

A study to Assess the Effectiveness of the Structured Teaching Programme, on Knowledge Regarding Swine Flu Among Secondary School Going Children in Selected School at Karad

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Abstract: **Background:** Swine flu (swine influenza) is a respiratory disease caused by viruses (influenza viruses) that infect the respiratory tract of pigs and result in nasal secretions, a barking-like cough, decreased appetite, and listless behavior. It is caused due to new influenza virus called H1N1 virus. Swine flu virus targets the body's respiratory cells and damages the lining of the respiratory tract, leading to swelling and inflammation of the tract. Identification of disease is based on clinical symptoms and confirmation is done by various laboratory tests using PCR based kits. Treatment mainly involves use of different Antiviral drugs along with involvement of Indian system of medicine to some extent. The best treatment for swine influenza infection in humans is prevention by vaccination. **Aim & Objectives:** To determine the existing knowledge and to evaluate the effectiveness of structured teaching programme regarding preventive management of swine flu among the school going children. **Material & Methods:** A pre test and post test was adopted in the present study to accomplish the objectives. Purposive sampling technique was used to select samples. The sample consists of 50 children. The pre test assessment of knowledge of the children was carried out using the structured knowledge questionnaires followed by STP session regarding swine flu. After 4 days the post test was conducted using the same structured knowledge questionnaires. The collected data was analyzed by using descriptive and inferential statistics. **Result & Conclusion:** Reveals that in pre-test 18 (20%) student are had poor knowledge, the majority 31(62%) had average knowledge and 9(18%) had good knowledge regarding knowledge of swine flu and its protective measures. Where as in post-test majority 29(58%) student had average knowledge, 16 (32%) had good knowledge and 5(10%) student had poor knowledge regarding knowledge swine flu and protective measures. There is significant difference between gender of the student (6.474)& age of the students (4.645). There is No significant difference between students knowledge & educational qualification of parents (1.754).

Keywords: Structured teaching programme, effectiveness, swine flu, school going children, influenza

1. Introduction

H1N1 Influenza (swine influenza or swine flu) is a respiratory disease of pigs caused by type A influenza virus that regularly causes outbreaks of influenza in pigs. H1N1 virus causes high levels of illness and low death rates in pigs (Centers for Disease Control and Prevention [CDC], 2009a). The classical swine flu virus (influenza type A H1N1 virus) was first isolated from a pig in 1930 (CDC, 2009a). Like all influenza viruses, H1N1 viruses change constantly. At this time, there are four main influenza type A virus subtypes that have been isolated in pigs: H1N1, H1N2, H3N2, and H3N1. Most of the recently isolated influenza viruses from pigs, however, have been H1N1 viruses(2009 a) . Flu viruses are spread mainly from person to person through coughing or sneezing by people with influenza. The symptoms of 2009 H1N1 flu virus in people include fever, cough, sore throat, runny or stuffy nose, body aches, headache, chills and fatigue (WHO, 2009b). Some people may have vomiting and diarrhea (WHO, 2009b).

Swine flu disease was found in "Mexico and spread over the world .the union agency reported more than 15,000 cases of swine flu worldwide .50 to 100 million people were killed worldwide. The Mexico had 2 highest number of infection – nearly 5000 behind the united state with nearly 8000 cases.

According to U.S study of the disease Children were 14 times more likely to be sickened by swine flu than adults 60 and older, the age group that is typically the most at risk for influenza.

According to U.S centers for disease Children ages 5 to 14 became ill with swine flu, also known as H1N1, at a rate of 147 per 100,000 people, according to the study of 1,557 confirmed illnesses, including seven deaths, in Chicago from April to July, months when the flu virus usually doesn't spread. The findings were reported by the U.S. Centers for Disease Control and Prevention in Atlanta².

In Maharashtra, which tops the chart for the maximum number of deaths and cases in the country as many as 112 people have suffered to the contagious virus while In Andhra Pradesh(43), Tamil Nadu (34),, Haryana (25) and Gujarat (2).3)

Through review of literature the investigator realized that health risk of swine flu is one of the most prominent health problem among school children .present study undertake as felt need of increase and asses the knowledge of swine flu and help them to control and diagnosis the disease.

2. Material & Methods

The purpose of this Evaluative study was to obtain students' general knowledge and awareness levels about H1N1 influenza, the cross-sectional survey method was used. The questionnaires were distributed in the class and told them to tick the correct answer from given options. The questionnaire was designed on the following areas: current knowledge of students regarding H1N1 influenza, kind of general information do students have, symptoms of H1N1 influenza, treatment, prevention, perceived level of threat for contacting H1N1 influenza etc. Quantitative approach was used.

3. Research Design

Quasi experimental one group pre-test, post-test design was used. In the present study the base study measure introduced was the knowledge test depicted as K1 and K2 for pre test and post test respectively.

3.1 Setting

The present study was conducted in the Rotary Shikshan High school in Malkapur, Karad.

3.2 Population

High school children in the age group of 14- 16 years, studying in 9th standards in selected school, Karad.

