PREPAREDNESS OF RURAL POPULATION TOWARDS SWINE FLU (H1N1) – A COMMUNITY BASED STUDY

Dr. Ravindra H N

Professor,

Sumandeep Nursing College,

Sumandeep Vidyapeeth deemed to be University, Piparia, Waghodia,

Vadodara, Gujarat, India.

Corresponding Author

Dr. Ravindra H N

Professor,

Sumandeep Nursing College,

Sumandeep Vidyapeeth deemed to be University,

Piparia, Waghodia, Vadodara, Gujarat-391760

Ph .No: +91-*7567253559*

E-mail: *ravindrahn23@rediffmail.com*

ABSTRACT

BACKGROUND OF THE STUDY: Swine flu is a type of virus infection (influenza A). In 2009, the disease spread through large parts of the world, from the US and Argentina to India. National Centre for Disease Control, Ministry of health and family welfare, India, data show that Rajasthan, with at least 5,076 confirmed cases and 206 deaths, has the highest prevalence of the disease in the country in 2019, followed by Gujarat (4,839 cases and 151 dead) and New Delhi (3,598 cases; 31 dead). Health professionals also under diagnose the disease as signs and symptoms are similar to common flu.

AIM OF THE STUDY: The study aimed to assess the knowledge of rural population regarding swine flu and to enhance the knowledge through Mass health education.

MATERIAL AND METHODS: The present study was a community based study with non-experimental Descriptive research design, carried out among 636 adults aged between 18 – 65 years. The data was collected through structured knowledge questionnaire and was tabulated and analyzed by using descriptive and inferential statistics.

RESULTS: The result revealed that 63.52% of the samples had adequate knowledge, 21.38% of the population had moderately adequate knowledge and 15.09% of them had inadequate knowledge regarding knowledge on prevention of swine-flu.

CONCLUSION: The Study disclosed that, some knowledge gaps existed in the rural population regarding preventive aspects of swine flu. Therefore, there is a need for conducting repeated mass health education programme regarding deadly infectious diseases in various settings.

KEYWORDS: Community preparedness, Knowledge, Mass health Education, Swine-flu

INTRODUCTION

Influenza is an acute respiratory tract infection caused by influenza virus, of which there are 3 types- A, B and C. All known pandemics were caused by influenza-A strains. The disease is characterized by sudden onset of chills, malaise, fever, muscular pains and cough. More recently, influenza A (H1N1) virus of swine origin emerged in Mexico during the spring of 2009 and was given name – pandemic influenza A (H1N1) 2009 virus.[1] It occurs in all countries and affects millions of people every year. Its behaviour is unpredictable. It may smoulder in a community without clinical recognition, being manifest only by serological surveys. It may occur in pandemics every 10-40 years due to major antigenic changes, as occurred in 1918 (Spanish influenza), 1957 (Asian influenza), and 1968 (Hong Kong influenza).[2] Worldwide, the annual epidemics are estimated to result in about 3-5 million cases of several illness and above 250000 to 500000 deaths.

The unique features of influenza epidemics are the suddenness with which they arise, and the speed and ease with which they spread. The short incubation period, large number of subclinical cases, high proportion of susceptible population, short duration of immunity, and absence of cross-immunity, all contributes to its rapid spread.[3] In epidemiological terms, the hallmark of an influenza is the excess mortality that it causes combined with an enormous burden of ill-health that saps the energy of individuals, families and communities throughout the whole world.[4]

The pandemic influenza A ((H1N1) 2009 virus differs in its pathogenicity from seasonal influenza in two key aspects. First as the majority of human population has little or no pre-existing immunity to the virus, the impact of the infection has been in a wider age range, in particular among children and young adults, Secondly, the virus can infect the lower respiratory tract and can cause rapidly progressive pneumonia, especially in children and young to middle aged adults. Following its emergencies in March 2009, pandemic A (H1N1) 2009 virus spread rapidly throughout the world, leading to the declaration of an influenza pandemic by WHO on 2009.[5] The world is now in post-pandemic period. In India it causes local outbreaks.

