

KNOWLEDGE AND AWARENESS REGARDING H1N1 SEASONAL INFLUENZA: A MULTI-CITY COLLEGE BASED COMPARATIVE STUDY

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ABSTRACT

Background & Objectives: Many acute respiratory infections are prevalent in India and have become serious public health problem. Recurring outbreaks of swine flu have been reported in various states and union territories of India including Delhi, Ghaziabad and Meerut. Currently in 2017, big upsurge of swine flu is being observed in Delhi and nearby cities with reporting of cases from other States/UT's too. Despite this there was no documented evidence of knowledge and awareness of college students regarding swine flu. Therefore, current study was planned on college students of Delhi, Ghaziabad and Meerut. **Methods:** This cross-sectional study was carried out in the month of September 2017 among 706 college students of the cities of Delhi, Ghaziabad and Meerut. A pre-designed, pre-tested, semi structured, self-administered questionnaire was used to collect information. **Results & Conclusion:** All children have some but not complete knowledge of swine flu. 99.1% students believed Swine Flu is a harmful disease. 98.8% responded that it can cause death. 96.3% students believed that it is a preventable disease. 74.3% students knew that it is a viral disease. Meerut students had maximum myths regarding the disease. 73.9% students understand the importance of hand washing to check the spread of the disease and 89.7% knows that covering nose and mouth while sneezing or coughing can prevent the spread of disease. There is a need to sensitize college teachers to spread awareness about this disease in college students. Workshops or Special Talks can be organized in colleges. Youth groups or clubs can be made to spread health education. Findings of the study can help making strategies for students to enhance knowledge on this disease.

KEYWORDS: Delhi, Ghaziabad, Meerut, Knowledge, Awareness, College, Swine Flu, Influenza, Prevention.

INTRODUCTION

Swine flu (Seasonal Influenza) is an acute respiratory infection caused by Influenza virus (Orthomyxovirus). The virus is a mixture of four known strains of influenza A virus: One endemic in humans, one endemic in birds and two endemic in pigs (swine).^[1] In April 2009, a new strain of influenza virus-A/H1N1, commonly referred to as "Swine flu", began to spread in several countries around the world. Evidence that this new strain could pass from human to human led the World Health Organization (WHO) to quickly raise its pandemic alert level to phase 5, representing "a strong signal that a pandemic is imminent."^[2] This was subsequently raised to phase 6, indicating that a full global pandemic was under way. The 2009 influenza pandemic has affected most countries of the world within a short span of time.^[3]

Swine flu is a major cause for concern among the common people of India. H1N1-2009 pandemic strain of the virus continues to circulate causing outbreaks of seasonal influenza in various parts of the country and

needless to say it has created fear across the various strata of the society. Worldwide there have been more than 375,000 laboratory confirmed cases of pandemic influenza H1N1 in 2009 and over 4500 deaths reported to WHO.^[4] By June 2010, it had caused over 18,172 deaths in more than 214 countries, over seas territories and communities.^[5] India is ranked 3rd amongst the countries most affected, with respect to cases and deaths due to swine flu.^[6] Till 15 October 2017, India reported 37,463 cases and 2058 deaths due to Swine Flu with Delhi-NCR reporting significant number of cases which are enormously higher than previous years' data. Analysis of data also revealed 77% cases were from 17 major cities, maximum 24% from Delhi and 2% from Lucknow.^[7]

Most illnesses, especially the severe ones and deaths had occur red among healthy young adults.^[8,9] Transmission of the new strain is human-to-human. Its symptoms are similar to those of influenza in general. It includes fever, cough, sore throat, body aches, headache, chills and fatigue. The flu can cause worsening of chronic health

problems. Vaccines are available for different kinds of swine flu.^[8] These factors have focused attention on the use of non-pharmaceutical public health interventions to inhibit human to human transmission and fueled interest in answering important questions about influenza epidemiology and transmission.^[10] Sheer volume of cases could easily overstretch already fragile and overburdened health services, especially in the developing countries, and cause considerable suffering in human populations around the world.^[11] Knowledge and awareness of people regarding swine flu are a cornerstone in prevention of spread of virus and its outbreak. "The Government has been successful in providing information to people on swine flu. Even television channels have played a major role in educating people by inviting doctors and experts in their studios every day to provide information about the deadly virus," Information & Broadcasting minister, Govt. of India said.^[12] The Ministry of Health and Family Welfare joined hands with WHO, UNICEF, and the media to strategize on how to inform and protect the public from Pandemic H1N1 (2009) Influenza at the National Media Communication Workshop held in New Delhi on 23–24 July, 2009.^[13]

Prevention is the most appropriate measure to control H1N1 flu pandemic and creating awareness regarding H1N1 flu is ranked very high among preventive measures.^[14] Youth of the country can play an important and active role in spreading the message of prevention of this disease in the community. Thus it is necessary that they are aware and have correct knowledge about this disease. No previous study is available to assess and compare knowledge of Swine Flu in youth of the area, hence this study was conducted among college students of Delhi, Ghaziabad and Meerut.

