# A Study To Assess The Effectiveness of Planned Teaching Programme on Knowlegde Regarding Nipah Virus Infection And Its Prevention Among Nursing Students In Selected Nursing Schools of Tirupati

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Abstract: Background: Nipah virus infection has been identified as an emerging public health disease in the recent era. As there is no standard treatment protocols and vaccination contributes to high fatality rate. There is only symptomatic management and precautionary measures are only available. The aim of the study was to assess the effectiveness of planned teaching programme on knowledge regarding Nipah virus infection and its prevention among nursing students in selected Government nursing schools of Tirupati.

Objectives:
- To assess the knowledge regarding NIPAH virus infection and its prevention among Nursing students
- To develop and administer planned teaching programme on Nipah virus infection and its prevention among Nursing Students
- To evaluate the effectiveness of planned teaching programme on knowledge regarding NIPAH virus infection and its prevention among nursing students
- To find out the association between the pretest knowledge regarding NIPAH virus infection and its prevention among nursing students and selected socio demographic variables.

Methods: A quantitative approach was used with pre-experimental one group pretest posttest research design was adopted. Non probability convenient sampling technique was used. Sample size was 50. The investigator assessed the knowledge of Nursing students using structured questionnaire regarding NIPAH virus infection and its prevention after taking informed consent from sample. After conducting the pretest, the researcher provided Planned Teaching Programme for a period of 45 minutes on the same day. After one week Posttest was conducted using the same research tool.
Results: The findings of the study showed that the pretest mean knowledge scores was 30.28 and posttest mean knowledge scores were 60.38 Standard deviation value for pretest was 10.38 and posttest value was 10.23 on knowledge regarding Nipah virus infection and its prevention. Obtained t-value was 21.830and p value significant at 0.01 level.
Conclusions: The findings of the present study showed that Planned Teaching Programme was effective to increase the knowledge regarding NIPAH virus infection and its prevention among nursing students.

Keywords: NIPAH virus, nursing students, Planned Teaching Programme.

## INTRODUCTION

Nipah virus is a single stranded RNA virus of the family paramyxoviridae (species of the genus Henipavirus). The first outbreak of NIV disease was identified in 1998 at Malaysia place of Kampung Sungai Nipah so the name 'NIPAH' is originated from that village, in the year of 2004 in Bangladesh and again in the year of 2018 in Kerala also.[1]
Nipah virus is considered as a recently and newly emerging disease this is because its outbreak has occurred relatively in the last year. It is one of the public threat to the health this is because its severity can affect the wide range of animals and this leading in to the major disease and deaths in people. According to WHO 2018 report in the world Nipah virus outbreaks have been reported in Malaysia, Singapore, Bangladesh, India and Philippines. In the world wise statistics 1998 to 2015, more than 600 cases of Nipah virus human infection were reported.[2] According to 2024 July news, one boy aged 14 years diagnosed with Nipah virus and expired at

Malleppuram District, Kerala. National institute of virology, Pune declared this news.[3]

Now WHO is supporting affected and risk countries with technical guidance on how to manage outbreak of Nipah virus and how to prevent their occurrence. WHO has declared NIV to be a priority.[4] Currently there are no vaccines available for Nipah virus infection and prevention is only the way the preventive methods are educating the public and strengthening infection control practices. As it is contagious fatal disease nursing students need to know the causes, spread, signs and prevention of such disease. So that they prevent the spread of NIV disease.[4-6] So the researcher was interested to find out how much the nursing students know about this disease, so that they can educate the society.

MATERIALS AND METHODS

This study was carried out in Nursing college of Tirupati district, the target population of this study consisted of nursing students who met the inclusion criteria like Students who are studying in selected Nursing School, who are available during the data collection time. The target population of this study consisted of 50 nursing students.

Sample size formula adjusted sample size formula was adopted by,
A = n/(1+(n-1))/P)
n = 50, P = 150
A = 50/(1+49/150)
A = 37.69

Tools for data collection:
The structured questionnaire divided into two sections.
SECTION-I: This section consist of baseline information of the sample that is socio- demographic variables of the sample such as age, gender, religion, educational status of father and mother, occupation of father and mother, family income per month,

previous awareness about Nipah virus infection and source of information regarding Nipah virus infection and its prevention.

