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Original Research Article

Knowledge, attitude and practice study on swine flu (H1N1) among adolescent school children in Kolhapur district in Maharashtra

Jeevankumar U. Yadav, Jagannath S. Shete*

Department of Community Medicine, D. Y. Patil Medical College, Kolhapur, Maharashtra, India

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***Correspondence:**
Dr. Jagannath S. Shete,
E-mail: dr.jagannathshete@gmail.com

ABSTRACT

Background: Swine flu (H1N1) is very infectious respiratory disease occurring in different parts of world showing pandemicity from time to time. Thorough knowledge about its epidemiology and clinical symptoms, attitude towards disease and practices to prevent its occurrence and spread are essential in all age groups especially in school children. To assess the awareness, practices, their attitude and myths regarding swine flu among adolescent school going children in Kolhapur district Maharashtra.
Methods: A pre-tested questionnaire was designed emphasized on the demographic profile, knowledge and misconceptions about cause, transmission, prevention and cure of swine flu (H1N1) and social responsibility of every student about spreading awareness. The questionnaires were distributed to school students of 9th& 10th standard only. Maximum 15 minutes were allotted to participants. A power point presentation regarding swine flu was delivered to participants and staff members.
Results: Total 210 study participants were included. 80.47% students knew cause of swine flu is viral and 69.04% knew it spreads through airborne route. 73.33% students correctly knew about symptoms of swine flu. 71.90% mentioned all the correct preventive methods as wearing face mask of appropriate size, vaccination against swine flu and maintaining hand hygiene. In reality only 32.38% students exclusively practicing hand hygiene.
Conclusions: Although the term was well known, better recognition of pandemic influenza cases is needed. Children were not aware about certain important treatment and prevention aspects of the disease.

Keywords: Swine flu (H1N1), Adolescent, School children

INTRODUCTION

Swine flu is an acute respiratory disease, caused by a strain of the influenza type A virus known as H1N1, officially referred as novel A/H1N1.[1] Mixture of four known strains of Influenza A virus forms this virus i.e.one endemic in humans, one endemic in birds and two endemics to pigs (swine). An outbreak of novel influenza A/H1N1 infection occurred in Mexico at the end of March 2009, then in short period it spreads all over the world. The world health organisation raised its pandemic alert on 11 June 2009 as the highest level, phase 6, meaning that, the novel influenza A/H1N1 had spreads in more than two continents.[2] Swine flu caused 18,172 deaths in more than 214 countries and overseas territories or communities on June 2010.

Symptoms of swine flu are similar to those of influenza in general while transmission of the new strain is human to human.[3] Symptoms includes fever, cough, sore throat, body aches, headaches, chills and fatigue and can make chronic health problem worst. For different kinds of swine flu various vaccines available were developed and tested. However, vaccines against the new strain are developed; with safety profile like seasonal flu vaccine.[4]

Prevention of virus spread and outbreak essentially require the knowledge, attitude and practice amongst people about swine flu. The human influenza viruses killed millions of people, are believed to have arisen through reassortment between human and avian viruses in 1957 and 1968 pandemics.[5] There is a serious threat to the human health and the global economy from Influenza A viruses which are responsible for the recurrent outbreaks at any parts of the world. Swine influenza virus infections in humans have been reported in United States, Canada, Europe and Asia.[6]

India is ranked third amongst the most affected countries for cases and deaths of swine flu globally. The highest numbers of cases were reported in 2009 (27,236) and the highest number of swine flu deaths took place in 2011 (1,763). Increase in swine flu cases could easily overstretch already fragile and overburdened health services, especially in developing countries and cause considerable suffering in human populations around the world.

In India Swine flu has killed 261 people in the first 3 months of 2013, reported most deaths from Rajasthan and Gujarat. Total of 2,329 people tested positive for the influenza A/H1N1 virus in 35 states and union territories. Northern states of India like Punjab, there were total confirmed cases 182 with 42 deaths. Government and media information was more strongly associated with greater self-efficacy and hand washing; whereas truth in informal information was strongly associated with perceived health threat and avoidance behaviour.

The best we citizens can do is to keep ourselves informed about the happening and the steps we can take to prevent the spread of swine flu. Keeping all this views, the study was designed to assess the awareness, practices, their attitudes and myths regarding swine flu among adolescent school going children in Kolhapur district of Maharashtra.

