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**PREVALENCE OF SI AND NSI
AMONG NURSES IN NORTHERN
WEST BANK HOSPITALS /PALESTINE**

Introduction

- HAI is considered an important public health problem².
- According to WHO, its prevalence in developed countries (3.5% and 12%), while in developing countries it (5.7% and 19.1%)³.

- HAI can affect both patients and health-care workers.
- It involves occupational infections among nurses.
- The major occupational hazard is the transmission of blood-borne disease by being exposed injuries caused by contaminated sharp objects such as scalpels and broken glass and needle stick¹.

- The mode of transmission depends on many factors such as immunity of HCW and amount of blood transferred during injuries¹.
- The risk of transmission of infectious agents would increase if infection control practice and standard precautions were not applied⁵

- Nearly (39%) of cases of HCV that occurred worldwide happened among HCWs,
- Hepatitis B virus (HBV) formed (37%)⁶.
- Furthermore, needle stick injuries can transmit more than twenty types of infections such as malaria, syphilis and herpes⁷.

- SI and NSI are a problems that threaten nurses and form a significant risk in professional nursing. This is due to their daily activities which may expose nurses to NSI and SI.

- According to CDC's estimation, there were nearly (385,000) SI cases yearly among HCWs, and most reported cases occurred among nursing staff, but laboratory staff, physicians

- Nearly half of SI were not reported; this was due to many reasons: lack of time to report, lack of knowledge of the reporting procedure, possibility of getting in trouble for having the exposure, belief the source patient was low for hepatitis B or hepatitis C or AIDS, and underestimation of the importance of reporting^{12,13,14}.

Aim and Objectives

- **Aim** : to assess the prevalence of SI and NSI among nurses
- **Specific objectives** :
 - To estimate the prevalence of sharp injuries and needle stick injuries among nurses in the target hospitals.
 - To identify the percentage of needles sticks as a result of sharp injuries.
 - To identify the main related causes of SI and NSI among nurses

- **Research question:**
- What is the prevalence rate of SI and NSI among the nurses
- What are the main related causes of SI/NSI
- What are the measures taken by hospitals regarding infection control to prevent injuries and their consequences

Methodology

- **Study design:**
- A cross-sectional study was used to predict the prevalence of NSI and the related causes among nurses
- **Setting:**
- The study was conducted at the governmental hospitals of Nablus, Jenin, Qalqilya and Tulkarm in the northern West Bank.

- **Population of the study:**
- Based on MOH report of 2011, there were (547) nurses working in the five aforementioned hospitals.
- **Sample and Sampling method:**
- The calculated sample size was (249) nurses: reached (226)

- **The systematic random technique was used;**
- The proportion method .
- Simple random method .

- **Inclusion criteria :**

- All nurses were registered in the aforementioned governmental hospitals.

- **Exclusion criteria:**

- Participants who participated in the pilot study
- Nurse students

Tool of data collection:

- **Self- Administered Questionnaire**
- The part of questionnaire about exposure to NSI and SI and measurement taken by hospital regarding infection control was developed on the basis of survey done by CDC. This survey is called Survey of Healthcare Personnel on Occupational Exposure to Blood and Body **(CDC,2005)**.

- **Questionnaire consisted of three parts:**
- The first part assessed the Socio-demographic data: this part included questions about age, gender, categories of nurses, department of hospital, years of experience, place of work.

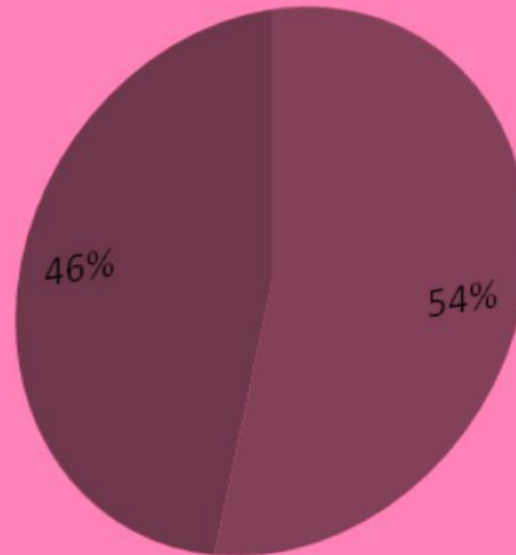
- The second part assessed exposures to needle stick injuries and sharp injury (it contained questions about times of NSI or SI in the past 12 months and causes that led to these injuries).

- The third part covered measures taken by hospitals regarding infection control to prevent injuries and their consequences: (Questions about reporting of injuries, and causes of not reporting these injuries, and sharp containers and vaccination of nurses against hepatitis B virus).

Results

Prevalence of NSI

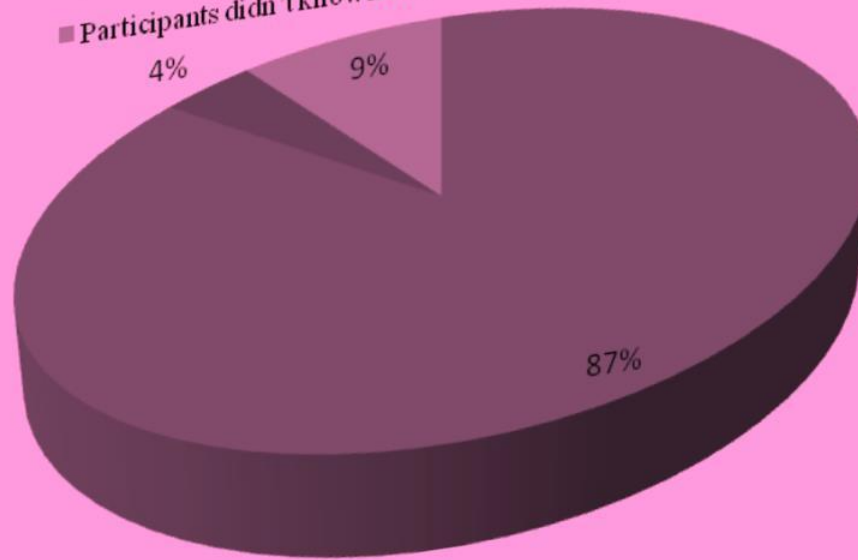
■ % of participants who were injured ■ % of participants who were not injured



