Diyala Journal of Medicine

ORIGINAL RESEARCH
Published: 25 December 2022
Doi: 10.26505/DJM.23026640717

Needle stick injuries and their safety measures among nurses in Erbil Hospitals

Ameer Talab Ali (MSc)[1], Samir M Othman (PhD)[2]

[1] Minstary of Health, Salah Adin health directorate, Iraq

[2] Department of Community Medicine, College of Medicine, Hawler Medical University, Erbil, Iraq

Abstract

Background: Needle stick injuries are serious professional hazards in the transfer of certain types of blood borne diseases such as hepatitis B virus, hepatitis C virus, and human immunodeficiency virus among healthcare workers.

Objective: Firstly, to determine the prevalence and factors related to needle stick injuries. Secondly, to assess related safety measures among nurses in Erbil hospitals.

Patients and Methods: A hospital based cross sectional study including a sample of 452 nurses. A representative supple sample size was calculated by using Epi info version 7.The sample was proportional to the population of nurses in each hospital. A convenient sampling technique was adopted in selection of studied sample from different teaching hospitals in Erbil city. Data were collected by using self-administered questionnaire, which included socio-demographic characteristics of participants and questions regarding needle stick injuries and preventive measures. (SPSS, Chicago, IL, USA), version 26) was applied for data entry and analysis. P value of ≤ 0.05 was considered as statistically significant.

Results: Out of a total (452) study population, 56.9% were females and 43.1% were males. The mean ± SD of age was 36.2 ± 5.41, ranging from 21 to 54 year. The prevalence of needle stick injuries was 87.4% among nurses, and the widespread activity leading to NSIs was recapping of needles (81%). The average of non-reporting to supervisor of infection control was 77.2%. The majority of NSIs took place in the morning (70.5%). There was a statistically significant association between NSIs and use of PPE, secure disposal of needle in the safety box, and use of auto-disable syringe during injection, in which NSIs were highest among those who not use or sometimes use the above mentioned safety measures, (P<0.001, P=0.002, and P=0.003 in respectively).

Conclusion: This study showed that transverse needle stick injuries among nurses are very high and pose a rise in hazards for professional exposure to diseases transmitted by blood. The majority of nurses are not reporting the needle stick injuries to the supervisor of the infection control unit.

Keywords: Needle Sticks Injury, Nurses, Erbil, Iraq

OPEN ACCESS

Correspondence Address: Ameer Talab Ali Minstary of Health, Salah Adin health directorate, Iraq
Email: talabameer@gmail.com

Website: https://djm.uodiyala.edu.iq/index.php/djm

Received: 17 July 2022
Accepted: 1 August 2022
Published: 25 December 2022

ORIGINAL RESEARCH
Published: 25 December 2022
Doi: 10.26505/DJM.23026640717

Introduction

Injuries from prick sticks and sharp objects are widespread among healthcare workers in hospitals and other healthcare settings. Because of their viable work environment and work-related stress, they are always in danger of needle-sticks and sharp injuries.

These injuries and a lack of understanding about the transmission of diseases by contaminated blood can put healthcare professionals and patients at risk of infectious diseases such as human immunodeficiency virus (HIV), hepatitis B, and hepatitis C. Needle injuries are a severe vocational danger in the spread of a range of blood-borne diseases among healthcare workers, including hepatitis B, C, and HIV [1,2].

Needle stick injuries (NSIs) are defined by the National Institute of Occupational Safety and Health (NIOSH) as injuries produced by objects such as needles relating to beneath the skin, blood collecting needles, intravenous injections, and needles utilized to connect parts of IV delivery systems [3,4]. The needle stick injury is most common among healthcare employees5. The most efficient technique to transfer blood-borne traces between healthcare providers and patients is through needle-stick injuries [6].

