



A pre-experimental study to assess the effectiveness of self-instructional module (SIM) in terms of knowledge on current trends of vaccination among nursing students of Himalayan institute of nursing, Ambala (Haryana)

Renu Bala¹, Isha Pundir², Kanchan Bala³, Kanchan Chauhan⁴, Mamta Gharu⁵, Manisha⁶

¹ Community Health Nursing Lecture in Himalayan institute of Nursing, Ambala, Haryana, India

²⁻⁶ B.Sc, Nursing Students, Himalayan institute of Nursing, Ambala, Haryana, India

Abstract

Objectives: **1)** To assess the knowledge on current trends of vaccination among nursing students of Himalayan Institute of Nursing, Ambala (Haryana) before implementation of Self Instructional Module (SIM). **2)** To assess the knowledge on current trends of vaccination among nursing students of Himalayan Institute of Nursing, Ambala (Haryana) after implementation of Self Instructional Module (SIM). **3)** To compare the knowledge on current trends of vaccination among nursing students of Himalayan Institute of nursing, Ambala (Haryana) before and after implementation of Self Instructional Module (SIM). **4)** To find out the association on current trends of vaccination among nursing students of Himalayan Institute of Nursing, Ambala (Haryana) after implementation of Self Instructional Module with their selected variables.

Methodology: A quantitative study by using pre-experimental pre-test and post-test design, A sample size of 60 nursing students were selected by using random sampling technique, semi structured questionnaire was used process the level of knowledge of nursing students on current trends of vaccination.

Result: The finding of the study reveals that mean of pre-test level of knowledge score is 10.7 and mean of post-test level of knowledge score is 14.4.

Keywords: self instructional module, vaccination, effectiveness, current trends and knowledge

Introduction

"Vaccines save lives; fear endangers them. It's a simple message parents need to keep hearing."

- Journalist Jeffrey Kluger

Vaccination is a proven and one of the most cost-effective child survival intervention. Vaccination is the administration of a vaccine to help the immune system to develop protection from a disease. All countries in the world have an immunization programme to deliver selected vaccines to the targeted beneficiaries, specially focusing on pregnant women, infants and children who are at high risk of diseases preventable by vaccines. Majority of the mortality and morbidity can be averted by simple measures like appropriate vaccination, hygienic measures and good nutrition. It is proved that most cost-effective part of health promotion is vaccination. Immunization forms the major focus of child survival programs throughout the world. Government has formally launched a special immunization drive in high focus areas in the country, with an aim to reach 90% coverage by December 2018. The drive is meant to vaccinate all pregnant women and children below 2 years of age, who have been left uncovered under the routine immunization program. Prime Minister Sh. Narendra Modi launched the drive-Intensified Mission Indra Dhanush (IMI) in Gujarat, focusing on improving immunization to more than 90% by December 2018.

Problem statement

A pre-experimental study to assess the effectiveness of Self Instructional Module (SIM) in terms of knowledge on

current trends of vaccination among nursing students of Himalayan Institute of Nursing, Ambala (Haryana).

Objective

1. To assess the knowledge on current trends of vaccination among nursing students of Himalayan Institute of Nursing, Ambala (Haryana) before implementation of Self Instructional Module (SIM).
2. To assess the knowledge on current trends of vaccination among nursing students of Himalayan Institute of Nursing, Ambala (Haryana) after implementation of Self Instructional Module (SIM).
3. To compare the knowledge on current trends of vaccination among nursing students of Himalayan Institute of nursing, Ambala (Haryana) before and after implementation of Self Instructional Module (SIM).
4. To find out the association on current trends of vaccination among nursing students of Himalayan Institute of Nursing, Ambala (Haryana) after implementation of Self Instructional Module with their selected variables.

Material and Methods

A pre-experimental pre-test and post-test research design was used to conduct the study in Himalayan Institute of Nursing, Kala-amb Ambala (Haryana). A sample size of 60 nursing students were selected by using random sampling technique. Permission was obtained from the research committee of Himalayan Institute of nursing Kala-amb, Ambala (Haryana). The informed consent was taken from nursing students who were willing to participate in the

study. Self structured questionnaire was used to assess the level of knowledge among nursing students on current trends of vaccination and Self-Instructional Module was provided.

