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Impact of Alertness Programme on Knowledge Regarding Nipah Virus Infection among Health Care Providers Residing at Vijayapur

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ABSTRACT

Context: In May 2018, 17 deaths were reported due to outbreak of Nipah infection, in that the first case was occurred in Calicut district of north Kerala along with spreading adjacent district through human to human transmission. As the Nipah virus is highly infectious and spreads hastily through close contact, prevention of such cases at community level will become biggest challenge for the health team to provide better services. The best primary strategies for prevention and control of Nipah infection will be alertness programme.
Aims: To alert regarding prevention and control of Nipah Virus infection among health care providers.
Settings and Design: A pre experimental –one group pre and post test design conducted at nursing institution Vijayapur
Methods and Material: A convenient sampling technique, 100 health care providers and administered structured questionnaires for the data collection..
Statistical analysis: Frequency percentage. Mean and standard deviation.
Results: The result revealed that majority were age group of 19-24 and had education status of GNM. The mean and standard deviation on pretest was 4.74 and 7.66 , after alertness programme it was 8.56 and 7.24 respectively.
Conclusions: Implementation of various educational interventional programmes on emerging and remerging diseases for health care providers are benefited to offer better services.

Key-words: Nipah, Health care provider and Alertness programme

INTRODUCTION

Every year world will face with new type of emerging and re-emerging diseases which is steeling many lives and disturbing health system along with administration. Recently Nipah virus newly emerged as zoonosis infectious disease caused severity in both animal and human being. The first outbreak of NIV disease was identified in 1998 at Malaysia place of Kampung Sungai Nipah. The natural host of the virus is fruit bats of the Pteropodidae family, Pteropus genus. Presently human to human transmission has been documented including hospital setting in India.[1]

In 1999 at Malaysia nearly 300 human cases were diagnosed with NIV and 100 deaths were reported. And again in May 2018 around 700 cases were reported with NIV and 50 to 75% of those who were infected died. Outbreak of NIV resulted in 18 deaths at Indian state of Kerala.NIV infection in human have a range of symptoms from asymptomatic infection to acute respiratory syndrome which may take 3-14 days and these may progress into coma as in 24-48 hours.[2]

The Nipah virus is a RNA virus spreads between people to people, or animal to people which requires direct contact with an infected source especially specific type of fruit bats. Within 3-14 days after exposure the symptoms will start appearing like initially with fever, headache, drowsiness followed by disorientation and mental confusion, these may progress into coma as fast as in 24-48 hours. RT-PCR from throat swabs, cerebrospinal fluid, urine etc are taken during acute and convalescent stage of lab diagnosis, as that there is no specific treatment and vaccination only act as supportive care for infected person.[1]

In India there was three times Nipah infection outbreak has reported on 2001, 2007 and 2018 respectively. Especially in 2018among 18 cases 16 deaths were reported. It has been observed that due to direct contact with bat fluids which were hanging around trees of the patient's house. Nipah infection is measured as one of the deadly disease which mainly transfer from infected Pteropus spices of bats commonly present in Kathmandu and Chitwan district of Nepal.[3]

Within 3-14 days after exposure the symptoms will start appearing like initially with fever, headache, drowsiness followed by disorientation and mental confusion, these may progress into coma as fast as in 24-48 hours. Inflammation of the brain I,e encephalitis is an serious complication of Nipah virus. Respiratory illness will more common during the early stage of illness and the patient with breathing difficulty of Nipah virus are more likely to transmit disease compare with non respiratory illness. This is most considered as epidemic outbreak. RT-PCR from throat swabs, cerebrospinal fluid, urine etc are taken during acute and convalescent stage of lab diagnosis, as that there is no specific treatment and vaccination only act as supportive care for infected person.[1]

Earlier studies on Nipah have highlighted that it was in the form severe febrile encephalitis in human being and respiratory diseases are seined in pigs of epidemic of Malaysia, and fallowed with spreading to various regions of world through the migration of infected pigs. Later it was identified as fruits bat of Pteropid species are the main natural reservoir hosts. A cross sectional study in Bangladesh in the year of 2010 to 2011 has explained that drinking raw date and direct contact with infected persons were the major risk; if these risks are apparently destructed magnitude of Nipah infection can be decreased.[4]