Injections, blood collection, needle recapping and disposal, garbage handling, and the movement of body fluid in the syringe to a sample container are all important actions that cause NSIs [7]. Public health is also impacted by NSIs; health staff are at a greater risk of disease caused by blood contaminatios with HIV, HBV, and HCV [8]. According to a survey, nurses had a high risk of NSIs [9]. In the USA, 78.3% of nurses have had an NSI, and 27.5% of nurses have had at least one NSI in the previous year [10]. The most common and life-threatening cause of blood borne disease is hepatitis B, which mostly raises occupational hazards to the health care workers [11]. According to the annual number of needle-stick injuries in the health care industry,4 injuries per person in Asia, Africa, and the western Mediterranean [12], needle-stick injuries not only result in physical harm and psychological effects but also economic loss. The most appropriate method for trainees to practice without fear is vaccination [13]. Practice of the universal provisions in medical training can stop NSIs in hospitals and laboratories [14].

Reported and non-reported NSIs are extremely common in HCW. The aim of the study is to increase knowledge about the risk of injury caused by blood-borne diseases and infections must be introduced to HCW by planning workshops and seminars to reduce the risk of needle injuries [15].

Patients and Methods

Study protocol

This is a cross-sectional study carried out from October 1st, 2021 to October 31st, 2022 to determine the prevalence of needle-stick injuries and their safety measures among nurses in public Erbil hospitals and carried out by Hawler Teaching Hospital, Rizgary Hospital, Raparin Hospital, Maternity Hospital, and Rozhalat Emergency Hospital. By using the Epi Info program (Version 7) a representative sample size of 308 nurses was selected as determined by using a confidence interval of 95%, with a 5% degree of precision or allowed error of the expected proportion, and expected frequency of 50%,

ORIGINAL RESEARCH
Published: 25 December 2022
Doi: 10.26505/DJM.23026640717

and a population size of 1550. However, a sample of 452 were collected and answered questions.

The sample was proportional to the number of nurses in each hospital. A convenient sampling technique was adopted in the selection of the studied sample. A well-designed, closed-ended questionnaire was utilized for data collection, which included general socio-demographic information of the participants such as age, gender, marital status, residency, years of employment, place of work, graduation, etc., and questions related to safety measures in Table 2. After the respondents had finished answering the questions, the questionnaires were collected immediately and revised, and the data were entered and analyzed by using the Statistical Package for Social Sciences (SPSS, Chicago, IL, USA), version 26). Two approaches were applied; descriptive and analytic. The descriptive process included the calculation of frequencies, percentages, means, and SDs. In the second way; Chi-square test of association was applied to test the significant association between categorical variables. P value of ≤ 0.05 was considered statistically significant.

Study Population

The study population in this case were nurses at five public hospitals who met the criteria for inclusion in this study. The study targeted nurses exposed to needle sticks who were potentially at risk of being injured or infected. Inclusion criteria were nurses working in hospitals and having frequent blood transfusions, and exclusion criteria were students and trainees who had not gotten their license yet.

Study Design

This study is a descriptive hospital-based cross-sectional design. A closed-ended questionnaire was designed by the researcher and approved by the supervisor. The data collected included first; general socio-demographic information such as age, gender, marital status, residency, years of employment, place of work, graduation,….etc. and second; questions related to safety measures. After the respondents had finished answering the questions, the questionnaires were collected immediately.

Statistical Analysis

The Statistical Package for Social Sciences (SPSS, Chicago, IL, USA), version 26) was used for data entry and analysis. Two approaches were used; descriptive and analytic. The descriptive approach included calculation of frequencies, percentages, means, S.Ds. while in the second approach; Chi-square test of association was used to test the significant association between categorical variables. P value of ≤ 0.05 was considered as statistically significant.

Results

Out of the total (452) study population, 257 (56.9%) were females and 195 (43.1%) were males. The mean ± SD of age was 36.2 ± 5.41, ranging from 21 to 54 years, and the most common age group among study participants was 35–39 years old (37.2%), and the majority (82.7%) of the participants were married. Regarding years of employment; more than half (57.7%) of participants had more than 10 years of employment, and the majority of participants (84.5%) were working 40 hours/week. Regarding treating patients per day, more

