"Effectiveness Of Video Assisted Teaching On Knowledge And Practice Regarding Prevention Of Needle Stick Injuries Among Fourth Year B.Sc Nursing Students At A Selected Nursing College, Chinakakani, Guntur District, Andhra Pradesh".

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ABSTRACT:

Background of the study: A needle stick injury is a penetration of skin by a needle point, but probably also by other piercing instruments. Injuries transmit infectious disease, especially blood- borne viruses. Needle stick injuries are most often associated with sudden patient movement during the injectionRecapping needles. Needle stick injuries can be prevented by Use safety syringeswith sharps injuryprotection, Plan safe handlingand disposal of needles before usingthem, never recapneedles.

Objective: To assess the effectiveness of video assisted teaching regarding prevention of needle sticks injuries among fourth year B.Sc. nursing students.

Materials and methods: Apreexperimentalresearchdesignwasadoptedtofindtheeffectiveness of video assisted teaching on knowledge and practice regarding prevention of needle sticks injuries among fourth year B.Sc. nursing students at NRI college of nursing , chinakakani, Guntur district, Andhra Pradesh. A total of 60 fourth year students were selected by using probability simple random sampling technique. Data were collected by using a pre-tested knowledge questionnaire and practice checklist. Data was analyzed by using descriptive and inferentialstatistics.

Results: Majority 55% (51-75%) of the fourth year B.Sc. nursing students had fair knowledge, and 45% of them had poor knowledge (<50%) and none of them had good knowledge (76-100%) in the pre-test regarding prevention of needles stick injuries.Inthepresentstudyitwasalsofoundthatthepre-testmean valuewas15.78 ± 3.24.In the post test majority (73.3%) of the fourth year B.Sc. nursing students had good knowledge and 26.6% had fair knowledge and none of them had poor knowledge. The post-testmean value was24.3± 4.3 whichishigherthanthat ofthepre-test.Apaired't'testwasdoneandwasfoundsignificant(21.5*)at the 0.05% level of significance which indicates that the video assisted teaching was effective in enhancing the knowledge regarding prevention of needle stick injuries among fourth year B.Sc. nursing students. Majority 86.6% (51-75%) of the fourth year B.sc nursing students had fair practice, and 10% of them had Good practice (>76%) and 6.6% them had poor practice (<50%) in the pre-test regarding prevention of needle stick injuries. In the present study it was also found that the pre-test mean was 13.21 with a standard deviation of 1.68.In the post test, majority 78.3% had good practice, and 21.6% had fair practice and none of them had poor practice regarding prevention of needle stick injuries. The post-testmean value was17.7± 2.29 whichishigherthanthat ofthepre-test.Apaired't'testwasdoneandwasfoundsignificant(20.4*)at the level of 0.05 which indicates that the video assisted teaching was effective in enhancing the practice of the fourth year B.Sc. nursing students regarding prevention of needle stick injuries.**Conclusion:** Needle stick injuries arestillamajorprobleminIndia.Thehealthcareprofessionals can adopt teaching strategies and impart it to the nursing students to reduce the incidence of needle stick injuries.

INTRODUCTION:

Hospital may be an outsized, organizationally complex system driven institution employing an outsized number of workers from different professional streams. It is also a potentially hazardous workplace that exposes their works to a wide range of physical, chemical, biological, work place efficiency and psychological hazards. Occupational disease burden in was India is growing unparalleled.[1]

Needles stick injuries are wounds caused by sharps like hypodermic needles, blood Collection needles, intravenous cannula's or needles used to connect parts of an Intravenous delivery system. It's one among the greatest risks faced by frontline health care workers. Every Percutaneous needle stick injury carries a risk of infection from Blood born pathogen.[2]

Needle stick injury may be a typical event in the health care environment when they were drawing blood, administering intramuscular or intravenous drugs, performing other procedures involving sharps, this needle can slip and injured the health care workers. This sets the stage to transmit viruses from the Source person to other person. This injury is also commonly occurring during needle recapping and as a result of failure to place under needles in approved sharps containers.[3]

Nursing students are at high risks for needle stick injuries (NSIs) during their practice in the clinical settings. They are exposed to sharp hazards while handling medical equipment's such as while administering medications or taking blood samples. Therefore, it is crucial for the students to possess adequate competences regarding the procedures that require them to handle sharp devices. To date, many studies had reported that top rates of needle stick injuries among nursing students.[4]

