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RESEARCH ARTICLE

AWARENESS AT NURSING LEVEL- BOON FOR HCV MANAGEMENT

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Abstract

Introduction: Hepatitis C virus (HCV)causes chronic infection in majority of cases but in few can also present as acute hepatitis and has already impacted170 million people worldwide which amounts to 3% of total world population and they are atfuture risk of developing cirrhosis and liver cancer.

Aim: To assess the effectiveness of self-instructional module on knowledge and awareness regarding prevention and control of hepatitis C among B.Sc. Nursing 4th year students of College of Nursing at PGIMS Rohtak.

Methodology: The study was done on 70 students of B.Sc. Nursing 4th year students of College of Nursing, PGIMS Rohtak from 1st Jan.2020 to 8th Feb.2020, to assess the effectiveness of self-instructional module on knowledge and awareness regarding preventive measures of HCV.

Results: The administration of self-instructional module in posttest leads to more knowledge in students about HCV, thus enabling them, to take care of themselves, their family and patients in better way. There is partial significant association between knowledge with selected demographic variables.

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Introduction:-

HCV is an important causeof chronic liver disease**[1,2].** Itcauses chronic infection in majority of cases but in few can also present as acute hepatitis and has already impacted170 million people worldwide which amounts to 3% of total world population**[3]**. Chronic HCV infection is usually slowly progressive**[4]**and leads to chronic hepatitis in 50% to 80% of patients**[5].**It impacts liver by causing inflammation of liver tissue and in many cases, it gradually progresses to permanent damage of liver**[6]**.HCV has assumed the place of significant health problem because of its contribution in causing deaths worldwide.It is estimated that viral hepatitis cause approximately one million deaths in the world on yearly basis. There are sevencommonly known types of hepatitis viruses (A, B, C, D, E, F G). The estimated carrier rate in India is around 1.2**%[7].** Intravenousdrug users (IDU) are at high risk for infection with several blood-borne pathogens, including HCV, hepatitis B virus (HBV), human immunodeficiency virus, type 1 (HIV), and human T-lymphotropic virus types I and II (HTLV)**[1-4]**. Transmission is primarily parenteral through the sharing of contaminated injection equipment**.[8]**Health care workers including treating specialists and medical students are prone for acquiring these infections because of their direct contact with infected patients. They all are directlyinvolved in blood transfusion, injections and doing or assisting surgical operations in their clinical practices. Thus, all of them should be fully aware of the risk involved and appropriate precautions to be taken while dealing with infected patients**[9].**Approximately 1.4% of health care workers are infected with HCV**[10].**Physicians, dentists, nurses, laboratory staff, and chair side assistants are at high-risk of acquiring infection via the contact with

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blood (and other body fluids) while performing their clinical duties **[11].** HCV infection screening should be routinely performed for persons at high risk for infection or who require post exposure management**[12].**Preventive strategies which aim to reduce the exposure to HCV should be based on blood testing of individuals, screening of blood and blood products, sterilization of reusable equipment, destruction of potentially contaminated disposable instruments, and promotion of barrier methods of contraception to prevent sexually transmitted diseases. Thus for increasing the efficacy of these interventions, it is important to determine the main risk factors for HCV infection in different populations**[13]**.There is no preventive vaccine for HCV infection in contrast to HBV.The millions of adolescents worldwide are at risk of these infectionsdue to lack of information; skills, health services and support which they need to go through sexual development during adolescence. The epidemic of HBV &HCV is gripping young population at rapid pace**[14].**Continuous investigation of the knowledge, attitude, and performance of different personnel of medicine in various studies shows that people's performances such as vaccination, applying general precautions recommended by international organizations including wearing a pair of gloves, and taking measures after occupational injuries would highly be influenced by their attitude toward hepatitis**[15].**HCV patientsmay be discriminated and stigmatizedat work place, family or community level. It is possibility that they may face discrimination from their colleagues i.e. health-care professionals due to lack of knowledge, which may lead to negative attitudes toward these kinds of diseases and fear of contracting the infection. The knowledge and attitudes of health care professionals play a key role in prevention of spread of infection. Therefore, the objectives of the present study were to assess knowledge and awareness of HCWs including about prevention of HCV among Nursing Students**[14].**As medical students also face the threat of percutaneous injuries with the consequent risk of contracting blood-borne infections such as hepatitis B and C viruses, their general knowledge and attitude about viral hepatitis and its transmission and prevention can stop the spread of this disease in hospitals and society**[6].**Nursing students are the care giver inthe hospital and in the community setting, so they should have knowledge and awareness regarding preventive measures of HCV. Thus investigator felt the need to assess the knowledge of nursing students regarding prevention of HCV by giving pretest and posttest through a self-instructional module.

Aim Of Study:-

To assess the effectiveness of self-instructional module on knowledge and awareness regarding prevention and control of hepatitis C among B.Sc. Nursing 4th year students of College of Nursing at PGIMS Rohtak.