Knowledge of participants about the usage of needle

Knowledge of participants about the usage of needle

- Needle was previously used on patients
- Needle was not previously used on patients
- Participants didn't know if needle was previously used on patients.



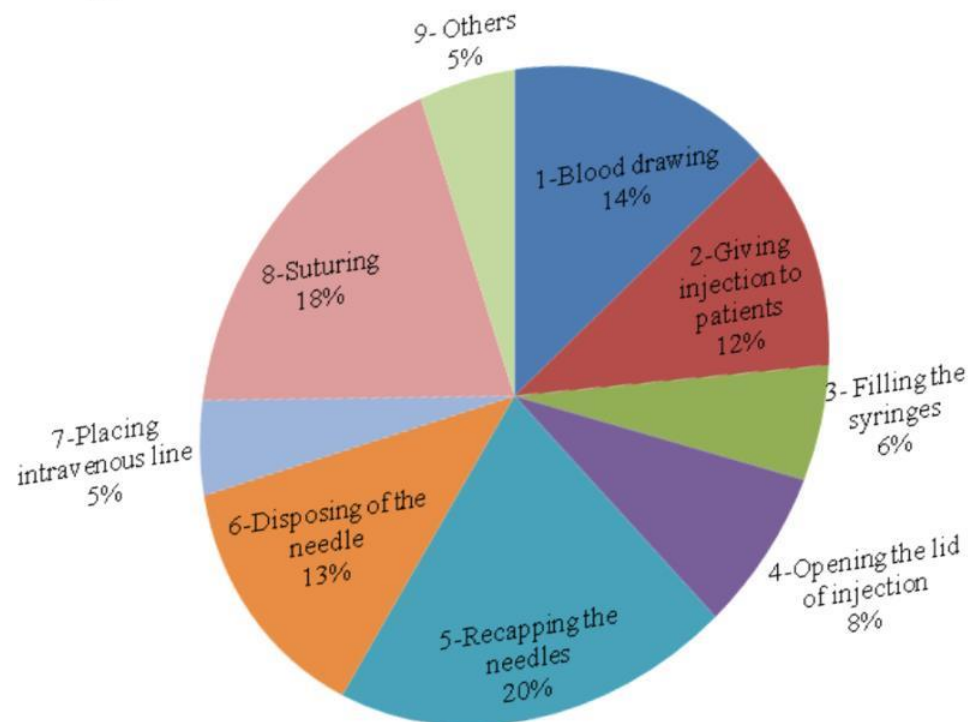
Number of injuries in the past 12 months:

No. of SI/NSI during past 12 months

	SI		NSI	
	No	%	No	%
1	78	53	63	61.8
2	51	34.7	28	27.5
3	14	9.5	7	6.9
4	2	1.4	3	2.9
≥5	2	1.4	1	0.9

Causes of Sharp Injuries:

Distribution of Percentage of Participants regarding Causes of SI



Measures taken by hospitals regarding infection control

Item	No	%
▪ <i>Numbers of completed reports about sharp injuries</i>		
▪ 0	112	76.2
▪ 1	29	19.7
▪ 2	4	3.04
▪ ≥ 3	2	1.06

	No.	%
2- Reasons for not reporting the injuries		
▪ I did not have time to report	12	10.7
▪ I did not know the reporting procedure	57	50.9
▪ I did not think it was important to report	23	20.5
▪ I thought I might be blamed or get in trouble for having the exposure	7	6.3
▪ I was concerned about confidentiality		2
1.8		
▪ I thought the source patient had low risk for HIV and/or hepatitis B or C	5	4.4
▪ I thought there was a low risk for the type of exposure for HIV and/or hepatitis B or C	4	3.6
▪ others	2	1.8

- 3-Availability of protocol/ procedure for reporting the injuries
- Yes 101 45.9
- No 69 31.4
- Don't know 50 22.7
- 4-If yes, are you familiar with how to report these exposures?
- Yes 39 38.6*
- No 62 61.4*

5-Places where participants received care after getting injured		
Infection Control	34	23.1
Emergency Room	39	26.5
Personal Physician	13	8.8
Outpatient Clinic	2	1.4
Employee Occupational Health	13	8.8
Others	4	2.8
I didn't Receive Care	42	28.6

■ 6-Place of Sharp Containers	88	40
■ Each Procedure Room	18	8.2
■ Each Patient Room	91	41.3
■ Medication Room	14	6.4
■ Soiled Utility Rooms	4	1.8
■ Laundry	5	2.3
■ Others		

- 7-Participants received hepatitis B vaccine
 - Yes 197 89.5
 - No 23 10.5
- 8-Doses of hepatitis B vaccine
 - 0 23 10.5
 - 1 8 3.6
 - 2 30 13.6
 - 3 139 63.2
 - 4 20 9.1

Thank you
Maria M