There are various strategies to prevent needle stick injuries (NSI). Nevertheless, some countries, particularly in low and middle income countries face obstacles for achieving their mission in lowering Needle stick injuries. One of the foremost common obstacles includes financial constraints that often substitute the way of making safer environment and preventing injuries for students, leading to inadequate supply of resources.[4]

In a developing country like India, the factors which are responsible for needle stick injuries due to unnecessary injections, lack of vaccination among health care personnel, poor quality of devices and

finally limited knowledge of safety precautions taking care of the above factors may reduce role the exposure to needle stick injury. In clinical trials conducted in India have shown that a particular, habit of the health care worker, recapping of the needle is the most common cause of needle stick injury.[5]

Clinical trials have shown that preventive measures are highly effective in reducing the incidence of needle stick injuries. It is estimated that safety devices, Proper health education and a safe working environment can reduce the incidence of needle stick injuries by 90%. Thus it is essential to create awareness about needle stick injuries among nursing students regarding the risks involved after exposure to such injuries.[6,7]

OBJECTIVES:

1. To assess the existing knowledge and practice regarding prevention of Needle stick injuries among Fourth year B.sc nursingstudents.
2. To determine the effectiveness of video assisted teaching regarding prevention of Needle sticks injuries among Fourth year B.sc nursing students.
3. To find out the correlation between post-test knowledge and practice scores regarding prevention of Needle stick injuries among Fourth year B.sc nursing students.
4. To find out the association between pre-test knowledge and practice scores with their selectedvariables.

HYPOTHESIS:

H_1- There will be a significant difference between the pretest and post-test knowledge and practice scores regarding prevention of needle stick injuries among Fourth year B.sc nursing students.

H_2-There will be correlation between the post- test knowledge and practice regarding prevention of needle stick injuries among Fourth year B.sc nursing students.

H_3-There will beasignificant association between the pre- test knowledge and practices scores with selected their selected demographic variables regarding prevention of needle stick injuries among Fourth year B.sc nursing students.

Materials and Methods:

Apreexperimentalresearchdesignwasadoptedtofindt heeffectiveness of video assisted teaching on knowledge and practice regarding prevention of needle sticks injuries among fourth year B.Sc. nursing students at NRI college of nursing , chinakakani, Guntur district, Andhra Pradesh. A total of 60 fourth year students were selected by using probability simple random sampling technique. Based on the study objectives the tool divided into two sections. Section- I and section-II. Section-I: Socio Demographic Data, Section- IIA: knowledge questionnaire consists of 30 questions and Section –IIB:checklist on practice consists of 20 questions Data was analyzed by using descriptive and inferentialstatistics.

Validity and reliability:-

The tool was validated by 9 subject experts in medical and surgical nursing among which 3 were doctors and 6 were nursing personnel. The reliability of the knowledge questionnaire and practice checklist was established by using Test Re-test method. In order to establish the reliability, the tool was administered to 10 students of Fourth year B.sc nursing studying in Lalitha College of nursing, Guntur, AndhraPradesh.Thereliabilityquotient was obtained for the knowledge tool was r=0.91, for the practice checklist r=0.95 Hence, the tool was reliable.

Results:

The data were analyzed by using both descriptive and inferential statistics basedontheobjectivesandhypothesesofthestudy.

Majority of students 46 (76.6%) were age group between 21-22 years. It is observed that out of 60, 13(21.6%) were Male, 47(78.4%) were Females. In relation with the source of information from 15(25%) Media, 35(58.4%) Hospital 3(5%) Newspaper, 7(11.6%) TV/Radio.
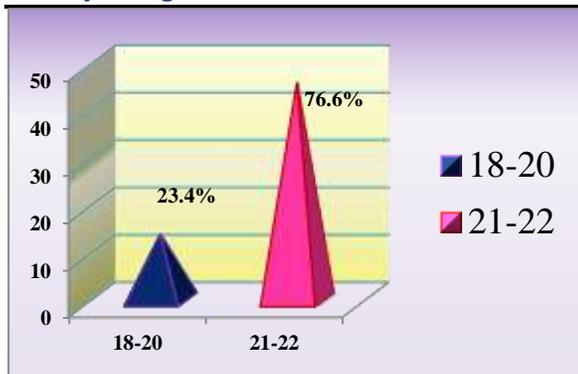
Fig-1 Percentage distribution of Fourth year B.sc nursing students according to their age
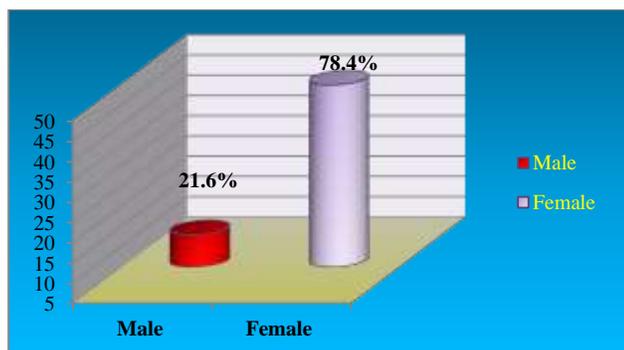

