Effectiveness of Video Assisted Teaching Programme on Prevention of Swine Flu among Students

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Abstract: India had reported 937 cases and 218 deaths from swine flu in the year 2014. By mid-February 2015, the reported cases and deaths in 2015 had surpassed the previous numbers. Every year, there was a rise in number of cases and deaths during winter as temperature affects virus. Objectives: To assess the knowledge on prevention of Swine flu among Students. To administer prepared average knowledge (13-22) and their socio demographic variable. Methods: Evaluative Research approach. Quasi Experimental (one group pre-test and post-test) research design was adopted. The sample consists of 40 students. Descriptive and inferential statistics like mean, median, standard deviation, paired ‘t’ test, correlation, coefficient and chi-square was used for data analysis. Result: average knowledge (13-22) and their frequency is 31 where as 9 samples belong to good knowledge category (23-34) The post test mean score of level of video assisted teaching program 26.13(SD±4.142) was higher than the pre test mean score 13 (SD±3.258) the paired ‘t’ value 14.591, So the video assisted teaching was highly effective in increasing knowledge of students regarding prevention of swine flu

Keywords: Video assisted teaching programme, Swine flu, Prevention

1. Introduction

Learning is the addition of new knowledge and experience. Teaching and learning is an integral part of nursing. Nurses have the responsibility to educate patients related to various aspects and keep themselves updated. Various teaching strategies are used to increase knowledge, such as lecturing, demonstration, discussion and self-education. These methods of self-education has an advantage over the others as the learner can educate himself at his own pace and it also stresses on rereading [1].

2009 H1N1 (sometimes called “swine flu”) is a new influenza virus causing illness in people. This new virus was first detected in people in the United States in April 2009. This virus is spreading from person-to-person worldwide, probably in much the same way that regular seasonal influenza viruses spread. On June 11, 2009, the World Health Organization (WHO) declared that a pandemic of 2009 H1N1 flu was underway.[2]

Swine flu is a respiratory tract infection from the pigs. This kind of virus can kill whole of the human race. Some of the symptoms of swine flu are fever, Lethargy, Lack of appetite, Runny nose, Sore throat, nausea, Vomiting, Diarrhea, and coughing. It is transmitted easily between humans, due to an ability attributed to a mutation not yet identified and makes it through the saliva, by air, by close contact between the mucous membrane or through hands mouth transmission due to contaminated hands

The swine flu is a viral disease that attacks pig occasionally transmitted to human, the swine flu is also known as pork flu (any) virus belonging to the family Orthomyxoviridae which is endemic in population of pigs. These strain of viruses are known as swine influenza virus of SIV (the acronym in English of swine influenza virus have been classified into influenza virus C or are the subtypes of the genus influenza virus A (being the best known strain H1N1 isolated in Japan and Europe).Most importantly the H1N1 influenza outbreak of 2009 in humans and known as swine flu swine influenza – is not caused by SIV only. This is a new strain of virus of influenza A H1N1 that contains genetic material matched a strain of human influenza virus a strain of avian influenza virus and two separate strain of swine influenza virus.[3]

The two antiviral drugs can be taken such as Tamiflu and Relenza available with prescription can make the illness milder and make feel better faster. These drugs are also prevent serious influenza complications. There are different agencies that are providing funding advice and other support from different rich nations to every country to assist swine flu epidemic planning and preparation.[4]

Prevalence of swine flu is highly contagious and has spread very fast to 191 countries. Starting from America to Europe, Asia to Africa. Number of confirmed cases and death as on 18th September 2009.In India 7374 number of confirmed deaths 225. Globally incidence 2, 96,471 and deaths globally 3, 486. [5]

2. Justification of the Study

Since swine flu is a most recent epidemic outbreak and most highly dangerous disease it caused havoc in the minds of people to use surgical mask and caused tremendous fear in the mind of public.
To provide knowledge to the public regarding respiratory hygiene through mass media and educational messages through news paper, journals, magazines, Television, TV aids, Internet etc. Must be done. A step must be taken by the Government in distributing surgical masks and discouraging large public gatherings including theater events, Games etc.

