International Journal of Science and Research (IJSR)
ISSN: 2319-7064
SJIF (2020): 7.803

A Study to Assess the Effectiveness of Structured Teaching Programme on Knowledge Regarding Prevention and Treatment of Swine Flu among 1st year B. sc Nursing Students

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Abstract: ***Swine flu is an infectious disease caused by swine influenza virus. It is a highly contagious respiratory infection. WHO 2009 figures have brought out that youth is more commonly affected and in India about 41.6% of people are tested positive are youth. The research approach used for this study the research approach used for this study was evaluative approach and pre - experimental (one group pre and post - test) design. The independent variable was STP and the dependent variable was knowledge of 1st year B. sc Nursing Students regarding prevention and treatment of swine flu. The setting of the study was in selected college of nursing at Bangalore and simple random technique was used to select the sample. The sample size was 50, 1st year B. sc Nursing Students. The tool used for this study consisted of two parts. Part – A (demographic data). Part – B, structured knowledge questionnaire consists of questions in various aspects such as general information of Swine flu, its causes, types and its prevention and treatment (20 questions). The data was analyzed and interpreted in terms of objectives formulated descriptive and inferential statistics were used for the data analysis. Effectiveness of STP on knowledge regarding prevention and treatment of swine flu among 1st year B. sc Nursing Students was pretest 67.5% and post - test is 74.53%. The difference was 7.03%. The findings of the study reveal that STP increased the knowledge of 1st year B. sc Nursing Students regarding prevention and treatment of swine flu. This result indicate that age, previous knowledge, and source of knowledge influence the knowledge level of 1st year B. sc Nursing Students regarding prevention and treatment of swine flu. Chi - square test used to associate the level of knowledge and selected demographic variables. The Chi - square value shows that there is no significance association between the score level and demographic variables of study revealed that Mean±S. D of pretest knowledge 10.80±2.755 and post - test knowledge 14.16±2.780 respectively.***

Keywords: Swine flu, Prevention and treatment, 1st year B. sc nursing students

1. Introduction

"Prevention is better than Cure"

Swine flu is a respiratory disease of pigs caused by type A influenza viruses that causes regular outbreaks in pigs. It is also called as pig flu, hog flu. It is a general term used for a variety of strains of influenza virus commonly found in pigs and people who have frequent close contact with pigs.[1]

The HINI is one type of swine flu which is very different from other strains of swine flu. Influenza viruses are split up into three broad groups known as Influenza A, B and C. Other forms of swine flu include H3N2 flu and H3N1 flu.[2]

Generally swine flu strains do not spread easily from pigs to human and even when they do; they do not always cause disease in people. People with swine flu typically have a fever or high temperature and may also have aching muscles, decreased thirst, decreased appetite, rapid breathing, sore throat or dry cough. These symptoms are very similar to seasonal flu[3].

With proper infection control and use of personal protective equipment (PPE), the chance for infection is low. Airborne aerosols have been thought to cause most infections, although which means of transmission is most important is not absolutely clear. Influenza virus can be inactivated by sunlight, disinfectants and detergents. As the virus can be inactivated by soap, frequent hand washing reduces the risk of infection.

Standard commercial swine flu vaccines are effective in controlling the infection when the virus strains match enough to significant cross protection. Prevention of swine flu include the use of one of several bivalent vaccines commercially available in the United States. Since the protective ability of influenza vaccines depends primarily on the closeness of the match between the vaccine virus and the epidemic virus.[8]

Oseltamivir, sold under the brand name **Tamiflu**, is an antiviral medication used to treat and prevent influenza A and influenza B (flu). Many medical organizations recommend it in people who have complications or are at high risk of complications within 48 hours of first symptoms of infection. They recommend it to prevent infection in those at high - risk, but not the general population. The CDC (Center of Disease Control) recommends that clinicians use their discretion to treat those at lower risk, who get present within 48 hours of first symptoms of infection.[9]

Objectives

- To assess knowledge among 1st year B. sc Nursing Students regarding prevention and treatment of Swine flu before the Structured Teaching Programme.

- To evaluate the effectiveness of Structured Teaching Programme on 1st year B. sc Nursing Students regarding prevention and treatment of swine flu.
- To compare the pre - test post - test knowledge score of 1styear B. sc Nursing Students regarding prevention and treatment of Swine flu
- To determine the association between pre - test level of knowledge on prevention and treatment of Swine flu and selected demographic

Hypothesis

H1: There will be a significant difference between the pre - test knowledge scores and post – test Knowledge scores regarding prevention and treatment of swine flu among1st year B. sc nursing students.