Tools of data collection

The tool consists of 3 parts

1. Demographic data profile sheet: Demographic data

- profile sheet was used for assessment of demographic variables such as age, gender, education, residence etc.
- 2. Self Structured Questionnaire: Self Structured Questionnaire was used to assess the knowledge on current trends of vaccination among nursing students of Himalayan Institute of Nursing.
- 3. Self Instructional Module on current trends of vaccination.

Data Analysis

Table 1

Sr. No.	Data Analysis	Method	Objectives
1.	Descriptive statistics	Frequency and percentage distribution, mean, mode, median and standard deviation.	Distribution based on demographic variable to assess the level of knowledge on current trends of vaccination among nursing students.
2.	Inferential statistics	Chi-square test, one sample t-test.	To associate level of knowledge on current trends of vaccination among nursing students with their selected demographic variables.

Result

Table 2: Frequency and percentage distribution of demographic characteristics of nursing students.

S. No.	Selected demographic variables	Frequency (f)	Percentage (%)
1.	Age-	30	50
1.1	17-18	26	43.33
1.2	19-20	3	5
1.3	21-22	1	1.6
1.4	23-24	Total=60	Total=100%
2.	Gender	6	10
2.1	Male	54	90
2.2	Female	Total=60	Total=100%
3.	Educational status	45	75
3.1	B.Sc. Nursing 1 st year	15	25
3.2	B.Sc. Nursing 2 nd year	Total=60	Total=100%
4.	Residence	6	10
4.1	Urban	42	70
4.2	Rural	12	20
4.3	Semi-urban	Total=60	Total=100%
5.	Knowledge regarding current trends of vaccination	24	40
5.1	Yes	36	60
5.2	No	Total=60	Total=100%
6.	Source of information	11	18.33
6.1	Mass media	3	5
6.2	Newspaper	3	5
6.3	Magazines	7	11.66
6.4	Others/journals/pamphlet	Total=60	Total=100%

Table 2. depicts that: The frequency distribution of demographic variables of nursing students according to age majority of the Nursing students 50% were in the age group of 17-18 years following by 43.33% were in age group of 19-20 years, 5% were in the age group of 21-22 years and 1.66% were in age group of 22-23 years.

The frequency distribution of demographic variables of nursing students according to gender majority of nursing students i.e. 90% were females following by 10% were males.

The frequency distribution of demographic variables of nursing students according to educational status majority of nursing students 75% were from B.Sc. Nursing 1st year following by 25% were from B.Sc. Nursing 2nd Year.

The frequency distribution of demographic variable of nursing students according to residence majority of the Nursing students 70% were from Rural area following by 20% were Semi urban and 10% were from Urban.

The frequency distribution of demographic variables of nursing students according to the level of knowledge majority of the Nursing students 60% have no knowledge on current trends of vaccination following by 40% students have no knowledge on current trends of vaccination.

The frequency distribution of demographic variables of nursing students according to the source of knowledge majority of the nursing students 18.33% get information from mass media following by 11.66% through journals and pamphlet, 5% through newspaper and 5% from magazines.

Table 3: Mean, median, standard deviation and range was used to assess the knowledge on current trends of vaccination among nursing students of Himalayan Institute of Nursing, Ambala (Haryana).

Group	Mean		Difference of mean	Standard Deviation		Paired t-test and df
	Pre-test	Post-test		Pre-test	Post-test	
Nursing students	10.7	14.4	3.7	2.75	3.89	6.784 df=1

Table 3. Data in the table no. 3 represents that mean post-test knowledge score $x_2=14.4$ was apparently higher than the mean pre-test knowledge score $x_1=10.7$ the difference

between the mean is 3.7 and SD in pre-test 2.75 in post-test 3.89 and the paired t-test value 6.784 i.e. significant.

Table 4: Frequency and percentage distribution of pre-test and post-test level of knowledge on current trends of vaccination among nursing students of Himalayan Institute of Nursing, Ambala (Haryana). N=60

Level of knowledge	Frequency	Percentage %	Mean	Median	SD	Range
Poor (0-6)	5	8.3	10.7	11	2.75	13
Average (7-12)	37	61.67				
Good (13-18)	18	30				
Very Good (19-24)	0	0				
Excellent (25-30)	0	0				

Table 4 The data presented in table no. 4 full fill the objective 1 as out of 60 (100%) samples, majority 37(61.67%), had average knowledge, 18(30%) had good knowledge, 5(8.3%) had poor knowledge, no student had

very good or excellent knowledge regarding current trends of vaccination. The mean, median, SD, and range also justify the knowledge of nursing students.