To understand the epidemiology and clinical manifestation of recent cases of swine flu infections in India can help inform regional national and global control measures in response to the emergence of swine flu infection. Important areas for investigation worldwide include evidence of person-to-person transmissions the geographical distribution of disease the clinical spectrum of disease and the effectiveness of mitigation strategies. [6]

For various infection people are scared of swine flu of all ages in whole of countries. The people at high risk of getting swine flu are parents who have had drug treatment of Asthma in the past three years, pregnant women, people aged 65 years and older, children under five years of age, people with chronic lung disease, chronic heart disease, kidney disease, liver disease, chronic neurological disease people with immnosuppression or Diabetes mellitus. [7]

In Maharashtra, which tops the chart for the maximum number of deaths and cases in the country as many as 112 people have succumbed to the contagious virus while In Andhra Pradesh(43), Tamil Nadu (34),, Haryana (25) and Gujarat (2). [8]

Through review of literature the investigator realized that health risk of swine flu is one of the most prominent health problem and computer assisted teaching is an effective educational strategy in prevention and management of swine flu disease, promotion of health and changing behaviour of individual to lead healthy life style.

3. Literature Review

Literature review is a critical summary of research on a topic of interest generally prepared to put a research problem in context or to identify gaps and weakness in prior studies so as to justify a new investigation. [9]

Studies Related to Effectiveness of Teaching Program

Assessment of the efficacy of a video-assisted teaching program on the knowledge of undergraduate students was done. This study was designed to compare the efficacy of a video-assisted teaching module (lecture combined with video film) versus conventional teaching module (lecture-only), regarding post exposure prophylaxis (PEP) among dental students. The test was repeated following conventional teaching module and the video-assisted teaching module. Data were analyzed using T-test and Chi-square. Conclusions was this study indicated that video-assisted teaching is an effective means of promoting persistent knowledge among students Therefore, this method can be suggested for academic educations. [10]

A study conducted on Retinoscopy. The video sequences are converted in computed files and together with computer animations of the g ray tracings, text files audio sequences, they are stored in a suitable CBT-programme. The CBT-program and the specific files are stored on CDs or can be distributed on the internet. A collection of retinoscopy records of patients, some with extraordinary reflex phenomena in also available. Video and animation procedures are more suitable for matching the dynamic phenomena on retinoscopy than photographs or drawings as they offer a more direct basis 36 for understanding of the sometimes difficult processes of retinoscopy. [11]

Kadam, A. (2014) found that Structured education programme was highly effective to improve the knowledge score and to improve the attitude score of subjects/ caregiver towards colostomy care of patient [12]. Anjum, S. (2014) conducted study to assess knowledge of contraceptives methods and appraisal of health education among married women and concluded After the health education married women knowledge was improved to 100% about female sterilization followed by condom 99%, skin implants 86%, oral pills 85% and emergency contraceptives 85%. Sociodemographic variable were significantly associated with existing knowledge and level of married women specially age at marriage, age at first child, occupation, income, education [13][14]. Babu, R. L. (2014) The findings of the study concluded that care takers had inadequate knowledge regarding non-curative care of terminally ill cancer patients. The planned education programme on non-curative care of terminally ill cancer patients was highly effective in improving the knowledge of care takers regarding non-curative care of terminally ill cancer patients [15]. Shinde, M. (2014) concluded that demonstration regarding feeding of hemiplegic patient among caregivers was effective in increasing the skill of the caregivers regarding feeding of hemiplegic patient [16].

Deshmukh, M., & Shinde, M. (2014). concluded that the structured education was effective on knowledge and practice of staff nurses regarding venous access device care [17]. Bhudhagaonkar, J., & Shinde, M. (2014). Concluded that Structured Education Regarding Menstrual Hygiene Practices was effective among Adolescent Girls. [18]

3.1 Studies Related to Swine Flu

A study was conducted on infection with seasonal influenza A (H1N1) virus in patients at a hospital. They found that Influenza A(H1N1) virus infection was predominantly a disease of younger people, regardless of whether the virus was of swine flu. Study also reported that independent of the origin, H1N1 virus higher proportion of swine origin influenza infections occurred in children aged 10-18 years. The study concludes that swine flu mainly affected school children and adolescent group [19]

3.2 Studies Related To Swine Flu Risk Factors

A study conducted on pregnant women’s and fetuses are at a high risk of getting infection with the movel H1N1 influenza virus obstetrics providers need to be prepared to provide
comprehensive case to address increased morbidity, mortality, and pregnancy related complications including spontaneous miscarriage and preterm birth faced by pregnant women during an influenza pandemic.[20]

