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"KNOWLEDGE AND ATTITUDE REGARDING NEEDLE STICK INJURY AMONG NURSING STUDENTS IN SELECTED COLLEGE AND SCHOOLS OF KAMRUP, ASSAM: A DESCRIPTIVE STUDY"

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ABSTRACT

BACKGROUND:

Needle stick injuries refer to puncture wounds or cuts caused by needles , scalpels,or other sharp objects contaminated with bodily fluids , such as blood , saliva , or other potentially infectious materials . Needle stick injuries pose a significant threat to the health and wellbeing of healthcare workers , including nurses , doctors and other medical professionals . A needle stick injury is the penetration of the skin by a needle or other sharp objects which has been in contact with blood, tissue or other body fluids before the exposure and it can cause blood -borne diseases such as Hepatitis B, Hepatitis C and even AIDS.

OBJECTIVES OF THE STUDY:

1. To assess the level of Knowledge regarding Needle Stick Injury among Nursing students in selected colleges and schools of Kamrup, Assam.
2. To assess the level of Attitude regarding Needle Stick Injury among Nursing students in selected colleges and schools of Kamrup , Assam.
3. To find out correlation between Knowledge and Attitude regarding Needle Stick Injury among Nursing student in selected colleges and schools of Kamrup , Assam.
4. To find out association between Knowledge regarding Needle Stick Injury among Nursing student in selected colleges and schools of Kamrup , Assam with their selected socio-demographic variables.
5. To find out association between Attitude score regarding Needle Stick Injury among Nursing student in selected colleges and schools of Kamrup, Assam with their selected socio-demographic variables.

METHODS AND MATERIALS

Quantitative Descriptive research design was used in this study to accomplish the objectives. Non - probability Convenience sampling technique was used for obtaining the adequate sample for the study. Study was undertaken on 246 nursing students studying in 2nd year B.Sc Nursing and 2nd year GNM in selected colleges of Kamrup , Assam. Students were selected based on the inclusion criteria. Knowledge regarding Needle Stick Injuries among Nursing students were assessed by using Structured Knowledge Questionnaire consisting of 30 questions and Attitude regarding Needle Stick Injuries among Nursing students were assessed by using 5-point Likert scale consisting of 10 statements to the respondents .

RESULTS

Result showed that out of 246 nursing students , all of the nursing students 246(100%) were aged 18-23 years, 236(95.9%) were female, 10(4.1%) were male , 123(50%) were students of B.Sc nursing 2nd year, 123(50%) were GNM 2nd year students , 246(100%) heard about Needle Stick Injury , 246(100%) source of information about Needle Stick Injury was from teachers , 174(70.7%) had encountered Needle Stick Injury , 72(29.3%) had not encountered Needle Stick Injury .

In assessing Knowledge it reveals that out of 246 respondents , majority i.e. 199(80.9%) had moderately adequate Knowledge, 30(12.2%) had inadequate Knowledge and 17(6.9%) had adequate Knowledge .The mean Knowledge score was 17.67 with standard deviation of 3.26.

In assessing Attitude it reveals that out of 246 respondents , 134(54.5%) had moderately desirable Attitude , 35(14.2%) had undesirable Attitude , 77(31.35) had desirable Attitude . The mean Attitude score was 34.21 with standard deviation of 6.83

The calculated Karl Pearson's Correlation Coefficient value of r=0.418 shows a moderately positive correlation between Knowledge and Attitude which was found statistically significant at p<0.001 level which clearly infers that when the Knowledge regarding Needle Stick Injuries among the Nursing students increases or decreases then their Attitude towards it also increases or decreases

The association was statistically tested by chi square test. The analysis depicted that among all the demographic variables, educational courses **(χ^2=8.782, p=0.012)** and have you ever encountered Needle Stick Injury **(χ^2=30.265, p=0.0001)** had statistically significant association with Knowledge regarding Needle Stick Injuries at p<0.05 level and Socio-demographic variables educational courses **(χ^2=37.932, p=0.0001)** and have you ever encountered needle stick injury **(χ^2=22.024, p=0.0001)** had statistically significant association with level of attitude regarding needle stick injuries at p<0.05 level .

