A cross sectional study on knowledge, attitude and behaviour regarding swine flu in urban slum of Hyderabad, India

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ABSTRACT

Background: The study was conducted in the Urban slum area, Shekpet, Hyderabad, India which is the field practice area of Apollo Medical college.

Methods: The aims was to study the awareness regarding symptoms, mode of spread and preventive measures of swine flu in the study population and to study the sources of information and health care seeking pattern of the population. Pre-designed questionnaire was used to collect information on socio -demographic characteristics (age, sex, education and occupation), knowledge and awareness about the disease (nature, mode of spread/transmission, clinical features, preventive measures and precautions).

Results: Majority were unaware of spread of Swine Flu from Pigs. 32% of them said it spreads through coughing and 27% through sneezing. About 15% of them said it spreads by sharing same room.

Conclusions: The cross sectional study, was taken up during the recent outbreak of Swine flu in Hyderabad. Knowledge, Attitude and Prevention practices of the infection, was carried out in the urban slum of Shaikpet area the study will create awareness of the disease and its preventive measures among the people. Thus, it would reduce the incidence of occurrences of the disease in future.

Keywords: Swine flu awareness, Swine flu management, Swine flu prevention, Swine flu transmission, Swine flu, Urban slum

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. The virus is a mixture of four known strains of influenza A virus: One endemic in humans, one endemic in birds and two endemics in pigs (swine).

On 11 June 2009, the World Health Organization (WHO) raised its pandemic alert to the highest level, phase 6, meaning that, the A/H1N1 flu had spread in more than two continents. On June 2010, it had caused over 18,172 deaths in more than 214 countries and overseas territories or communities. In a number of instances, people have developed the swine flu infection when they are closely associated with pigs (for example, farmers, pork processors), and likewise, pig populations have occasionally been infected with the human flu infection. In most instances, the cross-species infections (swine virus to man; human flu virus to pigs) have remained in local areas and have not caused national or worldwide infections in either pigs or humans. Unfortunately, this cross-species situation with influenza viruses has had the potential to change. Investigators decided the. 2009 so-called "swine flu" strain, first seen in Mexico, should be termed novel H1N1 flu since it was mainly found infecting people and exhibits two main surface antigens,
H1 (hemagglutinin type 1) and N1 (neuraminidase type 1). The total number of cases reported from Telangana has been progressively increasing and till now has attained a figure of 892 in January 2019, reports Institute of Preventive Medicine. The lack of awareness among people is one the major cause of the infection which ultimately is leading to the death of the patient.

The spread of an infectious disease can be strongly influenced by behavioral changes (e.g., social distancing) during the early phase of an epidemic, but data on risk perception and behavioral response to a novel virus is usually collected with a substantial delay or after an epidemic has run its course. This primary interest was the possible mediating effect of affective variables on action taken to protect against swine flu infection. To evaluate the hypothesis that respondents’ affective state (subjective anxiety, fatalism about infection) predicts protective measures, we include in the model demographic (age, gender), epidemiological (household size, number of contacts, survey day), and media (source of information on the outbreak) conditioning variables.

**METHODS**

The aims and objectives of this study was to study the demographic profile of the study population, to study the awareness regarding symptoms, mode of spread and preventive measures of swine flu in the study population, to study the sources of information and health care seeking pattern of these people.

This study was a cross sectional survey on swine flu conducted in the Urban Health Training Centre (UHTC) of Apollo Hospitals located at Shaikpet, Hyderabad, India which a field practice area of Apollo Institute of Medical Sciences and Research.

**Study instrument**

Pre-designed questionnaire was used to collect information on socio-demographic characteristics (age, sex, education and occupation), knowledge and awareness about the disease (nature, mode of spread/transmission, clinical features, preventive measures and precautions).

Data collected from the respondents was entered into excel sheet. Frequency distribution, percentages, was employed to analyse the data.

The research includes the following questions:

- Prevention (Face mask, Personal hygiene, avoiding crowded places, Not going to school, Ayurvedic treatment, killing pigs, Staying at home, Homoeopathic treatment, Not aware).
- Scared of Swine Flu (deadly disease, anyone can be affected, no treatment available, no vaccine).
- Where do you go if you get symptoms of swine flu (government hospital, private hospital, family physician)?
- Other diseases the patient is suffering from.

**RESULTS**

Among all the people who were questioned about Swine flu, 61% of them belonged to the age group of 20-35, 24.5% of them were between 35-50 years of age and 14.5% of them were elderly people with age group between 50-65 years (Table 1).

| Age       | Frequency | Percentage |
|-----------|-----------|------------|
| 20-35     | 122       | 61.00%     |
| 35-50     | 49        | 24.50%     |
| 50-65     | 29        | 14.50%     |
| Total     | 200       | 100%       |

Table 2 shows the percentage of gender among all the people who were questioned. Women were more than Men and were about 54.5% while Men were only 45.5%.

| Gender | Frequency | Percentage |
|--------|-----------|------------|
| Male   | 91        | 45.50%     |
| Female | 109       | 54.50%     |
| Total  | 200       | 100%       |