ORIGINAL RESEARCH
Published: 25 December 2022
Doi: 10.26505/DJM.23026640717

than half (55.8%) of participants treated > 10 patients per day Table (1). The current study revealed that 92% received the HBV vaccine, and among them, the highest percentage (50%) received three doses, (39.6%) two doses, and (5.3%) received one dose Figure (1). The prevalence of stick injury by needle was 87.4% among them. The most common cause of injury among respondents was syringe needle injury (80.5%). Regarding the time of injury, the majority of participants (70.6%) stated that they were exposed to NSIs in the morning. The results also revealed that more than two thirds (77.2%) of the participants did not submit a report to the supervisor of the infection control unit about NSIs Table (3). Regarding safety measures, this study showed that the vast majority (99.3%) of participants used sterilized needles and (47.8%) used protective pads between fingers when breaking a needle or ampoule. This study revealed that more than half (56.8%) of them sometimes safely dispose of needles contaminated with non-sterilized surfaces, while more than two thirds (72.1%) of them safely dispose of needles in the safety box and (61.7%) of them discharge the safety box when it is filled to at least 3/4 of its capacity. On the other hand, the majority (74.8%) of them did not break or bend the needle of the injection. The current study also showed that around half (50.9%) of the participants sometimes use PPE, while (48% of the participants use PPE while treating patients, details of safety measures are shown in Table (2).

Regarding participation There was an association between NSIs with use of a prophylactic pad between the fingers when fracturing needles/ampoules, use of gloves during injection procedure, use of PPE, secure disposal of needle in the safety box, and use of an auto-disable syringe during injection, in which NSIs were highest among those who did not use or sometimes use the above mentioned safety measures, ($P<0.001$, $p=0.001$, $P<0.001$, $P=0.002$, and $P = 0.003$, respectively).

A statistically significant ($P<0.001$) highest prevalence rate of NSIs was 84% of the participants who didn't attend any training course regarding safety measures. There was a statistically non-significant association between gender and the history of NSIs. Further, a statistically significant association was revealed between age groups and the history of NSIs, in which it was more prevalent among those aged over 30 years. The current study also revealed a statistically significant association between the numbers of patients treated per day, in which the highest prevalence of NSIs (89.7%) was observed among those who treated 10 patients per day versus those who treated less than 10 patients per day (78.5%).

A statistically significant high prevalence of NSIs was reported among those who had more than 10 years of employment Table (4).

ORIGINAL RESEARCH
Published: 25 December 2022
Doi: 10.26505/DJM.23026640717

Table (1): Socio-demographic characteristics of the study participants

Variables	No.	Percentage (%)
Age group in years		
< 25	14	(3.10)
25 -29	39	(8.60)
30 -34	112	(24.8)
35 -39	168	(37.2)
40 – 44	97	(1.50)
45 – 49	15	(3.30)
≥50	7	(1.50)
Gender		
Male	195	(43.1)
Female	257	(56.9)
Marital status		
Single	78	(17.3)
Married	374	(82.7)
Years of employment		
< 1 year	13	(2.90)
1 – 4	44	(9.70)
5 – 10	134	(29.6)
>10 years	261	(57.7)
Working hours in week		
< 40 hour	382	(84.5)
>40 hour	70	(15.5)
Patient treated per day		
<10	200	(44.2)
>10	252	(55.8)
Total	452	(100.0)

