

## An Evaluation of Knowledge, Attitude and Practices Among Dental Interns of Odisha on Swain Flu.

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### Abstract:

**Context-** Influenza is few of the most contagious disease with attack rate of 5% to 20%. The transmission is via droplet and dental professional work in close proximity of patient's oral cavity. This put dental professionals, in particular intern, at risk of being infected by H1N1 influenza.

**Objectives-** To assess knowledge attitude and practice regarding H1N1 influenza among inter.

**Methods-** A self-administered semi-structured questionnaire was used to survey all the interns present on the day of study and were willing to participate, in all dental colleges of Odisha.

**Results-** Among males, 58.67% had high level of knowledge and 41.33% had low level of knowledge and among females 66.47% had high level of knowledge and 33.53% had low level of knowledge. It was seen in this study that interns who had higher knowledge had better attitude towards prevention of swine flu and knowledge to attitude score was significantly correlated ( $r=0.2464$ ). It was also inferred that interns who had better attitude, practiced more towards the prevention of swine flu and attitude to practice score was significantly correlated ( $r=0.5471$ ).

**Conclusions-** It was found in this study that more than half of the dental interns had satisfactory knowledge regarding H1N1 influenza (swine flu), and interns with good level of knowledge had more positive attitude towards the preventive measures regarding H1N1 influenza (swine flu).

**Key Words:** Influenza, H1N1, Swain flu, Dental Intern, Bhubaneswar.

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### I. Introduction

Influenza is a non-predictable virus that spreads throughout the world. Usually it affects 5% to 20% of the population, but sometimes due to antigenic shift, a pandemic occurs affecting a larger proportion of the human population.<sup>(1)</sup> Although influenza occurs all over the world with attack rate of 5% to 10% and 20% to 30% among adults and children respectively.<sup>(2)</sup> In April 2009 a new strain of influenza virus, 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 compelled WHO to raise its pandemic alert level to phase 5, which was subsequently raised to phase 6, indicating that a full global pandemic was underway. On 6th August 2009 the WHO reported 1, 77,457 laboratory confirmed cases of influenza and 1462 deaths.<sup>(3)</sup>

Influenza spreads through droplets which are generated when infected individuals cough or sneeze. Aerosol transmission is major mode of transmission. Transmission can occur through direct and indirect contact with respiratory secretions.<sup>(4)</sup> These above circumstances put dental professionals, in particular intern, at risk of being infected by H1N1 influenza. Therefore this study was conducted to identify the knowledge, attitude and practice associated with H1N1 and to find out, if any, difference in KAP between genders.

### II. Methodology

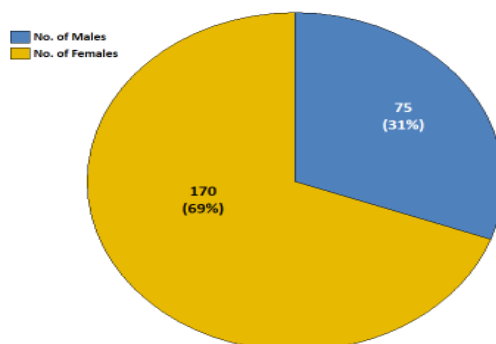
A cross sectional study was conducted in Cuttack and Bhubaneswar, Odisha in February and March 2016 to assess knowledge and practice about swine flu. All four dental colleges of Odisha were taken and the participants were Interns from these colleges. Before commencement of study approval was obtained from the Institutional Ethical Committee and from the authorities of the other dental institutions to conduct the study. Written informed consent was obtained from the interns interested to participate in the study. The names of interns and institutions were kept confidential during analysis. A pre-designed pre-tested semi-structured questionnaire was used to access information about their knowledge, attitude and practice regarding H1N1. The questionnaire had ten questions for each variable. Universal sampling technique was used, all interns who were willing to participate and were present on the day were taken in this study. During analysis not properly filled questionnaire were excluded from analysis. With total strength of 251 interns in Odisha, 3 were absent on the day

of study, 2 were partially filled and 1 intern was unwilling to participate. Hence data 245 inters was analyzed. Mean Content Validity Ratio (CVR) was calculated as 0.87 based on the opinions expressed by a panel of total five academicians. Face validity was assessed among 25 interns and it was observed that 92% of the participants found the questionnaire to be easy. Statistical analysis was done by using t-test, chi-square test and Karl Pearson co-efficient correlation test. SPSS version 16.0 system was used for analysis.

