J Nur Today

RESEARCH ARTICLE www.jolnt.com

e-ISSN 2456-1630

A Study to Evaluate the Effectiveness of Self Instructional Module on Knowledge of Influenza and its Prevention Among Higher Secondary Students In Selected Schools at Udaipur

Akashdeep Singh[1] and Jayesh Soni[2]*

[1]M. Sc. Nursing Student, Venkteshwar College of Nursing, Ambua Road, Udaipur, Rajasthan, India

[2]HOD, Child Health Nursing, Venkteshwar College of Nursing, Udaipur, Rajasthan, India

ABSTRACT

Influenza is an infectious respiratory disease brought about by flu infections that contaminate the nose, throat, and once in a while the lungs. It can cause mild to severe illness, and at times can prompt death. The most ideal way to forestall influenza is by getting an influenza immunization every year. The present study aims to study to evaluate the effectiveness of self instructional modules on knowledge of influenza and its prevention among 50 higher secondary students in selected schools at Udaipur. The quantitative research approach and pre-experimental one group pre-test post–research design was adopted for this study. The purposive sampling technique was used for sample collection. Data collection tool consisted of 5 demographic variables, 34 structured knowledge questionnaire. Data was analyzed through descriptive and inferential statistics. In the study observed that the knowledge score in the pre-test 64% had inadequate knowledge, 36% had moderate knowledge and 0% had adequate knowledge regarding influenza and its prevention. Whereas in the post-test 70% had adequate knowledge, 30% had moderate knowledge and none of had inadequate knowledge regarding influenza and its prevention after administer self instructional module. The mean score in the pre-test knowledge score mean and SD was 11.06 ± 5.11 and post-test knowledge score mean and SD was 25.92 ± 3.22 with mean difference of 14.86. The mean pre-test and post-test was compared and tested by using paired t test (t value = 17.48 df = 49 and p value = 0.05) was highly significant at p value <0.05 level of significance. The study findings showed that self instructional module was effective in improving the knowledge of students regarding influenza and its prevention. There was significant association between the pretest knowledge score and demographic variables such as type of gender ($\chi 2 = 4.97$), residence ($\chi 2 = 8.73$), and source of information ($\chi 2 = 11.51$), and no significant association with variables such as age, age and religion.

KEYWORDS

Effectiveness; Self-Instructional Module; Knowledge; Influenza; Prevention

Date Received: 30/08 /22 **Date Revised: 13/09/22** **Date Published: 15/09/2022**

INTRODUCTION

Influenza infections are the model of arising and reappearing infections. Flu infection type An and type B presently circle in people causing occasional plagues and periodic pandemics.[1,2,3] Influenza viruses cause annually recurrent respiratory disease in humans with a significant impact on human health as well as on the economy. Although influenza B viruses are almost exclusively found in humans, influenza A viruses (IAVs) circulate in the human population as annually recurring epidemic disease and emerge from a huge zoonotic reservoir. Characterized by their ability to rapidly acquire adaptive mutations in a process called antigenic drift, IAV gradually evades the human immune response.[4, 5] Two different genera of the virus family Orthomyxoviridae, influenza A and B, can cause a contagious respiratory disease in humans. They cause annual epidemics of varying severity, including mild common cold symptoms to extreme lung injury with fatal results. IAVs, on which we focus in this review, show a very wide variety and thus are further subgrouped by the antigenic properties of their surface proteins hemagglutinin (HA) and neuraminidase (NA). Besides the well-defined strains circling in people (of the subgroups H1N1 and H3N2), IAVs are available in an enormous number of mammalian species, poultry, and especially wild birds, with at present 18 or 11 variations known for HA or NA, separately, where the as of late found bat-disconnects H17/18 and N10/11 appear to be very particular from avian and mammalian strains.[6, 7] This survey article sums up our flow information on the sub-atomic premise of flu contamination and illness movement, the central participants in pathogenesis driving serious sickness and movement to lung disappointment, as well as accessible and imagined counteraction and therapy methodologies against flu infection disease.

