

# A STUDY OF THE KNOWLEDGE, ATTITUDE & PRACTICE REGARDING H1N1 AMONG THE RESIDENTS OF SURENDRANAGAR CITY

Shashwat Nagar<sup>1</sup>, Darshan Mahyavanshi<sup>1</sup>, SS Nagar, Noopur Nagar<sup>1</sup>, Girija Kartha<sup>1</sup>

<sup>1</sup>Department of P & SM, CU Shah Medical College, Surendranagar, Gujarat, India

<sup>2</sup>Department of P & SM, GCS Medical College, Ahmedabad, Gujarat, India

Correspondence to: Shashwat Nagar (ssn.9982@gmail.com)

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## ABSTRACT

**Background:** H1N1 virus has caused a major pandemic worldwide creating a global havoc. The Infection till now has claimed over 14,000 lives. Even after the declaration of the end of pandemic there are still epidemics & sporadic cases reported from many parts of India, which shows that the lacunae left in the awareness among the people.

**Aims & Objective:** (1) To find out the awareness regarding H1N1 influenza among urban population of Surendranagar. (2) To elucidate the correlation of the awareness with the socio demographic characteristics.

**Material and Methods:** Sample selection was by simple random technique & size of the sample was 742. A cross sectional house to house survey was carried out. The obtained data was analyzed using SPSS for windows.

**Results:** Out of the 742 subjects, 272 were males and 470 females with mean age of  $37.31 \pm 17.58$ . Out of the total no. of subjects, only 430 (57.95%) had heard of swine flu. Majority of the families (70.88%) were from Social Class 1 (Modified Prasad's Classification). Out of those who had heard of swine flu, 43.48% of the individuals knew that the disease transmission was through Coughing, sneezing and airborne. About 42.99% of subjects knew about the major symptoms like fever, coryza and dyspnoea.

**Conclusion:** There was a large no. of individuals in the population who had not heard of swine flu, indicating that in spite of the health education; there has been some loophole in conveying the knowledge regarding the disease to the people, showing an urgent need of more large scale IEC activities.

**KEY-WORDS:** KAP; H1NI Influenza; IEC; Pandemic; Social Distancing; Respiratory Etiquette

## Introduction

Swine flu, which is caused by novel H1N1 virus, lead to the major pandemic in 2009 which shook the world. After the 1<sup>st</sup> description of the virus which caused the pandemic in 2009, it created a global havoc. With the declaration of the outbreak as a pandemic by the WHO and CDC in June 2009, the infection claimed over 14,000 lives and started wavering off by November with the quick decline in the no. of cases by May 2010. Even after the declaration of the end of pandemic by the director general of WHO on 10<sup>th</sup> August 2010 there have been epidemics & sporadic cases reported from many parts of India even in 2011 and 2012, which shows that the lacunae in the awareness among the people. This study was aimed at finding out the awareness of swine flu among the urban residents of Surendranagar regarding its transmission, prevention and treatment.<sup>[1-6]</sup>

## Aims and Objectives

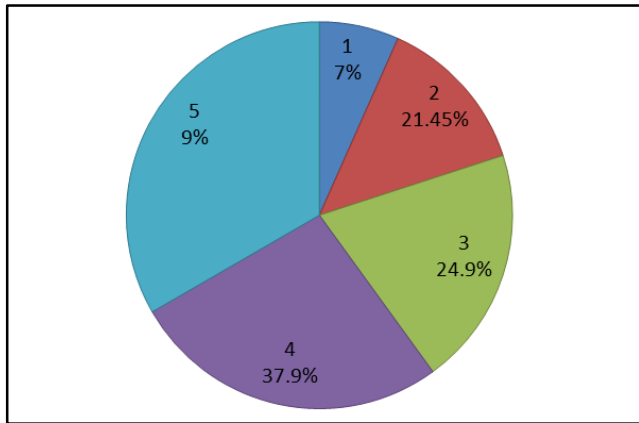
1. To assess the Knowledge, Attitude & Practice regarding H1N1 influenza among residents of Surendranagar City.
2. To explicate the association of the findings with the socio-demographic data of the subjects.

## Materials and Methods

Out of all the wards in the city, Ward No. 12 was randomly selected using simple random sampling. The size of the sample was 742 which was 0.5% of the total ward population. A cross sectional house to house survey was carried out including all the members (aged >10yrs) present at the time of the visit. Data was collected by directly questioning the subjects using a predesigned and pretested questionnaire. The obtained data was analyzed using SPSS for windows statistical software.

## Results

When the Social class of the subjects was assessed as per the modified Prasad's Classification of 2009, it was seen that about 7% of the families surveyed were from Social class 1 and the majority were from social class 4 and 3 i.e. 37.9% & 24.9% respectively.