3.3 Sampling Technique

Simple sampling technique.

3.4 Sample and Sample Size

50 high school children including boys and girls.

3.5 Development of New Tool

The tools consisted of structured questionnaires- SECTION 1:- Demographic variable- age, sex, education, occupation of parents, etc.

SECTION 2:- Structured questionnaires on the knowledge History, disease condition, sign symptom, preventive measures, and treatment modalities.

Content validity of the tool was obtained from nursing expert minor suggestion regarding modification of questions and option were corrected in simple word as per the suggestion.

4. Method of Data Collection

1)Inclusion Criteria

- 1.Students of high school, who are interested to participate in the study and who are present.
- 2.Students belonging to 9th standards of high school will be selected.
- 3.Students belonging to Marathi medium of instruction.

2)Exclusion Criteria:

- 1.Students who are not available at the time of data collection.
- 2.Students who are exposed to swine flu and thereby know the disease.

4.1 Data Collection and Procedure

A formal consent from the respective high school authorities had taken. Pre-test was conducted by using structured questionnaire and training was given to them. On the 8th day, a post-test was conducted using the same knowledge questionnaire.

For each individual category, descriptive statistics were used to find out the percentages of respondents for multiple choice questions and yes/no type responses. This method of analysis limits the possibility that the participant could choose correct answers simply by chance. By encouraging participants to correctly identify true statement and reject misconceptions regarding H1N1 influenza, it was easier to determine whether or not the individual truly possessed knowledge regarding H1N1 influenza. A total of n= 50 students participated in the survey and all these data were included in the final analysis.

During data analysis, demographic information was tabulated using simple descriptive statistics, which included frequencies and percentages. General knowledge questions were analyzed by finding out the current response of the participants on the questions regarding symptoms, contract and transmission, treatment and prevention about H1N1 influenza. The level of current knowledge and source of that knowledge was analyzed by calculating frequencies and percentages.

Table 1: Frequency and tabular distribution of sample with variable, N = 50

Sr. No.	Variables	Frequency	Percentage
1.	Age		
	13	4	8%
	14	30	60%
	15	14	28%
	16	2	4%
2.	Gender		
	Female	19	38%
	Male	31	62%
3.	Family Qualification		
	Educated family	18	36%
	Uneducated family	32	64%

The data presented in table no.1 reveals classification of secondary school going children by age, gender, occupation of parents.

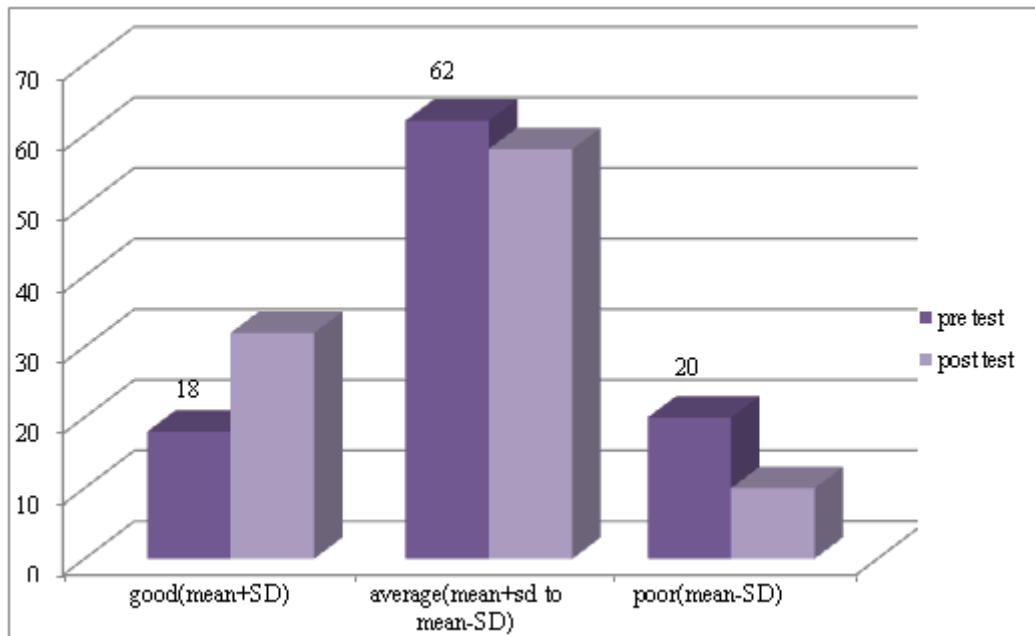
Maximum no of 30 (60%) school going children belongs to age 14, 4 (8%) belong to 13 yrs, 14 (28%) belong to 15 yrs, minimum number of children i.e the 2 (4%) belong to age 16. Maximum number of children are female i.e. 31 (62%) and the 19 (38%) are male. The maximum 32(64%) no of children are belong to uneducated family, and 18(36%) belong to educated family.

Table No. 2: Distribution of frequency and percentage of total knowledge scores of secondary school students regarding swine flu and its prevention.

