

# Incidence of Needle Stick and Sharp Items Injuries Among Nurses At Al-Kindy Teaching Hospital

BATOOL KADHAM HUSSIN<sup>1</sup>, ZAHRAA KHALID IDANED<sup>2</sup>

<sup>1</sup>Assistant Instructor, Technical Nursing Department, Institute of Medical Technology - Baghdad / Middle Technical University, Iraq

<sup>2</sup>M.Sc., Ministry of Health/Environment Medical City Directorate High Health Institute. Email: kzahraa017@gmail.com

Correspondence to: Batool Kadham Hussin, Email: batoolhussin4@gmail.com

## ABSTRACT

**Background:** This paper aimed to assess the rate of NSIs among the Iraq nursing staff at Kindy teaching hospital

**Methods:** A descriptive study was conducted to collect information about the rate of acupuncture accidents among nurses at Al-Kindi Teaching Hospital.

**Results:** (77%) of the sample were in the stage group of 20-30 years. while the majority of the sample (74%) was female. Regarding the educational level, the high percentage of high school with 52%, followed by the institute of nursing with a 22% about experience years the majority of sample 70% were 1-5 years in hospital. Among the nurses involved in the study, 72% were injured in acupuncture sharps while 64% did not participate in training courses about NSIs

**Conclusion:** Nursing workers suffer a high rate of sharp injuries, which can increase the chances of a disease and its consequences. Emphases of researcher's mast increasing the nurses' awareness and skills, holding workshops, finally, the importance of completing the hepatitis B vaccine course can be effective in reducing the incidence of infections and the risks of infectious diseases.

**Keywords:** nurses, needle stick injuries, and sharp object.

## INTRODUCTION

One of the most significant responsibilities of nursing is handling surgical instruments and medication administration. The nurse's primary responsibility is to provide treatment <sup>(14)</sup>

In addition, 90% of patients admitted to health care facilities are treated with cannula and needles, since they are the primary means of delivering medicines, blood products, and nutritional fluids, which makes it difficult because serious infections can be contracted through them. <sup>(6) (12)</sup>

Needles and sharp tools injuries are among the most common accidents that may transmit more than 25 types of microorganisms.

In any case, four types of disease conditions are more serious and common: HIV, hepatitis B and C, and tetanus, which is caused by *Clostridium tetanus*. <sup>(1) (8)</sup>

Acupuncture injuries are a cut or puncture in the skin caused by a needle or sharp tools, by which we mean items and devices with protrusions or points capable of injuring the skin and punctures, as well as scalpels, scissors, broken glass, etc. <sup>(3) (2) (16)</sup>.

These injuries are among the most serious occupational hazards to which health care providers are exposed, according to previous studies. <sup>(12) (15)</sup>

It is expected that approximately Six hundred to eight hundred thousand NSIs take place every year among HCWs in the United States (one injury every ten seconds). More than half of these injuries are not reported. <sup>(16)</sup> However, each year worldwide roughly 66,000 HBV, 16,000 HCV, and 1,000 HIV infections were expected to occur among HCWs – commonly in upward countries – due to their job-related contact to percutaneous injuries. <sup>(3)(4)(9)</sup>

According to a previous study approximately 37% of H.B. virus infections, 39% of H.C. virus infections, and 4.4% of human immunodeficiency among HCWs global At least 1,000 are expected to get vital infections once a year from an NSIs <sup>(5)(13)</sup> In the same context Occupational injuries sustained by health workers continue during the provision of health care to patients, as previous studies have shown that three million health care workers out of 35 million experienced in national institutes of statistics each year internationally. A study in Saudi Arabia confirmed that there were 364 reported cases of a cut or pricking with a sharp object.

The incidence varies according to specialization. The nursing staff has 38 injuries out of a thousand nurses, and the assistant medical staff is 46/1000, and the case is more exacerbated in some other surgical specialties, reaching 66/1000 cases. The highest reason was 12% due to disorganization and improper disposal of sharps. <sup>(26)</sup>

## METHODOLOGY

Study design: A descriptive goal was carried out from September 10 to October 25, 2021, to assess the incidence of needle stick injuries among nurses. Study sample A purposive (non-probability) sample was used in the study, composed of 100 nurses from the morning and night shifts at Al-Kindi Teaching Hospital. The Study Tool was designed by the researchers after looking at the relevant kinds of literature that were related to the study. The survey was designed to collect information on the rate of tingling accidents among the nursing staff. It was based on previous studies related to the subject and consisted of two parts. (7) (10) (11) The survey form was distributed manually and answered by the participant's It contains 2 portions: Part one: Sociodemographic information, which includes age, sex, and educational level. The second part contained 10 questions containing information about how many times you were subjected to needles, whether you received the hepatitis B vaccine, and whether the accident was reported, etc. Use the statistical analysis program SPSS version 21 to find quantitative results using percentages and frequencies.

