

Assessment of Nurses' Knowledge Regarding Needle Prick Injury in Erbil Hospitals

تقييم معرفة الممرضات عن الإصابة بوخز الإبرة في مستشفيات اربيل

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الخلاصة:

الخلفية : في كل يوم يتعرض العاملون في المجال الصحي إلى المخاطر الوخز بالإبر الملوثة أو الأدوات الجارحة. الممرضات هم أكثر العاملين الذين يتعرضون الوخز الإبر في المستشفى والتي قد تنتج عنها مخاطر الالتهابات نتيجة الممارسات غير الآمنة في التعامل مع الوخز بالإبر والأدوات الحادة.

الهدف : تهدف الدراسة الى تقييم معلومات الممرضات والمخاطر الناتجة عن الاستخدام غير الجيد للوخز بالإبر والأدوات الحادة .

المنهجية : أجريت الدراسة الوصفية في بعض المستشفيات مدينة اربيل وقد شملت العينة (60) ممرض وممرضة وتم اختياره بطريقة غرضية وقد تم تصميم الاسئلة لتحقيق اهداف البحث.تم استخدام الوسائل الاحصائية الوصفية والتحليلية في تحليل النتائج بالاستخدام SPSS Version 19 لتحليل المعلومات

النتائج: أظهرت نتائج الدراسة بين اغلب الممرضات ان معلوماتهم جيدة حول المخاطر الناتجة عن الوخز بالإبر والأدوات الحادة . ولا توجد أي علاقة مؤثرة بين معرفة الممرضين تجاه إصابات وخز الإبر والبيانات الديموغرافية.

الاستنتاج : استنتج الباحثون أن المعرفة الممرضون بشأن إصابات وخز الإبر بشكل عام كانت جيدة.

التوصيات: إجراء برنامج التعليم التربوي للممرضين بشأن إصابة وخز الإبرة لتحسين معرفتهم حول هذا الموضوع لحماية أنفسهم من مخاطر ها.
مفاتيح الكلمات: معرفة، ممرض، ممرضة، الوخز بالإبر

Abstract:

Background Every day, health care worker are exposed to dangerous and deadly blood borne pathogens through contaminated needle sticks, sharps, or splash exposures. In hospitals, nurses are the first level of the staff whom contact with risk of infection from unsafe practices related to needles and sharps.

Objective: Assess of nurse knowledge regarding needle prick injuries and its risks in Erbil hospitals.

Methodology: A descriptive study was conducted in some hospitals of Erbil City. The Sample size for the study was 60 nurses. Purposive sample was selected and Data was analyzed by using descriptive and inferential statistic by SPSS version (19).

Results: It showed that the most of nurses had good knowledge regarding the needle prick injuries and its risks. Also there are no significance relationship between nurse's knowledge and their demographic data.

Conclusion: The researchers concluded that the nurse's knowledge regarding needle prick injuries generally were good

Recommendation: conducting educational teaching programme for nurses regarding needle prick injury to improve their knowledge about it to protect themselves from its risks

Key words: Needle prick injury, Knowledge, Nurses.

INTRODUCTION:

In hospitals, nurses are the first level of the staff whom contact with risk of infection from unsafe practices related to needles and sharps. They are expected to undertake activities related to patient care with the beginning of their clinical years. Being amateurs, they lack experience and skill, therefore; at a higher risk of infection from unsafe practices related to needles and sharps¹.

Every day, health care workers are exposed to dangerous and deadly blood borne pathogens through contaminated needlesticks, sharps, or splash exposures. It is one of the greatest risks faced by the frontline health care worker. Yet, these exposures have often been considered “part of the job.” The Needlestick Safety and Prevention Act were signed into law in November 2000 and became effective in April 2001. The passage of this federal needlestick legislation was part of a plan by the American Nurses Association (ANA) and other health care worker advocates to achieve an amendment to the federal Occupational Health and Safety Administration (OSHA) Blood borne Pathogens Standard. The purpose of this Independent Study Module is to inform nurses about the law, the additional protections it provides, and present other strategies the nurse can use to reduce occupational exposure to blood borne pathogens².

The National Institute for Occupational Safety and Health (NIOSH) USA, Defined needle sticks injuries as injuries are caused by needles such as hypodermic needle, blood collection needles, intravenous styles and needles used to connect parts of IV delivery system³.

Health care workers face the hazard of needle-stick injuries, (NSI) which can result in serious infections with blood borne pathogens such as hepatitis B virus, (HBV), hepatitis C virus, (HCV) or Human immunodeficiency virus, (HIV)⁴.