### III. Results

Out of total 251 interns 245 participants response were analyzed, of which 75(31%) were males and rest were females. [Fig1].

**GENDER WISE DISTRIBUTION ON PARTICIPANTS**



The mean knowledge index score among females was higher (67.65%) as compared to males (67.07%). Mean percentage for knowledge was found to be equal among both the genders whereas, mean attitude and practice was higher among female inters. As for safe practices the data is statically significant.[Table1]

**Table-1** Comparison of male and female with mean percentage of knowledge, mean percentage of attitude and mean percentage of practice by t- test

| Variable      | Sex    | n   | Mean  | SD    | SE   | t-value | P-value |
|---------------|--------|-----|-------|-------|------|---------|---------|
| Knowledge (%) | Male   | 75  | 67.07 | 15.75 | 1.82 | -0.3215 | 0.7481  |
|               | Female | 170 | 67.65 | 11.63 | 0.89 |         |         |
| Attitude (%)  | Male   | 75  | 51.60 | 21.01 | 2.43 | -1.5763 | 0.1163  |
|               | Female | 170 | 55.38 | 15.41 | 1.18 |         |         |
| Practice (%)  | Male   | 75  | 73.60 | 23.46 | 2.71 | -2.1438 | 0.0330* |
|               | Female | 170 | 78.53 | 12.44 | 0.95 |         |         |
| *p<0.05       |        |     |       |       |      |         |         |

In association between gender with level of knowledge it was found that among males, 31(41.33%) had a low level of knowledge and 44(56.67%) had a high level of knowledge. Among females, 57(33.53%) and 113 (66.47%) had low and high level of knowledge respectively. [Table-2]

**Table-2** Association between genders with levels of knowledge

| Gender              | Low Level | %      | High Level | %      | Total     |
|---------------------|-----------|--------|------------|--------|-----------|
| Male                | 31        | 41.33% | 44         | 58.67% | 75(100%)  |
| Female              | 57        | 33.53% | 113        | 66.47% | 170(100%) |
| Chi-square = 1.3771 |           |        | p = 0.2406 |        |           |

In the level of attitude among males, 38 (50.67%) had high attitude level and 37 (49.33%) had low attitude level. Among females, 92 (54.12%) had high attitude and 78 (45.88%) had low attitude level. [Table-3]

**Table-3** Association between genders with levels of attitude

| Gender              | Low Level | %      | High Level | %      | Total     |
|---------------------|-----------|--------|------------|--------|-----------|
| Male                | 37        | 49.33% | 38         | 50.67% | 75[100%]  |
| Female              | 78        | 45.88% | 92         | 54.12% | 170[100%] |
| Chi-square = 0.2491 |           |        | p = 0.6179 |        |           |

In association between gender with their level of practice it was found that among females, 99 (58.24%) had a high practice level and 71 (41.76%) had low practice level. Among males, 42 (56.00%) had a high practice level and 33 (44.00%) had a low practice level. [Table-4]

**Table-4** Association between genders with levels of practice

| Gender              | Low Level | %      | High Level | %      | Total     |
|---------------------|-----------|--------|------------|--------|-----------|
| Male                | 33        | 44%    | 32         | 56%    | 75[100%]  |
| Female              | 71        | 41.76% | 99         | 58.24% | 170[100%] |
| Chi-square = 0.1061 |           |        | p = 0.7442 |        |           |

