Original Research Article

Knowledge Regarding Prevention and Management of Swine Flu among Students of Selected Schools at Mandi. (H.P)

Authors

Jyoti Bagga¹, Rajani², Parul³, Poonam⁴, Pooja⁵, Nitu⁶, Minal Kumari⁷
¹, ⁷Assistant Professor, Abhilashi College of Nursing, Mandi, H.P. 175008
², ³, ⁴, ⁵, ⁶Post Basic B.Sc., Abhilashi College of Nursing, Mandi, H.P. 175008

Abstract

Introduction: The disease is spread among pigs by direct and indirect contact, aerosols, and from pigs that are infected but do not have symptoms. The swine flu origin Influenza H1N1 Virus that appeared in 2009 and was first found in Mexico is a reassortant with at least three parents. Swine flu is a disease of pigs that can in rare cases can be passed to humans. It is a highly contagious respiratory disease caused by one of much Influenza viruses.

Methodology: A quantitative research approach and descriptive design was used for the study. The study sample size was 150 and the sampling technique used was convenient sampling technique for selecting the sample. The knowledge was assessed by the help of structured questionnaire tool and selected variables included in the study were age, gender, level of education, residence, type of family, family income, nutritional pattern, father education, mother education, heard about swine flu, source of information, swine flu vaccine. Descriptive and inferential statistics were used to analyze the data. Bar, cylindrical, pyramid diagrams were used to depict the finding and to interpret data.

Result: After pretest majority of 97(64.7%) students had average knowledge regarding prevention and management of swine flu. After posttest majority of 127(84.7%) students had good knowledge regarding prevention and management of swine flu. Knowledge regarding swine flu is associated with age of students (P=0.024), source of information (0.010) as calculated by chi-test and t value was significant at 0.05 level. Association of knowledge regarding swine flu with sex (0.611), level of education (0.665) residence (0.106), family (0.976), family income (0.124), nutritional pattern (0.488), father’s education (0.488), mother’s education (0.163), have you heard about swine flu (0.7143), have you taken swine flu vaccine (0.065) as calculated chi-test and t value was non-significant.

Keyword: Knowledge, Students, Swine flu, School.

Need For the Study

“Prevention is better than cure”. The present study aim is to assess the knowledge regarding, prevention and management of swine flu among the student of school. Swine flu is a emerging viral infection that is present global public health problem. This infection can be seen around the world in present day .This infection is a kind of variant of H1N1 infection. Swine flu, also called as pig influenza, Hog flu, Pig flu. Influenza occurs in all countries and affects millions of people every year. The influenza viral strain implicated in 2009 flu pandemic in India was earlier refer to as swine flu because initial
testing showed many of gene in the virus. A cross sectional descriptive study was conducted to assess the knowledge and practices related to swine flu in school student of Bhavnagar Gujarat. Result showed that almost all school students have heard about swine flu disease and 66% knew about the causative agent. TV, friends, relatives were the most common source of information. There is a strong felt need to conduct study to create awareness among students regarding swine flu and make contribution in reducing the spread of H1N1 influenza virus.

**Objectives**

1) To assess the knowledge regarding swine flu among school students.

2) To assess the effectiveness of video assisted teaching on knowledge regarding swine flu among students.

3) To determine the association between knowledge scores with selected demographic variables.

**Assumptions**

1) Students may have different knowledge regarding swine flu.

2) Structured questionnaire can be appropriate tool for measuring knowledge regarding swine flu.

3) Student will give honest responses on structured questionnaire.

**Methodology**

The research methodology includes strategies to be used to collect and analyzed the data to accomplish the research objectives. The methodology of research indicates the general pattern for organizing the procedure for gathering valid and reliable data for an investigation. The chapter deals with the methodology adopted for the study. It include research approach, research design, setting ,sample and sampling technique, development and description of tools, pilot study ,data collection and plan of data analysis.

The present study carried out to assess the effectiveness of video assisted teaching on knowledge regarding prevention and management of swine flu among students of selected school.

**Development and description of tools**

**Section-A**: Selected demographic variables of school students.

It consists of items regarding selected variables. The selected variables included in the study were age, gender, level of education, residence, type of family, family income, nutritional pattern, father education, mother education, heard about swine flu, source of information, swine flu vaccine.

**Section-B**: Structured questionnaire for swine flu.

This part consists of structured knowledge questionnaire tools to assess the knowledge regarding swine flu among school students. In questionnaire tool 28 items was set.

**Table - 3.1 Scoring Interpretation**

| Sr. no. | Response     | Score |
|---------|--------------|-------|
| 1       | Correct Answer | 1     |
| 2       | Wrong Answer  | 0     |

Maximum score = 28
Minimum score = 00
Poor knowledge = 1-09
Average knowledge = 10-19
Good knowledge = 20-28

The validity was found to be 0.70 by Split Half correlation method and 0.82 by Spearman Brown method. Hence the tool was found valid for the study.