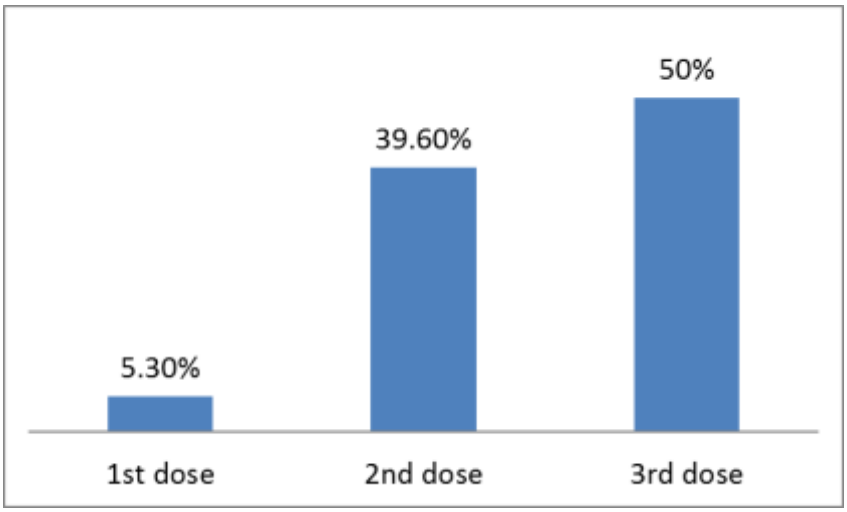

Figure (1): Percentage of participants by number of receiving HBV vaccine

ORIGINAL RESEARCH
Published: 25 December 2022
Doi: 10.26505/DJM.23026640717

Table (2): Compliance and frequency of safety measures among study participants

Safety measures	Yes No. (%)	Sometimes No. (%)	No No. (%)
Use of sterilized needle	449 (99.3)	1 (0.23)	2 (0.44)
Use protective pad between finger when breaking needle/ampoule	65 (14.4)	216 (47.8)	171 (37.8)
Safe disposable of needle contaminated with non-sterilized surface	56 (12.4)	257 (56.8)	139 (30.8)
Use of gloves during injection	282 (62.4)	165 (36.5)	5 (1.10)
Safe disposable of needle in the safety box	326 (72.1)	125 (27.7)	1 (0.20)
Existence of warning label on the safety box	205 (45.4)	239 (52.9)	8 (1.80)
Discharge the safety box when it is filled at the 3/4 of its capacity	124 (27.4)	279 (61.7)	49 (10.8)
The presence of adequate number of safety box	308 (68.1)	140 (31.0)	4 (0.90)
Breaking or bending needle of the injection	16 (3.5)	98 (21.7)	338 (74.8)
Use of auto disable syringe during injection	12 (2.7)	127 (28.1)	313 (69.2)
Using gloves after injury	111(24.6)	300 (66. 4)	41 (9.0)
Use of PPE	217 (48.0)	230 (50.9)	5 (1.10)
Total			452 (100.0)

Table (3): Frequency of NSIs and its related factors among nurses (N=452) (%=84.7)

Variables	Frequency	Percentage (%)
Treatment after injury		
Wash injury site by soap and running water	168	(37.1)
compress injury site	59	(13.1)
Wash injury site by disinfectant	156	(34.5)
Blood test after injury		
Yes	130	(28.7)
No	253	(56.0)
Time of injury (morning)		
Yes	319	(70.5)
No	64	(14.2)
Time of injury (afternoon)		
Yes	78	(17.3)
No	305	(67.4)
Time of injury (night)		
Yes	139	(30.7)
No	244	(54.0)
Injury during transferring body fluid from syringe		
Yes	43	(75.2)
No	340	(9.50)
Injury during recapping needle		
Yes	366	(81.0)
No	17	(3.80)

ORIGINAL RESEARCH
Published: 25 December 2022
Doi: 10.26505/DJM.23026640717

NSIs by disposable syringe		
Yes	364	(80.5)
No	19	(4.20)
NSIs by I.V catheter style		
Yes	78	(17.3)
No	305	(67.5)
NSIs by suture needle		
Yes	102	(22.6)
No	281	(62.2)
NSIs by others		
Yes	8	(1.80)
No	375	(83.0)
Report to the supervisor infection control unit		
Yes	34	(7.50)
No	349	(77.2)
Total	383	(84.7)

Table (4): Association between history of needle stick injury and demographic characteristics

Variable	NSI				Total		P value
	Yes		No				
	No.	%	No.	%	No.	%	
Gender Male	166	85.1	29	14.9	195	100	
Female	217	84.4	40	15.6	257	100	0.83
Age group in years							
< 25	9	64.3	5	35.7	14	100	
25 -29	19	48.7	20	51.3	39	100	
30 -34	89	79.5	23	20.5	112	100	
35 -39	149	88.7	19	11.3	168	100	<0.001
40 – 44	95	97.9	2	2.1	97	100	
45 – 49	15	100	0	0.0	15	100	
≥50	7	100	0	0.0	7	100	
Marital status							
Single	57	73.1	21	26.9	78	100	0.002
Married	326	87.2	48	12.8	378	100	
Graduation							
High school	16	94.1	1	5.9	17	100	0.47
Diploma	137	85.6	23	14.4	160	100	