N=50

Knowledge Score	Pretest		Post Test	
	Frequency	Percentage	Frequency	Percentage
Good (mean+SD)	26	18	41	32
Average (mean+sd to mean-SD)	19-25	62	32-40	58
poor(mean-SD)	18	20	1-31	10

Table No. 2 reveals that in pre-test 18 (20%) student are had poor knowledge, majority 31(62%) had average knowledge and 9(18%) had good knowledge regarding swine flu and its protective measures. Where as in post-test majority 29(58%) student had average knowledge, 16 (32%) had good knowledge and 5(10%) student had poor knowledge regarding swine flu and protective measures.

**Graph 1:** Bar graph showing pre-test and post-test knowledge**Table 3:** Association between knowledge scores and selected demographic variables.

N=50

S. No	Socio Demographic Variable	Pre Test Knowledge			Chi-Square Value	P Value	DF
		Good	Average	Poor			
1)	Gender of Children				6.474 (S)	0.0393	2
	Male	3	19	9			
	Female	6	12	1			
2)	Age of Student				4.645 (S)	0.5901	6
	13 years	1	5	0			
	14 years	7	16	6			
	15 years	2	7	2			
	16 years	0	4	0			
3)	Education Qualification				1.754 (NS)	0.4161	2
	Educated parents	3	15	2			
	Un educated parent	8	17	5			

This table shows that there was significant difference between gender (6.474) & age of the students (4.645). There was *No Significant* difference between students' knowledge & educational qualification of parents (1.754).

5. Discussion And Summary

The primary aim of the study was to assess the knowledge of secondary school going children about swine flu. A structured questionnaire was prepared for the study on the basis of objectives. The research design adopted for the study was cross sectional descriptive design. Total sample

size was 50 secondary school going children. The tool used in this study is questionnaire.

The obtained data were entered into the master sheet for tabulation and statistical processing. The findings of the study are discussed in terms of objectives and hypothesis. The findings of the study are compared with other similar study conducted in different settings. The major findings of the study were discussed under the objective and hypothesis.

Section A: Distribution of school going children according to socio-demographic variables.

The data on sample characteristics revealed that

- 1) The maximum no of 30(60%) student belongs to the age group of 14 yrs.
- 2) The majority of school children are 31(62%) were male.
- 3) The majority of the student are belong from 30(60%) uneducated family.

Section-B: A distribution of school children according to knowledge of a swine flu.

- 1) Area wise frequency and percentage distribution of knowledge score of secondary school going children regarding swine flu.
- 2) Area wise mean, median, mode, standard deviation of knowledge scores of student regarding swine flu.
- 3) Mean difference, Standard Error Of Difference (SED) and paired 't' value of knowledge score of student nurses.

- 4) Section C: Association between the pre-test with socio demographic variables.

Statistical analysis using chi-square test to find the association between pre test knowledge scores with socio demographic variables revealed that the age ,gender, education qualification of parents with the pre test knowledge of school children in gender and age of the student was significant .the education qualification of the parents is not significant association with demographic variable.

6. Implications of the Study

The present study enabled the student to gain knowledge on swine flu and also helped the students to improve their knowledge and health. The findings of the study have implications for nursing practice, nursing education, nursing administration and nursing research.

6.1 Implication for Secondary School Going Children

The study helps to understand the causes, mode of transmission, types of swine flu and steps to prevent self as well as others in the society from swine flu.

6.2 Implications for Nursing Education

To educate student nurses in enhancing knowledge and skills in theory as well as in practice.

6.3 Implication for Nursing Research

1. The research helps to plan new interventional studies to improve knowledge regarding swine flu.
2. The study helps the nurse researcher to develop insight in to the development of teaching module and for improving their knowledge and nursing management of swine flu
3. One of the aims of nursing research is to contribute the knowledge to the body of nursing, to expand and broaden the scope of nursing. This is possible only if nurses take initiative to conduct the further research.

6.4 Implications for Nursing Administration

- The present study has proven effectiveness of structured teaching programme enhancing the knowledge of student nurses regarding swine flu. So the nurse administrator can take initiative to provide facilities to conduct research such educational programmes in the hospital as well as in the colleges.
- The nurse administrator should take part in the making of health policies, development of protocols and standing orders with respect to swine flu.

6.5 Recommendations

1. The study may be replicated by taking a larger sample to generalize the findings.
2. A similar study may be conducted with different teaching strategies such as self instructional module, video assisted teaching and video demonstration.

3. An experimental study can be undertaken with control group for effective comparison.
4. A similar study can be conducted in higher secondary school and college going students.

7. Conclusion

Based on the findings the result of the study shows that the total pretest mean knowledge score of the students was 22.3, which indicates that the students had inadequate knowledge regarding swine flu. In the post test the mean knowledge score of the student was 36.9, benefit to the students due to the effectiveness of structured teaching programme. Thus, it was inferred that the structured teaching programme was effective to improve students' knowledge regarding swine flu.

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