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A study to assess the effectiveness of planned health teaching on knowledge regarding swine flu among students in selected schools

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Abstract

To assess the knowledge regarding swine flu among students of selected schools. To evaluate the effectiveness of planned health teaching on knowledge regarding swine flu among students of selected schools. To find out association between knowledge regarding swine flu with selected demographic variables.

Design: pre experimental one group pre test post-test study design.

Sample: 100 school students from selected municipal schools.

Tool: socio demographic data and structured questionnaire on knowledge of swine flu.

Validity: validity of the tool was done by 16 experts and modifications were made accordingly. Reliability: Reliability was estimated by using split-half method. The total reliability of the tool was calculated to be 0.8146 by Cronbach's alpha method. The estimated r value reliability is greater than 0.7, which shows that the tool is reliable.

Data collection: Data was collected from 100 school students of selected municipal schools.

Data analysis: The data collected was analysed using descriptive and inferential statistics. The findings of the present study showed that most of the school students had inadequate knowledge regarding swine flu during pre-test. But after the planned teaching their knowledge score increased in the post-test. The planned health teaching significantly brought out an improvement in the knowledge regarding swine flu among school students. There was a significant association between knowledge and age of the students as p value < 0.05 whereas the other variable like gender, educational status of parents and information on swine flu was not significantly associated as $p > 0.05$.

Keywords: assess, effectiveness, Knowledge, planned health teaching, school students
Selected school

Introduction

Swine flu has been creating a worldwide panic and has been declared epidemic in most parts of the world. Swine influenza, also called pig influenza, swine flu, hog flu and pig flu is an infection caused by any one of several types of swine influenza viruses. Swine influenza virus (SIV) or swine-origin influenza virus (S-OIV) is any strain of the influenza family of viruses that is endemic in pigs^[1]. As of 2009, the known SIV strains include influenza C and the subtypes of influenza known as H1N1, H1N2, H2N1, H3N1, H3N2, and H2N3.

The 2009 flu outbreak in human that is widely known as swine flu is due to a new strain of influenza A virus, subtype H1N1, that was produced by assortment from one strain of human influenza virus, one strain of avian influenza virus and two separate strains of Swine influenza virus. The potential for swine influenza virus to cause a human flu pandemic is greater than previously thought. Influenza pandemic occurs when an influenza virus is efficiently transmitted from person to person against which the human population has limited immunity. An influenza pandemic has the potential to cause considerable morbidity and mortality for a concentrated period of around 8-12 weeks with recurrence in waves over 2-3 years. In addition, a severe pandemic could change daily life, including limiting travel and public gatherings, disrupting businesses, and dismissing children and adults from schools.² Even less severe pandemics would likely pose substantial challenges to the health care system and lead to higher rates of work and school absenteeism. The first swine flu in India was reported on May 13, 2009, when a man, who had just boarded off the plane at the Hyderabad airport on its flight originating from the United States, manifested same signs of

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swine flu infections. Later on, the man was confirmed to be an H1N1 carrier. Thereafter swine flu cases in India had increased in its far test speed rate in the month of August. Also during the same month India reported its first death toll due to swine flu outbreak. Maharashtra which continues to have the highest number of death from swine flu pandemic had a death toll of 220, the highest number of death being from Pune.

Objectives of the Study

1. To assess the knowledge regarding swine flu among students of selected schools
2. To evaluate the effectiveness of planned health teaching on knowledge regarding swine flu among students of selected schools.
3. To find out association between knowledge regarding swine flu with selected demographic variables.

Research Methodology

Research approach: Evaluative Quantitative approach

Research Design: pre experimental one group pre-test post-test study design

Variables under study

Dependent variable

In this study the dependent variable is knowledge of the student regarding Swine flu.

Independent variable

The independent variable is the information given through Planned Health Teaching regarding Swine flu.

Research setting

The setting of the present study is the selected municipal schools of Pune city.

Population

The population of the present study conducted in selected municipal schools of Pune city.

Sample: The selected for the present study comprised of 100 school students from selected municipal schools Pune city.