**Figure-1: Social Class of the Subjects Using Modified Prasad's Classification (N=261, AICPI=741)**

**Table-1: Distribution of the Subjects as per their Age (N=742)**

Age Group	Males		Females		Total	
	No.	%	No.	%	No.	%
<20	58	21.32	61	12.97	119	25.31
20-40	92	33.82	215	45.74	307	41.37
40-60	76	27.94	118	25.10	194	26.14
>60	46	16.91	76	16.17	122	16.44
<b>Total</b>	<b>272</b>	<b>36.65</b>	<b>470</b>	<b>63.34</b>	<b>742</b>	<b>100</b>

Out of the 742 subjects, 272 were males and 470 females with mean age  $37.31 \pm 17.58$  yrs and median age 33 yrs. Majority of the subjects were young adults from the age group 20 - 40yrs and the percentage of geriatric subjects in the study sample was nearly 17%.

**Table-2: Distribution of the Subjects as per their Education (N=742)**

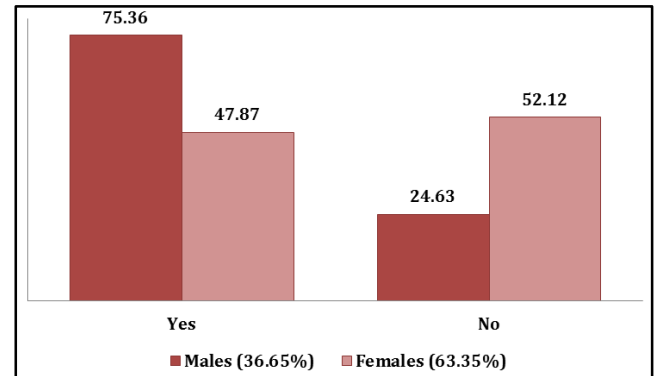
Education	Males		Females		Total	
	No.	%	No.	%	No.	%
Primary	77	28.3	135	28.72	212	28.57
Secondary	76	27.94	91	19.36	167	22.50
Higher Secondary	38	13.97	38	8.08	76	10.24
Graduate	36	13.23	33	7.02	69	9.29
Post Graduate	7	2.57	12	2.55	19	2.56
Doctorate	0	0	1	0.21	1	0.13
Illiterate	38	13.97	160	34.04	198	26.68
<b>Total</b>	<b>272</b>	<b>100</b>	<b>470</b>	<b>100</b>	<b>742</b>	<b>100</b>

Nearly 16.17 % of the subjects were students either in school or college. Most of the females (34.4%) were illiterate & males (28.3%) had been educated up to primary school (Table 2). Majority

of the males (26.83%) were labourers (skilled & unskilled) & females (47.97%) were housewives (Table 3).

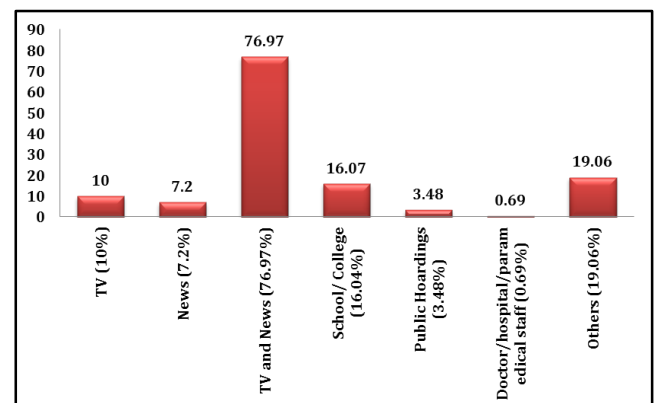
**Table-3: Occupation wise Distribution of the Subjects (N=742)**

Occupation	Males		Females		Total	
	No.	%	No.	%	No.	%
Unemployed/Retired	102	37.5	439	93.40	541	72.91
Skilled/Unskilled Labourers	89	32.72	21	4.46	110	14.82
Service Class	41	15.07	7	1.48	48	6.46
Professional/Semi-Professiona	40	14.70	03	0.63	43	5.79
<b>Total</b>	<b>272</b>	<b>100</b>	<b>470</b>	<b>100</b>	<b>742</b>	<b>100</b>