ORIGINAL RESEARCH
Published: 25 December 2022
Doi: 10.26505/DJM.23026640717

Bachelor	230	83.6	45	16.4	275	100	
Patient treated/ day							
<10	157	78.5	43	21.5	200	100	0.01
>10	226	89.7	26	10.3	252	100	
Number of injection/da							
<20	230	83.3	46	16.7	276	100	0.3
>20	153	86.9	23	13.1	176	100	
Working hours/week							
<40 hours	324	84.8	58	15.2	382	100	0.91
>40 hours	59	84.3	11	15.7	70	100	
Years of employment							
<1 year	9	69.2	4	30.8	13	100	<0.001
1-4 years	29	65.9	15	34.1	44	100	
5- 10 years	102	76.1	32	23.9	134	100	
>10 years	243	93.1	18	6.9	261	100	
Total	383	84.7	69	15.3	452	100	

Discussion

NSIs are one of the most pressing concerns in the field of occupational health and safety in healthcare facilities. Working in the morning, recap of needles, kind of injection device, and hours per week were all found to be key variables in the occurrence of NSIs. The prevalence of NSIs was 84.7% among the studied sample, indicating that there is a high danger of NSIs among nurses. Similarly, in another study conducted in Egypt [15] reported NSI in 273/371 nurses (73.5%). Moreover, among the 526 nurses and midwives in Uganda [16].

The prevalence of NSIs was 128/168 (76.2%). On the other hand, studies conducted in some developed countries, for example, studies in Germany and in Poland [1,17], reported the prevalence of NSIs as 22% and 28% among nurses, respectively. According to the findings, morning shift nurses reported greater incidences of NSIs (70.6%) than other shifts, which is consistent with a study done by [18]. This indicates that the performance and safety of nurses is affected by a high work load [19]. For example, factors such as new patient admission, patient turnover, documentation & paperwork, implementing surgical procedures, and other medical duties, for example, blood sampling, all of which occur more frequently during the morning shift in hospitals, can increase the rate of workload and daily habits for nurses, increasing the risk of performance mistakes, including the danger of NSIs. In terms of the number of patients they oversee and the quantity of activities and medical services they deliver, the morning rotation is considered a particularly demanding shift for nurses in Iraq.

ORIGINAL RESEARCH
Published: 25 December 2022
Doi: 10.26505/DJM.23026640717

Despite the Occupational Safety and Health Administration's (OSHA) blood borne pathogen guidelines restricting risky injection techniques such as recapping needles, it is nevertheless observed to be significantly high in most research [20]. According to the findings of this study, the most common behavior that leads to NSIs among nurses is recapping needles (81%).

The majority of nurses in this study performed well in terms of taking the initial work after an NSI; 37.1% reported cleaning the injury site with soap and water as the first step after injury. However, after an NSI, the nurses' second most common measure to protect oneself from blood borne infections was to wash the injury site with disinfectant (34.5%). Immediate reporting of NSIs is critical for post-exposure prophylaxis and damage management. However, even healthcare setting with well-established sharps injury and surveillance programs and readily accessible reporting systems, a number of studies have found low reporting rate of NSI incidents [21].

Only 7.5% of injured nurses reported to the supervisor of the infection control unit because of the decrease in preventive systems in hospitals, and most nurses do not care if exposed to a needle stick injury. Despite the fact that 15% of nurses in this study participated in NSI preventive training courses. Furthermore, underreporting average NSIs in healthcare professions was found to be 76.2% in Thailand [22] and 99.3% in Pakistan [23]. This might be attributed to the fact that a heavy clinical-intensive workload and the perception of a minimal risk of infection among nurses were major factors in not reporting NSIs. Factors that reduce action pressure on nurses and the need to establish a preventive program targeted at addressing the prominence of reporting all exposures, whether or not they are high hazards might decrease the occurrence of NSIs. The possibility of contracting blood-borne infections such as the hepatitis B, hepatitis C, and HIV, is a major concern. In this study, 98% of nurses said they had been vaccinated against HBV; nearly half of the participants did not finish their immunization program. This should be taken into consideration, because it could result in an insufficient antibody response, and might lead to healthcare professionals remaining unprotected. Nurses may have a misleading sense of security and fail to employ proper preventive measures following HBV. According to the findings of the current study, despite being aware of HBV infection, healthcare staff in health care settings are noncompliant with HBV immunization. A study done by Norsayani [24] found the vaccination rate against HBV to be 93%, and they reported only 10.1% failing to complete all three doses of hepatitis vaccines.

