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A Study to Evaluate the Effectiveness of Teaching on Nipha Virus on Knowledge and Attitude Level among Nursing Students at Selected College in Bidar, Karnataka

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Abstract: ***Nipha virus is one of the viral zoonotic infection caused by the RNA virus .The aim of the present study is to evaluate the effectiveness of teaching program regarding Nipah virus infection on Knowledge and attitude among nursing students. Objectives of the study were i) to assess the existing knowledge and attitude of Nipah virus disease among nursing students in selected college, ii)to assess the effectiveness of teaching program on knowledge and attitude of Nipah virus disease among nursing students and iii) to correlate the knowledge and attitude of Nipah virus disease among nursing students . One group pre-test post-test design was selected for the study . The participants were 60 student nurses from selected nursing college from Bidar, Karnataka. Convenience sampling method was used to select the sample for study. A structured questionnaire was used to collect data from the subjects. The obtained data was analyzed using descriptive and inferential statistics and interpreted in terms of objectives and hypothesis of the study. The level of significance was set at 0.05 levels. In experimental group, pre-test mean was 7.26 (SD=2.52) and post-test mean was 16.87 (SD=3.70), with the t value of 9.99. The obtained t-value is greater than the table value at 0.05 level of significance. Therefore, teaching program was effective in improving knowledge on Nipha virus among them. Conclusion: In the pretest 42% of the subjects had inadequate level of knowledge, 58% of the subjects had Moderate level of knowledge and none of of the subjects had adequate level of knowledge where as in the post test 70% of the subjects had adequate level of knowledge, 30% of the subjects had moderate adequate level of knowledge The study findings indicate that teaching program was effective for improving knowledge level among student nurses.***

Keywords: Nipha virus, Effectiveness, Teaching program , Knowledge and Attitude, Student nurses

1. Introduction

Zoonoses as causes of human infections have been increasingly reported, and many of these are viruses that cause central nervous system infections and have recently emerged to cause severe encephalitis and systemic infection in humans and animals in the Asia-Pacific region. The pathological features in the human infections comprise vasculopathy (vasculitis, endothelial multinucleated syncytia, thrombosis, etc.) and parenchymal cell infection in the central nervous system, lung, kidney, and other major organs. Most animals naturally or experimentally infected show more or less similar features confirming the dual pathogenetic mechanism of vasculopathy-associated microinfarction and direct extravascular parenchymal cell infection as causes of tissue injury. The most promising animal models include the hamster, ferret, squirrel monkey, and African green monkey. With increasing evidence of infection in the natural hosts, the pteropid bats and, hence, probable future outbreaks in many more countries, a greater awareness of henipavirus infection in both humans and animals is imperative.[1]

Nipah virus is one of the type of RNA virus belonging to which the category of the family genus of Paramyxoviridae. It is one of the viral zoonotic infection caused by the RNA virus naming RNA virus that is Nipah virus[2]

Nipah virus was firstly identified in the country that includes Singapore and Malaysia country in the year 1998, in the year of 2004 in Bangladesh and again in the year of 2018 in Kerala also. This is a viral as well as zoonotic infection. Nipah virus infection was firstly emerged in Kampung Sungai Nipah village of Malaysia. The name Nipah is came from the name of village names Sungai Nipah [3]

In Malaysia, Nipah virus infection was firstly seen among pigs. The emergence of Nipah infection in Malaysia and Singapore was very high with major and severe encephalitis, respiratory problem. The encephalitis was a very common problem affected in the people residing in Malaysia and Singapore which was occurred with high fatality rate in the peoples. In India, it was firstly occurred in the state of Kerala in Kozhikode city[4]

About 74.5 per cent is the mortality rate of Nipah virus infection in India. As of May 2018 about 700 human beings were infected and 50 to 70 per cent of them were died. There was 19 Nipah virus infected cases in 17th July 2018 and 17 deaths cases were reported from the state Kerala in India. The 18 cases were confirmed by the testing in the laboratory. The Nipah virus outbreak was being localized into two districts of Kerala: Kozhikode and Malappuram. The pre valance of the diseases is < 1/10000000 [2]

Human infections range from asymptomatic infection to acute respiratory infection, and fatal encephalitis. Infected people initially develop symptoms including fever, headaches, myalgia, vomiting and sore throat. This can be followed by dizziness, drowsiness, altered consciousness, and neurological signs that indicate acute encephalitis. Some people can also experience atypical pneumonia and severe respiratory problems, including acute respiratory distress. Encephalitis and seizures occur in severe cases, progressing

to coma within 24 to 48 hours. It causes a range of illnesses from asymptomatic (subclinical) infection to acute respiratory illness and fatal encephalitis[5].

Nipah virus has an incubation period of 4 to 14 days. It can spread immediately from animal to animal, human to human and also animal to human transmission. It can become a serious and also a fatal condition in the world. The common diagnostic examinations include cell culture, serological testing by enzyme linked immunosorbent assay (ELISA) or indirect fluorescent antibody (IFA), and reverse transcription polymerase chain reaction (RT-PCR). Because no any type of commercial assays are now available here. These tests are typically performed only in a few specialized laboratories. The main factor which is responsible for the transmission of Nipah virus is human beings. The increased pollution in the environment and increased population is also leading into the transmission and spreading of the infection. The breeding of virus is take placed due to the polluted environment, unhealthy environment and also due to the irregular disposal of waste materials. The only thing that can help a patient suffering from Nipah virus infection is intensive supportive care. The caretaker though needs to take precautions that the infection does not spread to him/her. Thus, whilst providing the necessary care and support, the caretaker must take basic precautions like wearing a mask, cap, wearing gloves, and washing hands.[6] Although Nipah virus has caused only a few known outbreaks in Asia, it infects a wide range of animals and causes severe disease and death in people, making it a public health concern.

