

## Study to Assess the Awareness, Perception and Myths regarding Swine Flu among Educated Common Public in Patiala District

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### Abstract

**Background:** Swine flu is causing a massive havoc and fear across the various strata among the common people of India since its emergence in April 2009 when it was declared a Phase 6 pandemic and was the 3rd most affected country in the world. Media and Government agencies have a vital role in creating awareness. **Objectives:** 1) To assess the awareness, perception and myths regarding Swine flu among educated common public in Patiala district. 2) To assess the response generated by the media coverage and Govt. responses. **Materials and Methods:** Cross sectional study done in first half of April, 2013 immediately after an epidemic situation among 400 educated common public selected from different places and strata with a pre defined questionnaire. Data was analysed with Ms Excel and SPSS.

**Results:** 88% (352) of the study population had previously heard of Swine flu. Hand washing as a mode of prevention was known only to 36.5% of the respondents. Around 40 % of the population have myths regarding mode of spread. Television news channels and newspaper were found to be the major source of information. **Discussion:** Comparatively lower levels of awareness as compared to other studies in India regarding some key elements such as route of spread and methods of prevention is a key problem area showing lack of clear message and response generation in IEC activities. **Conclusion & Suggestions:** Government should focus on providing scientific and effective information through the prime medias. Communication messages should be made closely related to the pandemic situation to target the information needs of the public by involving Public Health Personnel.

**Key Words:** Awareness, Communicable diseases, Epidemic, Public health, Swine flu

### Introduction

Swine flu is causing a massive havoc among the common people of India and has created fear across the various strata of the society. 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 to quickly raise the risk level to phase 6, indicating that a full global pandemic

was under way. According to WHO estimates, 1/3rd of the world's population will be affected with H1N1flu within two years and India is no exception. It ranked 3rd most affected country for cases and deaths of swine flu globally [1]. The no. of cases in various countries in subsequent three years has well established the reason why it is being considered as a major threat in emerging disease in global scenario. In context to India, the highest number was reported in 2009 (27,236), followed by 2010 (20,604) and 2012 (5,054 cases).

The highest number of swine flu deaths took place in 2011 (1,763), followed by 2009 (981) and 2012 (405)[2]. 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 [3].

Swine flu has killed 261 people in India in the first 3 months of 2013, with most deaths reported from Rajasthan and Gujarat. A total of 2,329 people tested positive for the Influenza A (H1N1) virus, which causes Swine flu, in 35 states and union territories [2]. In a northern state of India, Punjab, total no. of confirmed cases was 182 and 42 deaths. In the Patiala district where this study has been done, 17 confirmed cases were found with 7 deaths [4]. These deaths initiated chain of media reports and local physician's articles on measures to prevent Swine flu being published in the newspaper dailies. At the same time Swine Flu cases in the National Capital Region also led to Swine Flu coverage in major news channels. When levels of worry are generally low, acting to increase the volume of mass media and advertising coverage is likely to increase the perceived efficacy of recommended behaviors, which, in turn, is likely to increase their uptake [5]. Trust in government/media information was more strongly associated with greater self-efficacy and hand washing; whereas trust in informal information was strongly associated with perceived health threat and avoidance behavior [6].

"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 [7]. The best we citizens can do is to keep ourselves informed about the happenings and the steps we can take to prevent the spread of the flu [8].

Prevention is the most appropriate measure to control H1N1 flu pandemic and awareness of H1N1 flu is ranked very high in preventive measures. The distribution of proper information to the public on the status of the H1N1 virus pandemic will be important to achieve awareness of the potential risks and the optimum code of behaviour during the pandemic.

District Health authorities in Patiala has distributed 2500 pamphlets and installed flex banners at Community health centers in the district as IEC activities. State health department has published mass media messages in daily newspapers through State nodal officer during Jan –March 2013(as per information from District Civil Surgeon office).

## Objectives

Keeping all this in view the study was designed to assess the awareness, perception and myths regarding Swine flu among educated common public in Patiala district. Another secondary objective was to assess the response generated by these media coverage and Govt. responses.