During 2014, India reported 937 cases and 218 deaths, a case fatality rate of 23.2 percent.[6] Based on knowledge about post-pandemics, the (H1N1) 2009 virus is expected to continue to circulate as a seasonal virus for some years to come. While level of concern is now greatly diminished, vigilance on the part of national health authorities remains important, when the behaviour of H1N1 virus as a seasonal virus cannot be reliably predicted.[7] On 26th September 2011 WHO has adapted a new nomenclature as influenza A (H1N1) pdm09.[8] Public and political awareness of the ever-present potential of a worldwide pandemic needs to be strengthened. Despite this century's pandemics, influenza remains a poorly understood and appreciated infection. Knowledge regarding swine flu is crucial to control and prevent the outbreak of this disease and also to protect from illness.

AIM OF THE STUDY: The study aimed to prepare the rural population to prevent from swine Flu through mass health education program

REVIEW OF LITERATURE

Singh, I., Munjal, S., Kumar, M., Jha, M., Gambhir, R. S., & Talukdar, B. (2019) conducted a cross-sectional study among 255 private dentists practicing in the Tricity to assess knowledge and awareness regarding swine flu. A self-administered, anonymous, multiple choice type questionnaire was administered to gather information. The questionnaire contained 12 questions on knowledge and awareness regarding swine flu keeping in view the time constraints. Statistical analysis was done using ANOVA and t-test. Awareness regarding mode of transmission of swine flu were reported positively by 88.5% of subjects. About 24.6% of subjects reported about having encountered a swine flu patient at their clinic. Preventive measures to prevent spread of swine flu were known to 71.2% of subjects. Statistically significant association of mean knowledge scores was noted with education level (P = 0.015) and working profile (P = 0.017) of the subjects. The results showed that some knowledge gaps existed among dentists regarding some important aspects of swine flu. Therefore, there is an urgent need for training and continuous education programs regarding infectious diseases.[9]

Hasan, F., Khan, M. O., & Ali, M. (2018) conducted a descriptive, cross-sectional study to evaluate the swine flu-related knowledge, attitudes and practices of the medical and dental students at various institutions in Karachi, Pakistan among 613 students that were available on the dates of this survey, keeping a medical to dental student ratio of 75:25. All students from first to final year comprised of the study population, and no internists or medical personnel were included. The questionnaire was divided into three sections, namely knowledge, attitudes and, practices. All questions were based on a multiple choice format. The data were entered and interpreted using the IBM Statistical Package for the Social Sciences 23.0 (IBM Corp., Armonk, New York).The majority of the students were aware that the swine flu is a transmittable disease (n=485, 80.8%). Most students identified the signs and symptoms correctly; however, diarrhea (15.5%) and vomiting (32.2%) were the least correct answers (n=93, n=193 respectively). Most of the preventative measures were reported accurately by the participants. Despite this, only 15.5% students (n=93) reported the use of a facemask when suffering from fever, cough and a runny nose. There is a dire need for the routine integration of the awareness and management programs in the medical and dental schools. There exists a gap between the policy and practice, and it is high time we bridge the divide. The students should also be vaccinated annually for influenza A.[10]

METHODOLOGY

The present study was conducted by using pre experimental one group pre-test Post-test research design. The population consisted of all the people who were residing at rural areas of Waghodia (India). Out of whom 636 rural people aged between 18-65 years were selected as a sample by using simple random sampling technique.

The data collection tool included two sections, the first one consisted socio demographic characteristics such as Age, Income, Education, and occupation of the samples and the second one was structured knowledge questionnaire for measuring the knowledge on prevention of swine flu. The total score was calculated by summing up the answers given to the questions and categorized as adequate knowledge, moderately adequate knowledge and inadequate knowledge. The reliability of the self structured questionnaire was measured by using split half correlation. The correlation

coefficient for these data is +0.85.The split half correlation of +.80 or greater generally considered good internal consistency.

DATA COLLECTION AND ANALYSIS PROCESS

The samples were identified by simple random sampling from rural areas of Waghodia. Prior to the data collection, the investigator familiarized him with the subjects and explained the purpose of the study. He requested all the participants' full cooperation and assured them the confidentiality of their response. An informed consent was obtained from the consent. Once the subject was ease and comfortable pretest structured questionnaire were issued, to assess the existing level of knowledge regarding prevention of swine flu. The average time taken for the pretest was 25 minutes by samples. Subsequently the mass health education program was organized by dividing the samples into small groups and appropriate pedagogy such as demonstration, structured video assisted teaching and discussions were followed to sensitize the participants. The mass health education program last for 45 minutes. The post test was conducted on seventh day of the health education program by administering the same tool which was used in pretest

