, it was noticed that the nurses has a lack of knowledge and skill in setting care priorities according to the triage system<sup>(4)</sup>.

## Material and Method

A pre-experimental experimental design was used. It was conducted with application of pre-test and post-test approach to determine the effectiveness of an education program on nursing staff knowledge toward priorities of responsibilities in emergency unit and to identify the association between nursing staff knowledge and demographic characteristics of (age, gender, education level and year of experiences). The study has been carried out at Emergency Unit in Imam Al-Hussein Medical City in Holly Karballah Governorate at the period from (26th of September, 2020 to 18th of April, 2021) on a non-probability (purposive) sample consisting of (28 nurses) who work in the emergency unit. A questionnaire was built as a data collection tool and consisted of two parts: First part: The demographic characteristics of the nursing staff (age, gender, level of education, years of experience in hospital, years of experience in emergency and level of education, and second part includes Knowledge of

Nursing Staff about Priorities of Responsibilities at Emergency Unit, and consist of four domain. The validity of content of program and the study instruments were determined through a panel of (11) experts (who had more than 10 years of professional experience in their fields. These experts distributed for (6) experts from

the faculty members College of Nursing / University of Baghdad, (2) experts specializing in emergency medicine work at Imam Hussain Medical City, (1) expert from faculty of Nursing/ University of Al- Ameen, (1) expert from faculty of nursing/ University of Karbala and (1) expert from faculty of nursing/ University of Samawah. Those experts were provided with a copy of the study instruments (program and multiple choice questions of the study). Those experts were asked to review and evaluated the instruments of program for content, simplicity, relevancy, and competence; some items were excluded and others were added after discussion with each expert. The instrument was considered valid after taking all the comments and recommendations in consideration. The reliability of the questionnaire was determined through a test of five nurses who are working at Emergency Unit in Imam Al-Hussein Medical City. After two weeks, the same nurses were retested to determine the reliability of the study instrument. The result of the reliability shows that the person correlation coefficient is ( $r = 0.88$ ) which is considered statistically acceptable matching with the lower bound of reliability coefficient (Barton & Peat, 2014). The pilot study was conducted during the period from (28th of February to 14th of March, 2021). The data analyzed by using Statistical Package for Social Sciences (SPSS) version 25 application of statistical analysis system

## Result

**Table (1): Distribution of the Study Sample According to The Socio demographic Data (N=28).**

Demographic Data	Rating and intervals		
		Frequency	Percent
Age / Years	<= 24	10	35.7
	25 to 29	11	39.3
	30 to 34	2	7.1
	35 to 39	3	10.7
	More than 40	2	7.1
	Total	28	100.0
Gender	Male	12	42.9
	Female	16	57.1
	Total	28	100.0

**Cont... Table (1): Distribution of the Study Sample According to The Socio demographic Data (N=28).**

Education level	Secondary	13	46.4
	Institute	12	42.9
	College	3	10.7
	Total	28	100.0
Years of experience In hospital	1 to 3	14	50.0
	4 to 6	7	25.0
	7 to 9	2	7.1
	10 to 12	2	7.1
	13+	3	10.7
	Total	28	100.0
Years of experience in emergency unit	1 to 3	21	75.0
	4 to 6	6	21.4
	7 to 9	1	3.6
	Total	28	100.0
Training sessions	YES	0	0.0
	NO	28	100.0

Table 4-1 shows that (39.3%) of the study sample are at age group (25 to 29) years old, ( 50%) have 1-3 years of experiences in hospital , (75%) have (1-3) years of experiences in emergency unit. Additionally, all the study samples (100%) don't have training sessions towards Priorities of Responsibilities at Emergency Unit.