Hollow-bore needles are important because they have been associated with the spread of infections brought on by blood-contaminated diseases [2]. The outcome of this finding is that a high proportion of people who are exposed to sources with unknown blood-borne pathogen status assume the patient. This is in direct opposition to universal precautions principles, which state that all patients should be treated as potentially infectious. Because infected individuals cannot always be detected, the notion of universal precautions, i.e., all patients should be treated as infective

ORIGINAL RESEARCH
Published: 25 December 2022
Doi: 10.26505/DJM.23026640717

and adequate infection control techniques should be used to avoid infection. Other explanations provided were "prevalence was important or negligible," "worried about future ramifications if known by administration," "too hard and too many forms to fill out when reporting," "embarrassed," and "it was merely a minor injury."

The reasons given for not reporting injuries point to the need for more education about the risk of contracting blood-borne viruses as a result of such injuries. Some of them were unaware that NSIs must be reported and had no idea who to report them to or how to do so.

There were no reports to the supervisor of the infection control unit in this study because of a lack of knowledge of how to report an injury. This demonstrates the shortage of clear instructions on how to record cases and whether they should be reported. According to earlier studies [23, 24], participants commonly cited "did not know how to report" as a reason for not reporting. This finding emphasizes the importance of teaching healthcare professionals how to disclose exposures. It's possible that efforts to simplify the reporting procedure will be required.

Conclusions

This study showed that occasional needle injuries by nurses (84.7%). There is a high prevalence of cases and episodes of stick injuries among nurses because they do not fully practice standard precautions, though they have sufficient knowledge of them. The majority of nurses did not report the NSIs to the supervisor of the infection control unit. This study showed that a majority (85%) of them have not attended any training courses, while only (15%) of participants have attended such courses. And a majority of participants (70.6%) stated that they were exposed to NSIs in the morning.

Recommendations

Planning of systematic educational programs targeted at using PPE. By designing programs that are simple to use and efficient, as well as refreshing training programs in order to promote good injection practices. Stressing the importance of reporting NSI incidents and the development of a defined system aimed at the registration of needle stick and sharp injuries in order to achieve higher safety. Development of a proper safety management system and training on workplace safety. Universal precautions should be included in the training courses of healthcare workers. There is a need to ensure all nurses complete the 3 doses of hepatitis B immunization. Procedures for reporting needle stick injuries should be strengthened and made very clear to all health care workers.

Acknowledgement

We acknowledge the nurses who participated in the study and are grateful for the administration assistance at Hawler teaching hospital, Rizgary hospital, Raparin, Maternity, Roshalat .thus study was carried out by college of medicine department of community medicine.

Source of funding: The current study was funded by our charges with no any other funding sources elsewhere.

Ethical clearance: This study was approved by the ethics committee of the College of Medicine. Participation in the study was optional, and the respondents were

ORIGINAL RESEARCH
Published: 25 December 2022
Doi: 10.26505/DJM.23026640717

ensured that their responses would be kept confidential and private, and the collected information would only be used for research purposes. Anonymity was ensured by not mentioning their names.

Conflict of interest: Nil

References

[1]Firdousa Jan, Manzoor Ahmad Para, Zulifkar Ali, Maharaj Singh, Syed Umar and Mujtaba. A Cross Sectional Study To Evaluate Needle Stick And Sharp Injuries And Their Related Safety Measures Among Health Care Workers In Sheri- Kashmir Institute Of Medical Sciences, Soura Srinagar J &K, India. Int J Adva. Res. (IJAR)2019; 8(02): 125-41.

[2]Dechasa A. M &Sina T. Tolera . Prevalence of occupational exposure to needle-stick injury and associated factors among healthcare workers of developing countries. J Occup Health. 2020 ; 62(1): e12179.

[3]Shyamkumar S. Study of needle stick injuries among healthcare providers: Evidence from a teaching hospital in India. J Family Med Prim Care. 2019 ; 8(2): 599–603.