3.3 Studies Related To Prevention of Swine Flu

Awareness drive for PU Students Director of Pre University Education Shankar Narayan asked principals of all PU Colleges in the state to take steps to create awareness among the students and parents about Swine Flu. They also organized a meeting of students and informed them about the symptoms of the disease and take them to nearest hospital for investigations incase they suffer and found positive for disease the heads should arrange for suitable treatment [21]

According to article by W.H.O on prevention of H1N1 suggest on that factors like hygine geographic location, and immunity plays a pivotal role in causing the disease. The article also recommends for prevention stratagies like health education need to be focused. According to an article on prevention and treatment modalities of H1N1,The data was obtained from the centres for disease control and prevention, the food and drug administration department, the researcher suggested that the utilization of immunization and anti viral treatment options are available to prevent, treat and control the spread of H1N1 infection.[22]

3.4 Studies Related to Screening of Swine Flu

Study was conducted on a simple method for molecular detection of swine origin and human origin influenza A virus. A real time one step reverse transcriptase polymerase chain reaction SYBR green assay derived from the method reported by Van Elden and collaborators 2001 ensures the rapid sensitive and cost effective detection of both seasonal influenza virus and emerging H1N1 swine origin A virus S-OIV.[23]

4. Statement of the Problem

“A Study to Assess the Effectiveness of Video Assisted Teaching Programme on Prevention of Swine Flu Among Students in Selected Junior College.”

4.1 Objectives of the Study

1)To assess the knowledge on prevention of Swine flu among Students in selected Junior College.
2)To administer prepared video assisted teaching program on prevention of Swine flu among Students in selected Junior College.
3)To assess association between knowledge score & selected socio demographic variable.

4.2. Operational Definitions

1)Video assisted programme: It is series of visual information given through slide shows regarding prevention of swine flu.
2)Prevention: It refers to the measures to be taken at primary, secondary, tertiary levels of care.

3)Swine flu: It is a respiratory disease caused by influenza viruses that infect the respiratory tract of pigs
4)Junior College Students: In this study, the junior college students are those students who are studying in 11th & 12th standard.

4.3 Hypothesis

H0: There will be no significant difference between pre-test and post-test knowledge score regarding prevention of Swine flu.
H1: There will be significant difference between pre-test and post-test knowledge score regarding prevention of Swine flu.

4.4 Assumption

A Video Assisted Programme will help in enhancing the knowledge of Junior College students which in turn will improve the practices related to prevention of Swine flu.

4.5 Ethical Aspect

Yes, informed consent will be obtained from the institution authorities and subjects privacy. Confidentiality and anonymity was guarded. Scientific objectivity of the study was maintained with honesty and impartiality. As it is Video Assisted Teaching Programme it will not harm people.

4.6 Research Methodology

The methodology of research indicates the general pattern of organizing the procedure for gathering valid and reliable data for the purpose of investigation

4.6.1 Research Approach

Evaluative Research Approach.

4.6.2 Research Design

Quasi Experimental (one group pre-test and post-test) research design.

4.6.3 Independent Variable

Video assisted teaching programme on prevention of Swine flu among Students of selected Junior College.

4.6.4 Dependent variable

Knowledge of students regarding prevention of Swine flu among Students of selected Junior College.

4.6.5 Sample

The Students selected in Junior College.

4.6.6 Sample Size

40 students are selected for this study.

4.6.7. Sample Technique

Simple randomized sampling technique.

4.6.8. Settings

Selected Junior Colleges.
Inclusive Criteria
1) Students who are willing to participate in study.
2) Students who are available during the period of data collection.

Exclusive Criteria
1) Students who are not willing to participate in study.
2) Students who are not present during the time of data collection.

4.6.9 Data Collection Tools
In this study, the tools consisted of Structured knowledge questionnaire was administered in two parts.

4.6.10 Description of the Tool
The instrument consists of two sections.
Part – 1:- Socio Demographic data sheet
Part – 2:- Knowledge question regarding preventive measures of Swine flu.

4.11 Collection of Data
The purpose of the study was explained to involve in the study. Structured knowledge questionnaire was used to collect the data from the subjects. The tool for data collection was prepared and after validation by the experts. Pilot study was conducted before the main study. Pre-test was conducted before video assisted teaching programme. Post-test assessment was done after 7 days of the implementation of the video assisted teaching programme. Period of the study will be 4 weeks.

4.12. Method of Data Analysis and Presentation
Descriptive and inferential statistics like mean, median, standard deviation, paired,"t" test, correlation, coefficient and chi-square was used for data analysis and presented in the form of tables, graphs and diagrams.

