Research Article

EFFECTIVENESS OF SELF INSTRUCTIONAL MODULE ON THE KNOWLEDGE REGARDING SWINE FLU AMONG THE STAFF NURSES OF THE SELECTED HOSPITALS OF LUDHIANA, PUNJAB

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ARTICLE INFO

ABSTRACT

A quasi-experimental study was undertaken to assess the effectiveness of Self Instructional Module on Swine flu among the staff nurses of selected hospitals of Ludhiana, Punjab. A total of 60 staff nurses were selected as study subjects. Self Instructional Module on Swine flu was developed. Based on Self Instructional Module, a Self Structured Questionnaire was prepared to assess the pretest-posttest knowledge scores of study subjects regarding Swine flu. Descriptive and inferential statistical tests were used for data analysis. Finding of the study revealed that the mean posttest knowledge scores (22.97) of subjects regarding Swine flu after administration of Structured Instructional Module were significantly higher than pretest knowledge scores (11.43). In pre-test, maximum 41 (68.33%) of subjects had average knowledge score followed by 19 (31.66%) which were having poor knowledge scores. None of the subjects had good knowledge score in pretest. After administration of Self Instructional Module, level of post knowledge score of subjects increased as in posttest, 50 (83.33%) of subjects achieved good knowledge scores followed by 10 (16.66%) who had average knowledge score. None of the subjects had poor level of knowledge scores. Findings suggest that there is no statistically significant (p>0.05) association between the posttest knowledge scores of the subjects and their age, gender, marital status, monthly family income, professional qualification and experience. Hence, administration of Self Instructional Module on Swine flu was effective on staff nurses.

INTRODUCTION

Swine flu is an infectious disease of the respiratory tract. The effects of the Swine flu can vary from mild to severe life threatening depending on individual factors such as the specific strain of the Swine flu, age, general health status and presence of coexisting chronic conditions.

Swine influenza is an infection caused by any one of several types of Swine influenza viruses. It belongs to the 'Orthomyxoviridae' family and consists of three viral subtypes which includes Influenza type A, type B and type C. Influenza A has two subtypes which are important for humans $A(H_3N_2)$ and $A(H_1N_1)$. It has two different protein components known as antigens, on the virus surface. They are spike like features called hemaagglutinin (H) and neuraminidase (N) components. Swine influenza was first proposed to be a disease related to human flu during the 1918 flu pandemic, when pigs became ill at the same time as humans.[1]

The H1N1 virus outbreak had previously occurred in India during the 2009 flu pandemic. The virus killed 981 people in 2009 and 1,763 in 2010. It claimed 405 lives in 2012 and 699 lives

in 2013. In 2014, a total of 218 people died from the H1N1 flu. Every year, there was a rise in number of cases and deaths during winter as temperature affects virus. During 2014–15 winter, there was a spurt in cases at the end 2014. In 2015, the outbreak became widespread through India. On 12 February 2015, Rajasthan was declared an epidemic. By 20 March, 2015, according to the data released by the Health Ministry, 31,974 cases had been reported and 1,895 people had died to the disease.[2]

Nurses are at higher risk of developing Swine flu infection as they provide twenty four hour comprehensive care to the patients. It is generally observed that when there are increased seasonal infections, number of patient's increases which in turns leads to increased risk of infections. In case of handling infectious patient's, if preventive measures such as personal protective equipments and other precautions are not used; it increases the risk of transmission of disease. Moreover people mistakes symptoms of Swine flu as that of regular flu.

From the personal experience of investigators, it is observed that nurses have lack of knowledge and various misconceptions about prevention and treatment of Swine flu. Earlier, Swine flu was not included in the curriculum of nurses. It is well-known fact that incomplete knowledge

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towards the emerging communicable disease may lead to unnecessary chaos and excessive panic which would aggravate the disease epidemic. Hence, there is necessity that nurses should be made aware and educated about prevention and management of Swine flu. Moreover, nurse plays a crucial role in prevention of illness and promotion of health. In promotion of health her responsibility is to get knowledge and guide the people to make them aware about the current diseases and its communicability.

Keeping in mind the recent outbreaks of Swine flu, presence of various misconceptions about prevention and management of Swine flu; investigators felt that a research study should be conducted to impart knowledge regarding Swine flu among the staff nurses of the selected hospitals of Ludhiana, Punjab.

MATERIALS AND METHODS

Objectives

1. To evaluate the effectiveness of the Self Instructional Module regarding the knowledge of Swine flu among the staff nurses.
2. To find out the association between the selected demographic variables and knowledge about swine flu among the staff nurses.

