

Assessment of Nurse's Knowledge about Nosocomial Infection at Hospitals in Baghdad City

تقييم معارف الممرضين حول عدوى خمج المستشفى المكتسب في مدينة بغداد

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الخلاصة:

الهدف: تقييم معارف الممرضين حول عدوى خمج المستشفى المكتسب في بغداد.
المنهجية: دراسة وصفية أجريت في مستشفيات مدينة بغداد و شملت (مستشفى بغداد التعليمي، مستشفى غازي الحريري، مستشفى الكرامة، مستشفى اليرموك ومستشفى الكاظمية). ابتداء من ٥ اب ٢٠١٢ إلى ٢٠ من فبراير ٢٠١٣.
تم اختيار عينة غير احتمالية (غرضية) تكونت من ١٠٠ ممرض ممن يعملون في مستشفيات بغداد.
تم تصميم الاستبانة و التي صممت من قبل الباحث وفقا للدراسات السابقة واستعراض الأدبيات وما يتصل بها و تم تقييم ثبات الاستبانة من قبل ١٤ خبيراً. تم تحديد صدق الاستبيان من خلال الاختبار و اعادة الاختبار و الذي قدر (٠.٨٠٢).
جمعت البيانات من خلال المقابلات باستخدام تنسيق الاستبان و تم تحليل البيانات باستعمال الأساليب الإحصائية الوصفية والاستنتاجية
النتائج: معظم الممرضين ضمن العينة كانوا من الذكور و ضمن الفئة العمرية (٣٠-٣٩) سنة، و خريجو معاهد التمريض و الغالبية العظمى منهم لديهم سنوات خدمة اقل من خمسة سنوات و قد دخلوا دورات قليلة في مجال العدوى المكتسبة في المستشفيات. وأشارت النتائج بان معظم الممرضين (٦٩%) لديهم قلة في المعرفة نحو العدوى المكتسبة في المستشفيات. و هنالك علاقة ذات دلالة احصائية عالية بين معرفة الممرضين تجاه العدوى المكتسبة في المستشفى و المستوى الدراسي للممرضين. و لا توجد علاقة ذات دلالة احصائية بين معرفة الممرضين تجاه العدوى المكتسبة و بين العمر و الجنس و سنوات الخدمة في المستشفى، و عدد الدورات
الاستنتاجات: أن اكبر فئة عمرية من الممرضين في كانت ضمن الفئة العمرية (٣٠-٣٩) سنة و كانوا من الذكور و اكثرهم كانوا من خريجي معاهد التمريض، و اكثرهم دخلوا دورات قليلة في مجال العدوى المكتسبة في المستشفيات. وأشارت النتائج أن معظم الممرضين (٦٩%) لديهم قلة في المعرفة نحو العدوى المكتسبة في المستشفيات
التوصيات: اوصت الدراسة بضرورة زيادة معرفة الممرضين من خلال اشراكهم في دورات خاصة عن العدوى المكتسبة في المستشفيات

Abstract:

Objective: To assess nurse's knowledge about nosocomial infection at hospital in Baghdad city.

Methodology: A descriptive study was carried out at hospitals in the city of Baghdad and included (Baghdad teaching hospital, Gazi al-hariri hospital, Al-karama hospital, Al-yarmok hospital, and al-kadhemia hospital). Starting from 5 of August 2012 to 20 of February 2013. A non-probability (purposive) sample of 100 nurses who worked in hospitals in the city of Baghdad.

The questionnaires was designed and constructed by the researcher according to review of literature and related study. The content validity of the instrument was established through penal of 14 experts.

Reliability of the Instrument was determined by test-retest method which was estimated as average ($r=0.802$).

Data was gathered by interview technique using the questionnaire format and data was analyzed by application of descriptive and inferential statistical methods.

Results: The majority of nurses was male, with age group 30-39 years old, nursing institute graduated, the majority of nurses have less than 5 years of employment in the hospital and low number of training course about nosocomial infection. The result indicated that most of the nurses (69%) have poor knowledge toward NI. There is significance relationship at $P < 0.05$ between nurse's educational level and their knowledge toward NI. There is no significance relationship at $P > 0.05$ between nurse's (age, gender, years of employment in the hospital, and training course of nosocomial infection) and nurse's knowledge toward NI.