Findings
Analyzed data about knowledge among students regarding prevention of Swine flu.

Section 1
This section deals with the data concerning to the demographic characteristics of the students with respect Age, Educational qualification, Gender, any information regarding prevention of Swine flu, If yes source of information.

5. Findings

5.1 Section – 1

Table: Distribution of demographic data according frequency and percentage, n =40

<table>
<thead>
<tr>
<th>SNO</th>
<th>Variable</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Age In Years</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>16-18</td>
<td>17</td>
<td>42.5%</td>
</tr>
<tr>
<td>2.</td>
<td>19-21</td>
<td>22</td>
<td>55%</td>
</tr>
<tr>
<td>3.</td>
<td>22-24</td>
<td>1</td>
<td>2.5%</td>
</tr>
<tr>
<td>II</td>
<td>Qualification</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>11th std</td>
<td>14</td>
<td>35%</td>
</tr>
<tr>
<td>2.</td>
<td>12th std</td>
<td>26</td>
<td>65%</td>
</tr>
<tr>
<td>III</td>
<td>GENDER</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>MALE</td>
<td>31</td>
<td>77.5%</td>
</tr>
<tr>
<td>2.</td>
<td>FEMALE</td>
<td>9</td>
<td>22.5%</td>
</tr>
<tr>
<td>IV</td>
<td>Information Regarding Prevention Of Swine Flu</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>YES</td>
<td>8</td>
<td>20%</td>
</tr>
<tr>
<td>2.</td>
<td>NO</td>
<td>32</td>
<td>80%</td>
</tr>
<tr>
<td>V</td>
<td>Source Of Information</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>TV</td>
<td>5</td>
<td>12.5%</td>
</tr>
<tr>
<td>2.</td>
<td>Paper</td>
<td>1</td>
<td>2.5%</td>
</tr>
<tr>
<td>3.</td>
<td>Internet</td>
<td>2</td>
<td>2.5%</td>
</tr>
<tr>
<td>4.</td>
<td>Not Applicable</td>
<td>32</td>
<td>80%</td>
</tr>
</tbody>
</table>

Table: The data presented in table indicates that the 17 (42.5%) of the samples were from age 16-18 years, 22 (55%) of them were from 19-21 years and 1(2.5%) from 22-24 years. The 14 (35%) of the samples in 11th Std, 26 (65%) of in 12th Std. The 31 (77.5%) of the samples are male, 9 (22.5%) of the female. The 8 (20%) of the samples have information regarding swine flu 32 (80%) of the samples have no information regarding swine flu.

5.2 Section
The graph indicates that in the post test majority of the sample were in the category of average knowledge (13-22) and their frequency is 31 where as 9 samples belong to good knowledge category (23-34).
Comparison of pre-test and post-test knowledge scores about on prevention of Swine flu among Students in selected Junior College

The above figure shows that in the pre-test 20 sample belong to inadequate knowledge category and 20 samples belong to average knowledge category and no samples were in good knowledge category. In the post test 31 samples were in the average knowledge category and 9 samples were in good knowledge category. The above findings states that H1: there is significant difference in pretest and post test knowledge score is accepted. This clearly indicates that video assisted teaching program was effective in improving the knowledge of Students regarding prevention of on prevention of Swine flu

5.4. Section - III

Table: Association of demographic variable with pre test knowledge, n = 40

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Variables</th>
<th>Poor</th>
<th>Average</th>
<th>Chi square</th>
<th>P* Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Age in years</td>
<td>1. 16-18</td>
<td>3</td>
<td>14</td>
<td>3.993</td>
</tr>
<tr>
<td>II</td>
<td>Educational Qualification</td>
<td>1. 11th std</td>
<td>5</td>
<td>9</td>
<td>1.249</td>
</tr>
<tr>
<td>III</td>
<td>Gender</td>
<td>2. Female</td>
<td>1</td>
<td>8</td>
<td>1.973</td>
</tr>
<tr>
<td>IV</td>
<td>Information regarding prevention of swine flu</td>
<td>1. Yes</td>
<td>1</td>
<td>7</td>
<td>1.458</td>
</tr>
<tr>
<td>V</td>
<td>Source of information</td>
<td>2. Paper</td>
<td>0</td>
<td>5</td>
<td>3.244</td>
</tr>
</tbody>
</table>

1) Age

Table shows the calculated chi square value 3.993, p value 0.136 is greater than the table value and its (p >0.05), that means there is no significant association of age with pre – test knowledge regarding prevention of swine flu among students in selected Junior College.