Hypothesis

H_1: There will be significant difference in the posttest knowledge scores as compared to pretest knowledge scores among the staff nurses related to swine flu.

H_0: There will be no statistical significant association between the levels of posttest knowledge scores of the staff nurses in relation to the selected demographic variables.

METHODOLOGY

A Quasi-experimental approach was adopted to conduct the present study to assess the effectiveness of Self Instructional Module on Swine flu. A single group, pretest-posttest design was employed to carry out the study. The study was conducted at Guru Teg Bahadur Sahib (C) Hospital, Model Town, Ludhiana, Punjab, India. Target population of the study was all the staff nurses were taken as subjects available in the month of July 2019. A total of 60 staff nurses working in selected hospitals of Ludhiana, Punjab were taken. Simple random sampling technique was adopted to select the study subjects.

For the purpose of conducting this study, a teaching tool i.e. Self Instructional Module on Swine flu for staff nurses was developed as well as a knowledge assessment tool/ questionnaire was developed based on Self Instructional Module to evaluate the pretest and posttest knowledge scores.

Prior to the development of the tool expert consultation was sought from the experts in the field of nursing. Questionnaire to assess knowledge of staff nurses on Swine flu consists of two parts: Part A- It consisted seven items of demographic data (1-7); Part B- It included 30 (thirty) multiple choice questions, each having 4 (four) alternatives, with 3 (three) distracters and 1 (one) correct answer to assess the knowledge of staff nurses on Swine flu. Each item of the questionnaire was scored for the correct as well as for the incorrect response. Score 1 (one) was assigned to the correct response and 0 (zero) to the incorrect response. The total score of the questionnaire ranged from 0-30. According to the scores obtained by the study subjects, they were categorized into good (21-30), average (11-20) and poor (0-10) level of knowledge.

Before conducting the final study, a pilot study was conducted on 6 (10%) subjects during the month of June 2019 to find out the practicability & feasibility of the tool. The reliability of the questionnaire was calculated by using Karl Pearson's coefficient of correlation was used to determine the correlation between the test and retest and it was found to be "r=0.92" which was highly significant. The data was collected in the month of July, 2019 at Guru Teg Bahadur Sahib (C) Hospital, Model Town, Ludhiana, Punjab.

RESULTS

Table 1 describes the sample characteristics of the subjects. Most of the subjects 53 (88.33%) were in the age group of 21-30 years followed by the 6 (10%) of the age group of 31-40 years and the remaining 01 (1.67%) in the age group 41-50 years. All of the subjects 60 (100%) were female. Regarding their marital status, maximum 42 (70%) subjects were unmarried and 18 (30%) subjects were married. As per their monthly family income, majority 42 (70%) subjects belonged to the family income group Rs. <10,000 followed by 12 (20%) who belonged to the family income group Rs. 10,000- 20,000. 4 (6.67%) subjects belonged to the family monthly income group Rs. > 30,000 and 2 (3.33%) belonged to the family monthly income Rs. 20,001- 30,000. Regarding their professional qualification, 32 (53.3%) have G.N.M diploma while 28 (46.7%) have B.Sc. Nursing/Post Basic B.Sc. Nursing degree. None of them have M.Sc. Nursing or Ph D. Nursing degree. As per their experience level, 50 (83.33%) subjects have 0-5 years of experience followed by 6 (10%) who have 6-10 years of experience further followed by 3 (5%) subjects who have 11-15 years of experience and only 1 (1.67%) subject have more than 15 years of experience. Furthermore, majority 48 (80%) subjects have not attended any educational programme on Swine flu and only 12 (20%) subjects have attended educational programme on Swine flu.

Table 1 Percentage distribution of demographic characteristics of the subjects

N = 60

Characteristics of The Subjects	Frequency (n)	Percentage (%)
1) Age (in years)		
a) 21-30	53	88.33
b) 31-40	06	10.00
c) 41-50	01	1.67
d) >50	00	00
2) Gender		
a) Female	60	100
b) Male	00	00
3) Marital Status		
a) Married	18	30
b) Unmarried	42	70
c) Separated	00	00
4) Monthly Family income (In Rupees)	42	70
a) <10,000	12	20
b) 10,001-20,000	2	3.33
c) 20,001-30,000	4	6.67
d) >30,000		
5) Professional Qualification		
a) G.N.M	32	53.33
b) B.Sc. Nursing/ Post Basic B.Sc. Nursing	28	46.7
c) M.Sc. Nursing	00	00
d) Ph D. Nursing	00	00

6) Experience (In years)		
a) 0-5	50	83.33
b) 6-10	6	10
c) 11-15	3	5
d) >15	1	1.67
7) Have you attended any educational programme on Swine flu?		
a) Yes	12	20
b) No	48	80

Table 2 depicts that the value of mean posttest knowledge scores were (22.97) of subjects regarding Swine flu after administration of Self Instructional Module was significantly higher than their mean pretest knowledge scores (11.43) with a mean difference of 11.54 which was statistically significant ($p < 0.01$).