WHO (2002) reported, that of the 35 million health-care workers, 2 million experience percutaneous exposure to infectious diseases each year. It further notes that 37.6% of Hepatitis B, 39% of Hepatitis C and 4.4% of HIV/AIDS in Health-Care Workers around the world are due to needle stick injuries. WHO and others show on average: four NSIs per worker per year in the African, Eastern Mediterranean, and Asian populations⁵. Seventy percent of the world’s HIV population lives in Sub-Saharan Africa, but only 4% of worldwide occupational cases of HIV infection are reported from this region⁶. In Vietnam, 38% of physicians and 66% of nurses reported sustaining a sharp stick injury in the previous nine months⁷.

Numerous studies have found nurses to be the commonest group of healthcare workers experiencing needle stick injuries⁸. Needle pricks and sharps injuries represent a significant hazard in professional nursing. Researches also have shown that, between all health care workers, nurses are the ones who sustain a high needle pricks injuries burden^{9, 10}.

Effective measures to prevent infections from occupational exposure of healthcare workers to blood include immunization against, eliminating unnecessary injections, implementing Universal Precautions, eliminating needle recapping and disposing of the sharp into a sharps container immediately after use, use of safer devices such as needles that sheath or retract after use, provision and use of personal protective equipment, and training workers in the risks and prevention of transmission¹¹.

The healthcare system in Kurdistan is still in its primitive stages but a careful developmental program needs to begin to provide appropriate care for the Kurdish people. To achieve better Infection control measures the following areas are in need of improvement; education, resources, overload of patients on health care workers, and encouragement from the Regional Health Governor and Ministry of Health¹². So this study was conducted to assess knowledge of staff nurses regarding NPIs as risk is high for this group.

METHODOLOGY:

Design of study: Descriptive study cross sectional design was used.

Setting of study: This study was carried out at three hospitals (Raparin Pediatric Teaching Hospital, Rizgary Teaching Hospital and Hawler Teaching Hospital).

Sample size: The sample size for this study was 60 staff nurses (14 in Raparin, 17 in Rizgary and 29 in Hawler Teaching Hospitals) registered in Ministry of health/Kurdistan region/Iraq.

Sampling selection: Non-probability purposive sampling was used.

Instrument: A questionnaire was constructed by investigators, and its comprised of two major sections:

Section I- Demographic information: Which personal data included (age, sex, level of education, past experience).

Section II: Assessment of knowledge regarding needle prick Injuries. : It consists of 20 questions and categorized to four levels also give a score like the following:

Poor	< 60
Average or Fair	60-69
Very good	≥ 70

Data analysis: Data was analyzed using Statistical Package for the Social Sciences (SPSS) version 19. Descriptive statistics were performed on the knowledge on Needle prick injuries. The chi square was used to evaluate the relationship between variables.

RESULTS:

Table 1: Demographic Characteristic of Nurses:

Items	Frequency	N=60	Percentage
Age			
21-25 years	16		26.7
26-30 years	20		33.3
31-35 years	8		13.3
36-40 years	9		15.0
>40 years	7		11.7
Sex			
Male	35		58.3
Female	25		41.7
Educational level			
High school	12		20.0
Diploma	25		41.7
Bachelor	23		38.3
Total Years of experience			
1-5 years	29		48.3
6-10 years	11		18.3
11-15 years	10		16.7
> 15 years	10		16.7

Table 1 shows that 33.3% of the sample was in the age group of 26-30 years, 58.3% was male with 41.7% had diploma in nursing. Just under half (48.3%) of sample had a clinical experience of 1 to 5 years.

Table (2): Nurses' knowledge on needle prick injuries:

Level of Knowledge	Score in Percentage	Frequency	Percentage
Poor	< 60	16	26.7
Fair	60-69	17	28.3
Good	≥ 70	27	45.0
Total		60	100.0

Table 2 reveals that most of nurses 27 (45.0%) had good knowledge, 17 (28.3%) had fair knowledge, and 16 (26.7%) of them had poor knowledge, up to 20 general questioner regarding meaning, risk, prevention, and treatment of needle prick injuries (show figure 1).