2) Educational Qualification

Table shows the calculated chi square 1.249 and p value 0.535 is greater than the table value (p >0.05), that means there is no significant association of educational qualification with pre – test knowledge regarding prevention of swine flu among students in selected Junior College.

3) Marital Status

Table shows the calculated, chi square 1.973 and p value 0.160 is greater than the table value (p >0.05), that means there is no significant association of age with pre – test knowledge regarding prevention of swine flu among students in selected Junior College.

4) Information Regarding Prevention of Swine Flu

Table shows the calculated chi square value 1.458 and p value 0.227 is greater than the table value (p >0.05), that means there is no significant association of age with pre – test knowledge regarding prevention of swine flu among students in selected Junior College.

Therefore H2 is rejected as there is no significant association between pre test knowledge score with demographic variable source of information.

6. Discussion of Findings

6.1.1 Description of demographic data

1) The data presented (42.5%) of the samples were from age 16-18 years, 22 (55%) of them were from 19-21 years and 12 (2.5%) from 22-24 years. It means highest percentage (55%) of students were in the age group 19-21 of years.

2) Majority (65%) of students were 12th std and the (35%) of the samples were 11th std

3) Majority means (77.5%) of the students were male while (22.5%) of them are female.

4) Majority of (80%) of the samples have no information regarding swine flu.

6.1.2 To assess the knowledge of students regarding prevention of swine flu

Analysis of data related to knowledge of students before and after administration of video assisted teaching program on knowledge regarding prevention of swine flu among students. Majority 50.0% of students in pre -test were having poor knowledge (Scores 0-12), 50.0% of students in pre-test were having average knowledge (Scores 13-22) and 0% of students in pre-test were having good knowledge (scores 23-34). Whereas in post-test majority 77.5% of the students had average knowledge (Scores 23-34). 22.5% of students in post-test were having average knowledge which indicates that the video assisted teaching program improved knowledge regarding prevention of swine flu among students. This assessment was done using paired t-test. The p value was found 0.000, by comparing both the means of pre-test and post-test, using paired t-test.

The post test mean score of level of video assisted teaching program 26.13(SD=4.142) was higher than the pre test mean score 13 (SD=3.258) the paired t-value 14.591 , df 39, As the p=0.005 the test is significant at 0.001 level. So the video assisted teaching was highly effective in increasing knowledge of students regarding prevention of swine flu. So
the video assisted teaching is statistically significantly effective in improving knowledge of students regarding prevention of swine flu.

Average knowledge of students regarding prevention of swine flu is improved after administration of video assisted teaching programme.

There was no significant association established between variables like age, qualification, gender, information regarding swine flu, source of information.

The findings of the study show that chi-square value of age, qualification, gender, information regarding swine flu, source of information of are 3.993, 1.249, 1.973, 4.912, 1.458 respectively and the calculated “p” values are 0.136, 0.535, 0.160, 0.227, 0.356 respectively. There for H$_2$ is rejected.

7. Conclusion

The findings of this research indicate that the knowledge of students with regard to swine flu prevention was generally not of a standard that could deem them competent in this regard. This has important implications for nursing education and practice. As nurses are in an ideal position to play a positive role in increasing the awareness of the disease and encouraging prevention strategies among students, they should possess a thorough knowledge base of swine flu prevention. Educational efforts need to be tailored for optimum training of nurses in swine flu preventive issues.

8. Scope of the Study

a) Nursing Implication

This information may assist nurse educators to target and tailor education programs to equip nursing students with the knowledge that will make them effective advocates in the crusade against swine flu. In light of this, the following list of appropriate recommendations, specific to nursing practice, education and research, were developed by the researcher:

b) Nursing Practice

Professional nurses and nursing students should be regularly assessed for knowledge and skills relating to swine flu prevention. Thus this study should be replicated in the future and should include a greater sample of nurses from different institutions.

c) Nursing Education

Educational efforts are vital avenues through which nurses can learn more about the primary and secondary prevention of swine flu. When planning an education program for nursing students, swine flu risk Factors should be emphasised, and should be assessed formatively and summatively. Nursing students should be given the opportunity to integrate theory with practice.

d) Nursing Research

Nurses and nursing students must play an active role in ongoing research regarding swine flu and its prevention. This may increase the awareness of the disease amongst nurses, and may also highlight the important role that nurses can play in decreasing the mortality.

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