SECTION-II: Divided into three parts
Part A- Consists of questionnaire regarding Nipah virus infection.
Part B- Consists of questionnaire regarding Signs &Symptoms and Diagnosis of Nipah virus infection.
Part C- Consists of questionnaire regarding Treatment, Nursing Management and Prevention of Nipah virus infection.

Data collection procedure:

In order to collect data a formal written permission was obtained from the principal, Government General and Nursing Midwifery Nursing School S.V.R.R.G.G.H, Tirupathi. Data was collected at Government GNM Nursing School S.V.R.R.G.G.H, Tirupathi. Sample size of 50 General Nursing and Midwifery students were selected by using Non-probability convenient sampling technique. The researcher introduced herself to the group, they were informed about the schedule of data collection procedure and purpose of the research study, and pretest was conducted by distributing structured questionnaire to all students allotted 45 minutes, later on provided planned teaching programme for about 50 minutes and after 7 days post test was conducted. All the students were attentive and actively involved in the study. After giving a score for each individual student, both pre-test and post-test results were tabulated.

RESULTS AND DISCUSSION

A total of 50 Nursing students were participated in the study. The socio demographic variables shown that in relation to age out of fifty sample, majority 20(40.00 %) nursing students belongs to age 21, 20 (40.00 %), regarding gender 7(14%) of nursing students are males and 43(86%) are females.

Table 1: Frequency and percentage distribution of nursing Students according to level of knowledge in pre test and post test regarding general awareness of nipah virus infection.
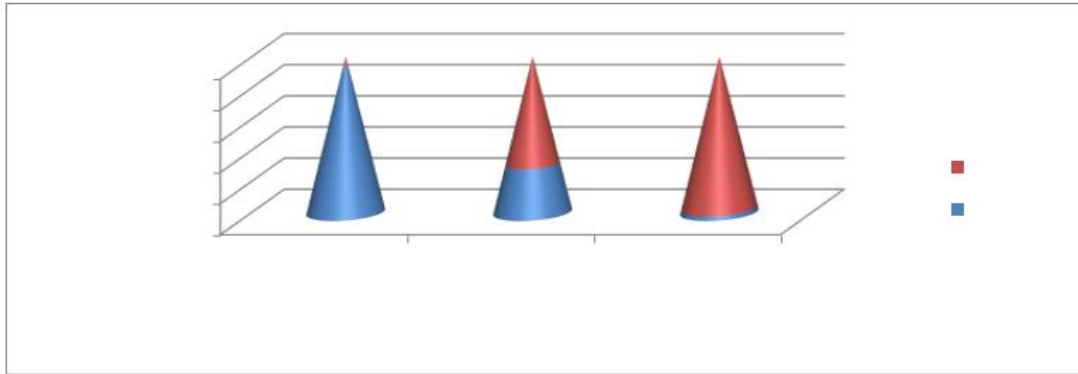
N = 50

| Sl.No | Level of knowledge regarding Nipah virus infection | Pre test | | Post test | |
|---|---|---|---|---|---|
| | | Frequency | Percent | Frequency | Percent |
| 1 | Inadequate | 47 | 94 | 4 | 8 |
| 2 | Moderate | 3 | 6 | 8 | 16 |
| 3 | Adequate | 0 | 0 | 38 | 76 |
| | Total | 50 | 100.00 | 50 | 100.00 |

The above table revealed the level of knowledge scores in pre-test out of 50 nursing students 47(94%) nursing students had inadequate knowledge and 3(6%) of students had moderate knowledge and 0% of students had adequate knowledge. Where as in the post- test 38(76%) nursing students had adequate knowledge and 8(16%) of nursing students had moderate knowledge and 4(8%) of students had inadequate knowledge regarding Nipah virus infection. Hence H1 was accepted where there was significant difference found between levels of knowledge from pre to post test.