It was seen in this study that interns who had higher knowledge had better attitude towards prevention of swine flu, and knowledge to attitude score was significantly correlated ( $r=0.2464$ ) It was also inferred that interns who had better attitude practiced more towards the prevention of swine flu and attitude to practice score was significantly correlated ( $r=0.4571$ ). [Table-5]

**Table-5** Correlations among knowledge, attitude and practice by Karl Pearson’s correlation coefficient methods

|               | Knowledge (%) | Attitude (%) | Practice (%) |
|---------------|---------------|--------------|--------------|
| Knowledge (%) | -             | -            | -            |
| Attitude (%)  | $r=0.2464^*$  | -            | -            |
| Practice (%)  | $r=-0.0084$   | $r=0.4571^*$ | -            |
| *p<0.05       |               |              |              |

#### IV. Discussion

In the present study, all the participants knew about H1N1 influenza (swine flu) which was similar to the findings of Karan Prakash Singh et al.<sup>[1]</sup> Nearly 37.14% participants believed that they had up-to-date knowledge regarding H1N1 influenza compared to 54.5% in the study by SealeH.et.al.<sup>[5]</sup> In study of Karan Prakash Singh et al.<sup>[1]</sup> 96% of the students avoided going to crowded places, whereas in present study 47.35% participants avoided going to crowded places during swine flu.

In the study conducted by AA Fatiregun, SA Olowookere and AO Oyebeda<sup>[6]</sup> 83.5% of healthcare workers agreed that isolating patients is an important measure in preventing swine flu. In present study 51.84% interns agreed that patient isolation is an important measure in preventing swine flu. Study by Askarian M et.al<sup>[7]</sup> in Iran found that 44% of participant agreed that isolation is always required for H1N1 patients. In a study conducted by Luciana Albano et al<sup>[8]</sup> 36.1% correctly knew the modes of transmission. In contrary the result of present study shows 83.67% knew the transmission of swine flu.

In a study conducted by Obaghe Edeghere et al.<sup>[9]</sup> 80% of respondents reported that they always wore a surgical mask and gloves during consultation. In contrary the results of present study shows 51.84% respondents submitted use of personal protective measure on every consultation.

In a study conducted by Xiaoyun Hu et al.<sup>[10]</sup> 56% of respondents reported having received training program of pandemic influenza before they attended H1N1 patients so most of the respondents i.e. 95% reported that they always washed their hands before every consultation and all respondents i.e. 100% after consultation. In contrary the results of present study showed that 78.78% responded positively regarding frequent hand washing during H1N1 pandemic and 65.31% adhered to guidelines for preventive measures issued by government. Training is important strategy for transferring technical knowledge into the action on the ground.<sup>[11]</sup> Thus proper training could play significant role in containing influenza spread.

In a study conducted by Omer Evirgen1 et al<sup>[12]</sup> 63.7% of health care workers thought that they are under risk of acquiring H1N1 influenza infection which is in accordance to the present study where 71.84% agreed that they are at risk of acquiring H1N1 influenza infection. In a study conducted by S.Puri et al.<sup>[13]</sup> the level of awareness, in nurses, about how to kill the H1N1 influenza virus was good. Although most used alcohol-based rubs result of present study showed 63.27% respondents favored using of alcohol based sanitizers during swine flu pandemic.

O.Evigen reported less knowledge about the management of linens, utensils and dishes of swine flu patients. Many participants thought that they had to be washed separately (82.1% of nurses, 58.4% of medical

students and 20.2% of resident doctors). However, 79.8% resident doctors knew that they could be washed together with items from patients without swine flu. In contrary the results of present study showed that 84.49% respondents advised for handling patient's linen/laundry separately.

## V. Conclusion

The knowledge about swain flu is good among more than half of the participants. Interns with good level of knowledge had more positive attitude towards the preventive measures regarding H1N1 influenza. Regular training using motivational methods and designs may change the knowledge and attitude which in-turn will change their behavior.

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