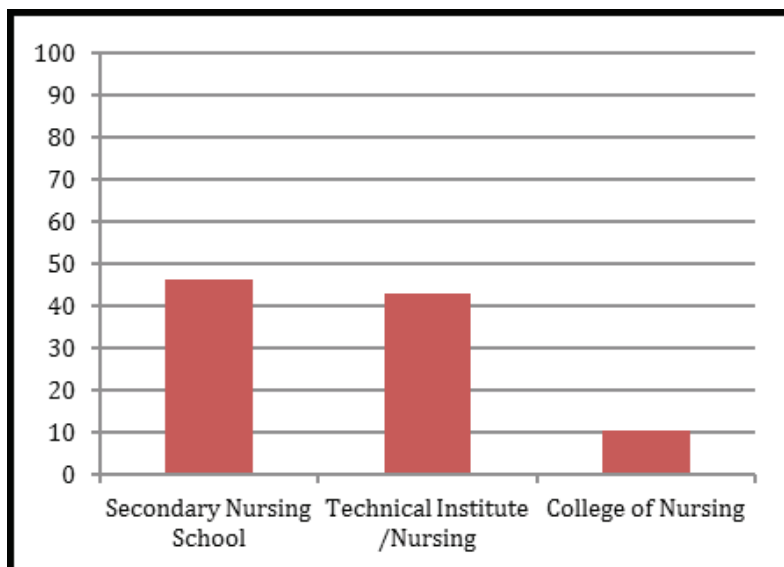
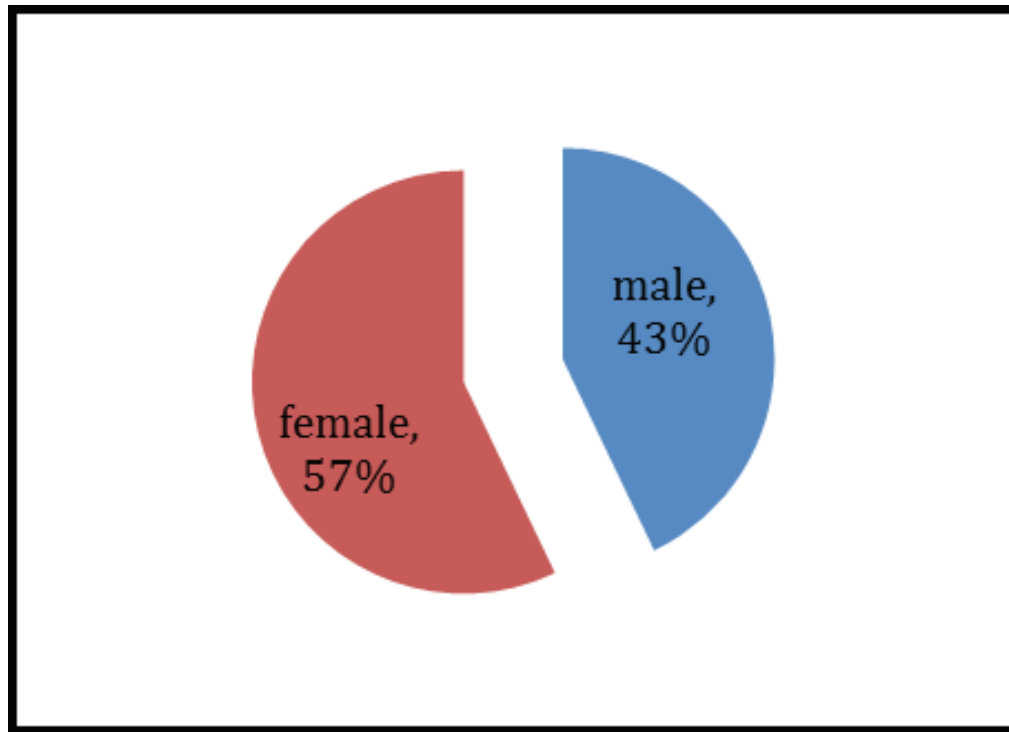
**Figure (1) Educational levels of the study sample.**

Figure (1) show that the greater number of nursing staff were secondary nursing school and they accounted for (46.4%) of the sample. Nursing staff graduate from technical institute accounted for (42.9%) and nursing staff graduate from nursing college were (10.7%).



**Figure (2) Distribution of the study sample by their gender.**

Figure (2) shows the study sample gender, the majority of the sample was female and they accounted (57.1%) of whole sample.