[4] Bidira, K., Woldie, M., &Nemera, G. Prevalence and predictors of needlestick injury among nurses in public hospitals of Jimma Zone, South West Ethiopia. Int J Nurs Midwifery 2014; 6: 90-96.

[5] Ebrahimi, H., &Khosravi, A. Needlestick injuries among nurses. Journal of research in health sciences 2007; 7(2): 56-62.

[6] Wicker S, Jung J, Allwinn R, Gottschalk R, Rabenau HF. Prevalence and prevention of needle stick injuries among health care workers in a German university hospital. Int Arch Occup Environ Health 2008;81:347-54.

[7]Lakbala P, Azar FE, Kamali H. Needlestick And Sharps Injuries Among Housekeeping Workers In Hospitals Of Shiraz, Iran. BMC Res Notes 2012;5:276.

[8] Galougahi, M. H. K. Evaluation of needle stick injuries among nurses of Khanevadeh Hospital in Tehran. Iran J nurs. and midwifery res. 2010; 15(4): 172-77.

[9] Nsubuga, F. M., &Jaakkola, M. S. Needle stick injuries among nurses in sub- Saharan Africa. Trop med int health 2005; 10(8): 773-81.

[10] Lee, J. M., Botteman, M. F., Nicklasson, L., Cobden, D., &Pashos, C. L. Needlestick injury in acute care nurses caring for patients with diabetes mellitus: a retrospective study. Curr. med. res. opin. 2005; 21(5): 741-47.

[11]Okeke, E., Ladep, N., Agaba, E., & Malu, A. Hepatitis B vaccination status and needle stick injuries among medical students in a Nigerian university. Niger J Med 2008; 17(3): 330-32 .

[12] Zhang, X., Gu, Y., Cui, M., Stallones, L., Xiang, H. J. W. h., & safety. Needlestick and sharps injuries among nurses at a teaching hospital in China. PubMed 2015; 63(5): 219-25.

[13] Deisenhammer, S., Radon, K., Nowak, D., & Reichert, J. Needle stick injuries during medical training. Journal of hospital infection 2006; 63(3): 263-67.

[14] Lee, L. K., & Hassim, I. N. Implication of the prevalence of needlestick injuries in a general hospital in Malaysia and its risk in clinical practice. Environ. health prev med 2005; 10(1): 33-41.

[15] Askarian, M., &Malekmakan, L. The prevalence of needle stick injuries in medical, dental, nursing and midwifery students at the

ORIGINAL RESEARCH
Published: 25 December 2022
Doi: 10.26505/DJM.23026640717

university teaching hospitals of Shiraz, Iran. Ind J Med Sci 2006 ;60(6):227-32.

[16] Hanafi M, Mohamed A, Kassem M, Shawki M. Needle stick injuries among health care workers of University of Alexandria Hospitals. East Mediator Health J 2011;17:26-35.

[17] Nsubuga, F. M., &Jaakkola, M. S. Needle stick injuries among nurses in sub-Saharan Africa. Trop med int health 2005; 10(8): 773-81.

[18] Bilski B. Needle stick injuries in nurses the Poznan study. Int J Occup Med Environ Health 2005;18:251-4.

[19] Hashemi SH, Mamani M, Torabian S. Hepatitis B vaccination coverage and sharp injuries among healthcare workers in Hamadan, Iran. Avicenna J Clin Microb Infec 2014;1:1-5.

[20] Honda M, Chompikul J, Rattanapan C, Wood G, Klungboonkrong S. Sharps injuries among nurses in a Thai regional hospital: prevalence and risk factors. Int J Occup Environ Med 2011;2:215-23.

[21] Hadaway L. Needle stick injuries, short peripheral catheters, and health care worker risks. J Infus Nurs 2012;35:164-78.

[22] Henderson DK. Management of needle stick injuries: a house officer who has. JAMA a needle stick 2012;307:75-84.

[23] Habib H, Khan EA, Aziz A. Prevalence and factors associated with needle stick injuries among registered nurses in public sector tertiary care hospitals of Pakistan. Int J Collab Res Intern Med Public Health 2011;3:124-30.

[24] Norsayani MY, Noor Hassim I. Study on incidence of needle stick injury and factors associated with this problem among medical students. J Occup Health 2003; 45: 172–78.