Table 2 Comparison of means of pretest and posttest knowledge scores of the subjects regarding Swine flu

N=60

N	Mean Knowledge Scores				t-value	p-value
	Pre Test		Post Test			
	MEAN	S.D	MEAN	S.D		
60	11.43	3.26	22.97	2.13	23.83	0.01

As indicated in Table 3, in pretest, maximum 41 (68.33%) of subjects have average knowledge scores followed by 19 (31.66%) which were having poor knowledge scores. None of the subject had good knowledge score in pretest. After administration of Self Instructional Module, the level of posttest knowledge score of the subjects increased as in posttest majority 50 (83.33%) of subjects achieved good knowledge scores followed by 10 (16.66%) subjects who had average knowledge scores. None of the subjects had poor level of knowledge scores.

Table 3 Frequency and percentage distribution of subjects according to their pretest and posttest level of knowledge scores.

N=60

Level of Knowledge Scores	Pre test		Post test	
	Frequency (n)	Percentage (%)	Frequency (n)	Percentage (%)
Good (21-30)	00	00	50	83.33
Average (11-20)	41	68.33	10	16.66
Poor (0-10)	19	31.66	00	00

Table 4 Association between the levels of post knowledge scores of the subjects and their selected demographic variables

The table 4 shows that there was no statistically significant ($p > 0.05$) association between the posttest knowledge scores of the study subjects regarding Swine flu and their age, marital status, monthly family income, professional qualification and experience.

Selected Demographic Variables	Levels of posttest knowledge scores value			Chi square	p value
	G	A	P		
Age (in Years)					
21-30	42	08	00		
31-40	05	02	00	1.330^{NS}	p>0.05
41-50	03	00	00		
Marital status					
Married	12	02	00	0.075^{NS}	p>0.05
Unmarried	38	08	00		
Monthly Family Income (in Rupees)					
<10,000	43	10	00		
10,001-20,000	01	00	00	1.585^{NS}	p>0.05
>30,000	06	00	00		
Professional Qualification					
G.N.M	24	06	00	0.480^{NS}	p>0.05
B.Sc/ Post Basic Nursing	26	04	00		
Experience (in Year)					
0-5	40	10	00		
6-10	06	00	00	6.568^{NS}	p>0.05
11-15	03	00	00		
>15	00	01	00		

Key: G: Good (21-30); A: Average (11-20); P: Poor (0-10)
NS: Not Significant at 5% level

DISCUSSION

Table 2 depicts the interpretation of H_1 hypothesis indicating that H_1 hypothesis stands accepted as there was highly significant ($p < 0.01$) difference in the posttest knowledge scores among the staff nurses compared to their pretest knowledge scores.

Table 4 illustrates that H_0 hypothesis was retained as the association between the staff nurses knowledge scores and their age, marital status, monthly family income, professional qualification and experience was found to be statistically insignificant ($p > 0.05$).

The above findings are supported by study undertaken by Hemavathy, Girijabhaskaran and Nongphud[3] to assess the knowledge on swine flu among 30 staff nurses in Selected Hospital, Chennai. Results of the study revealed that 6 (20%) of staff nurses had adequate knowledge, 21 (70%) of staff nurses had moderately adequate knowledge and 3 (10%) of staff nurses had inadequate knowledge about swine flu. Based on the results, majority of the staff nurses had moderately adequate knowledge, it is therefore recommended that the nurses needs to upgrade their knowledge regarding swine flu as they play a vital role in educating the public about swine flu and caring for a swine flu client.

A similar study conducted by Pradhan[4] on effect of leaflets on knowledge regarding prevention and management of Swine flu among staff nurses working in selected Hospital, Bhubaneswar, Odisha revealed that the mean post test knowledge score (25.08) was higher than the mean pretest knowledge score (9.06). Enhancement between the pretest and posttest was obtained by paired t" test value 20.10 for knowledge on prevention and management of swine flu at $p < 0.0001$ which was extremely significant in improving the knowledge of staff nurses.

CONCLUSION

From the findings of the present study, it can be concluded that administration of the Self Instructional Module on the knowledge regarding Swine flu among the staff nurses was effective.

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