CONCLUSION

From this study it was observed that the majority of Nursing students had moderately adequate knowledge and moderately desirable attitude regarding Needle Stick Injury which indicate that the Nursing students are to prone accidental exposure to blood borne pathogens and body fluids. Hence , the investigator concluded that the best way to reduce NSI is to impart Knowledge and awareness about it .

Keywords : Knowledge , Attitude , Needle Stick Injury , Nursing students , College and School

INTRODUCTION

Health care workers face a wide range of hazards in the health care setting including sharp injuries, harmful exposures to chemicals and hazardous drugs and injuries and so on. Among them the needle stick injuries are the most common occupational injuries for the health care workers.[1]

A needle stick injury is the penetration of the skin by a needle or other sharp objects which has been in contact with blood, tissue or other body fluids before the exposure and it can cause blood -borne diseases such as Hepatitis B, Hepatitis C and even AIDS.

According to the Centers for Disease Control and Prevention (2019), there are between 600,000 and one million needle stick injuries worldwide each year.

According to estimates from the World Health Organization (2019), the global burden of illnesses resulting from occupational exposure is estimated to be around 40% of hepatitis B and C infections among HCWs and 2.5% of HIV infections.

According to the Centers for Disease Control and Prevention (2019), there are over 385,000 injuries to healthcare workers (HCWs) in the United States alone each year as a result of needle and sharp object use.

According to data from Centers for Disease Control and Prevention (2022) hepatitis C surveillance, health professionals who get hepatitis C via needle stick injuries are predicted to account for 2% to 4% of all hepatitis C infections.

The WHO study from 2023 estimates that each year, health care workers worldwide who sustain needle stick injuries are exposed to 2.6% of blood-borne viruses from HCV, 5.9% from H BV, and 0.5% from HIV.

Nursing students are at high risks of needle stick injuries (NSIs) during their practice in the clinical settings. They are exposed to sharp hazards while handling medical equipments, such as when they are administering medications or taking blood samples. Therefore, it is crucial for students to possess adequate competences regarding the procedures that require them to handle sharp devices.

The aim of this study is to gain insight into the Nursing students Knowledge and Attitudes about Needle Stick Injuries.

NEED OF THE STUDY

WORLDWIDE

The World Health Organization (WHO, 2023) reports that 35 million healthcare workers are exposed to over 2 million sharp injuries at work each year.

X Xu, Y Yu, W Hao (2022) conducted a systematic review and meta analysis on the prevalence of needle stick injuries among nursing students. They discovered that 35% of NSIs were reported by nursing students, while 63% of NSIs went unreported. The prevalence of NSI among nursing students was prevalence of NSI in nursing students was 35%.

INDIA

The prevalence of NSIs among HCWs ranged from 18.7 to 86 .6%, according to data from Indian status (2019), and nursing students had the highest reported incidence of NSIs among all HCWs.

Rajpal S et al. (2021) carried out a cross-sectional observational study to determine the frequency of needle stick injuries among hospital staff members. The survey is conducted on 384 healthcare professionals. According to this study, the prevalence of needle stick injuries among health care workers was (20.1%) overall. This study found that the majority of healthcare personnel that suffer needle stick injuries are nurses (28.9%).

NORTH EAST

Gogoi J et al. (2017) conducted a cross sectional study on knowledge, attitude, practice and prevalence of needle stick injuries among health care workers in a tertiary care hospital of Assam. A number of 90 HCW were selected by using simple random sampling. The results shows prevalence of NSI among HCW was found 21.1% and regarding their attitude to report, only 21.1% had reported only 26.3% of HCWs had done screening for HIV/AIDS and Hepatitis B after injury.