NEED FOR STUDY

Due to the propensity for mutation, distinct strains emerge each year with the ability to infect the vulnerable human population.[4] Yearly, influenza viruses contaminate somewhere in the range of 5% and 15% of the populace with higher occurrences (~30%) in children. As we discussed above, Influenza is capable of causing epidemics and new viruses emerge from time to time as influenza is always evolving and they undergo further mutations which makes them unpredictable, which results in a considerable clinical and economical burden on a country and world, Hence, knowledge about influenza viruses is very important for the general population as they need to be aware of its transmission modes and its vaccination, which will help them to save themselves from the wrath of influenza viruses. Hence this study is useful in our assessment of current knowledge of higher secondary school students as they are the future of any country and at the same time, it will give me the opportunity to teach and educate the school students about the influenza virus and how to prevent getting infected from it. This will, in turn, be immensely useful for our society and the growing children in it.

PROBLEM STATEMENT

"A study to evaluate the effectiveness of self instructional modules on knowledge of influenza and its prevention among higher secondary students in selected schools at Udaipur"

OBJECTIVES

- To assess the pre-test knowledge score about the influenza in higher secondary school students.
- To administer SIM regarding influenza among higher secondary school students.
- To assess the post-test knowledge score about the influenza in higher secondary school students.
- To assess the effectiveness of SIM regarding influenza & its prevention among higher secondary school students.
- To assess the association between pre-test knowledge score with the selected demographic variables.

HYPOTHESIS

H_1: There will be significant difference between pre-test and post-test knowledge scores regarding knowledge of influenza & its prevention among higher secondary school students.

H_2: There will be significant association between pre-test knowledge score and selected demographics.

MATERIALS AND METHOD

Research Approach: A quantitative research approach will be used in the study.

Research Design: Pre-experimental, one group pre-test post–research design will used in the study.

Sample: In the present study the sample comprises of 50 students studying in the 12^{th} standard in selected higher secondary school.

Sampling Technique: In present study the samples were selected through a purposive sampling technique.

Setting: In present study the setting was selected Jeevanratan public school, Udaipur.

Population: In the present study, the target population consisted of students studying in the 12^{th} standard in selected higher secondary school.

Description of tool: Structured knowledge questionnaire to assess the knowledge about influenza and its prevention. It consisted of two parts:

Section A: Demographic data consists of 5 items seeking information about age, gender, religion, place of residence, source of health information.

Section B: Structured knowledge questionnaire consists of 34 questions related to meaning, incidences, causes, clinical features, diagnosis, and management of influenza. Each question has one correct answer that carries one mark and the wrong answer carries 0 marks.

Ethical consideration

- Approval from ethical committee of Venkteshwar College of Nursing Udaipur.
- Prior to data collection, written permission was obtained from the concerned authority of Jeevanratan public school, Udaipur.
- Anonymity and confidentiality of subjects was maintained.
- Informed consent was obtained from the subjects.

Plan for data analysis

The data analysis will be done according to study objectives by using descriptive and inferential statistics. The plan of data analysis would be as follows:

- Frequency, percentage, mean and standard deviation will be calculated.
- Paired t test will be used to test the hypothesis.
- Chi-square test will be used for association with demographic variables.

RESULTS AND DISCUSSION

The data's obtained are divided into certain sections for easy and accurate interpretation of data. The data finding have been organized under following sections:

Section I: Description of demographic variables of participants.

Section II: Findings related to knowledge score of higher secondary school students on influenza and its prevention.

> ***Part-I:*** Comparison of pre-test & post-test knowledge score regarding influenza and its prevention.
>
> ***Part-II:*** Evaluation of the effectiveness of SIM regarding influenza and its prevention.

Section III: Finding related to association between pre-test knowledge score with selected demographic variables.

Section I: Description of demographic variables of participants:

Demographic data consists of 5 items seeking information about age, gender, religion, place of residence, source of health information.

Table 1 Description of demographic variables of participants N = 50

S. N.	Demographic variable	Frequency	Percentage
1	**Age**		
a	<16 Years	15	30%
b	16-18 Years	16	32%
c	18-20 Years	10	20%
d	>20 Years	9	18%
Total		**50**	**100%**
2	**Gender**		

a	Male	13	26%
b	Female	37	74%
Total		**50**	**100%**
3	**Religion**		
a	Hindu	41	82%
b	Muslim	4	8%
c	Christian	5	10%
d	Other	0	0%
Total		**50**	**100%**
4	**Residence**		
a	Urban	7	14%
b	Rural	43	86%
Total		**50**	**100%**
5	**Source of information**		
a	Television	6	12%
b	Newspaper	11	22%
c	Health personnel	28	56%
d	Health related papers	5	10%
Total		**50**	**100%**

Age: Table 1 revealed that the majority of participants i.e. 16 (32%) were belonged to the age group of 16-18 yrs, while 15 (30%) were belonged to the age group of <16 yrs, 10 (20%) were belonged to the age group of 18-20 yrs and 9 (18%) were belonged to the age group of >20 yrs.