A news click reports that Kerala Government honored by American Virology institute for Nipah virus containment. Vijayan said that this honor goes to public health system of Kerala, were they able to ascertain Nipah infection in the second patient itself an achievement. it was only possible with propaganda of prevention of Nipah infection measures, immediate special training to hospital staff, provision of required equipments, and continues contact by health workers with more than 2000 people who are suspected cases of contact with infected person etc. Kerala was able to provide free medical care.[7]

The health team member and care takers are risk for exposure and infection for NIV. In India and Bangladesh the main source for disease transmission as linked to consumption of raw palm sap and contact with infected fruits bat. Prevention is better than treatment, the measure like avoiding exposure to infected bats in epidemic area and sick pigs, avoiding drinking or eating of raw palm sap, fruits contaminated by bat excreta, infected well water etc, especially health workers have to fallow standard infection control practices while handling infected cases. Along with this surveillance and awareness are important for preventing future outbreak.[3]

Aim: Determine the effectiveness of awareness programme on knowledge regarding Nipah Virus infection among health care providers.

Objectives

- To determine the existing level of knowledge regarding Nipah Virus infection among health care providers
- To introduce alertness programme on Nipah Virus infection among health care providers
- To determine the impact of alertness programme on knowledge regarding Nipah Virus infection among health care providers.

Assumptions:

- Health care providers may have inadequate knowledge about NIpah virus infection
- Alertness programme may promote the knowledge on prevention of Nipah virus infection among health care providers

Hypothesis:

- H1; There is significant difference between pretest and post test knowledge score regarding Nipah virus infection
- H2; There is significant association between pretest knowledge score with their selected socio demographic variables

MATERIALS AND METHODS

Sources of Data: The data will be collected from the health care providers residing at Vijayapur.

Research Design: Pre experimental design-one group pre and post test design is used for the study.

Research Approach-Quantitative research approach

Study setting-Study is conducted at nursing institution Vijayapur

Population-The target population of the study will be the health care providers includes both student and staff nurses residing at Vijayapur

Variables-Dependent variable includes knowledge on NIpah Virus infection, Independent variable includes awareness programme and Demographic variable are age, gender, education status, dietary patterns, occupation, family income and Information About Nipah virus infection before Guest lecture

Sample, size and sampling technique- Sample of the study are health care providers who were selected through convenient sampling technique and size of the sample was 100

Inclusion and exclusion criteria- Health care providers who are willing to participate in study, residing in Vijayapur and present at the time of study. Samples that are aware of Nipah virus and absent are excluded from the study.

Method of data collection-The data from the subjects were collected by Structured questionnaires,

Description of tool-the structured questioner includes two part

Part I-Socio Demographic variables consists of 7 items And Part II- Structured Knowledge Questionnaires with 23 items were formed to assess the level of knowledge.

Score interpretation-it is expressed as >35% poor,>70% average and >100% good. After taking consent the pretest was introduced to the subjects fallowed with alertness programme and post test.

RESULTS

Table 01- Demographical Variables n=100

Sl no	Variables	Frequency	%
1	Age in Years		
	19-24	60	60
	25-30	12	12
	35 & Above	28	28
2	Gender		
	Male	52	52
	Female	48	48
3	Education Status		
	GNM	60	60
	BSC /PBBSC	30	30
	Msc	10	10
4	Dietary Patterns		
	Veg	50	50
	Non-Veg	08	08
	Mixed	42	42
5	Occupation		
	Staff	30	30
	Student	46	46
	Teaching faculty	24	24
6	Family Income		
	5,000-10,000	20	20
	11,000-15,000	36	36
	16,000 & Above	44	44
7	Information About Nipah virus infection		
	YES	48	48
	NO	52	52

Table 01 describes 60% of participants were belongs to the age group of 19-24yra and had education status at GNM.52% were belongs to male, 46% are students and 44% had family income more than 16,000 per month. Only 48% had information about Nipah virus infection.