Sampling selection criteria (Inclusion criteria and Exclusion criteria) Inclusion criteria

1. Students who were: Between age group of 12-15 yrs, In secondary section. Willing to participate in the study

Exclusion criteria

Students who were:

- 1) Absent at the time of data collection.
- 2) Have family members who had suffered from Swine flu.

Sample size: 100

Tool: socio demographic data and structured questionnaire on knowledge of swine flu.

Validity: validity of the tool was done by 16 experts and modifications were made accordingly.

Ethical Aspects

1. The study proposal was sanctioned by the Institutional Ethical Committee (IEC).
2. Written permission was obtained from the school principal prior to the conduction of the pilot and the main study.
3. Written informed consent was taken from subjects after explaining the purpose of the study.
4. Confidentiality of information was maintained by utilizing code numbers instead of names of the subjects.

Reliability: Reliability was estimated by using split-half method. The total reliability of the tool was calculated to be 0.8146 by Cronbach's alpha method. The estimated r value reliability is greater than 0.7, which shows that the tool is reliable.

Data collection: Data was collected from 100 school students of selected municipal schools

Data analysis: The data collected was analysed using descriptive and inferential statistics.

Description of Data Collection Tools

The tool for data collection consisted of two sections:-

Section I

Demographic data which consisted of 7 items on personal data of subjects that included age, gender, education of father, education of mother, previous knowledge about Swine flu and the medium through which the knowledge is obtained, availability of treatment and vaccine for prevention of Swine flu.

Section II: structured questionnaire to assess the knowledge of school students regarding Swine flu.

A total of 30 question were included which were categorized based on the review of literature related to Swine flu, opinions and suggestions from experts determining the important areas to be included. It was categorized into:

- Concept of Swine flu.
- Risk factor of Swine flu.
- Mode of transmission of Swine flu.
- Sign and symptoms of Swine flu.
- Complication of Swine flu
- Diagnosis of Swine flu
- Treatment of Swine flu.
- Prevention of Swine flu.

Each item had four options with one most appropriate answer. Every correct answer was given one mark and wrong answer zero. The subjects responded to each items by choosing one correct option from the given four Thus for 30 items the maximum obtainable score was 30. The overall knowledge score was graded as poor, average and good. The total scoring was done as given below:

Scoring Key

S. No	Level of knowledge score	Marks obtained
1	Poor	0-10
2	Average	11-20
3	Good	21-30

The data was analyzed according to the objectives of the study which was

1. To assess the knowledge regarding swine flu among students of selected schools
2. To evaluate the effectiveness of Structured Teaching Programme on knowledge regarding Swine flu among students of selected schools.
3. To find out association between knowledge regarding Swine flu with selected demographic variables.

The analysis of the collected data was done with the help of inferential and descriptive statistics. The data collected was first coded and entered into the computer. The gathered data was organized, tabulated, analyzed and interpreted on the basis of the objectives and hypothesis of the study. A p value <0.05 was considered as significant.

Organization of Findings

The collected data was tabulated, analyzed and organized under the following headings:

Section I: Distribution of subjects based on demographic characteristics.

Section II: Analysis of level of knowledge of subjects on Swine flu.

Section III: Analysis of effectiveness of the Planned Health Teaching on knowledge regarding Swine flu.

Section IV: Analysis of association between knowledge score of subjects with selected demographic variables.

Section I: Distribution of Subjects In Relation To Demographic Characteristics

This section deals with the distribution of subjects based on to selected demographic characteristics such as age, gender, education of father and mother, information on swine flu, availability of treatment and vaccine to prevent swine flu.