The investigator has come across the incidence rate of the NSI injury among the Healthcare workers in India as well as worldwide that occurs mostly among the nursing students by going through various review of literature. The Needle Stick Injury has a higher rate on transmission of hepatitis-B disease.. An in- depth look into previous studies showed that a very few study were conducted specifically with regards to the identification of knowledge and attitude among students. Hence, the researcher has taken a keen interest in conducting a study on identification of knowledge and attitude among the nursing students.

OBJECTIVES

1. To assess the level of Knowledge regarding Needle Stick Injury among Nursing students in selected colleges and schools of Kamrup, Assam.
2. To assess the level of Attitude regarding Needle Stick Injury among Nursing students in selected colleges and schools of Kamrup , Assam.
3. To find out correlation between Knowledge and Attitude regarding Needle Stick Injury among Nursing student in selected colleges and schools of Kamrup , Assam.
4. To find out association between Knowledge regarding Needle Stick Injury among Nursing student in selected colleges and schools of Kamrup , Assam with their selected socio-demographic variables.
5. To find out association between Attitude score regarding Needle Stick Injury among Nursing student in selected colleges and schools of Kamrup, Assam with their selected socio-demographic variables.

METHODS AND MATERIALS

Quantitative Descriptive research design was used in this study to accomplish the objectives. Non - probability Convenience sampling technique was used for obtaining the adequate sample for the study. Study was undertaken on 246 nursing students studying in 2nd year B.Sc Nursing and 2nd year GNM in selected colleges of Kamrup , Assam. Students were selected based on the inclusion criteria. Knowledge regarding Needle Stick Injuries among Nursing students were assessed by using Structured Knowledge Questionnaire consisting of 30 questions and Attitude regarding Needle Stick Injuries among Nursing students were assessed by using 5-point Likert scale consisting of 10 statements to the respondents .

DESCRIPTION OF TOOL

The tool used for the study consist of three sections:

Section I: Demographic variables: Age, gender, educational courses , heard about NSI, source of information, encountered NSI.

Section II: Structured Knowledge Questionnaire: This part of the tool consisted of 30 items(each question had one correct answer out of the four options). The questions were divided into the following headings:

Scoring key: Each question had only one correct answer. For every correct response a score of 1 mark was given and a score of 0 mark for incorrect response. Hence the maximum score was 23 and minimum score was 15.

To interpret the level of Knowledge , the score were converted to percentage and were categorized as follows:

- Inadequate Knowledge: <50%(<15 score)
- Moderately adequate Knowledge:50-75%(15-23score)
- Adequate Knowledge: >75%(>23Score)

Section III: 5-point Likert scale for Attitude: This part of the tool consisted of 10 statements (5-positive statements and 5- negative statements).

Scoring key:

Total score =50

The items are divided into positive and negative items . For every positive item a score will be given as :

5- STRONGLY AGREE
4- AGREE
3- NEUTRAL
2- DISAGREE
1- STRONGLY DISAGREE

And reverse score is given for negative items :

5- STRONGLY DISAGREE
4- DISAGREE
3-NEUTRAL
2-AGREE
1- STRONGLY AGREE

Maximum score is 38 and minimum score is 25

To interpret the level of Attitude , the score is converted into percentage and categorized as follows:
Attitude score regarding Needle Stick Injury is interpreted as ;

- Undesirable attitude = <50%(25score)
- Moderately desirable attitude= 50-75%(25-38 score)
- Desirable attitude=>75%(>38 score)

DATA COLLECTION PROCESS

The data collection procedure refers to identification of subjects and the precise, systematic gathering of information/ data relevant to the research purpose or the specific objectives, questions or hypothesis of a study.

The data collection was done under the following process:

1. Period of data collection:

The data collection period was scheduled between 10th September -3rd October 2024 in three selected Nursing Colleges and Schools of Kamrup , Assam . The time schedule was 9am to 3pm.