Table 02- Pre and Post Test result n=100

Pre Test				Post Test			
Knowledge Level	Score	Frequency	%	Knowledge Level	Score	Frequency	%
Poor	0-8	38	38	Poor	0-8	20	20
Average	9-16	62	62	Average	9-16	52	52
Good	17-23	0	00	Good	17-23	28	28

Table 2 expresses that in pretest none of the participants had good knowledge and 62% had average knowledge. After alertness programme 52% had average and 28% had good knowledge on prevention of Nipah virus.

The similar study conducted by Aayoushma Shrestha1, Maiya Ranjitkar views that 44.4% of te respondents had adequate knowledge and 55.6% had inadequate knowledge in pretest. After expose to awareness programme there was increase in the knowledge of the respondents.[3]

Table 3 Impact of alertness programme on knowledge regarding Nipah Virus infection. n=100

t-test	N	Mean	S.D	S.E	p-value
Pre test	100	15.92	4.74	0.6838	
Post test	100	21.56	3.81	0.5399	0.0001

Table 3 defects the Impact of alertness programme on knowledge regarding Nipah Virus. The mean and standard deviation on pretest was 15.92 and 4.74 whereas, after alertness programme it was 21.56 and 3.81 respectively, thus showing Impact of alertness programme on knowledge regarding Nipah Virus among health care providers.

The similar study conducted by Aayoushma Shrestha1, Maiya Ranjitkar expressed that The mean and standard deviation on pre-test was 7.40 and 2.25 whereas, after educational intervention it was13.72 and 2.24 respectively, thus showing effectiveness of educational intervention.[3]

DISCUSSION

The present study explains that 60% of participants were belongs to the age group of 19-24yra and had education status at GNM.52% were belongs to male, 46% are students and 44% had family income more than 16,000 per month. Only 48% had information about Nipah virus infection.

The study was supported by Aayoushma Shrestha1, Maiya Ranjitkar on effects of educational intervention regarding Nipah virus infection among Bachelor level nursing highlights that 62.96% of the respondents were belong to the age group of 17 to 23 years, more that 48% were students and 22.2% were working in hospital.[3]

The study also expresses that in pretest none of the participants had good knowledge and 62% had average knowledge. After alertness programme 52% had average and 28% had good knowledge on prevention of Nipah virus.

The similar study conducted by Aayoushma Shrestha1, Maiya Ranjitkar on effects of educational intervention regarding Nipah virus infection among Bachelor level nursing views that 44.4% of te respondents had adequate knowledge and 55.6% had inadequate knowledge in pretest. After expose to awareness programme there was increase in the knowledge of the respondents.[3]

The existing study defects the comparison between pre-test and post test on knowledge regarding prevention of Nipah virus. The mean and standard deviation on pretest was 4.74 and 7.66 whereas, after alertness programme it was 8.56 and 7.24 respectively, thus showing effectiveness of educational intervention.

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Nipah virus infection among Bachelor level nursing expressed that The mean and standard deviation on pre-test was 7.40 and 2.25 whereas, after educational intervention it was13.72 and 2.24 respectively, thus showing effectiveness of educational intervention.[3]

Another similar study conducted by Varghese A D et.al on awareness regarding Nipah infection among health-care workers in a medical college hospital in Kerala explains that the mean age of the participants was 30.31±6.7 years, the major source of information was news papers, television and internet. Most of them believed the first Nipah outbreak was in India, 93,6% had expressed infection is caused by virus and nearly 75% had good knowledge on its cause and modes of transmission. The staffs of reception and pharmacy had misconceptions on prevention of Nipah infection. The study also expressed that by conducted study has helped in finding level of awareness among health care professional at the time of outbreak which can help in updating their knowledge by many educational intervention for providing quality services to the public.[4]

CONCLUSION

As Nipah is a highly infectious and zoonotic disease and documented as human to human transmission leading into high fertility rate among the people. The present study expresses that none of them had good knowledge on prevention of Nipah in pretest and after educational intervention 52 % had average and 28% has good knowledge. Therefore the study concludes that effective implementation of various educational interventional programmes on emerging and remerging diseases for health care providers are benefited to provide better services..

Recommendation

Every year India will face one or the emerging and remerging diseases and threatens the public and health care systems in control and prevention measures. By conducting various awareness programme to health personal will become a key factor in early prevention and control of diseases and its complications.

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