Pilot study was conducted in School at Mandi, in the Month of March 2019 to check the feasibility of the study.

District Mandi

**Procedure for data collection**

Formal administrative approval was taken from the principal of various Schools from districts Mandi (H.P) for conducting final study. (ANNEXURE-B, C and D) The study was conducted from April 2019.

Data collection was done in Crescent Star Public School Ratti, Govt. Senior Secondary School Kehnwal Mandi, Govt. Senior Secondary School Knaid District Mandi (H.P).

It took two weeks to include all the study subjects based on total convenient sampling. The sample
included was 150 (50 Crescent Star Public School Ratti, 50 Govt. Senior Secondary School Kehnwal Mandi, 50 Govt. Senior Secondary School Knaid

**Table-1** Pretest Frequency and percentage distribution of students in terms level of knowledge regarding swine flu. (N= 150)

| Level   | Actual Range | Pretest Frequency (f) | Pretest Percentage (%) |
|---------|---------------|------------------------|------------------------|
| Poor    | 0-9           | 53                     | 35.3                   |
| Average | 10-18         | 97                     | 64.7                   |
| Good    | 19-28         | 0                      | 0                      |

**Figure-1** Bar graph showing pretest frequency and percentage distribution of students in terms level of knowledge regarding swine flu.

**Table-2** Comparison between pre-test and Post-test Mean, mean percentage, SD and range of score of knowledge of school students regarding swine flu. N=150

| Paired T Test | Mean  | SD    | Mean%  | Range | Mean Diff. | Paired T Test | P value  | Table Value at 0.05 |
|---------------|-------|-------|--------|-------|------------|---------------|----------|---------------------|
| Pretest Knowledge | 10.29 | 2.031 | 36.70  | 6-16  | 10.500     | 40.781        | <0.001*  | 1.98                |
| Posttest Knowledge | 20.79 | 2.112 | 74.30  | 14-26 | 10.500     |               |          |                     |

**Figure-2** Bar graph showing the comparison between pre-test and Post-test Mean, mean percentage, SD and range of score of knowledge of school students

**Jyoti Bagga et al JMSCR Volume 09 Issue 09 September 2021**
Table 3 Association between knowledge on swine flu and selected demographic variables among 11th and 12th class school’s students.

| S. no | Selected Variables                  | Chi Test | Df | Table Value | p    |
|-------|-------------------------------------|----------|----|-------------|------|
| 1.    | Age of Student                     | 7.435    | 2  | 5.991       | 0.024* |
| 2.    | Sex                                 | 0.258    | 1  | 3.841       | 0.611NS|
| 3.    | Level of Education                  | 0.188    | 1  | 3.841       | 0.665NS|
| 4.    | Residence                           | 2.620    | 1  | 3.841       | 0.106NS|
| 5.    | Type of Family                      | 0.001    | 1  | 3.841       | 0.976NS|
| 6.    | Family Income                       | 5.758    | 3  | 7.815       | 0.124NS|
| 7.    | Nutritional Pattern                 | 0.480    | 1  | 3.841       | 0.488NS|
| 8.    | Father’s Education                  | 6.770    | 2  | 7.815       | 0.488NS|
| 9.    | Mother’s Education                  | 5.123    | 3  | 7.815       | 0.163NS|
| 10.   | Have You Heard About Swine Flu      | 0.134    | 1  | 3.841       | 0.7143NS|
| 11.   | Source of Information               | 13.352   | 4  | 9.488       | 0.010* |
| 12.   | Have You Taken Swine Flu Vaccine    | 3.415    | 1  | 3.841       | 0.065NS|

*Significant (P<0.05) NS Non Significant

Discussion
The present study was aimed to assess the knowledge regarding prevention and management of swine flu among 11th and 12th schools students in selected schools of District Mandi (H.P).

1. Understanding demographics
In the present study out of 150 student’s majority (63.3%) of students were females and 36.7% were males selected for the study. From demographics we know the type of family and their educational standard and economical conditions. According to their demographics student’s level of knowledge regarding swine flu is average. These finding are partially similar and contradictory to the study conducted by Ramesh Verma, Vinod Chayal, (2018) on Community perception about swine flu in an urban slum of Haryana: A cross-sectional study was found that there was no significant difference between gender and age with heard of swine flu while education wise (p= 0.002) and caste wise (p=0.011) awareness of swine flu was found to be statistically significant.