METHODS

A pre-tested questionnaire was designed to assess the knowledge of swine flu in the adolescent school students. The students were explained the purpose of the study and assured confidentiality. The ethical approval for study was obtained by the institutional ethics committee. The questionnaire emphasized on the demographic profile, knowledge and misconceptions about cause, transmission, prevention and cure of swine flu (H1N1) and social responsibility of every student about spreading awareness. The questionnaires were distributed to school students of 9th and 10th standard only. All students were asked to seat in one seminar hall of school. Maximum 15 minutes were allotted to participants for completing proforma. After completion, questionnaires were collected back. Participants along with the staff members of school were educated regarding swine flu through a power point presentation. An open question answer session was conducted for doubts or queries. The collected data was tabulated and analysed with percentage. Ethical approval was taken from institutional ethics committee. An observational knowledge attitude practice study (KAP). Three randomly selected private schools in Kolhapur named Kolhapur public school, Sanjeevan international school and Shantiniketan school were included in this study.

Inclusion criteria

Students from 9th and 10th standards from each school.

Exclusion criteria

Students up to 8th standard and those were absent on day of data collection.

After taking necessary permission from principals of all 3 respective schools, data collected from 9th and 10th standard students from each school. The total 210 samples were collected. It took duration of one month to complete data collection. Study was completed from August 2016 to January 2017.

RESULTS

In present study, total 210 study participants were included. Based on responses to questions asked with help of proforma following results were obtained.

Table 1 shows out of 210 participants, 168 (80.47%) students knew that causes of swine flu is viral and 145 (69.04%) knew swine flu spreads through airborne route.

Table 2 shows that, 67 (31.90%) respondents thought eating pigs causes spreading of swine flu in humans and 103 (49.04%) believed that normal flu and swine flu were totally different whereas 47 (22.38%) did not know difference between normal flu and swine flu.

Table 3 shows, 18 (8.57%) students responded running nose is symptom of swine flu whereas 19 (9.04%) said headache and body ache and sore throat are swine flu symptoms. 154 (73.33%) students correctly knew about symptoms of swine flu.

Table 4 shows, out of 210 students, 114 (54.28%) knew that antiviral should be used to treat swine flu. Also 110 (52.38%) responded that pneumonia is most common complication of swine flu. Also, it was seen that only 68 (32.38%) students exclusively practicing hand hygiene.

Fihure 1 shows, participants were asked about their knowledge regarding how to prevent from getting swine flu. Out of 210 study subjects 151 (71.90%) mentioned all the correct preventive methods as wearing face mask of appropriate size, vaccination against swine flu and maintaining hand hygiene. Also, 166 (79.06%)

participants mentioned that swine flu is not self-limiting disease.

In Figure 2, it was noticed that 160 (76.19%) students believed that, spreading awareness, taking prompt treatment and taking vaccine against swine flu were social responsibilities of people especially in swine flu epidemics.

Table 1: Cause and spread of swine flu.

Knowledge	Frequency	Percentage (%)
Swine flu cause		
Viral	168	80.47
Bacterial	35	16.66
Fungal	1	0.90
Miscellaneous	6	2.72
Total	210	100
Swine flu spread		
Waterborne	12	5.71
Airborne	145	69.04
Food borne	2	1.20
Blood borne	51	24.03
Total	210	100

Table 2: Relationship between pigs and spread of swine flu in humans and difference between normal flu and swine flu.

	Frequency	Percentage (%)
Relationship between pigs and spread of swine flu in humans		
Eating	67	31.90
Direct contact	28	13.33
Excreta	48	22.85
Do not Know	67	31.90
Total	210	100
Difference between normal flu and swine flu		
No difference	8	3.80
Totally different	103	49.04
Mutated flu	52	24.76
Do not know	47	22.38
Total	210	100

Table 3: Symptoms of swine flu.

Symptoms	Frequency	Percentage (%)
Running nose	18	8.57
Headache and body ache	19	9.04
Sore throat	19	9.04
All of the above	154	73.33
Total	210	100

Table 4: Treatment for swine flu and maintaining hand hygiene.

	Frequency	Percentage (%)
Treatment of swine flu		
Antibiotics	42	20.0
Antiviral	114	54.28
No treatment	14	6.66
Do not know	40	19.04
Total	210	100
Maintaining hand hygiene		
Practicing		
Yes	68	32.38
No	142	67.62
Total	210	100

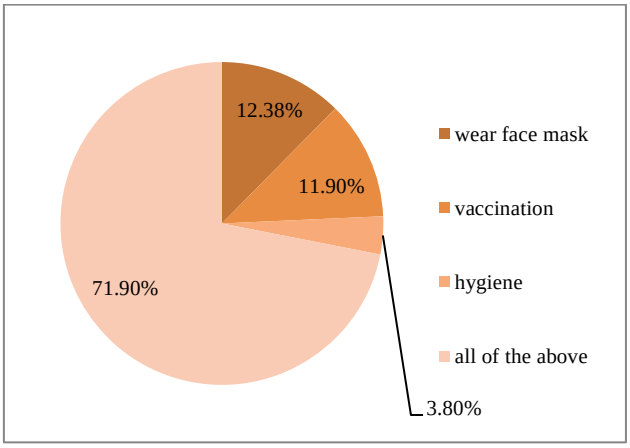

Figure 1: Prevention from swine flu.