Table 3 shows the frequency and percentage of the Educational levels of the people. Illiterate people dominated the table with 30.5% of them being Illiterates, followed by people who had Secondary Education with 29.5%, followed by Primary Education people with 24.5% and Graduates being the least with only 15.5%.

| Education | Frequency | Percentage |
|-----------|-----------|------------|
| Graduate  | 31        | 15.50%     |
| Primary   | 49        | 24.50%     |
| Secondary | 59        | 29.50%     |
| Illiterate| 61        | 30.50%     |
| Total     | 200       | 100%       |

Table 4 shows the various occupations of the people. The majority of the women were Housewives with 44.5%, followed by Employees with 32.5%, which was followed by Labours with 17.5%, followed by people who did
Local Business with 4.5% and Agricultural Workers were the least and about 1.

### Table 4: The various occupations of the people.

| Occupation  | Frequency | Percentage |
|-------------|-----------|------------|
| Agriculture | 2         | 1.00%      |
| Business    | 9         | 4.50%      |
| Employee    | 65        | 32.50%     |
| Housewife   | 89        | 44.50%     |
| Labor       | 35        | 17.50%     |
| Total       | 200       | 100%       |

### Table 5: Awareness of swine flu.

| Awareness | Frequency | Percentage |
|-----------|-----------|------------|
| No        | 91        | 45.50%     |
| Yes       | 109       | 54.50%     |

Table 5 shows the frequency and percentage of people who were Aware of Swine Flu. 54.5% of the people were Aware of Swine Flu and 45.5% were Unaware.

### Table 6: Source of information.

| Source of information | Frequency | Percentage |
|-----------------------|-----------|------------|
| Telemedia             | Yes       | 105        | 52.50%   |
|                       | No        | 4          | 2.00%    |
|                       | Don't know| 91         | 45.50%   |
| Friends and Relatives | Yes       | 36         | 18.00%   |
|                       | No        | 73         | 36.50%   |
|                       | Don't know| 91         | 45.50%   |
| Others                | Yes       | 7          | 3.50%    |
|                       | No        | 101        | 50.50%   |
|                       | Don’t know| 92         | 46.00%   |
| Health Workers        | Yes       | 18         | 9.00%    |
|                       | No        | 90         | 45.00%   |
|                       | Don’t know| 92         | 46.00%   |

### Table 7: Knowledge of the disease.

| Knowledge of the disease | Frequency | Percentage |
|--------------------------|-----------|------------|
| Supernatural             | Yes       | 1          | 0.50%     |
|                          | No        | 16         | 8.00%     |
|                          | Don’t know| 183        | 91.50%    |
| Germ Concept             | Yes       | 49         | 24.50%    |
|                          | No        | 8          | 4.00%     |
|                          | Don’t know| 143        | 71.50%    |
| Multifactorial           | Yes       | 17         | 8.50%     |
|                          | No        | 13         | 6.50%     |
|                          | Don’t know| 170        | 85.00%    |
| Environmental            | Yes       | 72         | 36.00%    |
|                          | No        | 2          | 1.00%     |

Table 7 shows the knowledge of the cause of the disease. Majority of them said that it was due to Environmental Causes (36%), followed by the Germ Concept (24.5%), which was followed by Multifactorial cause (8.5%) and only about 0.5% of them thought it was Supernatural.

### Table 8: Modes of spread.

| Modes of spread | Frequency | %  |
|-----------------|-----------|----|
| Close contact   | Yes       | 6.00% |
| with pigs      | No        | 4.00% |
| Don’t know     | 180       | 90.00% |
| Sneezing         | Yes      | 27.00% |
|                  | No        | 1.00% |
|                  | Don’t know| 144    | 72.00% |
| Coughing        | Yes       | 32.00% |
|                  | No        | 1.00% |
|                  | Don’t know| 134    | 67.00% |

Table 8 shows the Knowledge of Spread of Swine Flu. Majority of them were Unaware of Spread of Swine Flu from Pigs. 32% of them said it spreads through Coughing and 27% through Sneezing. About 15% of them said it spreads by sharing same room.
Table 10: Prevention.

| Prevention         | Frequency | %  |
|--------------------|-----------|----|
| Face mask          | Yes       | 61 | 30.50% |
|                    | No        | 27 | 13.50% |
|                    | Don’t know| 112| 56.00% |
| Hand wash          | Yes       | 78 | 39.00% |
|                    | No        | 6  | 3.00%  |
|                    | Don’t know| 116| 58.00% |
| Personal hygiene   | Yes       | 78 | 39.00% |
|                    | No        | 5  | 2.50%  |
|                    | Don’t know| 117| 58.50% |
| Ayurvedic/Homeopathic | Yes     | 4  | 2.00%  |
|                    | No        | 24 | 12.00% |
|                    | Don’t know| 172| 86.00% |
| Staying at home   | Yes       | 14 | 7.00%  |
|                    | No        | 45 | 22.50% |
|                    | Don’t know| 141| 70.50% |
| Killing pigs      | Yes       | 0  | 0.00%  |
|                    | No        | 22 | 11.00% |
|                    | Don’t know| 178| 89.00% |