H2: There will be no significant association between pre - test knowledge scores regarding prevention and treatment of swine flu and the selected demographic variables.

2. Materials and Methods

A study to assess the effectiveness of Structured Teaching Programme on knowledge regarding prevention and treatment of swine flu among 1st Year B. sc nursing students at selected college of nursing, Bangalore

The Conceptual framework selected for this study was based on CIPP (Context, Input, Process and Product). The research approach used in this study is evaluatory research approach. The tool was tried on 5 students in Sarojini College of Nursing (Bangalore). The reliability of the tool was established by using Test and Re - test method for knowledge.

A pilot study was conducted from 05 - 02 - 2018 to 12 - 02 - 2018 before actual data collection to assess the availability of sample and feasibility of the study to assess the knowledge regarding prevention and treatment of swine flu among 1st Year B. sc nursing students at selected college of nursing, Bangalore. Prior permission was obtained from the ethical committee of institution through Principal, DCON, Bangalore. Ethical approval was obtained from institutional ethical committee of SCON, Bangalore. Written informed consent was taken from the prospective participants of the study. Study was conducted in the month of March 2018. The data analysis through descriptive and inferential statistics data to determine the knowledge regarding prevention and treatment of swine flu among 1St Year B. sc nursing students.

3. Results

Section A: Description of Demographic Variables

Percentage distribution of sample according to socio - demographic variables. According to age, majority of population were in the age 18 - 20 years (70%) followed by the age 21 - 23 years (30%). According to gender 38% were males and, 62% were females. According to religion of population, 40% were Hindu, 60% were Christian. According to dietary pattern of population 30% were vegetarian, 70% were non - vegetarian. According to previous knowledge 80% had knowledge and 20% had no knowledge. Distribution according to source of information 15% were using newspaper, 50% were using internet and 35% were using T. V for information. (**Table - 1)**

Table 1: Frequency and percentage distribution of characteristic of 1st year B. sc Nursing students. **N=50**

S. No	Demographic profile	Frequency (F)	Percentage (%)
1.	**Age (Years)**		
	a.18 - 20	35	70
	b.21 - 23	15	30
2.	**Gender**		
	a. Male	19	38
	b. Female	31	62
3.	**Religion**		
	a. Hindu	20	40
	b. Christian	30	60
4.	**Dietary pattern**		
	a. Vegetarian	15	30
	b. Non - vegetarian	35	70
5.	**Previous knowledge**		
	a. Yes	40	80
	b. No	10	20
6.	**Source of information**		
	a. Newspaper	6	15
	b. Internet	20	50
	c. T. v	14	35

Data presented in table shows majority (70%) of the sample were in the age group of 18 - 20 years and 30% of the sample were in 21 - 23 years of age. Majority of the sample were female (62%) and rest of the sample were male (38%).60% of the sample were Christians and 40% of the sample were Hindu. Majority of the sample (70%) were non vegetarian and 30% of the sample were vegetarian. Majority of the sample (80%) had knowledge about swine flu and 20% of the sample had no knowledge about swine flu.50% of the sample were using internet for source of information, 35% were using T. V and 15% were using newspaper.

Section B - Analysis of level of knowledge of students regarding prevention and treatment of swine flu.

Table 1.1: Frequency and percentage distribution pre - test level of knowledge

S. No	Level of knowledge	Quartile	Knowledge score	
			Frequency	%age
1.	Poor (0 - 5)	0 - 25	02	4
2.	Average (6 - 10)	26 - 50	19	38
3.	Good (11 - 15)	51 - 75	27	54
4.	Very good (16 - 20)	76 - 100	02	4

Maximum score 20, Minimum score=0

This table depict that score highest mean percentage (54%) had knowledge regarding swine flu. Hence it can be interpreted that students had good level of knowledge regarding swine flu before STP.

Section C: Part (a) Evaluate the Effectiveness of Structure Teaching Programme on knowledge regarding prevention and treatment of swine flu among 1st Year B. sc nursing students.