## Materials and methods

The present cross-sectional study was carried out in first half of April, 2013 just after an epidemic situation in the study area (Dist. Patiala, Punjab). According to guidelines for conducting Knowledge, Attitude and Practice study, minimum sample size required for KAP study is 200,[9] for sample to be more representative of population, a total of 400 participants were included in the study. Inclusion criteria were education level more than Matriculate. The awareness among the educated section of society will act as a better indicator of the level and the quality of the response generated by the awareness drives during epidemic. The study population was selected by using convenience sampling and to achieve more representative sample, respondents were selected from different places including a Government sector college, one private sector college, employees from both public and private sector organizations, patients at outdoors of one tertiary care govt. hospital and one private sector multi-specialty hospital, households, shopkeepers, Bus stand. Out of total 400 respondents 136 were student, 116 were salaried employee, 66 were self employed, 26 were Professional and 56 were housewife (Table 1).

All the selected participants were interviewed through pre-tested and pre-designed questionnaire. This pre designed instrument consists of socio-demographic characteristics (age, sex, education and occupation), knowledge and awareness about the disease (nature, mode of spread/transmission, clinical features and preventive measures). The self-rated instrument was drafted in a close-

ended manner into local vernacular language (Punjabi) and translated into English language. Respondent was having an option to select the preferred language. There were no refusals, as complete anonymity was ensured. The information thus collected was computerized in specific programme developed on Microsoft excel 2007 software. Analyzed through Statistical Package for Social Science (SPSS 16.0) software program for Windows. Mean and standard deviation for continuous variable and percentages for categorical variables were calculated.

## Results

Study population constitutes 206 males and 194 females. 88% (352) of them had previously heard of Swine flu and are aware of it as a disease entity (Table 2). Hence, further analysis was performed on 352 participants. A common symptom of Swine flu such as fever was known to 68.1% while cough and cold were known to 51.5% of the respondents. Runny nose which is a very common symptom of swine flu was known to 33.5% of respondents (Table 3). Among them, 40.6% had myth regarding spread of swine flu by eating pork, 21% through food and water 14.8% through mosquito bite. Only 13% believe with the fact that swine flu can be spread by shaking hand with a patient (Table 4). Most common mode of prevention i.e. hand washing was only known to 36.5% of the respondents. Only 25.5 % responded to avoiding unnecessary visit to crowded places as a precautionary measure. Use of mask/ handkerchief as a preventive measure against swine flu was known to 60.5% in Table5.

**Table : 1 Demographic profile of participants**

Age group (yrs)	No. of Participants
16-20	120 (30 %)
21-25	46 (11.5%)
26-30	58 (14.5%)
31-35	46 (11%)
36-40	42 (10.5%)
41-45	36 (9%)
46-50	32 (7.5%)
50 and above	24 (24%)
<b>Gender</b>	<b>No. of Participants</b>
Male	206 (51.5%)
Female	194 (48.5%)
<b>Educational level</b>	<b>No. of Participants</b>
Matriculate	156 (39%)
Graduate	204 (51%)
Post graduate	40 (10%)
<b>Occupation</b>	<b>No. of Participants</b>
Student	136 (34%)
Salaried employee	116 (29%)
a) Public	22
b) Private	94
Self employed	66 (16.5%)
Professional	26 (6.5%)
Housewife	56 (14%)

**Table 2: Have you heard about Swine flu?**

Occupation	No. of Participants	Yes	No
Student	136	128 (94%)	8
Salaried employee	116	102 (88%)	14
a) Public	22		
b) Private	94		
Self employed	66	56 (85%)	10
Professional	26	25 (96%)	1
Housewife	56	41 (73%)	15
<b>Total</b>	<b>400</b>	<b>352 (88%)</b>	<b>48</b>

**Table 3: Which of the following are symptoms/ features of Swine Flu?**

Symptom/ Feature	Respondents ( n= 352)
a) Fever	40 (68.1%)
b) Abdominal pain	69 (19.6%)
c) Runny nose	18 (33.5%)
d) Breathlessness	84 (23.8%)
e) Cough & cold	81 (51.5%)
f) Rashes	23 (6.5%)
g) Diarrhoea	39 (11%)

**Table 4: How can one catch Swine Flu ?**

a) Coughing/ Sneezing by a patient	190 (54%)
b) By eating pork ( Pig meat)	143 (40.6%)
c) By house flies	48 (13.6%)
d) Shaking hands with a patient	46 (13%)
e) Through blood	49 (14%)
f) Through mosquito bite	52 (14.8%)
g) Through food & water	74 (21%)

**Table 5: How can one prevent catching Swine Flu infection ?**

Methods/ Measures	Respondents (n=352)
a) Hand washing	129 (36.5%)
b) Avoiding unnecessary visit to crowded places	90 (25.5%)
c) Keeping person with cold in a separate room	83 (23.6%)
d) Use of mask / Handkerchief	213 (60.5%)
e) Not eating flesh / meat products	109 (31%)
f) Killing pigs in surroundings of your neighbourhood	51 (14.5%)