2. Data collection process:

Data collection process refers to the identification of respondents and the precise, systematic gathering of information (data) relevant to the research purpose or the specific objectives, questions or hypothesis of the study.

Prior to the data collection,a formal written permission was obtained from the ethical committee INS trust GNRC, Dispur and concerned head of Nursing Institute.. After getting permission, the investigator visited the selected nursing colleges and schools on given dates respectively . A brief self- introduction and the purpose of the study were explained to the authority. The authorities were very much pleased to give their written consent and assured the investigator all sort of help . The investigator was accompanied by class coordinator to visit the classroom of B.Sc Nursing 2nd year and GNM 2nd year . The investigator identified and select the respondents who were willing to participate and provided informed consent. The respondents were selected by using non-probability Convenience sampling technique. The investigator also explained regarding the purpose of the study to respondents prior to data collection and keeping in mind the ethical aspect of the research , the data were collected after obtaining informed written consent from the respondents . The respondents were assured anonymity and confidentiality of information provided by them . The investigator distributed the Structured Knowledge Questionnaire for knowledge and 5-point Likert scale for Attitude regarding Needle Stick Injury among Nursing students and by self report and it took around 30-45 minute to complete the tools for each respondents . All the respondents interacted and co-operated well . After completing the data collection the investigator thanked the respected class co-ordinator as well as authorities for their valuable support and cooperation .

7. RESULTS

Section I :

- **Frequency and percentage distribution of Nursing students according to their Socio-demographic variables**

Table 1: Frequency and percentage distribution of Nursing students according to their Socio-demographic variables

n=246

AGE (IN YEARS)	**FREQUENCY (f)**	**PERCENTAGE (%)**
18- 23	246	100
24-29	0	0
30-35	0	0
GENDER		
Male	10	4.1%
female	236	95.9%
Transgender	0	0
EDUCATIONAL COURSES		
a) B.Sc Nursing 2nd year	123	50%
b) GNM 2nd year	123	50%
HEARD OF NEEDLE STICK INJURY		
a) YES	246	100%
b) NO	0	0
SOURCE OF INFORMATION		
a) Teachers	246	100
b) Journals	0	0

C)Mass Media/ Workshops / Conferences	0	0
ENCOUNTERED NEEDLE STICK INJURY		
a) YES	174	70.7%
b) NO	72	29.3%

The table 1 portrays that most of the college students, out of 246 students , all of the respondents i.e 246(100%) were in the age group of 18-23 years, 236 (95.9%) of the respondents were female, 123(50%) of the respondents were B.Sc Nursing 2nd year students , and 123(50%) of the respondents were GNM 2nd year students, 246(100%) of the respondents heard of Needle Stick Injury from teachers , 246(100%) of the respondents heard of Needle Stick Injury from teacher, 174(70.7)% encountered Needle Stick Injury .

SECTION II:

- **Assessment of Knowledge of the nursing student according to their level of Knowledge**

Table 2: Frequency and percentage distribution of nursing students according to their level of Knowledge

n = 246

LEVEL OF KNOWLEDGE	**FREQUENCY**	**PERCENTAGE (%)**
Inadequate knowledge (<15)	30	12.2
Moderately adequate knowledge (15 – 23)	199	80.9
Adequate knowledge (>23)	17	6.9
TOTAL	**246**	**100%**

Table 2: shows that, out of 246 students , majority i.e, 199(80.9%) had moderately adequate knowledge, and 30(12.2%) had inadequate knowledge and 17(6.9%) had adequate knowledge regarding needle stick injury.

SECTION III:

- **Assess the level of Attitude regarding Needle Stick Injury among Nursing students**

Table 3: Frequency and percentage distribution of Nursing students according to their level of Attitude

n = 246

LEVEL OF ATTITUDE	**FREQUENCY**	**PERCENTAGE (%)**
Undesirable attitude (<25)	35	14.2%
Moderately desirable attitude (25 – 38)	134	54.5%
Desirable attitude (>38)	77	31.3%
TOTAL	**246**	**100%**

Table 3: portrays that out of 246 , 134(54.5%) had moderately desirable Attitude , 77(31.3%) had desirable Attitude and 35(14.2%) had undesirable Attitude regarding Needle Stick Injury.