Gender: Table 1 depicts that the majority of participants i.e. 37 (74%) were female, while 13 (26%) were male.

Religion: Table 1 mentioned that the majority of participants i.e. 41 (82%) belonged to Hindu religion, 5 (10%) belonged to Christian, 4 (8%) belonged to Muslim religion and none of belonged to other.

Residence: Table 1 depicts that the majority of participants i.e. 43 (86%) were belonged to rural area, while 7 (14%) were belonged to urban area.

Source of information: Table 1 revealed that the majority of participants i.e. 28 (56%) were getting information from health personnel, while 11 (22%) were getting information from newspaper, 6 (12%) were getting information from television and 5 (10%) were getting information from health related papers.

Section II: Findings related to knowledge score of higher secondary school students on influenza and its prevention.

Part-I: Comparison of pre-test & post-test knowledge score regarding influenza and its prevention.

H_1: There will be significant difference between pre-test and post-test knowledge scores regarding knowledge of influenza & its prevention among higher secondary school students.

Figure 1 shows that in the pre-test 64% had inadequate knowledge, 36% had moderate knowledge and 0% had adequate knowledge regarding influenza and its prevention. Whereas in the post-test 70% had adequate knowledge, 30% had moderate knowledge and none of had inadequate knowledge regarding influenza and its prevention after administer self instructional module. Hence **H_1** accepted and proved.

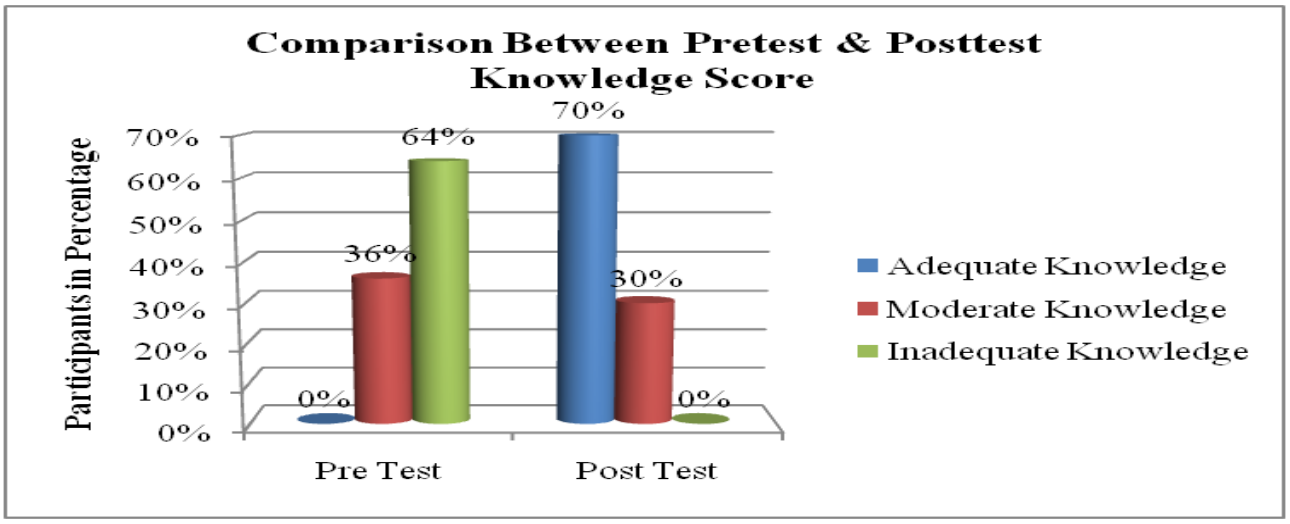

Figure 1 Comparison of pre-test & post-test knowledge score

Part-II: Evaluation of the effectiveness of SIM regarding influenza and its prevention

Table 2 Effectiveness of SIM by calculating Mean, SD, Mean Difference and 't' Value of pre-test and post-test knowledge score **N = 50**

Test	Mean	SD	Mean Difference	df	t- value	Inference
Pre-test	11.06	5.11	14.86	49	17.48	1.29* (0.05 Level)
Post-test	25.92	3.22				

Significant*

The table 2 revealed that in the pre-test knowledge score mean and SD was 11.06 ± 5.11 and post-test knowledge score mean and SD was 25.92 ± 3.22 with mean difference of 14.86. The mean pre-test and post-test was compared and tested using paired t test (t value = 17.48 df = 49 and p value = 0.05) was highly significant at p value <0.05 level of significance. The study findings showed that self instructional module was effective in improving the knowledge of students regarding influenza and its prevention.