## RESULTS AND DISSUASION

Table 1: Demographic portion of study subjects (n=100).

No.	Item's	Groups	F.	%.
1-	Age /years	20-30	77	77 %
		31-40	13	13%
		41-50	6	6%
		51-60	4	4%
2-	Gender	Male	26	26%
		Female	74	74%
3-	Level of education	High school	52	52%
		Institute	22	22%
		B. Sc nursing	21	21%
		M. Sc nursing	5	5%
4-	experiences (Years)	1-5 years	70	70%
		6-10	14	41%
		11-15	8	8%
		> 15	8	8%
5-	History of NSIs	Yes	73	73%
		No	22	22%
6-	Training courses related NSIs	Yes	36	36%
		No	64	64%

The above table shows that the highest percentage of participants are females in the age group (20-30), at 74%, because of the nursing schools for females, while the educational level was for secondary schools at 52%, as most of the nursing graduates

want to be appointed because of the Economic Status and leave to continue studying. regard to years of experience, the study confirmed that the highest percentage is (1-5) by 70%. Regarding the injuries part, most of the participants were exposed to puncture injuries and accidents by 73%, and this is due to the low educational level, lack of experience, and scientific competence. About training courses, most participants did not receive any training course or workshop on the dangers of contaminated sharp tools, and this explains poor planning and lack of interest in continuing education. compatible with studies. <sup>(19) (20) (21).</sup>

Table 2: Assessment of incidence regarding NSIs among staff nurses (n=100).

No.	Questions	Answer	F.	%
1	Number of accidents (NSIs)	%22	22	0
		%45	45	3-1
		%26	26	6-4
		%7	7	7-10
2	Document acupunctures	%26	26	Yes
		%74	74	No
3	Reason for not documenting?	annoying procedures	%52	52
		no benefit of reported	%32	32
		Fear of results	%8	8
		I don't want to know the results	%8	8
4	Have you received the hepatitis vaccine?	%36	36	Yes
		%35	35	No
		%29	29	Incomplete course
5	Device of NSIs	%63	63	Needle &cannula
		%18	18	Ampulla
		%7	7	Scalpels
		%8	8	Scissor
		%4	4	Other
6	Clinical procedures associated with (NSIs)	%17	17	Suturing
		%11	11	Recapping
		%29	29	Giving medication
		%35	35	Cannulation
		%8	8	clean the place
7	Causes of NSIs	%5	5	inexperienced
		%50	50	Tired helpless
		%35	35	lack of protective equipment
		%10	10	Negligence

Table tow reveals that a high percentage of nurses had (1-3) accidents of NSIs by 45% and 63%, Device of NSIs were Needle &cannula. Related to clinical procedures associated with (NSIs) Cannulation (35%), about Causes of NSIs was tired helpless by 50% The nurses were documenting acupunctures 26% while 74% didn't document their injuries. Regarding the Reason for not documenting was 52% annoying procedures, finally, the nurses have received the hepatitis vaccine 36%.

The results demonstrated that a high percentage of nurses were with the age group of (20-30) years old, who are female nurses 74%. The level of education for nurses was referred to secondary school of nursing (52%). Regarding the years of experience, the nurses had work experience of (1-5) years (70%), were participated in training courses about needle stick injuries (36%). Related to a history of needle stick injuries, the nurses had a history of NSIs (73%).

Our results of the table show that a high percentage of nurses had (1-3) accidents of NSIs 45%, Device of NSIs were Needle & cannula. Related to clinical procedures associated with (NSIs) Cannulation (35%)IT agree with study <sup>(24) (25).</sup> Causes of NSIs tired helpless (50%) Poverty of knowledge in many trials, insufficient training, duty overwork, and low energy indication to

job-related hurts The nurses were documenting acupunctures 26% while (74%) didn't document their injuries. The reason for not documenting was annoying procedures, this is due to the lack of interest and lack of focus on acupuncture incidents by health institutions and the lack of specialized centers to document and follow up similar cases. The nurses have received the hepatitis vaccine (36%) The results of this study are consistent with different studies <sup>(16) (22) (23) (24).</sup>

**CONCLUSIONS**

The current study confirmed the existence of a high rate of acupuncture injuries among nurses due to mistake practices, which expose patients and health care providers to the risk of infection with infectious diseases The researchers recommended improving working conditions for nurses, focus on their participation in training programs on the prevention of occupational injuries, and pay attention to documenting and following up on actual cases of injuries and the type of disease

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