Fig-1: Percentage Distribution of Nursing Students According To Overall Level of Knowledge in Pre Test and Post Test Regarding Signs &Symptoms and Diagnosis of Nipah Virus Infection



The above figure revealed the level of knowledge scores in pre-test out of 50 nursing students 44(88%) nursing students had inadequate knowledge and 5(10%) of students had moderate knowledge and1(2%) of students had adequate knowledge. Where as in the post-test 36(72%) nursing students had adequate knowledge and 11(22%) of nursing students had moderate knowledge and 3(6%) of students had inadequate knowledge regarding Nipah virus infection. Hence H1 was accepted where there was significant difference found between levels of knowledge from pre to post test.

Table-2: Frequency and percentage distribution of nursing students according to level of knowledge in pre Test and post test regarding treatment, nursing management and prevention of nipah virus infection

N = 50

| Sl.No | Level of Knowledge regarding Treatment, Nursing Management and Prevention of Nipah virus infection | Pre test | | Post test | |
|---|---|---|---|---|---|
| | | Frequency | Percent | Frequency | Percent |
| 1 | Inadequate | 44 | 88 | 4 | 8 |
| 2 | Moderate | 4 | 8 | 14 | 28 |
| 3 | Adequate | 2 | 4 | 32 | 64 |
| | Total | 50 | 100.00 | 50 | 100.00 |

The above table revealed the level of knowledge scores in pre-test out of 50 nursing students 44(88%) nursing students had inadequate knowledge and 4(8%) of students had moderate knowledge and 2(4%) of students had adequate knowledge. Where as in the post-test 32(64%) nursing students had adequate knowledge and 14(28%) of nursing students had moderate knowledge and 4(8%) of students had inadequate knowledge regarding Nipah virus infection. Hence H1 was accepted where there was significant difference found between levels of knowledge from pre to post test.

Table-3: Frequency and percentage distribution of nursing Students according to the overall knowledge level in pre test
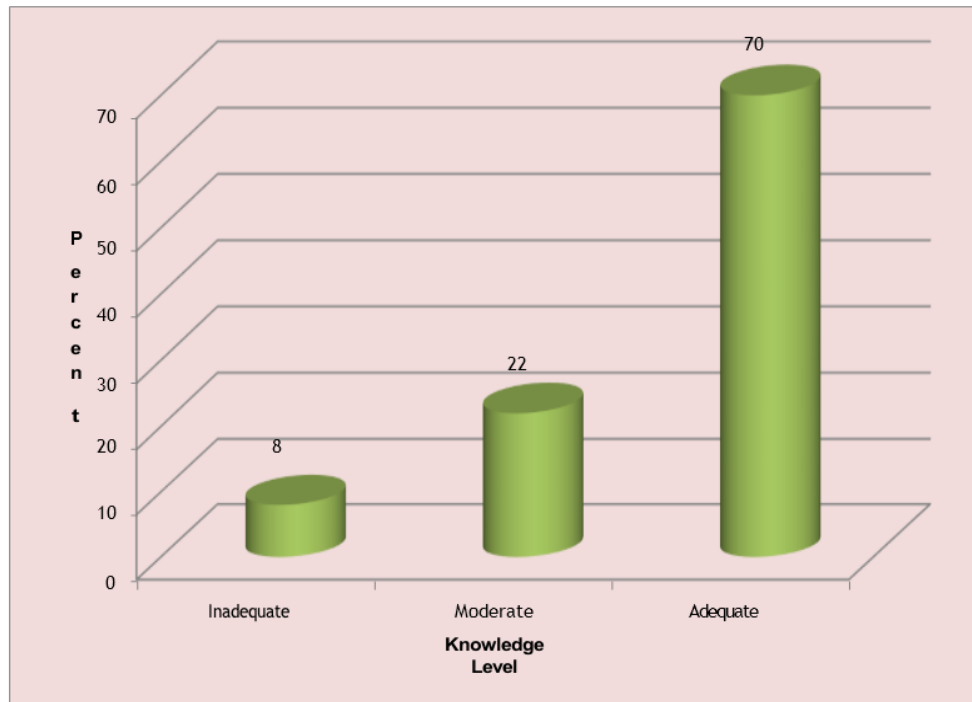
N = 50

| Sl.No | Knowledge level | Pre test | |
|---|---|---|---|
| | | Frequency | Percent |
| 1 | Inadequate | 45 | 90 |
| 2 | Moderate | 3 | 6 |

| 3 | Adequate | 2 | 4 |
|---|---|---|---|
| | Total | 50 | 100.00 |

The above table revealed the level of knowledge scores in pre-test out of 50 nursing students 45(90%) nursing students had inadequate knowledge and 3(6%) of students had moderate knowledge and 2(4%) of students had adequate knowledge.