Section III: Finding related to association between pre-test knowledge score with selected demographic variables.

Table 3 Association between pretest knowledge score with demographic variables **N = 50**

S. N.	Demographic Variable	Below Median	Above Median	Total	Df	χ2	P value (0.05 level)	Inference
1	**Age (in years)**							
a	<16 Years	3	12	**15**				
b	16-18 Years	7	9	**16**				
c	18-20 Years	4	6	**10**	**3**	**2.43**	**7.815**	**NS**
d	>20 Years	4	5	**9**				
	Total	**18**	**32**	**50**				
2	**Gender**							
a	Male	8	5	**13**				
b	Female	10	27	**37**	**1**	**4.97**	**3.841**	**S**
	Total	**18**	**32**	**50**				
3	**Religion**							
a	Hindu	15	26	**41**				
b	Muslim	1	3	**4**				
c	Christian	2	3	**5**	**3**	**0.25**	**12.592**	**NS**
d	Other	0	0	**0**				
	Total	**18**	**32**	**50**				
4	**Residence**							
a	Urban	6	1	**7**				
b	Rural	12	31	**43**	**1**	**8.73**	**3.841**	**S**
	Total	**18**	**32**	**50**				
5	**Source of information**							
a	Television	5	1	**6**				
b	Newspaper	5	6	**11**				
c	Health personnel	5	23	**28**	**3**	**11.51**	**15.507**	**S**
d	Health related papers	3	2	**5**				
	Total	**18**	**32**	**50**				

NS: Non Significant / **S:** Significant

H_2: There will be significant association between pre-test knowledge score and selected demographics.

Table 3 revealed that there was a significant association between the pretest knowledge score and demographic variables such as type of gender ($\chi2 = 4.97$), residence ($\chi2 = 8.73$), and source of information ($\chi2 = 11.51$), and no significant association with variables such as age, age and religion. Hence **H_2** accepted and proved that there was a significant association between the knowledge score with demographic variables.

CONCLUSION

The present study aims to study to assess the effectiveness of self-instructional modules on knowledge of influenza and its prevention among 50 higher secondary students in selected schools at Udaipur. The study finding revealed that the knowledge score in the pre-test 64% had inadequate knowledge, 36% had moderate knowledge and 0% had adequate knowledge regarding influenza and its prevention. Whereas in the post-test 70% had adequate knowledge, 30% had moderate knowledge and none of had inadequate knowledge regarding influenza and its prevention after administer self instructional module. The mean pre-test and post-test was compared and tested using paired t test (t value = 17.48 df = 49 and p value = 0.05) was highly significant at p value <0.05 level of significance. The study findings showed that self instructional module was effective in improving the knowledge of students regarding influenza and its prevention.

REFERENCES

1. Kilbourne ED. Influenza pandemics of the 20th century. Emerging infectious diseases. 2006 Jan;12(1):9.

2. Saunders-Hastings PR, Krewski D. Reviewing the history of pandemic influenza - understanding patterns of emergence and transmission. 2016 Dec;5(4):66.

3. BARBERIS I, MYLES P, Ault SK, Bragazzi NL, Martini M. History and evolution of influenza control through vaccination: from the first monovalent vaccine to universal vaccines. Journal of preventive medicine and hygiene. 2016 Sep;57(3):E115.

4. Schmolke M, García-Sastre A. Evasion of innate and adaptive immune responses by influenza A virus. Cellular microbiology. 2010 Jul;12(7):873-80.

5. Vossen MT, Westerhout EM, Söderberg-Nauclér C, Wiertz EJ. Viral immune evasion: a masterpiece of evolution. Immunogenetics. 2002 Nov;54(8):527-42.

6. Wu Y, Wu Y, Tefsen B, Shi Y, Gao GF. Bat-derived influenza-like viruses H17N10 and H18N11. Trends in microbiology. 2014 Apr 1; 22(4):183-91.

7. García-Sastre A. The neuraminidase of bat influenza viruses is not a neuraminidase. Proceedings of the National Academy of Sciences. 2012 Nov 13;109(46):18635-6.