Diyala Journal of Medicine

ORIGINAL RESEARCH
Published: 25 December 2022
Doi: 10.26505/DJM.23026640717

اصابات وخز الابر والاجراءات الوقائية بين الممرضين في مستشفيات اربيل - العراق

امير طلب علي [١] ، د. سمير محمود عثمان [٢]

الملخص

خلفية الدراسة: تنتشر إصابات وخز الإبر والأدوات الحادة بين العاملين في مجال الرعاية الصحية في المستشفيات وأماكن الرعاية الصحية. بسبب بيئة عملهم القابلة للحياة والضغط المرتبط بالعمل ، فهم دائمًا معرضون لخطر الإصابة بوخز الإبرة والإصابة الحادة. هذه الإصابات ونقص الفهم حول انتقال الأمراض التي تنتقل عن طريق الدم والاحتياطات يمكن أن يعرض اختصاصي الرعاية الصحية والمرضى لخطر الإصابة بالأمراض المعدية مثل فيروس نقص المناعة البشري والتهاب الكبد الفيروسي.

اهداف الدراسة: لمعرفة مدى انتشار إصابات وخز الإبر في مستشفيات أربيل الحكومية ، وتقييم ممارسة الممرضين تجاه الإصابة بوخز الإبرة وتدابير السلامة وتقييم امتثال الممرضات لتدابير السلامة فيما يتعلق بإصابة الوخز بالإبرة وتحديد العلاقة بين بعض الخصائص الاجتماعية والديموغرافية من عينة الدراسة مع احتياطات سلامة الإبرة لإصابات وخز الإبرة .

المرضى والطرائق: معرفة مدى انتشار إصابات وخز الإبر في مستشفيات أربيل الحكومية ، وتقييم ممارسة الممرضين تجاه الإصابة بوخز الإبرة وتدابير السلامة وتقييم امتثال الممرضات لتدابير السلامة فيما يتعلق بإصابة الوخز بالإبرة وتحديد العلاقة بين بعض الخصائص الاجتماعية والديموغرافية من عينة الدراسة مع احتياطات سلامة الإبرة لإصابات وخز الإبرة .

النتائج: تم جمع ٤٥٢ عينة (ممرض) من ٥ مستشفيات عامة في أربيل. معدل انتشار الإصابة بالوخز بالإبرة (٨٤,٧٪). تحدث معظم الإصابات أثناء اعادة تركيب غطاء الإبرة (٨٠٪) غالبية وقت الإصابة في الصباح (٧٠,٦٪)، وأكثر من الممرضين والممرضات غير الملتحقات بالدورة التدريبية للإجراءات الوقائية هم عرضة لإصابات الوخز بالإبر (٨٤,٧٪).

الاستنتاجات: أظهرت هذه الدراسة أن إصابات وخز الإبرة العرضية من قبل الممرضين عالية جداً (٨٤,٧٪) ومعرضة لخطر التعرض المهني لمسببات الأمراض المنقولة بالدم. ارتفاع معدل انتشار حالات ونوبات إصابات وخز الإبر بين الممرضين لأنهم لا يمارسون الاحتياطات القياسية بشكل كامل على الرغم من أن لديهم معرفة كافية بها. غالبية الممرضين لا يبلغون عن إصابات وخز الإبرة لمشرف وحدة مكافحة العدوى. وأظهرت هذه الدراسة أن الغالبية (٨٥٪) منهم لم يحضروا أي دورات تدريبية ، بينما (١٥٪) فقط من المشاركين حضروا مثل هذه الدورات. افاد غالبية المشاركين (٧٠,٦%) انهم تعرضوا لإصابات وخز الابر في الصباح.

الكلمات المفتاحية: اصابات وخز الابر ،الممرضين ،اربيل ،العراق

البريد الالكتروني: talabameer@gmail.com

تاريخ استلام البحث: ١٧ تموز ٢٠٢٢

تاريخ قبول البحث: ١ آب ٢٠٢٢

---

[١] دائرة صحة صلاح الدين - وزارة الصحة العراقية - العراق

[٢] رئيس فرع طب المجتمع - كلية الطب - جامعة هولير الطبية -أربيل - العراق