RESULTS

A total of 636 rural people were included in the final study for analysis. Descriptive and inferential statistics both were used to analyzed the data. Out of 636 samples 385 were male and 251 were females. Among the total population, highest percentage (40%) were aged between 19 – 39 years and lowest percentage were observed (10%) below 18 years. In terms of family income, 5000 – 10000 was found to be high and below 20000 was found to be low. It was understood that 50% samples were having primary education and 5% of samples were graduated. and in occupation the highest (50%) were farmers and the lowest samples (5%) were unemployed. The result revealed that 63.52% of the samples had adequate knowledge, 21.38%of the population had moderate knowledge and15.09% of them had inadequate knowledge regarding prevention of swine-flu. It is found that the knowledge level is moderate in rural population after giving mass health education.

TABLE NO. 1: Distribution of knowledge scores of pre-test in rural population.

Sr. No	Category	Level Of Knowledge	Frequency	Percentage
1	0-10	Inadequate	564	88.67%
2	11-20	Moderately Adequate	72	11.32%
3	21-30	Adequate	0	0%

Above table shows that the (88.67) samples were having inadequate knowledge, (11.32%) samples were having moderate and (0%) were having adequate knowledge regarding prevention of swine-flu.

TABLE NO. 2: Distribution of knowledge scores of post-test in rural population.

Sr. No	Category	Level Of Knowledge	Frequency	Percentage
1	0-10	Inadequate	96	15.09%
2	11-20	Moderately Adequate	136	21.38%
3	21-30	Adequate	404	63.52%

Above table shows that the (15.09%) samples were having inadequate knowledge, (21.38%) samples were having moderate and (63.52%) were having adequate knowledge regarding prevention of swine-flu.

Table 3: Comparison of pre-test and post-test knowledge score in rural population.

Variables	Test	Mean	Mean difference	"t" value
Knowledge regarding prevention of Swine- flu	Pre test	6.29	11.33	65.35* Df:635
	Post test	17.62		

*Significance level at 0.05

Above data shows the comparison of pretest and post test knowledge regarding prevention of swine-flu in rural population. It shows overall mean score of knowledge in pretest is (6.29) while after providing mass health education, the score of knowledge was increased up to (17.62). The mean difference between pretest and post test knowledge score is (11.33) shows the positive impact of providing mass health education on sample. The calculated t value is significant at 0.05 level.

Hence, Mass health education programme found to be effective in enhanced the knowledge of rural population.

DISCUSSION:

The present study reveals that there is a significant difference between the pre test and post test knowledge regarding prevention of Swine flu. In post test 63.52% of the samples had adequate knowledge, 21.38% of the population had moderate knowledge and15.09% of them had inadequate knowledge regarding prevention of swine-flu. The result shows that enormous difference in knowledge level before and after administering Mass health education Programme.

A study conducted by Kumar et al, among rural population of Belgaum district, Karnataka in India reported 79.6% of the participants had previously heard about swine flu.[9] Similarly study by Kumari in rural area of Jammu also found that more than 90% had heard of swine flu, knew prevalent season and had knowledge of disease symptoms.[11]

Also other study conducted by Anusha et al reported that more number of participants previously heard of swine flu.[12] In a study conducted by Dayanand et al[13] in Nepal found that, 58.5% people were aware about the swine flu as a communicable disease while Rathi et al reported that 96% of the Vadodara population were aware that influenza is an infectious disease.[14]

Harshal Kawanpure et.al found in their study that Knowledge regarding swine flu was average among rural population of Kollam district, Kerala. Knowledge regarding the route of transmission was concerned 4.69% thought that swine flu spread by eating contaminated pork, 23.92% through food and water, 8.44% through mosquito bite and house flies. Almost 56.33% were aware of the fact that swine flu could spread by inhaling infected aerosols. Availability of treatment and vaccine against swine flu were known to 56.80 % and 55.86% respectively.[14]

CONCLUSION

This study was undertaken to prepare the rural population to prevent from swine Flu through mass health education program. Addressing the inadequate knowledge of rural population is an essential intervention. Hence, the mass health education program included the measures to improve the knowledge of rural population to focus on various aspects of swine flu.

Ethical approval

Since the study involved human subjects, a formal ethical approval received from institutional ethical committee.

Informed Consent

Informed consent was obtained from participants and assured for anonymity.

Declaration of Interest

The author declares that there is no financial and personal relationship with other people and organizations.

Conflict of Interest

None

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