**Table (2): Distribution of the Study Sample According to the Overall Evaluation of Nursing Staffs' Knowledge in Pre-Test Period.**

Periods of measurements	Levels	Frequency	Percent	Overall mean	Overall evaluation
Pre-test	Good Knowledge	0.0	0.0	1.28	Poor Knowledge
	Poor Knowledge	21	75.0		
	Fair Knowledge	7	25.0		
	Total	28	100.0		
Post-test	Good Knowledge	22	78.6	1.78	Good Knowledge
	Poor Knowledge	0.0	0.0		
	Fair Knowledge	6	21.4		
	Total	28	100.0		
t- value (-15.955) , d.f (27) , p –value (0.000) HS					

poor (mean of scores 1-1.33) ,fair (1.34-1.67), good (1.68 and more), %= percentage , HS: High significant cutt off point (0.33).

Table (2) explains that the overall evaluation of the nursing staff knowledge before application of the program is poor with a statistical mean equal to( 1.28)

at all main studied domains while the overall evaluation of the nursing staff knowledge after application of the program is( good) with a statistical mean equal to(1.78) at all main studied domains ,as well as there is a highly statistically significant difference between the study sample overall responses in pre-test and post-test period, Where p –value was (0.000).

**Table (3). Relationship between the Overall Nursing Staffs'knowledge (Post-Test) and their Demographic Data by ANOVA.**

Demographic Data		df	F	p-value	sign
Age	Between Groups	9	.946	.512	non-significant
	Within Groups	18			
	Total	27			
Gender	Between Groups	9	1.025	.457	non-significant
	Within Groups	18			
	Total	27			
Educational Level	Between Groups	9	.913	.535	non-significant
	Within Groups	18			
	Total	27			
Years of experience in hospital	Between Groups	9	.778	.639	non-significant
	Within Groups	18			
	Total	27			

**Cont... Table (3). Relationship between the Overall Nursing Staffs' knowledge (Post-Test) and their Demographic Data by ANOVA.**

Years of experience in emergency unit	Between Groups	9	2.748	.032	Significant
	Within Groups	18			
	Total	27			

(T value): t-test, (D f): degree of freedom. Results were determined as highly significant at at ( $P < 0.01$ ), significant at ( $P < 0.05$ ), and non-significant at ( $P > 0.05$ ).

Table (3) showed that there is a statistically significant relationship only between the nurses' knowledge and their years of experience in emergency unit (at p-value = .032), while there is no statistically significant relationship between their knowledge and the rest of the socio demographic variables including (age, gender, educational level and years of experience in hospital).

### Discussion of the Study Findings

Part-I: A Discussion of the Demographic Characteristics of Nursing Staff in emergency unit as Shown in Table (1) and Figure (1) and (2):

Regarding nursing staffs' age, the result shows that (39.3) of the study sample are at age group (25 to 29) years old. This study supported by <sup>(5)</sup> who showed that more than a third of the study participants in their study that (35 %) of participants at age group (24-30) years. Also this study disagree with a study done by <sup>(6)</sup> who showed that the majority (40.6%) of participants were aged between (31-35) years.

After statistical analysis of the results of this study, it was found that the number of female participants exceeds the number of male participants, as the percentage of female participation was (57.1) and males was 42.9. This finding supported by <sup>(5)</sup>, who found in their study that (88.4%) of participants were female. Another study was conducted by <sup>(7)</sup> who found in their study that the majority of nursing staff gender was female. Also, there is a study conducted by <sup>(8)</sup> show that the number of female participants exceeds the number of

male participants.

Concerning Levels of education, the study results indicate that the greater number of nursing staff were graduates from secondary nursing school and they accounted (46.4) of the sample. This result agreed with the study conducted by <sup>(7)</sup> as it showed that the largest percentage of nurses participating in the study that was conducted in Baghdad hospitals in the emergency unit were graduates from secondary nursing school. Also this study disagree with a study done by <sup>(4)</sup> who showed that the majority (54.5) of participants were graduated from college of nursing (bachelor's degree).

Regarding the years of experience in nursing and emergency unit, the study found that half of the nursing staff (50.0) have (1-3) year experiences in employment and (75.0) of them have (1-3) year experiences in emergency unit. This study is consistent with the study conducted by <sup>(1)</sup> which showed that most of the nursing staff have an experience of (1-5) years in the nursing job and their percentage was (37.5%) and (72.5%) of them have (1-5) years experiences at emergency unit. Also this study disagree with a study done by <sup>(4)</sup> who found that the majority of the samples had more than (5) years of experience.