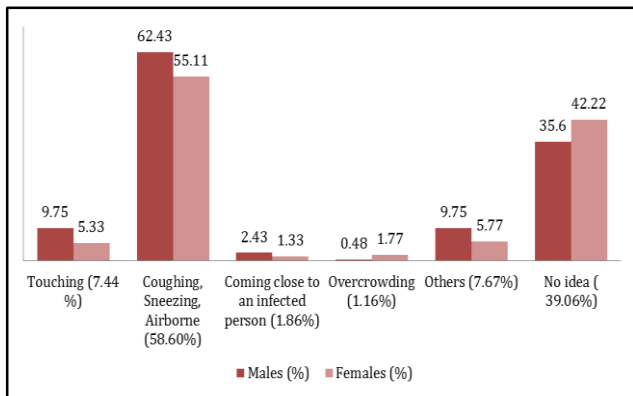
**Figure-2: Subjects who had Heard of "Swine Flu" (N=742)**

Out of the total no. of subjects, only 430 (57.95%) had heard of swine flu majority of whom were males (75.36%). About 52.12% of the females had not heard of it. The difference in the awareness levels of males and females regarding swine flu was found statistically highly significant using Z test ( $P < 0.0001$ ) (Figure 2). About 77% of the subjects had heard of swine flu from TV & News. Around 16.17% of the individuals who were studying had received information about the disease from their school/college. Alarming, <1% of the subjects had heard about the disease from doctors, hospitals or some paramedical staff (Figure 3).



**Figure-3: Source of Information regarding Swine Flu (N=430) (Others: Social gathering, friends, family etc.)**

When questioned regarding the mode of transmission, about 58.6% of the individuals who had heard of the disease knew that the mode of transmission was airborne, but 39.6% of the subjects didn't know how it got spread (Figure 4).



**Figure-4: Knowledge regarding the Modes of Transmission of Swine Flu (N=430)** (Others: contaminated water, atmosphere, impurity in food etc.)

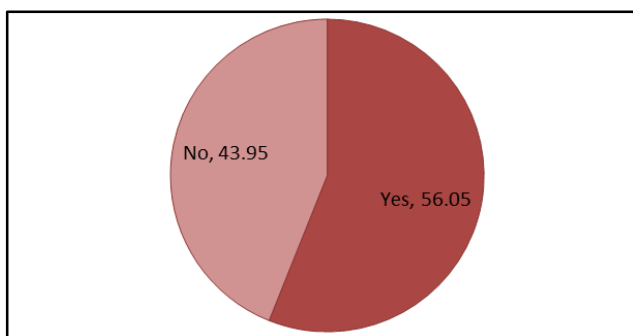
Approximately 33% of the subjects knew about Coryza & 22% about Fever as major signs and symptoms of the disease. About 65% who had heard of the disease had no idea regarding the signs and symptoms of the disease (Table 4).

**Table-4: Distribution of the Subjects according to their Knowledge of Signs/Symptoms (N=430)**

Symptom	Male		Female		Total	
	No.	%	No.	%	No.	%
Coryza	71	34.63	73	32.44	144	33.48
Fever	51	24.87	44	19.55	95	22.09
Dyspnea, bodyaches & Headaches	19	9.26	11	4.88	30	6.97
Others	14	6.82	7	3.11	21	4.88
No idea	128	62.43	151	67.11	279	64.88

**Table-5: Practices of the Subjects for the Disease Prevention (N=430)**

Preventive Practices	Males		Females		Total	
	No.	%	No.	%	No.	%
Respiratory etiquette	105	51.21	100	48.78	205	27.62
Cover nose & mouth during other's cough and sneeze	29	39.72	44	61.28	73	9.83
Social distancing	25	48.07	27	51.93	52	7
Regular hand washing	4	40	6	60	10	1.34



**Figure-5: knowledge regarding Methods of Prevention from Swine Flu**

Nearly 44% of the subjects had no idea regarding the various methods by which one can prevent from contracting the illness (Figure 5 & Table 5).

About 28% of the subjects showed good health practices by practicing respiratory etiquette and 10% practiced covering of nose & mouth at other's cough & sneezes. About 7% practiced social distancing and just 2% washed their hands regularly. About 7% of the subjects had heard of the vaccine for swine flu & out of them only 44% knew that it was available to the general population. When asked about maintaining a distance of 1.3 meters from a patient or person having flu like symptoms, only 22% followed it; majority being males (62.5%). Almost all of the subjects had no idea if the disease transmission was related to pork consumption which again showed a lacuna in awareness among them. The health awareness and health practices of the subjects were categorized as good, average and poor and there after an association was sought between with education & occupation.

The health awareness was categorized individually in 3 heads - Knowledge regarding transmission, signs/symptoms & prevention of the disease. An average of all the 3 heads was taken to compute the percentage of subjects with good, average and poor knowledge.