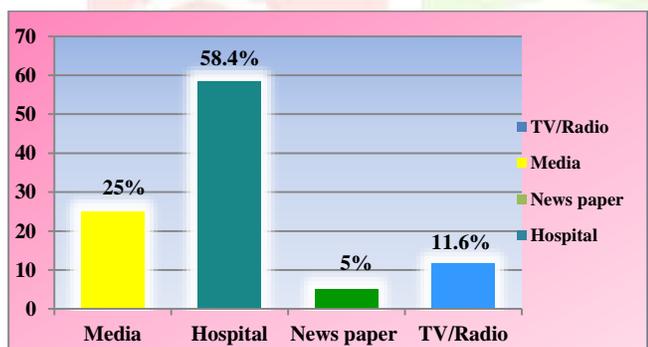**Fig-2Percentage distribution of Fourth year B.sc nursing students according to their gender**

Fig-3Percentage distribution of Fourth year B.sc nursing students according to Source of information

Variable	knowledge and practice	Pre-test		Post – test		Mean difference
		Mean	SD	Mean	SD	
Knowledge	Poor knowledge	12.7	1.89	-	-	-
	Fair knowledge	18.2	1.66	18.4	2.23	0.2
	Good knowledge	-	-	26.6	2	-
Practice	Poor practice	10	0.81	-	-	-
	Fair practice	13.05	1.27	14.15	0.94	1.1
	Good practice	16.1	0.37	18.6	1.44	2.5

Table -1 Mean, standard deviation of pre-test and post-test for poor, fair, good knowledge and practice scores regarding prevention of needle stick injuries among Fourth year B.sc nursing students

S.no	Research variables	Mean	Standard deviation	Karl Pearson correlation	Inference
1	Knowledge	24.3	4.3	r =0.56 p-value=0.25	Moderate positive correlation
2	Practice	17.7	2.29		

Table-2 Correlation of post-test Knowledge and Practice scores regarding prevention of needle stick injuries among Fourth year B.sc nursing students.

Table-3 Association between pre-test knowledge scores regarding prevention of needle stick injuries among Fourth year B.sc nursing students with their selected demographic variables

S.N O	Selected demographic Variables	Level of knowledge						χ2 Value	Table value P<0.05
		Poor knowledge		Fair knowledge		Good knowledge			
		(f)	%	(f)	%	(f)	%		
1.	Age								
	a)18-20 years	10	16.6%	4	6.6%	-	-	5.15 df=1	S 3.84
	b)21-22 years	17	28.4%	29	48.4%	-	-		
2.	Gender								
	a) male	11	18.4%	11	3.4%	-	-	10.5 df=1	S 3.84
	b) female	16	26.6%	16	51.6%	-	-		
3.	Source of information								
	a) Media	6	10%	9	15%	-	-		
	b) Hospital	11	18.4%	24	40%	-	-	15.0 df=6	S 7.82
	c)News paper	3	5%	0	0%	-	-		
	d)TV/Radio	7	11.6%	0	0%	-	-		

Table-4 Association between the pre-test practice scores regarding prevention of needle stick injuries among Fourth year B.sc nursing students with their selected demographic variables.

S.NO	Selected demographic Variables	Level of practice						χ2 Value	Table value P<0.05
		Poor practice		Fair practice		Good practice			
		(f)	%	(f)	%	(f)	%		
1.	Age								
	a)18-20 years	1	1.6%	13	21.6%	0	0%	1.19 df=2	NS 5.99
	b)21-22 years	5	8.4%	38	63.4%	3	5%		
2.	Gender								
	a) male	3	5%	8	13.4%	2	3.4%	7.49 df=2	S 5.99
	b) female	3	5%	43	71.6%	1	1.6%		
3.	Source of information								
	a) Media	2	3.4%	12	20%	1	1.6%	21.2 df=6	S 12.59
	b) Hospital	2	3.4%	33	55%	0	0%		
	c)News paper	2	3.4%	0	0%	1	1.6%		
	d)TV/Radio	0	0%	6	10%	1	1.6%		

Table -1shows that pre -test mean value for poor and fair knowledge was 12.7±1.89, 18.2±1.66 and while in post -test mean value for fair and good knowledge was 18.4±2.23,26.6±2.Pre-test mean value for poor, fair and good practice was 10±0.81, 13.05±1.27, 16.1±0.37 while in the post-test it revealed that mean value for fair and good practice was 14.15±0.94, 18.6±1.44.