Fig-2: PERCENTAGE DISTRIBUTION OF NURSING STUDENTS ACCORDING TO THE KNOWLEDGE LEVEL IN POST TEST



The above figure revealed the level of knowledge scores in Post-test out of 50 nursing students 4(8%) nursing students had inadequate knowledge and 11(22%) of students had moderate knowledge and 35(70%) of students had adequate knowledge.

Table-4: Mean and standard deviation distribution and paired t-test and 'p' value knowledge scores of nursing students regarding Nipah virus infection and its prevention

N = 50

| Sl. No | Paired Samples Statistics : Pre test Vs Post test Difference : Mean , S.D and t-value | Mean | N | Std. Deviation | t-value | p value |
|---|---|---|---|---|---|---|
| 1 | Pre test Knowledge regarding Nipah virus infection | 17.16 | 50 | 6.68 | 14.808** | 0.000 |
| | Post test Knowledge regarding Nipah virus infection | 35.55 | 50 | 7.76 | | |
| 2 | Pre test Knowledge regarding Signs &Symptoms and Diagnosis of Nipah virus infection | 6.38 | 50 | 2.51 | 10.773** | 0.000 |
| | Post test Knowledge regarding Signs &Symptoms and Diagnosis of Nipah virus infection | 12.45 | 50 | 2.35 | | |
| | Pre test Knowledge regarding Treatment, Nursing Management and Prevention of | 6.71 | 50 | 3.16 | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 3 | Nipah virus infection | | | | 9.426** | 0.000 |
| | Post test Knowledge regarding Treatment, Nursing Management and Prevention of Nipah virus infection | 12.38 | 50 | 2.71 | | |
| 4 | Pre test Knowledge | 30.28 | 50 | 10.38 | 21.830** | 0.000 |
| | Post test Knowledge | 60.38 | 50 | 10.23 | | |

The above table explains that the mean knowledge scores of pretest was 17.16 and posttest mean knowledge scores were 35.55. Standard deviation value for pretest was 6.68 and posttest knowledge standard deviation value was 7.76 on knowledge regarding Nipah virus infection. Obtained t-value 14.808 and p value significant at 0.01 levels.

Accordingly knowledge regarding Signs &Symptoms and Diagnosis of Nipah virus infection, the pretest was 6.38 and posttest mean knowledge scores were 12.45. Standard deviation value for pretest was 2.51 and posttest knowledge standard deviation value was 2.35 on knowledge regarding Nipah virus infection. Obtained t-value 10.773 and p value significant at 0.01 levels.

Accordingly overall knowledge regarding treatment, nursing management and prevention of Nipah virus infection, the pretest was 6.71 and posttest mean knowledge scores were 12.38. Standard deviation value for pretest was 3.16 and posttest knowledge standard deviation value was 2.71 on knowledge regarding Nipah virus infection. Obtained t-value 9.426 and p value significant at 0.01 level.

Accordingly overall knowledge regarding Nipah virus infection and its prevention, the pretest mean knowledge scores was 30.28 and posttest mean knowledge scores were 60.38. Standard deviation value for pretest was 10.38 and posttest knowledge standard deviation value was 10.23 on knowledge regarding Nipah virus infection. Obtained t-value 21.830 and p value significant at 0.01 level.

There is a significant association between the socio demographic variables such as gender, course of studying, education of mother, occupation of father, family income, previous knowledge, and knowledge levels of nursing students with the 'p' value at 0.01 levels of significance and source of information, education of father significant at 0.05 levels.

Limitations: The limited sample size places a limitation on the generalization of the study findings.
- Study is limited to 50 Nursing Students in selected Nursing Schools, Tirupati.
- Study is limited to II and III year General Nursing and Midwifery students.

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