**Table 6: What is the other name used for Swine Flu ?**

a) H1N2	72 (20.5%)
b) H2N1	85 (24.1%)
c) H1N1	162 (46%)
d) H1N5	33 (9.4%)

**Is there any treatment / Medicine available for Swine Flu?**

Yes	260 (74%)
No	92 (26%)

**Is any vaccine available to prevent Swine Flu?**

Yes	213 (60.5%)
No	139 (39.5%)

**Can Swine Flu cause death?**

Yes	297 (84.4 %)
No	55 (16.6 %)

In Table 6, 46% were aware of H1N1 as another name for Swine flu. Availability of medicine and vaccine against swine flu were known to 74% and 60.5%, respectively. 84.4% were of the opinion that Swine flu can cause death. TV was found to be the most common source of knowledge regarding swine flu for 76 % of the respondents. Newspaper in 68.5 % and Internet in 21.5% were found as a source of knowledge regarding swine flu (Table 7).

## Discussion

Very few epidemiological studies on H1N1flu are available in India because of its recent origin since 2009. This is the first study of its kind among urban adults in this northern state of India as per best of our knowledge. Nonetheless, few comparable studies from other states (Gujarat [11] and Uttar Pradesh [12]) and similar studies in other parts of globe were added in the literature in recent past. In this study almost all (88 %) of the respondents had previously heard about swine flu which was lesser than found in the other studies (94% in Vadodara [11] & 97% in Barielly [12]). Most common symptom of swine flu known to students was fever, whereas runny nose which is very common symptom was known only to 33.5 %. Among them, 54% of the respondents reported coughing and sneezing by a patient as the mode of transmission of Swine flu. In other studies it was higher, 77.2% in Barielly [12], 82% in Vadodra [11].

In present study 40.6% had myth regarding spread of swine flu by eating pork, 21% through food and water 14.8% through mosquito bite also found in a study by

**Table 7: Which is the source of your information to you about Swine Flu? (multiple options)**

a) Television & news Channel	264 (76%)
b) Seminars	42 (12%)
c) Internet	76 (21.5%)
d) Hoardings/ Banners	39 (11%)
e) Advertisement/ Messages/ pamphlets in Print media	109 (31%)
f) Health Dept. Staff	63 (18%)
g) Newspaper	241 (68.5%)
h) Personal Doctor	49 (14%)

Chaudary V et al where few of the students also mention

food, water, and mosquito bite (11.7%, 10.5%, and 9%, respectively) as a mode of swine flu transmission. In our study, 60.5 % mention use of mask as a way of prevention from swine flu whereas hand washing which is a very effective way to prevent swine flu transmission was known only to 36.5 %. In contrast to our study, Rubin *et al.* in their study[13] reported high percentage (87.8%) of the interviewer believing hand washing role in reducing swine flu transmission and less respondent (24.3%) in favour of use of mask in preventing swine flu spread. It is a significant area of concern as awareness regarding hand washing as a prevention method is quite low as compared to other studies in India (82% in Vadodara & 78.7% in Bareilly) which shows lack in response to IEC activities. Knowledge of availability of medicine and vaccine was good in comparison to other studies. Many of the respondents (84.4%) were aware of the fact that swine flu can lead to death.

### Conclusions and Suggestions:

In present study TV, news channels and newspaper comes out to be the most common source from which common public get knowledge of swine flu as already found in other studies also. Internet, hoardings, pamphlets were found to play little role in spreading awareness about Swine flu. We recommend in the light of study findings that however, people are aware of Swine flu and risk associated with it but lack in correct knowledge although the study has been conducted just after so much hype and this topic being in news and on the tongues of the people. Govt. should focus

on providing scientific and effective information through the prime medias. Lack of awareness regarding key focus areas like Hand washing as a preventive measure, runny nose as a symptom and Swine flu not being spread by eating pork are a serious concern because the role of the media at the time of an epidemic should not be to create hue and cry among masses but should be of a quick responding and efficient channel to reach out a large no. of affected population.

Awareness generated by health staff is not significant. Health education sessions, seminars, workshops and symposia for creating awareness in all areas of urban as well as rural masses can be made more effective by involving Public Health Professionals to develop communication messages closely related to the pandemic situation to target the information needs of the public.

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