Conclusion: The study concluded that the nurses not have appropriate knowledge toward nosocomail infection

Recommendations: The training course is necessary to increase nurses' knowledge toward nosocomial infection. This training course should be regularly done and updated in view of changing knowledge and practices

Key words: assessment, nurse's knowledge, nosocomial infection

INTRODUCTION:

Nosocomial infections (NI) increase patients' morbidity, mortality, length of hospital stay and treatment cost⁽¹⁾.

Therefore, knowledge about the frequency and distribution of NI is important to improve infection control measures as well as to develop effective preventive and curative strategies which, in turn, will help us in decreasing incidence, morbidity and mortality⁽²⁾. Nosocomial infection (NI) refers to as a hospital acquired infections (HAI) or simply hospital infections are infections occurring during staying 48 hours or longer, which resulted in the use of the 48 hour criterion in several epidemiological surveillance system⁽³⁾.

NI an important health problem throughout the world and affects both developed and developing countries, it results in high morbidity and mortality, greater use of antibiotics, prolonged stays in the hospital and consequently increases hospital costs. An effective knowledge about infection prevention can reduce the rate of NI and its consequence⁽⁴⁾.

Nosocomial infection continues to be burden to the world health care system through increased risk to patient and employees. These infections have tremendous health and financial costs with an estimate incidence of 2,000,000 infection per year, 20,000 death per year and added costs of billion dollars per year. Effective infection control program are essential to controlling and preventing Nosocomial infection⁽⁵⁾.

Objective:

To assess nurse's knowledge about nosocomial infection at hospital in Baghdad city.

METHODOLOGY:

Quantitative design a descriptive study was conducted on female and male nurses who work in at hospitals in the city of Baghdad and included (Baghdad teaching hospital, Gazi al-hariri hospital, Al-karama hospital, Al-yarmok hospital, and al-kadhemia hospital). Starting from 5 of August 2012 to 20 of February 2013.

A non-probability (purposive) sample of 100 nurses were selected from (28 nurses from Baghdad teaching hospital, 19 nurses from Gazi al-hariri hospital, 10 nurses from Al-karama hospital, 28 nurses from Al-yarmok hospital, and 15 nurses from al-kadhemia hospital) who were accepted to be involved in the study.

The content validity of the instrument was established through panel of (14) experts. Reliability of the problems scale was determined by test-retest method which was estimated as average ($r=0.802$).

Data was gathered by interview technique using the questionnaire format and data was analyzed by application of descriptive and inferential statistical methods.

RESULTS:**Table 1: Distribution of Nurse's Demographical Characteristics.**

Dem. characteristics	Groups	Freq.	Percent	Cum. Percent
Age Groups	20 - 29	36	36	36
	30 - 39	42	42	78
	40 - 49	13	13	91
	50 - 59	7	7	98
	60 $\geq$	2	2	100
Gender	Male	70	70	70
	Female	30	30	100
Education levels	Training course in nursing	3	3	3
	Secondary nursing school	31	31	34
	Nursing institute	45	45	79
	Nursing college and more	21	21	100
Years of employment in the hospital	1 - 5	43	43	43
	6 - 10	28	28	71
	11 - 15	14	14	85
	15 - 20	7	7	92
	21 - 25	2	2	94
	26 - 30	3	3	97
	30 >	3	3	100
Training course	0	38	38	38
	1 - 5	55	55	93
	6 - 10	6	6	99
	10 >	1	1	100

This table indicates that the observed frequencies, percents and cumulative percents of demographical characteristics variables in the sample which age group (30-39) (42%). More than half of the subjects are males (70%). (45%) of sample was nursing institute in educational level. About years of employment in the hospital (1-5) (43%) and about training course of nosocomial infection (1-5) was larger group (55%) in the sample.

Table 2: Nurses Responses about Nosocomial Infection

Parameters	Good knowledge		Poor knowledge		Total	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Nurse's information about nosocomial infection	31	31	69	69	100	100

This table indicates the nurses have poor knowledge about nosocomial infection in which just (31%) of nurses have adequate knowledge and most of them (69%) have inadequate knowledge toward nosocomial infection.

Table 3: Association between the Nurse's Demographical Data and their Knowledge

Nurse's Demographical Data	Contingency Coefficient	Approx. Sig.	C.S.
Age Groups	0.291	0.773	NS
Gender	0.141	0.889	NS
Education levels	0.287	0.04	S
Years of employment in the hospital	0.209	0.370	NS
Training course	0.209	0.370	NS

This table shows that there are no significant correlation at $P > 0.05$ between (age groups, gender, Years of employment in the hospital, and Training course about hospital acquired infection), and nurse's knowledge about nosocomial infection, which there are significant correlation at $P < 0.05$ between nurse's educational level and their knowledge toward nosocomial infection.