SECTION IV:

- Assessment of correlation between Knowledge and Attitude regarding Needle Stick Injury among Nursing students

Table 4: correlation between Knowledge and Attitude regarding Needle Stick Injury among Nursing students

H_{01}: There is no significant correlation between Knowledge and Attitude regarding Needle Stick Injury among Nursing students in selected Colleges and Schools of Kamrup , Assam.

H_1: There is significant correlation between Knowledge and Attitude regarding Needle Stick Injury among nursing students in selected Colleges and Schools of Kamrup , Assam.

n = 246

Variables	**Mean**	**S.D**	**Karl Pearson's Correlation "r" and p- Value**
Knowledge	17.67	3.26	r = 0.418 p=0.0001, S***
Attitude	34.21	6.83	

*****p<0.001, S – Significant**

The table 4: portrays the relationship between Knowledge and Attitude regarding Needle Stick Injury among Nursing students . The table depicts that the mean score of knowledge was 17.67±3.26 and the mean score of attitude was 34.21±6.83. The calculated Karl Pearson's Correlation value of r=0.418 shows a moderately positive correlation between Knowledge and Attitude which was found statistically significant at p<0.001 level which clearly infers that when the Knowledge regarding Needle Stick Injuries among the Nursing students increases or decreases then their Attitude towards it also increases or decreases. H_1 was accepted and H_{01} was rejected

SECTION V:

- Assess the association between Knowledge regarding Needle Stick Injury with selected Socio-demographic variables .

Table 5: Association between level of Knowledge regarding Needle Stick Injury with selected Socio-demographic variables

Chi-square test was used to assess the association between Knowledge regarding Needle Stick Injury with selected Socio-demographic variables .

H_{O2}: There is no significant association between Knowledge regarding Needle Stick Injury among Nursing students of selected Colleges and Schools of Kamrup , Assam with their selected Socio-demographic variables.

H_2: There is significant association between Knowledge regarding Needle Stick Injury among Nursing students of selected Colleges and Schools of Kamrup , Assam with their selected socio-demographic variables.

n = 246

Socio-demographic Variables	**Inadequate**		**Moderate**		**Adequate**		**Chi-Square/Fisher Exact test p-value**
	F	**%**	**F**	**%**	**f**	**%**	
Age (in years)							
18 – 23	30	12.2	199	80.9	17	6.9	-
24 – 29	0	0	0	0	0	0	
30 – 35	0	0	0	0	0	0	
Gender							
Male	2	0.8	7	2.8	1	0.4	P=0.332 (N.S)
Female	28	11.4	192	78.0	16	6.5	
Transgender							
Educational courses							
B.Sc. Nursing 2nd year	13	5.3	107	43.5	3	1.2	χ^2=8.782 d.f=2 P=0.012 S*
GNM 2nd year	17	6.9	92	37.4	14	5.7	
Have you heard of needle stick injury?							
Yes	30	12.2	199	80.9	17	6.9	-
No	0	0	0	0	0	0	

Socio-demographic Variables	Inadequate		Moderate		Adequate		Chi-Square/Fisher Exact test p-value
	F	%	F	%	f	%	
If yes, mentioned the Source of information about needle stick injury?							
Teachers	30	12.2	199	80.9	17	6.9	-
Journals	0	0	0	0	0	0	
Mass Media / workshops / conferences	0	0	0	0	0	0	
Have you ever encountered needle stick injury?							χ^2=30.265 d.f=2 P=0.0001 S*
Yes	17	6.9	154	62.6	3	1.2	
No	13	5.3	45	18.3	14	5.7	