Table 1: Distribution of subjects from selected municipal schools in relation to demographic characteristics

Parameters	No of cases	Percentage (n=100)
Age (Yrs)	12	6
	13	23
	14	42
	15	29
Gender	Male	60
	Female	40
Education of father	Illiterate	11
	Primary	43
	High school	42
	Graduate	4
Education of mother	Illiterate	16
	Primary	40
	High school	41
	Graduate	3
Heard or read about the disease called "Swine Flu"	Yes	68
	No	32
If Yes (n=68)	Television/Radio	40
	Magazine/News paper	18
	Family Members/Friends	10
Any treatment available for Swine Flu (n=68)	Yes	34
	No	34
Any vaccine available to prevent Swine Flu (n=68)	Yes	45
	No	23

- The above table shows that most (42%) of the subjects were 14 yrs followed by 29% who were 15 yrs. 23% of the subjects were 13 yrs and 6% of them were 12 yrs. Majority (60%) of the subjects were male with female making up the remaining 40%. As with educational status of the parents there was similar representation. Most (43%) of the subjects father had primary education, 42% had secondary education, 11% of there were illiterate while 4% were graduates whereas most (41%) of the subjects mothers had secondary education, 40% had primary, education .16% were illiterate while 3% were graduates. Majority (68%) of the subjects had heard about swine flu and most (58.8%) of them had

got the information through TV/ radio, followed by newspaper and magazine (26.5%) 50% of the subjects said that there is no treatment available for swine flu while there was an equal representation stating that there is treatment available. Majority 66% of the subjects said that vaccine is available to prevent Swine flu.

Section II: Analysis of knowledge of swine flu among school students of selected municipal school

This section deals with the analysis of knowledge on swine flu before and after Planned Teaching Programme

Section II: Analysis of knowledge of swine flu among school students of selected municipal school

This section deals with the analysis of knowledge on swine flu before and after Planned Teaching Programme

The above table shows that in pre-test majority (63%) of the subjects had poor knowledge about swine flu, while 37% had average knowledge on swine flu, whereas in the post test majority (82%) had good knowledge and the remaining 18% had average knowledge on Swine flu.

Section III: Analysis of data related to effectiveness of Planned Health Teaching Programme on the knowledge regarding swine flu

This section deals with the comparison of mean knowledge scores before and after Planned Health Teaching.

Findings Related To Effectiveness of Planned Health Teaching Of Knowledge in Subjects Regarding Swine Flu

The mean knowledge score in pre-test was 10 ± 2.83 and that of post-test was 23.79 ± 3.66 which is highly significant as $p < 0.0001$. This shows that planned health teaching was effective in improving the knowledge regarding swine flu among the school students. Hence H_1 is accepted.

Findings Related To Association between Knowledge and Selected Demographic Variables

There is a significant association in the knowledge score with age as $p < 0.005$ while there is no significant association in the knowledge score with gender. Educational status of parents and information received on Swine flu as $p > 0.05$.

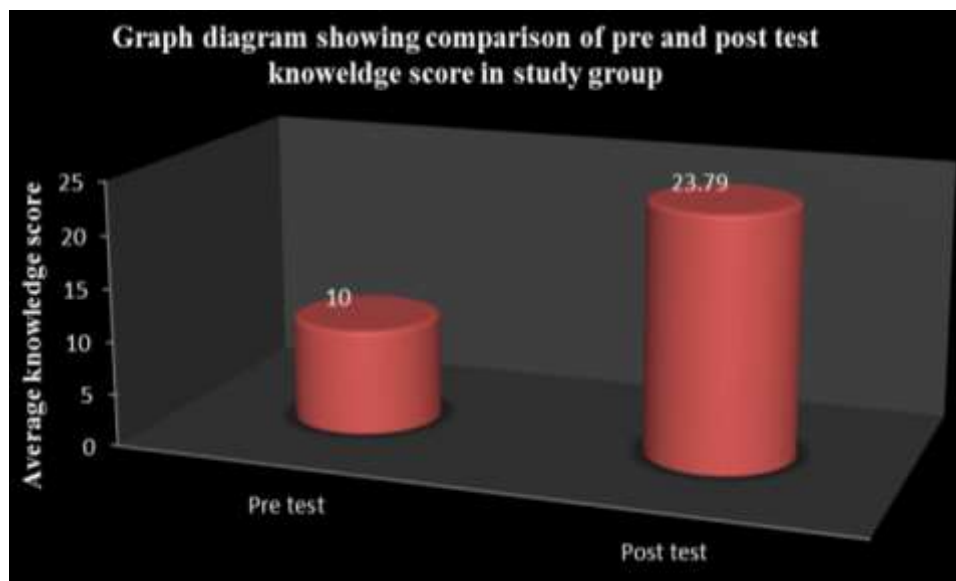


Fig 1: Bar diagram showing comparison of mean pre-test and post-test knowledge scores