DISCUSSION:

Throughout the course of data analysis table number (1) indicates that the majority of the samples were (30-39) years old who were a counted (42%). This finding comes along with result obtained from study done by (Motamed, et al., 2006) which indicated that majority of the nurse's age were (30-40) years old⁽⁶⁾.

In relation to gender, most of nurses in this study (70%) were male. This result is compatible with (Abdollahi, et al., 2003) which indicated that (67.7%) of nurses in their study was male⁽⁷⁾.

Relative to educational level (45%) of nurses was nursing institute. This finding agrees with results obtain from study done by (Abdollahi, et al., 2003) which indicated that the majority of the nurses in their study was nursing institute⁽⁷⁾.

Regarding years of employment of nurses in the hospital, about half of nurses (43%) have less than 5 years of employment in the hospital. This result is compatible with (Taheri and Jokar, 2007) which indicated that most of sample has less than 5 years of employment in the hospital⁽⁸⁾.

In relation to training course about NI, more than half of nurses (55%) take (1 - 5) training course. This result is incompatible with (Janjua, et al., 2007) which indicated that most of nurses take more than 5 training course about NI⁽⁹⁾.

Throughout the course of data analysis table number (2) indicates that the majority of the samples (69%) have poor knowledge toward nosocomial infection. This finding comes along with result obtained from study done by (Ghadamgahi, et al., 2011; and Taneja, et al., 2009) which indicated that majority of the nurses (67.9% and 68.3% respectively) have poor knowledge toward nosocomial infection^(10, 11).

In this study the results in table (3) reflect that there is no relation between nurse's age and their knowledge toward NI. This result may be related to inadequate training to the nurses about NI. This result is incompatible with (Motamed, et al., 2006) which indicated that there is relation between nurse's age and nurse's knowledge about NI⁽⁶⁾.

Regarding gender, there is no relation at $p > 0.05$ between nurse's gender and their knowledge toward NI. This result agrees with the results obtained from study done by (Harbarth, et al., 2009) which they found that there are no relationship between nurse's gender and their knowledge toward NI, and disagrees with the results obtained from study done by (Motamed, et al., 2006) which they found that females were more knowledgeable than males toward NI^(12, 6).

Relative to educational level there is significant association at $P < 0.05$ between nurse's educational level and their knowledge toward NI. When the nurses increased their level of education, their knowledge increased too. This finding agrees with results obtain from other studies done by (Cardo, et al., 2010) which indicated that there are good relation between nurse's educational level and their knowledge toward NI⁽¹³⁾.

Concerning years of employment of nurse in the hospital there is no relation at $P > 0.05$ between nurse's years of employment and their knowledge toward NI. This result may be related to educational level of nurses or inadequate training during these years to the nurses about NI. This result is incompatible with (Taheri and Jokar, 2007) which indicated that there was positive relation between the knowledge and the years of employment as a nurse in to increasing their knowledge⁽⁸⁾.

In relation to training course, the findings showed that there is no significant association at $P > 0.05$ between the nurse's training courses about NI and their knowledge toward NI. This result may be due to the facts that the nurses who have not the educational courses about NI, or they have training course 5 years ago, or the curriculum in that course has not been implemented effectively. This finding agrees with results obtain from other studies done by (Adra`a, 2008) which indicated that there are no significant relation between the nurse's training courses about NI and their knowledge about NI. This finding disagrees with results obtain from other studies done by (Ghadamgahi, et al., 2011) which indicated that there was good relation between nurse's knowledge and training course about NI^(14, 10).

CONCLUSION:

According to the present study findings, the researcher can conclude the following:

1. The majority of nurses have less than 5 years of employment in the hospital.
2. Most of the nurses have less than 5 training course of nosocomial infection.
3. Nurses do not have adequate and appropriate knowledge about nosocomial infection.
4. There is significance relationship at $P < 0.05$ between nurse's educational level and their knowledge toward NI.
5. There is no significance relationship at $P > 0.05$ between nurse's (age, gender, years of employment in the hospital, and training course of nosocomial infection) and nurse's knowledge toward NI.

RECOMMENDATIONS:

According to the results of the study, the researcher recommends to:

1. Training course is necessary to increase nurses' knowledge toward nosocomial infection.
2. Training course should be regularly done and updated in view of changing knowledge and practices.

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