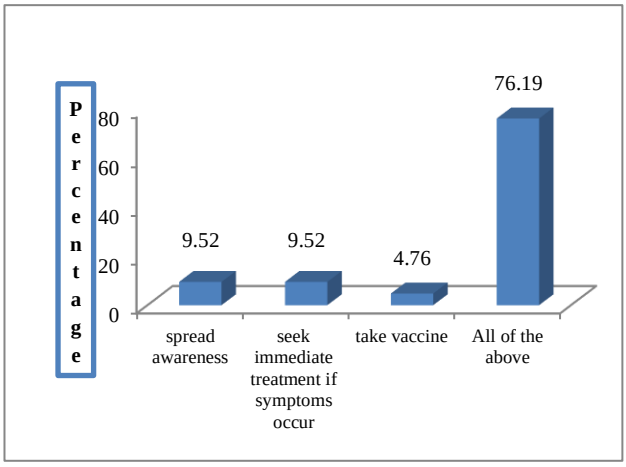

Figure 2: Social responsibility of people.

DISCUSSION

Multiple numbers of similar studies have been conducted related to awareness about swine flu in various population groups. However, all of them have similar conclusion and they support our results.

Level of knowledge amongst participants

The findings from the present study indicated that more than half (54.2%) of the respondents as compared to only 30% of reference study although had inadequate knowledge.[7] As the present study was done in selected Schools and the reference study was undertaken in certain areas of slum so it might be a reason of their poor knowledge.

Preventive practice regarding swine flu amongst participants

Respondents in this study had good knowledge to prevent infection and most of them (72.2%) correctly answered on covering mouth and nose while coughing and sneezing to prevent from spreading the infection. Only 56.6% of the participants reported, they use to cover mouth and nose with tissue or handkerchief and this percentage was low compared to the level of knowledge that they had. This result is similar with findings. This could be due to the fact that education improves better perception about this pandemic. There was no significant association between some demographic characteristics (e.g. age, gender) and knowledge level that was similar to other study done among outpatient in tertiary level hospital in India.[8]

Washing hand as a preventive measure

Proper washing of hand is another important practice that one should consider to reduce transmission of infection. Present study found that only 32.5% practiced it frequently. This finding was very low compared to previous studies Kumar (98%) in Delhi.[9] A Korean study showed that females washed hands more frequently at the time of the peak pandemic period of A/H1N1. This variation could be due to the difference in living standards of the study population.

Role of media and vaccination programme

Most of the participants reported media as their primary source of information about Swine flu, which is similar to findings of other researcher.[10] This may be due to the news channels, Govt. and NGOs aware people during the disease breakouts. Vaccination programme is an effective measure to prevent infectious disease, but surprisingly in prevention methods, a relatively less portion (20.8%) of the participants were aware about available vaccination. This may be due to the poor knowledge similar reports were seen in previous studies.[11] Although the term was well known, better recognition of pandemic influenza cases is needed. Improved awareness, access to treatment and timely referrals by private practitioners are also required to reduce treatment delays is the conclusion of cultural epidemiology of pandemic influenza in urban and rural Pune, India: a cross-sectional, mixed-methods study.[12]

In a similar study undertaken in the Belgaum city also had supporting results i.e. people were aware about certain facts about swine flu however were totally blank when it came to the vaccination part.[13]

A certain study done in countries like Tehran that best way to fight a disease such as swine flu is increased awareness among people and mass media such as TV plays the most important role in it.[14]

An important strategy to combat with the situation is to encourage the public to adopt precautionary behaviours. Correct knowledge of the epidemic will be helpful for them for behavioural modification. A vast number of researchers have examined the various levels of KAP about infectious disease outbreaks, such as SARS, avian influenza.[15]

CONCLUSION

The observations from a small group of adolescent school students can be limitation of our study. Improved awareness, access to treatment and timely referrals by private practitioners are also required to reduce treatment delays. After looking at the statistical data and the graphical representation we came to a conclusion that overall school going children were not aware about certain important treatment and prevention aspects of the disease. We however found that they do know about the cause of the disease and its spread. Although the term was well known, better recognition of pandemic influenza cases is needed. There was hardly any awareness about the connection with pigs and the early signs and symptoms.

Recommendations

Similar type of awareness program for Swine flu should be conducted on a larger scale. Information regarding swine flu and its prevention should be incorporated in syllabus of schools. Information regarding swine flu epidemiology, prevention, vaccination and treatment should be thoroughly spread to community at large with help of media. Students should have knowledge and importance of hand washing and hand washing training at regular intervals to prevent spread of disease. There should be standard operating protocols for people to prevent spread of swine flu during swine flu epidemic.

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