Section IV: Association between knowledge and selected demographic variables

This section deals with the association between pre-test knowledge score on swine flu among school student and demographic variables like age, gender, education of father, education of mother, information on Swine flu.

Conclusion

The findings of the present study showed that most of the school students had inadequate knowledge regarding swine flu during pre-test. But after the Planned Teaching their knowledge score increased in the post-test. The Planned Health Teaching significantly brought out an improvement in the knowledge regarding Swine flu among school students. There was a significant association between knowledge and age of the students as $p < 0.05$ whereas the other variable like gender, educational status of parents and information on swine.

Discussion

In the present study, majority (68%) of the subjects had heard about Swine flu and most (58.8%) of them had got the information through TV/ radio, followed by newspaper and magazine (26.5%). 50% of the subjects said that there is no treatment available for Swine flu while there was an equal representation stating that there is treatment available.

Majority 66% of the subjects said that vaccine is available to prevent Swine flu. This was consistent with the study conducted by K. Shilpa, B. Kumar (2014) on awareness regarding Swine flu in which 73.6% had previously heard of Swine flu. Tele media was the most common source of information in 52.2% of the participants. Half of the participants 50.5% knew there was treatment available for Swine flu but contrary to the study only 15.8% of them were aware of availability of swine flu vaccine [43].

Secondly in the present study, it was found that in the pre-test majority (63%) of the students had poor knowledge about Swine flu and 37% had average knowledge whereas in the post test it was seen that majority (82%) had good knowledge and the remaining 18% had average knowledge on Swine flu. The mean knowledge score in pre-test was 10 ± 2.83 and that of post-test was 23.79 ± 3.66 which is highly significant as $p < 0.0001$.

K. Patel, R. Varghese *et al.* (2015) conducted a study to assess effectiveness of Structured Teaching Programme on knowledge regarding prevention of Swine flu among secondary school students. The study revealed that majority (60%) of the respondents had good knowledge score, 40% had poor knowledge score on Swine flu and its prevention and in the post test majority (82%) of the respondents had good knowledge score on Swine flu and its preventive. The

mean pre-test score was 11.14+_{2.28} and mean post-test score was 17.79 +_.

The post-test means score is significantly greater than the pre-test mean knowledge score. Hence Structured Teaching Programme were effective. This finding are comparable with the results obtained from the present study where students gained more knowledge in the post test following planned health teaching, and there is a significant difference in the pretest and post-test knowledge scores at $p < 0.0001$. This shows that Planned Health Teaching was effective in improving the knowledge on swine flu among school students. The findings from the present study indicate that there is significant association in knowledge score with age as $p < 0.005$ while there is no significant association in knowledge score with gender, educational status of parents and information received on swine flu as p value > 0.05 similar to the finding of the present study. A study conducted by N. Kakade, S.V Kakade (2012) it was found that gender and age of the students was significantly associated whereas there was no significant association found with educational qualification of the parents^[44]

Limitations of the Present Study

- The findings of the study could not be generalized in view of the small sample size and limited area of setting.
- There was difficulty in getting permission from administrative heads of selected schools.

Recommendations

Keeping in view the findings of the study, following recommendations are made

1. A similar study can be conducted on a large sample for generalizations
2. A study can be done to assess the attitude and practices of caregivers on swine flu disease.
3. A comparative study can be done to assess the knowledge regarding swine flu between school students residing in urban and rural areas.
4. A similar study can be conducted with different teaching strategies such as SIM. (Self-instructional module), video assisted teaching.

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Psalms 92

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