Table 1.2: Shows mean median and standard deviation of Pre - Test and Post - Test

Sr. No	Maximum score	Mean	Median	Standard deviation	Mean %	Range
Pre - test score	16	10.80	11.00	2.755	67.5	12
Post - test score	19	14.16	14.00	2.780	74.53	14

Data presented in table shows knowledge score mean with standard deviation was 10.80±2.755, and mean % of knowledge score was 67.5% before Structured Teaching Programme

Data presented in table shows posttest knowledge score mean with standard deviation was 14.16±2.780, and mean % of knowledge score was 74.53% after STP**.**

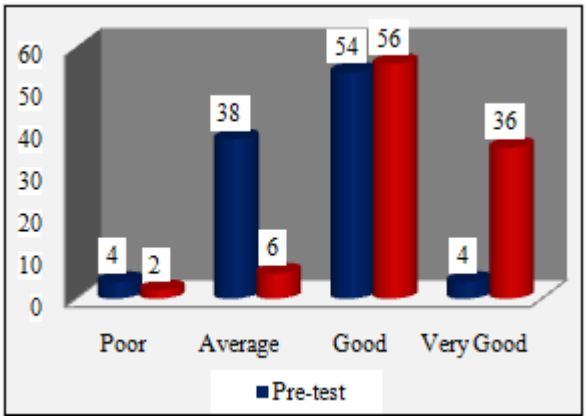
Table 1.3: Frequency and percentage distribution of level of knowledge of students before and after STP

S. No	Level of knowledge	Quartile	Knowledge score (Pre - test)		Knowledge score (Post - test)	
			Frequency	%age	Frequency	%age
1.	Poor (0 - 5)	0 - 25	02	4	01	2
2.	Average (6 - 10)	26 - 50	19	38	03	6
3.	Good (11 - 15)	51 - 75	27	54	28	56
4.	Very good (16 - 20)	76 - 100	02	4	18	36

Maximum score=20, Minimum score=0

In pretest level of knowledge of students showed that 54% of students was having good level of knowledge, 38% was having average, and 4% of students was having poor and very good level of knowledge.

In post - test, Level of knowledge of students showed that 28% were having good level of knowledge, 18% were having very good level of knowledge, 3% were having average level of knowledge and only 1% was having poor level of knowledge.



Section D: Compare the pretest posttest knowledge score regarding prevention and treatment of swine flu.

Table 1.4: Shows comparison between pre - test and post - test. **N=50**

Sr. No	Characteristics	t - value	P - Value
1.	Pre - Test Score	- 9.948	0.00001
2.	Post - Test Score		

Section E: Association between pretest level of knowledge on prevention and treatment of swine flu and selected demographic variables.

Table 1.5: Table shows association between pretest level of knowledge score and selected demographic variables.

S. No	Demographic variables	categories	Below Median	At and above median	FP	Chi - square value	P - value
1.	Age in years	18 - 20	11 (31.42)	24 (68.57)	35	41.960	0.718
		21 - 23	10 (66.66)	05 (33.33)	15		
2.	Gender	Male	8 (42.10)	11 (57.89)	19	11.998	0.446
		Female	13 (41.93)	18 (58.06)	31		
3.	Religion	Hindu	09 (45)	11 (55)	20	10.205	0.598
		Christian	12 (40)	18 (60)	30		
4.	Dietary pattern	Non vegetarian	12 (34.28)	23 (65.71)	35	17.109	0.146
		Vegetarian	09 (60)	06 (40)	15		
5.	Previous knowledge	Yes	13 (32.5)	27 (67.5)	40	18.046	0.114
		No	08 (80)	02 (20)	10		
6.	Source of knowledge	Newspaper	04 (66.66)	02 (33.33)	06	25.975	0.167
		Internet	03 (15)	17 (85)	20		
		Tv	06 (42.85)	08 (57.14)	14		

Table - 1.5 Shows that pretest score of the study participants was not significantly associated with any of the demographic variable and Degree of Freedom value is 1.

4. Discussion

Discussion of the findings of present study in accordance with the objectives of the research problem.

Section 1: Discussion on selected demographic characteristics of the students

More than half (70%) of the subjects were in 18 - 20 years, followed by 21 - 23 years (30%). The results were consistent with the study done by **Kaur Paramjeet, Singh Gurmeet (2013)** in which (30%) of the study subjects were in the age group of 16 - 20 years and (11.5%) were in the age of 21 - 25 years.[16]

Regarding gender (62%) of the subjects were female and (38%) were male. The result were consistent with the study done by **Fatiregun AA, Olowookere SA, OyebladeAO (2011)** in which 59.3% of the study subjects were females and the rest 40.7% were females.[17]

In the context of religion (60%) of study subjects were Christian, (40%) were Hindu. The results were inconsistent with the study done by **Prabhuswami Hiremath, Jyoti A Salunkhe, Vaishali R Mohite (2015)** in which (91%) of subjects were Hindus and (33%) were Christians.[11]

More than half of the study subjects (70%) were Non vegetarian and (30%) were Vegetarian. The results were inconsistent with the study done by **BiamNiewkor, P Bhuvaneshwar (2013)** in which (78%) of subjects were Non - vegetarian and (22%) were vegetarian.[12]