AIMS AND OBJECTIVES

1. To assess and compare the knowledge, awareness and beliefs regarding Swine Flu (H1N1 Seasonal

Influenza) among college students of Delhi, Ghaziabad and Meerut.

2. To identify gaps in knowledge and mis-conceptions regarding Swine Flu (H1N1 Seasonal Influenza) infection in them.

MATERIALS AND METHODS

This cross-sectional study was carried out in the month of September 2017 among college students of the cities of Delhi, Ghaziabad and Meerut.

A list of all government/government-aided co-educational degree colleges in Delhi, Ghaziabad and Meerut was obtained and one college from each city was selected by simple random sampling (lottery method).

Sri Aurobindo College (Delhi), MMH College (Ghaziabad), Meerut College (Meerut) were finally selected for the study.

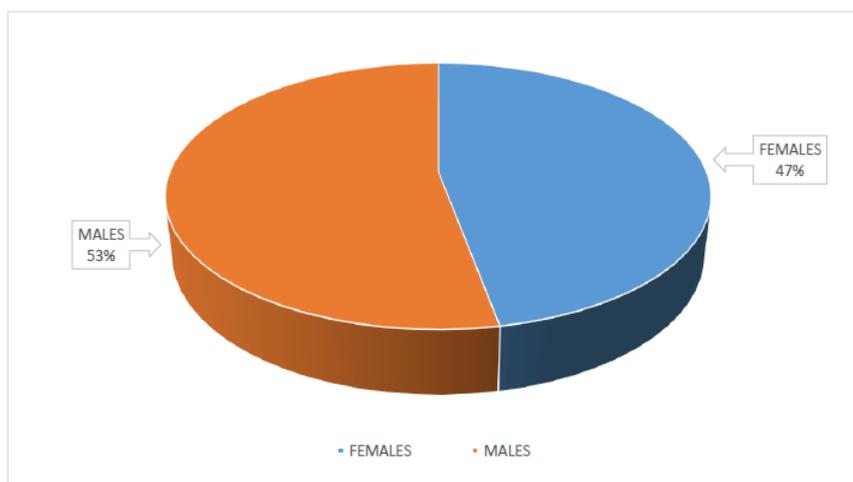
It was decided to include a minimum of 200 students from each college.

A pre-designed, pre-tested, semi-structured, self-administered questionnaire was used to collect responses. Data was entered in MS-Excel 2013 and was analyzed statistically in Epi- Info v7.2. Ethical clearance from Institutional Ethical Committee was taken before beginning the study.

RESULTS AND DISCUSSION

A total of 721 questionnaires were filled but 15 questionnaires were found to be incomplete. So finally, 706 college students were included in the study as respondents. Out of these 706 students, 242 were from Delhi, 228 from Ghaziabad and 236 belonged to Meerut. Of these, 374 (53%) were boys and 332 (47%) were girls.

No. of Students	DELHI	GHAZIABAD	MEERUT	TOTAL
	242	228	236	706



All children have some but not complete knowledge of swine flu. 99.1% students (i.e. 700 students) believed Swine Flu is a harmful disease. 98.8% (i.e. 698) responded that it can cause death. 96.3% (680) students believed that it is a preventable disease. 74.3% (525) students knew that it is a viral disease. 98.9% (239) Delhi, 97.6% (223) Ghaziabad and 97.2% (229) Meerut students knew that it spreads due to coughing/sneezing.

94.2% (228) Delhi, 96.4% (220) Ghaziabad and 95.4% (225) Meerut students had correct knowledge about symptoms. It was very surprising to note that only 34.2% (83) Delhi, 32.4% (74) Ghaziabad and 26.6% (63) Meerut students knew about danger signs of the disease. 35.9% (87) Delhi, 38.4% (88) Ghaziabad and 31.3% (74) Meerut Students knew persons who are at high-risk for the disease.

Table 1: Source of Information (Multiple Responses).

S. No.	Sources	Delhi		Ghaziabad		Meerut	
		No.	%	No.	%	No.	%
1	Television	225	93.1	199	87.3	201	85.2
2	Newspaper	136	56.3	144	63.2	206	87.2
3	Social Media	185	76.4	169	74.2	131	55.7
4	Health worker	6	2.3	9	4.2	102	43.4
5	College Teacher	24	9.8	16	7.2	13	5.3
6	Family/Friends	86	35.4	99	43.6	93	39.5

Source of information for majority of students were television (88.5%), newspaper (68.8%) and social media (68.6%). Awareness spread by Health workers and

College teachers were relatively low i.e. 16.5% and 7.5% respectively. Family/Friends (39.3%) played a little role in spreading awareness.