The health practices were categorized as good average and poor in the following way: (1) Good practices: Following respiratory etiquette, Covering nose & mouth at others cough & sneeze, social distancing at the time of epidemics; (2) Average practices: Hand washing, Staying distant from a person having flu like illness, taking care of hygiene; (3) Poor practices: Not following any of above

**Table-6: Association of Level of Knowledge with Education of Subjects (N=430)**

Knowledge	Education*			Total
	Illiterate	Primary & Secondary	Higher Secondary & above	
Good	13	51	92	156
Average	09	22	29	60
Poor	18	164	32	214
<b>Total</b>	40	237	153	430

\* Chi squared test ( $\chi^2=90.678$ ,  $df=4$ ,  $P<0.0001$ ): Higher the education better was the level of awareness regarding swine flu.

**Table-7: Association of Level of Knowledge with Occupation of Subjects (N=430)**

Knowledge	Occupation*			Total
	Unemployed/Student/Not working	Skilled/Unskilled Workers	Service/Professional/Semi-professional	
Good	69	39	48	156
Average	32	08	20	60
Poor	180	27	7	214
<b>Total</b>	<b>281</b>	<b>74</b>	<b>75</b>	<b>430</b>

\* Chi squared test ( $\chi^2=81.361$ ,  $df=4$ ,  $P<0.0001$ ): Higher professions to labor class, the level of awareness regarding swine flu got decreased.

**Table-8: Association of Preventive Practices with Education of Subjects (N=430)**

Health Practices	Education *			Total
	Illiterate	Primary/Secondary	Higher Secondary & above	
Good	8	54	88	150
Average	3	17	53	73
Poor	29	166	12	207
<b>Total</b>	<b>40</b>	<b>237</b>	<b>153</b>	<b>430</b>

\* Chi squared test ( $\chi^2=158.762$ ,  $df=4$ ,  $P<0.0001$ ): Higher the education better was the preventive practices for swine flu.

**Table-9: Association of Level of Knowledge with Occupation of Subjects (N=430)**

Health Practices	Occupation*			Total
	Unemployed/Student/Not working	Skilled/Unskilled Workers	Service/Professional/Semi-professional	
Good	54	44	52	150
Average	39	21	13	73
Poor	188	9	10	207
<b>Total</b>	<b>281</b>	<b>74</b>	<b>75</b>	<b>430</b>

\* Chi squared test ( $\chi^2=124.68$ ,  $df=4$ ,  $P<0.0001$ ): Higher professions to labor class, the preventive practices regarding swine flu got decreased.

## Discussion

In a study conducted by Kamate et al 83% of the subjects had heard of swine flu (higher than present study of 58%).<sup>[1]</sup> In the same study 38.6% of the subjects had heard of swine flu from TV which is around more than 80% here. A study conducted by viveki RG et al showed that 88.8% of the screening booth visitors had heard of swine flu.<sup>[7]</sup>

In a study conducted by Kumar et al it was noticed that 72% of the subjects learned about swine flu from TV. In the same study >80% of the subjects thought that touching nose and mouth without washing hands and other poor hygienic practices can transmit the disease compared to 7.5% in the present study.<sup>[8]</sup> In viveki et al, 64% of subjects

had heard from Newspaper which is almost similar to present study, nearly 61% had heard from TV which is much less than the present study and nearly 44% from public hoardings which is much higher than the present study.<sup>[9]</sup>

In the present study nearly 33% of the subjects knew about the major signs & symptoms of the disease which is higher than V Chaudhary et al where 20% of males & 16% of females knew about coryza & other major signs & symptoms.<sup>[8]</sup>

In Kumar et al it was seen that 70% knew that mask can prevent the spread of the infection (40% in the present study). In the above study almost 40% of the subjects used to wash their hands regularly which was <2% in present study. In the above study nearly 94% of the respondents maintained a respiratory etiquette in the above study which was very high compared to <28% in the present study. Some of these differences observed could be because of the socio demographic differences in the populations.

## Conclusion

From the study it was evident, that there was a large No. of individuals in the study who had not heard of swine flu. Also, there was an inadequate knowledge regarding modes of transmission and prevention of Swine flu. This clearly shows that there is a lack of penetration by the system in creation of awareness. Also it was seen that a large amount of information which was conveyed, didn't percolate into the masses showing an imperative need for large scale IEC activities through various Health education programmes & film shows. The basic role of illiteracy especially among women known since ages is still awaiting proper remedies. Unless this lacuna is filled up, it is difficult to disseminate knowledge among the people. There is thus an exigent need to make active measures to curb illiteracy. Along with creating awareness an Improvement in the general hygiene practices persists to be a serious concern. We need to convince the masses to adopt good hygiene practices for the prevention of any epidemic/ pandemic. Use of TV & Newspapers as an effective media to dissipate information must be utilized to maximum. Film shows interspersed with information & posters regarding Dos &

Don'ts of curative & preventive practices should be exhibited to help people gain the information about the disease.

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