Objectives Of Study:-

1) To assess knowledge of Nursing students regarding prevention and control of hep C.
2) To assess the effectiveness of instructional module on knowledge of Nursing students regarding prevention and control of hep C.
3) To determine the association between knowledge of Nursing students regarding prevention of hep C with selected demographic variables.

Methodology:-

In present study was conducted on 70 students of B.Sc. Nursing 4th year students of College of Nursing, PGIMS Rohtak from 1st Jan.2020to 8th Feb.2020, to assess the effectiveness of self-instructional module on knowledge and awarenessregarding preventive measures of HCV.Quantitative research approach was used and Pre – experimental(one group pretest and posttest) research design was adopted.Non-probability convenient sampling technique was adopted for the present study.The design adopted for the present study can be represented as given schematic representation of research design. The variables under study were demographic (age, Residential area, Family history& source of information of HCV, Attended any training), dependent (knowledge and awareness regarding prevention and control of HCV and Independent variables (Self-instructional module regarding prevention and control of HCV. The inclusion criterion waswillingness to participate in the study, availability at time of data collection and who were studying in College of Nursing, PGIMS Rohtak. The Exclusion criterion were unwillingness and unavailability at time of study.

Table 1:- Interpretation Of Knowledge Score.

LEVEL OF KNOWLEDGE	SCORE
Inadequate knowledge	0-11
Moderate knowledge	12-23
Adequate knowledge	24-35

A self-instructional module was prepared for students regarding Prevention and Control of HCVand is given to the study samples after administration of knowledge questionnaire in pretest. A Pilot study was conducted on seven B.Sc. Nursing 4th year students of K.V M College of Nursing, Rohtak. After written consent, pre-test was conducted by a structured knowledge questionnaire and after 6 days, post test was conducted which revealed that the tool was feasible, practicable and acceptable.

Table 2:- Demographic Characterstics Of The Sample.

SR.NO.	SAMPLE CHARACTERISTICS	FREQUENCY	PERCENTAGE
1.	**Age**		
	a) 20-22	55	78.57%
	b) 23-25	15	21.43%
	c) Above 25	00	0%
2.	**Residential area**		
	a) Urban	38	54.28%
	b) Rural	32	45.71%
c)	**Family History of HEP-C.**		
	a) Yes	01	1.42%
	b) No	69	98.57%
4	**Any training (work shop, seminar) attended on HEP-C.**		
	a) Yes		
	b) No	08	11.42%
		62	88.57%
5	**Source of information about HEP-C.**		
	a) Classroom lectures	49	70%
	b) Mass media(T.V/Radio/Internet)	07	10%
	c) Personal study of books/magazines/journals	13	18.57%
	d) Hepatitis B/C information broachers,posters	01	1.42%

The obtained scores were analyzed in terms of mean, median and standard deviation. Structured questionnaire was developed to assess the knowledge of students whichconsisted of 35 items. According to the total score obtained by each subject knowledge was classified into three sections**.**

Table 3:- Knowledge Level Of The Students In Pre-Test. N=70

Knowledge level	Frequency	Percentage
Inadequate Knowledge	12	17.14%
Moderate Knowledge	55	78.57%
Adequate Knowledge	3	4.28%
Total	70	100%

Table 4:- Result Of Pre-Test Knowledge Score.

Knowledge level Score	Frequency	Percentage
Inadequate Knowledge (0-11)	2	2.85%
Moderate Knowledge (12-23)	9	12.85%
Moderate Knowledge (12-23)	9	12.85%
Adequate Knowledge (24-35)	59	84.28%

Table 5:- Result Of Post Test Knowledge Score.

	KNOWLEDGE SCORE	
	Mean	SD
RESULT	15.47	3.14

	KNOWLEDGE SCORE	
	Mean	S.D.
RESULT	27.27	5.63

Table 6:- Effectivreness Of Sim On Knowledge Score In Pretest And Post Test.

Sr.no	**Mean**	**S.D.**	**Mean difference**	**t- test value**
PRE-TEST	15.47	3.14	11 .80	-14.25
POST TEST	27.27	5.63		

Theabove table depicts that the mean value of posttest is more as compared to the pretest and mean difference of knowledge score is 11.80. The t value is -14.25, it shows the significant difference between the knowledge of students in pretest and posttest.

Table 7:- Association Of Sociodemographic Variables With Knowledge of b.sc. Nursing 4th year students.

Sample characteristic	**F**	**Inadequate**	**Moderate**	**Adequate**	**Chi Test**	**P Value**	**Df**	**Result**
1.Age								
a) 20-22	55	2	53	0				
b) 23-25	15	3	12	0	2.121	.145	1	**NS**
c) Above 25	0	0	0	0				
2. Residential area								
a) urban	38	4	32	0	0.026	.873	1	NS
b) rural	32	3	29	0				
3.Family history of HEP-C								
a. Yes	01	0	01	0	.113	.737	1	NS
b. No	69	7	62	0				
4.Any training attended								
a) Yes	8	1	07	0				
b) No	62	6	56	0	.630	.802	1	**NS**
5. Source of information								
a) Class room lectures	49	04	45	0				
b) Mass media	07	01	06	0				
c) Personal study of books	13	0	13	0	10.59	.014	3	**S**
d) Hepatitis C broachers	01	01	0	0				

NS is not significant S is significant DF is degree of freedom

The calculated chi square value proves that there is not significant association between pre intervention knowledge score and age of sample, residential area of samples, family history of HCV, any training attended but there is a significant association between pre intervention knowledge score and source of information about HCV.