Demographic Variables	Undesirable		Moderately desirable		Desirable		Chi-Square p-value / Fisher Exact test p-value
	F	%	f	%	f	%	
Age (in years)							
18 – 23	35	14.2	134	54.5	77	31.3	-
24 – 29	0	0	0	0	0	0	
30 – 35	0	0	0	0	0	0	
Gender							
Male	1	0.4	6	2.4	3	1.2	P=1.000 (N.S)
Female	34	13.8	128	52.0	74	30.1	
Transgender							
Educational courses							χ^2=37.932 d.f=2 P=0.0001 S*
B.Sc. Nursing 2nd year	11	4.5	91	37.0	21	8.5	
GNM 2nd year	24	9.8	43	17.5	56	22.8	
Have you heard of needle stick injury?							
Yes	35	14.2	134	54.5	77	31.3	-
No	0	0	0	0	0	0	
If yes, mentioned the Source of information about needle stick injury?							
Teachers	35	14.2	134	54.5	77	31.3	-
Journals	0	0	0	0	0	0	
Mass Media / workshops / conferences	0	0	0	0	0	0	
Have you ever encountered needle stick injury?							χ^2=22.024 d.f=2 P=0.0001 S*
Yes	29	11.8	106	43.1	39	15.9	
No	6	2.4	28	11.4	38	15.4	

***p<0.05, S – Significant, p>0.05** **N.S – Not Significant,p>0.05**

The table 5: portrays Knowledge regarding Needle Stick Injuries among Nursing students with their selected Socio-demographic variables. It was observed that the Socio-demographic variables educational courses **(χ^2=8.782, p=0.012)** and have you ever encountered needle stick injury **(χ^2=30.265, p=0.0001)** had statistically significant association with level of Knowledge regarding Needle Stick Injuries at p<0.05level. The other socio-demographic variables did not show statistically significant association with level of Knowledge Needle Stick Injuries among Nursing students at p<0.05 level. Therefore, H_2 was accepted and H_{02} was rejected

INTERPRETATION

The table X depicts the association of level of Knowledge regarding Needle Stick Injury among Nursing students with their selected socio-demographic variables .

Gender : The calculated p value was 0.332 . Since the p value was more than 0.05 there was no significant association between Knowledge and gender

Educational courses: The calculated p value was 0.012. Since the p value was less than 0.05 there was significant association between Knowledge and educational courses

Encountered Needle Stick Injury : The calculated p value was 0.0001 . Since the p value was less than 0.05 there was significant association between Knowledge and encountered Needle Stick Injury

SECTION VI:

- Assess the association between Attitude regarding Needle Stick Injury with selected Socio-demographic variables

Table 6 : Chi-square test was used to assess the association between Attitude regarding Needle Stick Injury with selected Socio-demographic variables

Demographic Variables	Undesirable		Moderately desirable		Desirable		Chi-Square p-value / Fisher Exact test p-value
	F	%	f	%	f	%	
Age (in years)							-
18 – 23	35	14.2	134	54.5	77	31.3	
24 – 29	0	0	0	0	0	0	
30 – 35	0	0	0	0	0	0	
Gender							P=1.000 (N.S)
Male	1	0.4	6	2.4	3	1.2	
Female	34	13.8	128	52.0	74	30.1	
Transgender							
Educational courses							χ^2=37.932 d.f=2 P=0.0001 S*
B.Sc. Nursing 2nd year	11	4.5	91	37.0	21	8.5	
GNM 2nd year	24	9.8	43	17.5	56	22.8	
Have you heard of needle stick							-

injury?							
Yes	35	14.2	134	54.5	77	31.3	
No	0	0	0	0	0	0	
If yes, mentioned the Source of information about needle stick injury?							
Teachers	35	14.2	134	54.5	77	31.3	-
Journals	0	0	0	0	0	0	
Mass Media / workshops / conferences	0	0	0	0	0	0	
Have you ever encountered needle stick injury?							χ^2=22.024 d.f=2 P=0.0001 S*
Yes	29	11.8	106	43.1	39	15.9	
No	6	2.4	28	11.4	38	15.4	