Table 2: Myths About Swine Flu (Multiple Responses).

S. No.	Myths	Delhi		Ghaziabad		Meerut	
		No.	%	No.	%	No.	%
1	Spread By Pigs	111	45.8	124	54.3	172	72.8
2	Caused By Eating Pork	133	54.9	186	81.5	198	83.8
3	Spread By Sexual Route	62	25.6	72	31.5	93	39.4
4	Spread By Mosquito Bite	47	19.4	59	25.8	79	33.4

Myths regarding spread of swine flu were high among college students. Meerut students had maximum myths regarding the disease.

occur by eating pork. According to 227 students (32.1%), it spreads by sexual route and 185 students (26.2%) say that spread of swine flu occurs via mosquito bites.

407 students i.e. 57.6% of students believe that swine flu is spread by pigs. 517 students (73.2%) think that it can

Table 3: Attitude Towards Preventive Aspects (Multiple Responses).

S. No.	Preventive Aspects	Delhi		Ghaziabad		Meerut	
		No.	%	No.	%	No.	%
1	Importance Of Hand Washing	176	72.7	174	76.3	212	89.8
2	Covering Nose And Mouth	234	96.6	220	96.4	228	96.6
3	Is There Any Vaccine Available?	110	45.4	88	38.5	74	31.3
4	Have You Got Yourself Vaccinated	87	35.9	43	18.8	27	11.4

It was important to check the attitude of college going students towards preventive aspects of the disease so that the awareness programs could be initiated accordingly.

565 students i.e. 73.9% of students understands the importance of hand washing to check the spread of the disease and 682 students (89.7%) knows that covering nose and mouth while sneezing or coughing can prevent the spread of disease from infected persons to healthy ones.

Though only 272 students (35.7%) knew that vaccine is available for prevention of swine flu and amongst these

only 157 students (20.6%) were vaccinated.

DISCUSSION

The results of the present study depict a range of knowledge; attitudes, awareness and self-reported behavioural patterns concerning H1N1 influenza pandemic among a sample of college students of Delhi, Ghaziabad and Meerut.

Our study revealed mass media as a major source of information about swine flu and role played by health workers and teachers in providing information was less. These findings are consistent with the findings of study

done by Baria HG et al^[15] in Valsad, Shilpa et al^[1] in Belgaun and Kawanpure H et al^[14] in Kerala.

In our study, overall 57.6% students had a myth that swine flu can spread by eating pork. This is much higher as compared to the findings of Kawanpure H et al^[14] in Kerala (4.69%) and of Baria HG et al^[15] in Valsad (8.38%).

Myth that swine flu can spread by mosquito bite was found in 26.2% respondents in our study. However, Chaudhary V et al^[7] in Bareilly and Kawanpure H et al^[14] in Kerala found this to be 9% and 8.44% respectively.

In our study, importance of hand washing as a mode of prevention of swine flu was known to 73.9% students which is comparable with the findings of Chaudhary V et al^[7] in Bareilly (78.7%).

However, Baria HG et al^[15] in Valsad and Kawanpure H et al^[14] in Kerala found this percentage as 4.45% and 31.9% respectively. Shilpa et al^[1] in Belgaun found that 92.4% participants were aware about the importance of hand washing.

We found that overall only 35.7% participants were aware of the availability of vaccine for prevention of swine flu which is lower than the findings of Kawanpure H et al^[14] in Kerala (55.86%) and Chaudhary V et al^[7] in Bareilly (47%). However, Baria HG et al^[15] in Valsad found this awareness in only 5.45% participants.

CONCLUSION AND RECOMMENDATIONS

Awareness of college students is an important factor for preventing swine flu in the community. All students have some but not complete knowledge of Swine Flu. Meerut students had maximum myths regarding the disease. Furthermore, this study describes that the existing knowledge regarding swine flu among college students is not sufficient and also identified the current practices used by college students in their home environment to prevent them from the disease. Findings of the study will be helpful to make strategies for college students to enhance knowledge on this disease. There is a need to sensitize college teachers to spread awareness about this disease in college students. Awareness of youth is important, if they are made aware they can actively spread this knowledge in the community. Hence, they should be given proper knowledge to dispel the myths. Further, findings can be utilized for health care personnel and policymakers to eradicate this problem from the community. Government should utilize methods of mass communication for educating about swine flu. Social Networking platforms like Facebook and Twitter may be used to spread awareness. Government can also use college as platform for spreading knowledge/awareness as a mandatory activity. Workshops or Special Talks can be organized in colleges. Youth groups or clubs can be made to spread health education.

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