An area of previous knowledge about swine flu, majority of the study subjects (80%) had heard about knowledge and 20% of the study subjects had no previous knowledge. The results were contradictory with the study done by **Kaur Manjeet, Kanika, Kumar Yogesh (2014)** in which most of the study subjects (76%) had no previous knowledge and 24% of subjects had heard about swine flu previously.[14]

Regarding source of information (50%) of study subjects had internet, (35%) had television and (15%) had newspaper as source of information. The results were consistent with the study done by **K. Shilpa, B A. Praveen Kumar, S Yogesh Kumar (2018)** in which 52.2% of the subjects had telemedia like tv, newsapaper, radio as source of information and 38.6% had heard about swine flu from internet.[13]

The result was consistent with the study done by **G Krsihnaleela, Daya Parveena (2017)** in which out of 190 Nursing Students 64% belongs to 18 - 20 years of age and 34% belongs 21 - 23 years of age group.[19]

Section 2**:** Assessment of knowledge of the subjects regarding prevention and treatment of swine flu before Structured Teaching Programme.

More than half of the study subjects (54%) had good knowledge, 38% had average knowledge, 4% had very good and 4% had poor knowledge. Therefore it can be inferred that maximum of students had good level of knowledge regarding prevention and treatment of swine flu before Structured Teaching Programme. The results were contradictory with the study done by **Nandkumar R. Kakade, Dr S. V. Kakade (2012)** in which 18% of subjects had good knowledge, 62% had average knowledge, 20% had poor level of knowledge.

Section 3: Assessment of effectiveness of Structured Teaching Programme on knowledge of subjects regarding prevention and treatment of swine flu.

More than half (56%) of the study subjects had good level of knowledge, 36% had very good, 6% had average and 2% had poor level of knowledge in post test. The results were also supported by the study done by **Kaur Manjeet, Kanika, KumarYogesh (2016**) in which of test knowledge score reveal that almost half (50%) of the study subjects had good level of knowledge, 35% had very good and 15% had average level of knowledge.[18]

Section 4: Comparison between the pretest knowledge score and post - test knowledge score.

The descriptive statistics expressed that post - test knowledge score was more than pre - test knowledge score. The results were consistent with the study done **by Zaina Elizabeth Jose (2015)** in which mean post - test knowledge score was higher than mean pretest knowledge score regarding swine flu.[10]

The results were also supported by the study done by **Kaur Manjeet, Kanika, Kumar Yogesh (2016**) in which the mean post - test knowledge score were significantly higher than mean pretest knowledge score.[14]

Section 5: Association between pretest knowledge score and the demographic variables

There is no association between pretest knowledge score and the demographic variables. The results were consistent with the study done **by Kaur Manjeet, Kanika, Kumar Yogesh (2016)** in which the pretest knowledge score was not significantly associated with gender, religion, previous knowledge and source of information about swine flu.[14]

The results were also supported by the study done **by Zaina Elizabeth Jose (2015)** in which there was no significant association of pretest knowledge with age, religion, source of information about swine flu.[10]

The study conducted by **Dayanand G, Rama MM (2015)** also revealed that prestest knowledge has no significant association with age and gender.[15]

5. Conclusion

From the findings of the study it can be concluded majority of the subjects were in the age group of 18 - 20 year, highest percentage of the study subjects were females. More than half of the subjects were Christians. Majority of the study subjects were non - vegetarian.

Almost half of the study subjects had internet, as source of information about swine flu.

Overall students had good knowledge regarding prevention and treatment of swine flu before structured teaching program. The mean post test score was higher than mean pretest knowledge score that show effectiveness of structured teaching program. The pre - test knowledge score of the study participants was not significantly associated with any of the demographic variables. Hence it can be interpreted that demographic variables such as age, gender, religion, dietary pattern, previous knowledge and source of information had no impact on knowledge score of the study participants.

6. Limitations

- The size of the sample was 50; hence it was difficult to make broad generalizations.
- The study was limited to B. sc nursing students of selected college in Bangalore

7. Acknowledgement

"Develop a fashion for learning. If you do, you will never cease to grow (Anthony J. D' Angelo)"

I express my deep sense of gratitude to almighty God for blessing and helping me to complete the study successfully**.**
I would like to express my heartfelt gratitude and appreciation to the study participants for their support. I am very grateful to all those help me directly or indirectly, especially the Institutional ethical Diana College of Nursing, Bangalore, Karnataka in the successful completion of this study. Your dedication, support, and confidence in my abilities have made my educational experience. Your insight, feedback, and support gave me the motivation I needed to complete this thesis work

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