H_{03}: There is no significant association between Attitude regarding Needle Stick Injury among Nursing students of selected Colleges and Schools of Kamrup , Assam with selected Socio-demographic variables

H_3: There is significant association between Attitude regarding Needle Stick Injury among Nursing students of selected Colleges and Schools of Kamrup , Assam with selected socio-demographic variables

'n = 246

***p<0.05, S – Significant, p>0.05** **N.S – Not Significant, p>0.05**

The table 6 portrays Attitude regarding Needle Stick Injuries among Nursing students with their selected socio-demographic variables. It was observed that the Socio-demographic variables educational level **(χ^2=37.932, p=0.0001)** and have you ever encountered needle stick injury **(χ^2=22.024, p=0.0001)** had statistically significant association with Attitude regarding Needle Stick Injuries at p<0.05 level and the other demographic variables did not show statistically significant association with Attitude Needle Stick Injuries among Nursing students at p<0.05 level. Therefore H_3 was accepted and H_{03} was rejected.

INTERPRETATION

The data presented in table 6 shows the association of Attitude regarding Needle Stick Injury among Nursing students with their Soio-demographic variables.

Gender: The calculated p value was 1.000. Since the p value was more than 0.05 there was no significant association between Attitude and gender .

Educational courses: The calculated p value was 0.0001. Since the p value was less than 0.05 there was significant association between Attitude and educational courses.

Encountered needle stick injury : The calculated p value was 0.0001 . Since the p value was less than 0.05 there was significant association between Attitude and encountered Needle Stick Injury

CONCLUSION

Out of 246 nursing students , all of the nursing students 246(100%) were aged 18-23 years, 236(95.9%) were female, 10(4.1%) were male , 123(50%) were B.Sc nursing 2nd year, 123(50%) were GNM 2nd year nursing students , 246(100%) heard about Needle Stick Injury , 246(100%) source of information about Needle Stick Injury from Teachers , 174(70.7%) had encountered Needle Stick Injury , 72(29.3%) had not encountered Needle Stick Injury .

Majority i.e. 199(80.9%) had moderately adequate knowledge, 30(12.2%) had inadequate knowledge and 17(6.9%) had adequate knowledge .The mean knowledge score was 17.67 with standard deviation of 3.26.

Majority i.e. 134(54.5%) had moderately desirable attitude. 35(14.2%) had undesirable attitude , 77(31.35) had desirable attitude . The mean attitude score was 34.21 with standard deviation of 6.83.

The mean score of knowledge was 17.67±3.26 and the mean score of attitude was 34.21±6.83. The calculated Karl Pearson's Correlation value of r1=0.418 shows a moderately positive correlation between knowledge and attitude which was found statistically significant at p<0.001 level which clearly infers that when the knowledge regarding stick injuries among the nursing students increases or decreases then their attitude towards it also increases or decreases.

The association was statistically tested by Chi-square test and analysis depicted that there demographic variables educational courses **(χ^2=8.782, p-value=0.012)** and have you ever encountered needle stick injury **(χ^2=30.265, p-value=0.0001)** had statistically significant association with Knowledge regarding needle stick injuries at p<0.05level. The other demographic variables did not show statistically significant association with level of knowledge needle stick injuries among nursing students at p<0.05 level.

The association was statistically tested by Chi-square test and analysis depicted that there demographic variables educational courses **(χ^2=37.932, p-value=0.0001)** and have you ever encountered needle stick injury **(χ^2=22.024, p-value=0.0001)** had statistically significant association with Attitude regarding needle stick injuries at p<0.05level. The other demographic variables did not show statistically significant association with Attitude needle stick injuries among nursing students at p<0.05 level.

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