Nursing students play a vital role in keeping communities healthy and serves as an important channel in controlling infectious diseases. Continued education and staying updated education will help prepare professionals for a successful career in the society. Better education about disease prevention that involves demonstration of proper performance is essential to ensure adequate knowledge and safe practice. Nurses play a vital role in keeping people informed when it comes to emerging diseases and other potential health risks to a given population. Existing emerging diseases prevention competencies should be the basis for nurse training. Nurses should receive education about routine procedures as the basis for all care, and disease- or event-specific recommendations that includes information about altered standards of care in situations that involve limited resources.

Research Objectives

- To assess the knowledge and attitude of Nipah virus disease among nursing students in selected college
- To assess the effectiveness of teaching program on knowledge and attitude of Nipah virus disease among nursing students in selected college
- To correlate the knowledge and attitude of Nipah virus disease among nursing students in selected college

Hypotheses

- H1: There will be a difference in pre and post-test knowledge level after teaching on Nipah virus disease among nursing students in selected college
- H2: There will be a significant relationship between knowledge and attitude after teaching on Nipah virus disease among nursing students in selected college

2. Materials and Methods

The study was conducted among undergraduate Nursing students of vasantha nursing college Bidar,, karnataka, India. One group pre-test post-test design was selected for the study. The study sample was collected using convenient sampling method from nursing college Undergraduate students of third year and fourth year. The duration for sample collection was four weeks during December 2018. Samples that were not willing to participate in the study were excluded. The sample size was 60; A pre structured questionnaire was used to assess knowledge and attitude related to Nipah for assessing the pre and post test knowledge& attitude. Structured teaching program was given to the samples for 45 mts. Then the data was collected, analyzed through descriptive and inferential statistics.

Ethical clearance

Ethical clearance was taken from Institutional Ethical Committee Board of Vasantha college of Nursing, Bidar, Karnataka. Consent of each subject was obtained before the study. Confidentiality was maintained throughout the study.

3. Results and Discussion

Demographic variables revealed that out of 60 students 67% from North part of India and 33% from south part of India, 58% students are females and 42% students are Male and previous knowledge exposure to the topic through the media were 50% and 50 % were not known to the topic.

Table I: Comparison of pretest and Post test knowledge and attitude scores of of Nipah virus disease among nursing students

	Pretest		Post Test		Paired t value
	Mean	SD	Mean	SD	
Knowledge	7.54	30.16	17.54	70.16	37.03**
Attitude	31.9	62.4	41	82	23.69**

** Significant P<0.01

Table I shows that in pretest of knowledge mean & SD was 7.54 and 30.16. and post test mean & SD was 17.54 and 70.16 with the t value of 37.03.obtained t value was greater than the table value at o.o1 level of significance. Therefore teaching program was effecting in improving knowledge on NIPHA virua among nursing students. HI was accepted.

Table 2: Frequency and percentage distribution of knowledge score of Nipah virus disease among nursing students

variable	Inadequate (0-30%)	Moderately adequate (31-65%)	Adequate (66-100%)
Pretest Knowledge	42	58	0
Post test Knowledge	0	30	70

Table 2 findings revealed that in pretest 42%students of the students had inadequate knowledge. Whereas in post test

30% had moderately adequate knowledge and 70% had attained adequate knowledge after teaching program.

Table 3: Frequency and percentage distribution of Attitude score of Nipah virus disease among nursing students

Variable	Low positive (0-50%)	Positive (51-75%)	High positive (76-100%)
Pretest attitude	6	86	8
Post test attitude	0	22	78

Table 3 findings depicted that in pretest 6% students of the students had low positive attitude, 86% had positive attitude and 8 % had positive attitude. Whereas in post test 30% had moderately adequate knowledge and 70% had attained adequate knowledge after teaching program after the teaching program

Table 4: Correlation between Knowledge and attitude of Nipah virus disease among nursing students

Variables	Knowledge	Attitude	r
Knowledge	1	0.279*	0.273*
Attitude	0.279*	1	

*significant p<0.05

Table 4 shows that In post test there is significant positive correlation between knowledge and attitude It was significant at 5% level P<0.05

Hence The research hypotheses H1 and, H2 was accepted. Therefore teaching was effective in improving knowledge on NIPHA virus among nursing students.

Our study findings are consistent with the study of Pre-experimental one group pre-test post-test design was used among 54 nursing students from Om Health Campus. The objective of the study was to assess the knowledge regarding Nipah virus infection among the nursing students before and after educational intervention. Self administered questionnaire consisting demographic characteristics and knowledge regarding NiV infection was used before and after educational intervention. Results revealed that the mean of pre-test knowledge was 7.40 whereas; the mean of post-test was 13.72 with a difference of 6.32. The paired t-value was 8.13 (p=0.00) showing the significant increase in the knowledge level regarding NiV infection after an educational intervention. Results of this study indicated most of the respondents had inadequate knowledge before educational intervention and all the respondents had adequate knowledge after educational intervention. Thus, the study concluded that in order to upgrade the knowledge of nursing students on emerging diseases education intervention will be beneficial.[7]

4. Conclusion

From this study we can conclude that teaching program have enhanced the Knowledge and attitude of Nursing students. It's found 70% of the nursing students had adequate knowledge and 78% had high positive attitude towards Nipah after the teaching program. Being upcoming nurses they need to have better knowledge and attitude towards emerging diseases like Nipah to deal with such occurrences in the future. Special training sessions regarding Nipah should be focused among the nursing students. Health Education classes on protective measures and prevention against emerging diseases should be incorporated to face the sudden outbreaks of Emerging and Reemerging diseases.

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