2. To Assessment knowledge regarding swine flu among school students.

In the present study out of 150 students, during pre test about (64.7%) students had average knowledge and (35.3%) students had poor knowledge regarding prevention and management of swine flu. After given a video assisted teaching to the students about (84.7%) of the students had good knowledge and (15.3%) students had average knowledge regarding prevention and management of swine flu. Similarly a cross sectional study was conducted by Harshal Kawanpure (2013) on Knowledge, Attitude and Practice Regarding Swine Flu 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. 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. Mass media (TV, Radio, newspaper) was found to be the most common source of knowledge regarding swine flu for 74.18 % of the respondents.

Conclusion
Most of the 11th 12th school students had high positive knowledge regarding swine flu. The present study concludes that after video assisting teaching. Hence it is most important for the educators to educate reinforce the school children regularly.

Implication:
The finding of study to assess the knowledge regarding swine flu in schools students has many implications in nursing education, nursing administration, nursing practice and nursing research.

Nursing Education:
- Support and mentoring of the students are required to identify early unfavorable attitudes and strategies to modify attitude of students
- Greater attention need to be paid to educational processes: teacher and their teaching must be valued and appropriate support systems should be provided for college students and trainees.
- Teaching plays vital role in nursing profession to orient students and to gain adequate knowledge regarding various scope of nursing. Hence it is necessary to motivate the students to seek knowledge regarding swine flu in nursing which may be provided with proper class room teaching.

Nursing Practice:
- The nurse can directly influence the care which has been provided by them. Hence more competent nurse is essential to be working in the hospital for better patient care. If the nurses have good knowledge regarding swine flu they can provide better nursing care for swine flu patients.

Nursing Administration
- The nurse administrator should take step in formulating polices and plans for modifying knowledge regarding swine flu. She should organize some preparation classes for school students to undergo smoothly.
Nurse administrator should act as a role model for the students. Hence the budding students may change their perception by following him or her.

Findings can be implicated to select and retain suitable students who have knowledge regarding swine flu to render quality patient care.

**Nursing research**

- The present study findings showed that school students had high positive perception regarding swine flu. Hence study findings can be implicated in nursing research to determine their motivating factor for swine flu and to undertake certain strategies support the nurse during their real transition phase and perception regarding swine flu among schools students in various settings can help to generalize the suitable perception regarding role transition which is essential for nursing profession.

**Limitation**
The present study was limited to small number of schools students (150 students ) of crescent, kehnwal, kanaid schools of district Mandi (H.P). Thus this limits the generalization of the study.

**Recommendation**
- The similar study can be conducted with other schools.
- Qualitative study can be conducted with more sample size.