Table-2 The above tables shows that moderate positive correlation between post-test knowledge and practice regarding prevention of needle stick injuries among Fourth year B.Sc. Nursing by Karl Pearson formula,(r=0.56) with the level of significance 0.05.hence research H_2 hypothesis was accepted and null hypothesis was rejected.

Table-3 presents the calculated values of socio demographic variables regarding prevention of needle stick injuries among Fourth year B.sc nursing students for knowledge such as age ($\chi2$=5.15*), gender ($\chi2$=10.5*) and source of information ($\chi2$=15.0*) are more than the table value and thus are found to be significantly associated with pre-test knowledge of the fourth year B.Sc. nursing students at 0.05 level of significance. Hence, the researcher accepted the research H_3hypotheses and rejected the null hypothesis.

The calculated values of socio demographic variables regarding prevention of needle stick injuries among Fourth year B.sc nursing students for practice such as gender ($\chi2$=7.49*) and source of information ($\chi2$=21.2*) are more than the table value and thus are found to be significantly associated with post-test practice of the fourth year B.sc nursing students at 0.05 level of significance. Hence, the researcher accepted the research H_3 hypothesis and rejected the null hypothesis.

DISCUSSION:-

Findings of the study revealed that video assisted teaching was effective enhancing the knowledge and practice regarding prevention of needle stick injuries. Majority 55 %(51-75) of the Fourth year

B.sc nursing students had fair knowledge and 27 %(< 50%) of them had poor knowledge and for practice majority 85% (51-75%) of the Fourth year B.sc nursing students had fair practice, and 10% of them had poor practice (>50%) and 5% them had good practice (>76%) in the pre-test regarding prevention of needle stick injuries. In the present study it was also found that the pre-test for knowledge mean value was 15.78 ± and for practice mean value was 13.21 ± 1.68.In the present study, majority 73.3%of the Fourth year B.sc nursing students had good knowledge and 78.3% had good practice after the implementation of video assisted teaching with the mean value 24.3 ±4.3.

In the present study correlation between post-test knowledge and practice scores regarding prevention of Needle stick injuries among Fourth year B.sc nursing students was moderate positive correlation with 0.56 at the level of 0.05 (p=0.25.).In the present study association between post-test knowledge and Practice scores with their selected variables data were done and found for knowledge age ($\chi2$=5.15*), gender ($\chi2$=10.5*) and source of information ($\chi2$=15.0*) and for practicegender ($\chi2$=7.49*) and source of information ($\chi2$=21.2*) more than the table value and thus are found to be significantly associated with pre-test knowledge of the fourth year B.sc nursing students at 0.05 level of significance. Hence, the researcher accepted the research H_2 hypothesis.

LIMITATIONS

The present study was limited to:-

- 60 Fourth year B.sc nursing students
- Fourth year B.sc nursing students studying in selected college, chinakakani, Guntur district, Andhra Pradesh.
- Who are willing to participate in the study
- Who are available at the time of data collection

RECOMMENDATIONS

Based on the findings of the present study, the following recommendations have been made:

- A similar study can be done on a large sample to generalize thefindings.
- A quasi-experimental study can bedone.
- A similar study can be carried out to evaluate the effectiveness of various teaching strategies like self-instructional module, information booklet, computer-assisted instruction, on knowledge regarding prevention of needle stick injuries.
- A descriptive study can be done to assess the knowledge of Fourth year B.sc nursing students regarding prevention of needle stick injuries.

CONCLUSION:-The researcher concludes the study by showing the effectiveness of the video assisted teaching on knowledge and practice regarding prevention of needle sticks injuries among Fourth year B.sc nursing students at a selected nursing college, chinakakani, Guntur district, Andhra Pradesh.

ETHICAL CLEARANCE:-
Ethical clearance was obtained from NRI College of Nursing ethical research committee and principals of the respective colleges.

SOURCE OF FUNDING:-
Self
CONFLICT OF INTREST:-
None

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