Part-II: Discussion of the Evaluation of Nursing Staffs' Knowledge towards Priorities of Responsibilities at Emergency Unit at the Pre-Test and Post Test Trials, as Shown in Tables (2)

The study findings revealed that nursing staffs' knowledge regards Priorities of Responsibilities at Emergency Unit before application of the program was poor with a statistical mean equal to (1.28) as shown in table (2). This result is inconsistent with the study

conducted by <sup>(5)</sup>, which showed that most of the nurses who work in the emergency unit have good knowledge about Priorities of Responsibilities at Emergency Unit. This study agree with a study done by <sup>(3)</sup> who showed that most nursing staff that work in emergency unit have knowledge and skills below the average about priorities of responsibilities.

After implementing the educational program, the study confirmed that the nurses' knowledge became good with a statistical mean equal to (1.78). as shown in table (2) . This study is agree with the other study conducted by <sup>(8)</sup> who show that the nurses' knowledge was improved after the implementation of the educational program.

The study show that there is a positive effect of the educational program on the nursing staff's knowledge about Priorities of Responsibilities at Emergency Unit , where p-value was (0.000) in two periods of measurements (pre-test and post-test) ,these improvements were statistically significant. These results are in agreement with the study done by <sup>(4)</sup> which ensured that the majority of nurses' knowledge have improved after the implementation of the educational program. Also other study by <sup>(4)</sup>, they found that nursing staffs' knowledge was improved after the implementation of the educational program with p-v(0.000).

Part-III: Discussion of the Relationship between Nursing Staffs' Knowledge at the post-test and their Demographic Data as Shown in Table (3) :

Regarding the association between the nursing staffs' gender and their knowledge towards priorities of responsibilities at Emergency Unit . the study shows that was a no significant relationship between nursing staffs' knowledge in post-test and their gender at (p-value=.457), this result indicated that female and male nurses were affected by the same level of the educational program , This indicates that both male and female are affected at the same level of the educational program. This result agreed with the study conducted by <sup>(5)</sup>.

Concerning the association between nursing staffs' age and their knowledge towards priorities of responsibilities at Emergency Unit, the study showed that there was no statistically significant difference between nursing staffs' age and their knowledge in post-test at

p-value (.512) ,This finding indicates that the all age groups are affected at the same level of the educational program. this study agree with a study done by <sup>(6)</sup>.

About the level of education, the result of the study shows no significant difference between the educational level and nursing staffs' knowledge in post-test at p-value (.535),The researcher's point of view this result because most of the participants are graduated from Secondary Nursing School and Technical Institute / Nursing, and the participation rate of nurses who graduate from colleges of nursing was very low, as the rate of participation was (10.7%).This result disagree with the study conducted by <sup>(5)</sup> and agree with a study done by <sup>(7)</sup>.

The study showed that there is no statistically significant between nurses' knowledge and experience in nursing work, but there is statistically significant between their knowledge and experience in the emergency unit where p-value was (.032%). This result agreed with the study conducted by <sup>(8)</sup> and disagree with a study done by <sup>(5)</sup> .

## Conclusions

Nursing staffs' knowledge regards Priorities of Responsibilities at Emergency Unit before application of the program was poor with a statistical mean equal to(1.28) and after implementing the educational program became good with a statistical mean equal to (1.78). Also the study show that there is a positive effect of the educational program on the nursing staff's knowledge, where p-value was (0.000) in two periods of measurements (pre-test and post-test). As well as the study showed that there is statistically significant between their knowledge and experience in the emergency unit where p-value was (.032%)

## Recommendations:

The study recommended the necessity of improving the knowledge of the nursing staff regarding the priorities of their responsibilities in the emergency unit by the activation of continuing medical education in correctly .

**Ethical Clearance:** The Research Ethical Committee at scientific research by ethical approval of both environmental and health and higher education and scientific research ministries in Iraq



**Conflict of Interest:** The authors declare that they have no conflict of interest.

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