**References**
1. Adrin J Gibbs, John S et. al. ‘Swine-origin’ influenza A virus (H1N1) emerge? Virology journal 2009, 6:207
2. Jilani TN Jamil RT Siddiqui A H1N1 influenza (swine flu) stat pearls NCBI Bookshe; Jan 2019
3. Swine Influenza: https:// en.Wikipedia. Org>wiki> 2009-fl…
4. Indian swine flu outbreak (2015): https://en.m.wikipedia.org>wiki>2015
5. Christian Nordquist. Everything you need to know about swine flu. Medical News Today The 16 May 2017.
6. Swine flu (H1N1): https://www.nhs.uk/conditions/swine-flu/
7. E. Vinukini S, Badiger S. A study on awareness attitude and myths regarding swine flu pandemic in rural communities of costal Karnataka: A cross-sectional study. Nitte University Journal of health Science. Vol 7, March 2017.
8. L Girish Dandagi and Sujata M. Byahatti. An insight into the swine- influenza A (H1N1) virus infection in human s. Article from lung India .2011 Jan –March ; 28 (1): 34 -38.
9. Archana Keleb Pardeshi and Mini Shibu. A study to assess the effectiveness of planned health teaching on knowledge regarding swine flu among student in selected school. International Journal of applied Research 2018; (8):78-84.
10. Vinod Kumar Metha, Pooja Sharma, Ramesh Chand Guleria et al. Clinico-epidemiological profile, Pandemic influenza a H1N1 /2009 and seasonal influenza August 2009 , India. Indian Journal of community Medicine 2016 6;41:69-71
11. Ramandeep Singh Gambir, Prabh Rohan Pannu and Amanpreet Kaur. Knowledge and awareness regarding swine flu (H1N1) virus infection among Dental professional in India- A systematic Review Journal of clinical and Diagnostic Research (JCDR) 2016.
12. Gautan Rawal, Sankalp Yadav, Raj Kumar, Sujan R. Swine flu (H1N1 Influenza A): concise review. Indian Journal of Immunology and Respiratory Medicine April –June 2017; 2(2):29-32.
13. Mujoriya Rajesh Z Dhamande Kishore, Dr Ramesh Babu Bodle.A review on review on study of swine flu.(NDU-GLOBAL
RESEARCH LIBRARY (IGRL).July,Sept 2011/vol.1
14. Prabhuswani Hiremath, Jyoti A Salunkhe, Vaishali R Mohite, Avinash H Salunkhe. A study to assess the knowledge regarding prevention of swine flu among school children in selected at Karad. International Journal of health science and research (IJHSR). Vol.5;Issue:7; july 2015.
15. Sumeet Singh, Paramjeet Kaur, Gurmeet Singh. A study to assess the awareness, precaution and myths regarding swine flu among educated common public in Patiala District. International Journal of research and development of health April 2013;vol-1(2).
16. Naik JD, Swapnil Jain et. al. A study on awareness regarding swine flu (influenza A H1N1) pandemic in an urban community of Maharashtra. Schoolars Journal of Applied Medical Science 2015;3(8B):2891-2894.
17. Clinical Management of human infection with Pandemic (H1N1)2009: https://www.who.int>csr>swineflu
18. MR Sebastian, Rakesh Lodha, et. al. Swine origin influenza (swine flu). The Indian Journal of Pediatrics. 2009;76(8):833-841
19. Christopher W, et.al. Serologic Evidence of H1N1 Swine Influenza Virus Infection in Swine Farm Residents and Employees. Emerging Infectious Diseases. 2002;8(8):814-8
20. Girish L et.al. An insight into the swine influenza A (H1N1) virus infection in human 2009.
21. Gawande A. Knowledge about swine flu (H1N1) among community people. Journal of Medical Science And clinical Research. 2018;6(2).
22. Chant, K. - Comment on ‘Public health management of pandemic (H1N1) infection in America: 2009, 15(5), pp.869-869
23. Mini shibu et.al. A study to assess the effectiveness of planned health teaching on knowledge regarding swine flu among students in selected school.2018;4(9):
24. Vinod Ramanu j Nilesh et.al. Rupani, Kailesh D. Bhalani, M.P. singh .A study assess the knowledge and practices related to swine flu in school students of Bhavnagar, Gujrat (Publish). The journal of Medical Research 2 (6)2016.
25. Vasantha Kalyani, S.K Mohanasundari. A study to assess the awareness regarding influenza a (H1N1) Among adults at selected community in Rishikesh Uttarakand community and Public Health Nursing Vol.1 No.2, july-December-2016.
26. Suneel K. Parvathareddy. Knowledge and awareness about H1N1 Influenza (Swine Flu) Among University Students 2010.
27. Vasantha Kalyani, S.K Mohanasundari. A study to assess the awareness regarding influenza a (H1N1) Among adults at selected community in Rishikesh Uttarakand community and Public Health Nursing Vol.1 No.2, july-December-2016
28. Arora G, Kaur A, A cross sectional observational studies were include in the systematic review to assess the knowledge and awareness regarding swine flu among dental professionals.JClinDiagn Res. 2016 sep:10(9) ZE 10-ZE-13n Epub 2016 sep 1.
29. Niraj Bharadva, shreyash Mehta, Pravinyerpude, Keerti Jogandkartik Trivedi ,A cross sectional study to assess the knowledge attitude and practice regarding swine flu amongb people accompanying patients of a tertiary health care center bhuj national ajournal of community medicine Vol.s8(12)Dec 2017.
30. Epari, V., Gupta, S. and Kaipa, S-Knowledge and attitude towards swine influenza among dental practitioners in Nellore district of Andhra Pradesh, India. Journal of Education and Ethics in Dentistry,(2011) 1(2), p.52.
31. Reuter, T. and Renner, B- Who Takes Precautionary Action in the Face of the New H1N1 Influenza? Prediction of Who Collects a Free Hand Sanitizer Using a Health Behavior Model. PLoS ONE, (2011), 6(7), p.e22130.

32. Signorini, A., Segre, A. and Polgreen, P- The Use of Twitter to Track Levels of Disease Activity and Public Concern in the U.S. during the Influenza A H1N1 Pandemic. PLoS ONE,(2011), 6(5), p.e19467

33. Arbat, S., Dave, M., Niranjane, V, Rahman, I. and Arbat, A-. Analyzing the clinical profile of swine flu/influenza A H1N1 infection in central India: a retrospective study. Virus Disease, (2017) 28(1), pp.33-38.

34. Dhawale, S. and Jayant, S- Clinical profile, morbidity and mortality among swine flu (H1N1) infected patients: 2015 Gwalior, Madhya Pradesh pandemic, India. International Journal of Advances in Medicine, (2016), pp.324-327.

35. Baria, H, Solanky, P, Shah, H. and Patel, R- A study on swine flu (H1N1) awareness among college students of Valsad city. International Journal Of Community Medicine And Public Health,(2015), 4(10), p.3668.