Discussion:-

The study showed that self-instructional module had played a great role in improving knowledge of the students.Findings of the analysis of student knowledge with the selected socio-demographic variables showed that the chi square test is used to determine the association between the knowledge and the selected demographic

variables age, residential area, family history of HCV, any training attended on HCV, source of information about HCV knowledge regarding HCV. According to findings age, family history, residential area, any training attended is not significantly associated with knowledge of students but source of information in which there is significant association, as the calculated value is more than the tabulated value at the level of significance 0.05, hence the research hypothesis H1 is accepted. Our study is in alignment withstudy conducted to determine the knowledge about blood borne viral infections and steps taken to prevent their transmission among two hundred nursing students of a teaching hospital in North East India. A pre-tested questionnaire regarding the knowledge, and practices related to blood borne infections was used.Majority of the students (62.5%) had knowledge about the three most serious blood borne infections, though only 25% were aware that HIV is transmitted by infected blood, unprotected sexual intercourse, tattooing and piercing instruments, mother to child during pregnancy and during labor. This study concluded that the majority of the students (89%) knew that being a healthcare worker puts them at risk of acquiring Hepatitis B, C and HIV.Our study is also supported byan educational interventional study was conducted in KushabhauThakre Nursing College, Kolar Road, Bhopal. Study population included two hundred nursing students. Most of the Nursing students (95%) knew that HBV &HCV are viral disease and an effective vaccine against Hepatitis B is available in the market but they are not able to differentiate between HBV & HCV and thought that both are the same entity. After intervention 87% of the students were aware about preventive measures against HBV &HCV. Health care providers (55%), Teaching (25) and Mass media (22%) were main source of knowledge for them.

Results:-

On analyzing the data obtained from pilot study it was found that study subject was deficit of knowledge regarding HCV. The findings revealed that overall mean knowledge score of students in pretest as 15.47 and the standard deviation was 3.14.In pretest 17.14%students had inadequate knowledge, 78.57% had moderate knowledge and 4.28% had adequate knowledge regarding HCV.In posttest the overall mean knowledge score of students were 27.27 and SD was 5.63. In posttest students 2.85% had inadequate knowledge,12.85%had moderate knowledge and 84.28% had adequate knowledge regarding HCV.After analysis the data the major finding was that the knowledge mean of posttest (27.27) was more as compare the pretest (15.4).Distribution of self-instructional module was effective in enhancing the knowledge of students.On the basis of success of pilot study final study was conducted in the defined setting after obtaining permission from the principal of College of Nursing, PGIMS Rohtak. Final study was conducted AND data was analyzed using descriptive and inferential statistics.Majority of the students (78.57%) belonged to the age group 20-22 years.The 85% of students had not any family history of HCV, 54.28% of students had urban residential area, 98.57% had not taken any training on HCV and 70% had knowledge from class room lectures.Majority,**78%** had moderate knowledge and 22% had adequate knowledge regarding HCV in Pretest. In posttest students 2.85% had inadequate knowledge,12.85%had moderately knowledge and 84.28% had adequate knowledge regarding HCV.There was no significant relation with age, residential area, family history, any training attended with pre intervention knowledge of students but source of information had significant relation with the pre intervention knowledge score.

Conclusion:-

The administration of self-instructional module in posttest leads to more knowledge instudents about HCV, thus enabling them, to take care of themselves, their family and patients in better way. There is partial significant association between knowledge with selected demographic variables. Nurse administration should evaluate the staff taking care of person suffering from HCV, develop in- service education program so that recent change can be communicated to them and motivate them for caring in good manner and should focus on health promotion through outreach and mass health education program. Professional interaction between the nurse and the public will help to improve professional standards and create better image.Nurse researcher should conduct interactive session regarding HCV among students for promoting their knowledge.Compared to other aspects of health, there is need for extended and intensive nursing research on the areas of preventive health care among students using better methods of teaching and effective teaching materials, so that they can use their knowledge in every field of nursing.

Recommendations:-

1. This study should be replicated on larger sample to validate the findings of the study.
2. A Same kind of study can be conducted for general population.
3. A comparative study can be done on knowledge regarding students in medical and non-medical fields.

4. The study can be done in different parts of India as the baseline knowledge may vary depending upon geographical area.
5. Experimental study can be done using structured teaching program on knowledge.
6. The short-term training programme and its effectiveness can be analysed through a pre and post-test method.

Limitations Of The Study-

The study was confined to small number of students of College of Nursing, PGIMS Rohtak only and was limited only to assess the knowledge of students regarding HCV.

Ethical Clearance-

A prior permission was taken from Principal of College of Nursing, Pt. B. D. Sharma ROHTAK, Haryana. A verbal informed consent was taken from the students were obtained before enrolling them into the study.

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