Table 11: Scared of swine flu.

| Scared of Swine Flu | Frequency | %  |
|---------------------|-----------|----|
| Deadly disease      | Yes       | 28 | 14.00% |
|                     | No        | 19 | 9.50%  |
|                     | Don’t know| 153| 76.50% |
| Anyone can be affected | Yes     | 76 | 38.00% |
|                     | No        | 0  | 0.00%  |
|                     | Don’t know| 124| 62.00% |
| No treatment available | Yes     | 12 | 6.00%  |
|                      | No        | 14 | 7.00%  |
|                      | Don’t know| 174| 87.00% |

In Table 9, the knowledge of symptoms of the people. Fever was said by 36.5% of the people, cough by 34%, cold by 25%, running Nose by 23.5%, body ache by 11% and vomiting only by 4.5% of the people. Table 10 shows the prevention of Swine Flu. Hand wash and personal hygiene dominated with 39% each, while face mask followed them with 30.5%, while staying at Home was 7%, Ayurvedic/Homeopathic was 2% and None of them killed Pigs.

Table 11 shows the frequency and percentage of people who are scared of Swine Flu. 38% of the people think that anyone can be affected by Swine Flu, while 14% of the people think it is a deadly disease and only about 6% think that there is no treatment available for Swine Flu. Table 12 shows the frequency and percentage of people who would report immediately or not in case of Signs and Symptoms. 67% of them said that they would not report, while 33% of them said that they would report immediately. Table 13 shows the frequency and percentage of people who would Isolate patients with symptoms of Swine Flu. 79.5% of them said that they would not Isolate the patients, while only 20.5% of them said that they would Isolate.

Table 14 shows the place of seeking treatment. Majority of them would go to Government and Private Hospitals (35% and 37% respectively), 3% of them visited Family Physicians and around 3.5% went to other places like Hakeem (Quacks).

Table 12: Reporting immediately in case of signs and symptoms.

| Reporting immediately in case of signs and symptoms | Frequency | Percentage |
|-----------------------------------------------------|-----------|------------|
| No                                                  | 134       | 67.00%     |
| Yes                                                 | 66        | 33.00%     |

Table 13: Isolation of patients with flu symptoms.

| Isolation of patients with flu |
|--------------------------------|
| Symptoms                      | Percentage |
|--------------------------------|------------|
| Yes                            | 20.50%     |
| No                             | 79.50%     |

Table 14: Where do you go when you get symptoms of swine flu

| Where do you go when you get symptoms of Swine Flu | Frequency | Percentage |
|---------------------------------------------------|-----------|------------|
| Government hospital                               | Yes       | 70         | 35.00%    |
|                                                   | No        | 130        | 65.00%    |
| Private hospital                                  | Yes       | 74         | 37.00%    |
|                                                   | No        | 126        | 63.00%    |
| Family physician                                 | Yes       | 6          | 3.00%     |
|                                                   | No        | 194        | 97.00%    |
| Others                                           | Yes       | 7          | 3.50%     |
|                                                   | No        | 193        | 96.50%    |

DISCUSSION

Since 1997, global healthcare leaders are cautiously awaiting the emergence of a new influenza pandemic. It seems that thus far, the current H1N1 pandemic is not the realization of the fears of a worst case 1918-like scenario, as may have been the case should there have been an H5N1 highly pathogenic avian influenza HPAI-borne outbreak.

In this study, 61% of them belonged to the age group of 20-35, 24.5% of them were between 35-50 years of age and 14.5% of them were elderly people with age group between 50-65 years. The majority of the women were Housewives with 44.5%, followed by Employees with 32.5%, which was followed by Labours with 17.5%, followed by people who did Local Business with 4.5% and Agricultural Workers were the least and about 1%.
To reduce disease transmission, efforts to reduce crowding and close contact and to minimize gatherings of people are critical. Interventions aimed at reducing close physical contact depend on individual behaviour, community mobilization, implementation of national policy, and cultural norms. To be most effective, these interventions should be implemented early, targeted to
settings where high transmission is likely (e.g. schools) and layered to provide multiple levels of prevention activities. All people should be encouraged to remain at home (voluntary isolation) as soon as symptoms develop, and to restrict close contact with others.

Household contacts of patients with respiratory illness should be encouraged to remain at home (voluntary quarantine) and avoid contact with the patient - unless they are the designated caregiver. Gatherings of children (e.g. schools and child-care facilities) may need to be closed, sporting events postponed, etc. Contact of adults, such as in the workplace and places of worship, should be reduced as much as is feasible; large public gatherings should be discouraged, including funerals. If funerals and other ceremonial/religious events do proceed, close contact should be minimized.

In addition, population movements to and from communities should generally be discouraged, and movement of both symptomatic patients and staff should be avoided. Food and water distribution should be decentralized as much as feasible to discourage large gatherings of people. One designated healthy member of a household might be assigned to water/food collection. Delivery of goods and services to the place of residence is preferred if possible.

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