Figure 1: Nurses' knowledge on needle prick injuries

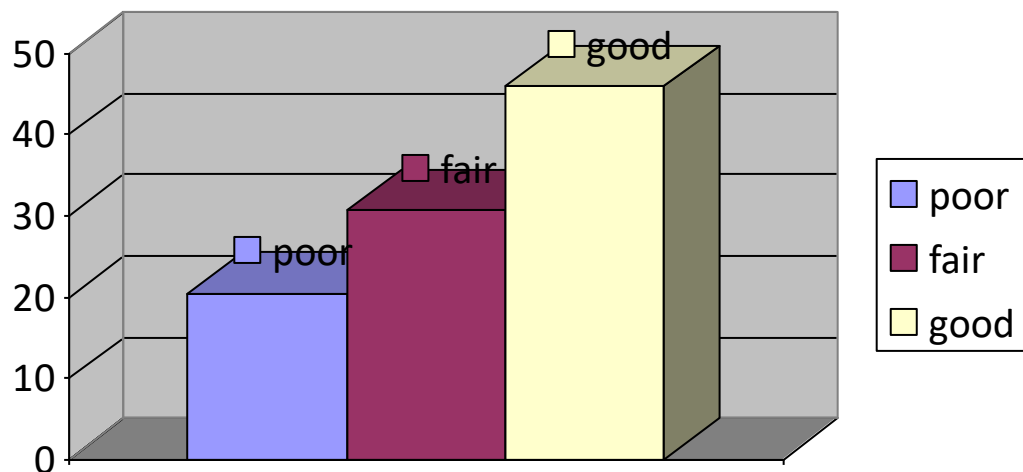


Table 3: The relationship of nurses' knowledge with selected demographic variables:

Demographic variables	Poor	Fair	Good	Chi-square <i>P value</i>
Age (in years):				
21-25 year	4	5	7	0.810
26-30 year	6	3	11	
31-35 year	3	3	2	
36-40 year	2	2	5	
> 40 year	2	3	2	
Gender:				
Male	11	11	13	0.341
Female	6	5	14	
Qualification:				
High school	5	2	5	0.442
Diploma	7	9	9	
Bachelor	5	5	13	
Year of experience:				
0-5 years	7	5	17	0.212
6-10 years	5	2	4	
11-15 years	2	4	4	
> 15 years	3	5	2	

Table 3 shows that there are no any significant associations between nurses' knowledge with selected demographic variables (Age, Gender, Qualification, and year of experience).

DISCUSSION:

This study showed that most of participants were in the age group of 26-30 years (table 1). This finding similar with the result of Sharma et al. (2010)¹³, their Results showed maximum participants were in the age group of 20-30 years. In contrast with most of the study done in abroad regarding nurses' gender were female, our results reveled that most participants were male (table 1), because most of female nurses was not agree to conduct of this study.

Regarding qualification and experience; most of subjects (41.7%) had diploma in nursing. Just under half (48.3%) of sample had a clinical experience of ≤ 5 years, Some studies supported this result such as Shah et al., (2010)¹⁴ they showed that 61% Health Care Workers had less than 5 year of work experience and Hanafi et.al., (2011)¹⁵ found that Around two-thirds of workers (67.9%) had suffered at least 1 needle stick injury (NSI) in the last 12 months, also Nsubuga and Jaakkola (2005)¹⁶ revealed that 57% of the nurses and midwives had experienced at least one needle stick injury in the last year.

In the present study most of nurses 27 (45.0%) had good knowledge, 17 (28.3%) had fair knowledge, and 16 (26.7%) of them had poor knowledge, similar to other study done by Onyemochi et al., (2010)¹⁷ their findings showed that 54.3% of Health workers had good knowledge score of key injection safety issues, while 16.7% and 29.0% had had fair and poor general knowledge scores respectively. While another study done by Shah et.al., (2010)¹⁴ revealed that knowledge of health care workers about the risks associated with needle stick injuries and use of preventive measures was inadequate and Siddique et al., (2008)¹⁸ reveals inadequate knowledge amongst health care workers about the risk associated with needle-stick

injuries and lack of use of preventive measures. Knowledge among health care workers regarding risks and hazards associated with NSI is inadequate.

Study of Sharma et al., (2010)¹³ revealed few gaps in the knowledge among health care workers about needle-stick and sharps injuries (NSSIs). Like risks associated with needle-stick injuries and use of preventive measures, disassembling of needles prior to disposal. These gaps can be addressed by extensive education. As nurses were the most affected victim for the NSSIs, more emphasis should be given towards them for reducing the NSSIs.

Corelationship of level of knowledge regarding needle prick injury with selected demographic variables:

In present study was find association between the Knowledge scores & the selected demographic variables such as age, gender, education status, and past experience with needle pricks injury, there are no any significant associations between nurses' knowledge with selected demographic variables (table 3). This is meant that demographic variables are not influential factor on nurses' knowledge regarding needle pricks injury. This finding consistent with the result of Bijani et al., (2010)¹⁹ indicated that there was no statistically significant relationship needle stick injury with education level, gender and related training course.

CONCLUSION:

Needle stick injury is the most important occupational health hazard in nurses with alarmingly high rates. Most of staff nurses with bachelor degree and possess 1 to 5 years of experiences has good knowledge on the needle prick injuries, on the other hand the nurses have a high school degree are inadequate knowledge. There are no significance relationship between nurse's knowledge and their demographic data.

RECOMMENDATIONS:

On the basis of the findings of the study, the following recommendations are made:

1. A study can be done on knowledge, practice & attitude related to needle prick injury among staff nurses on a larger sample.
2. Teaching programme can be conducted in all hospitals and health care centers regarding needle prick injury

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