Table 5

Level of post-test knowledge	Frequency	Percentage %	Mean	Median	SD	Range
Poor (0-6)	1	1.67	14.4	14	3.89	20
Average (7-12)	16	26.67				
Good (13-18)	33	55				
Very Good (19-25)	9	15				
Excellent (25-30)	1	1.67				

Table 5 The data presented in the table no. 5 full fill the objective as out of 60(100%) samples, majority 33(55%) had good knowledge, 16(26.67%), had average knowledge, 9(15%) had very good knowledge, 1(1.67%) poor and

1(1.67%) had excellent level of knowledge on current trends of vaccination. The mean, median, SD and range also justify the knowledge of nursing students.

Table 6: Chi square showing the Association of knowledge on current trends of vaccination among nursing students Himalayan Institute of Nursing, Ambala (Haryana). N=60

S. No.	Selected demographic variables	Frequency (f)	Percentage (%)	Chi-square, df, p-value
1.	Age-			2.311, 3, 7.82 NS
1.1	17-18	30	50	
1.2	19-20	26	43.33	
1.3	21-22	3	5	
1.4	23-24	1	1.66	
2.	Gender			0.649, 1, 3.84*
2.1	Male	6	10	
2.2	Female	54	90	
3.	Educational status			0.011, 1, 3.84*
3.1	B.Sc.Nursing 1 st year	45	75	
3.2	B.Sc.Nursing 2 nd year	15	25	
4.	Residence			1.391, 2, 5.99 NS
4.1	Urban	6	10	
4.2	Rural	42	70	
4.3	Semi-urban	12	20	
5.	Knowledge regarding current trends of vaccination			1.975, 1, 3.84*
5.1	Yes	49	81.66	
5.2	No	11	18.33	
6.	Source of information			1.975, 3, 7.82 NS
6.1	Mass media	0	0	
6.2	Newspaper	0	0	
6.3	Magazines	0	0	
6.4	Others/journals/pamphlet	49	81.66	

(*S) Significant { $p \leq 0.05$ }, (NS) Non Significant { ≥ 0.05 }.

Table 6 Shows that chi-square test for association between the post-test knowledge score with the selected demographic variables.

The data revealed that gender (0.649), educational status (0.011) and level of knowledge (1.975) were found statistically significant because p value is less than 0.05 (it means 3.84 respectively), whereas age of nursing students, residence and source of knowledge were not statistically significant.

Conclusion

The finding of the study had showed that in pre-test knowledge score majority of the nursing students had average level of knowledge i.e. 61.67% followed by 30% had good level of knowledge and 8.34% had poor level of knowledge.

In post-test knowledge score majority of nursing students had good level of knowledge i.e. 55% following by 26.67% had average level of knowledge, 15% had very good level of knowledge, 1.67% had excellent and poor level of knowledge.

It was concluded that there is increased in post-test knowledge score as compared to pre-test knowledge score. It was the result of Self Instructional Module on knowledge regarding current trends of vaccination.

It was found that all the socio-demographic variables like age, gender, educational status, residence, level of knowledge and source of information on current trends of vaccination.

Conflict of interest: There was no such conflict and bias during the study.

Source of finding: It is self-founded research study.

Ethical consideration: No ethical issue exists.

References

1. Lahariya Chandrakant A brief history of Vaccines and Vaccination in India. Indian J Med Res139, April 2014, pp491-511.
2. Sharma Shilpa *et al.* Effectiveness of Self Instructional Module (SIM) on current trends of vaccination in terms of knowledge and practices among nursing students: A Quasi Experimental Study.
3. Pinjra Shankra *et al.* Indian journal of community medicine: Official Publication of Indian Association of Preventive and Social Medicine.
4. www.immune.org.nz
5. <http://www.slideshare.net> (Evolution of immunization program in India with recent update).