Original Research Article

A Study to Assess the Effectiveness of a Structured Teaching Programme on Knowledge and Attitude Regarding Nursing Profession among Pre University Course Students of Selected Colleges, in Bengaluru

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ABSTRACT

Nursing is as old as human life itself; however, the shortage of nurses is not a recent phenomenon. The profession is said to have long suffered from public stereotyping and from being closely associated with feminity and powerlessness. Perception of advanced secondary school students is important because they offer strategic clues towards successful recruitment of next generation of nurses. The objectives of the study were: To assess the knowledge regarding nursing profession among pre university course students, To assess the attitude towards nursing profession among pre university course students, To determine the effectiveness of a structured teaching programme on knowledge and attitude regarding nursing profession among pre university course students, To identify the association of knowledge and attitude regarding nursing profession with selected baseline variables among pre university course students, To identify the correlation between knowledge and attitude regarding nursing profession. The conceptual framework adopted for the study was based on Imogene king's goal attainment theory (1981). A true experimental pretest- posttest design with control group was used to assess the effectiveness of a structured teaching programme on knowledge and attitude regarding nursing profession among 130 pre university course students of selected colleges in Bengaluru. A researcher prepared 35 questionnaire was used to assess knowledge and researcher prepared likert scale with 25 statements was used to measure attitude regarding nursing profession among pre university course students. The finding of the study reveals that in pretest knowledge, Only 1(1.5%) subjects in control group and none of the subjects in experimental group had very good knowledge. But in posttest 65(100%) subjects in experimental group had very good knowledge whereas only 1(1.5%) had very good knowledge in control group. Finding of the study reveals that in pretest only 8(12.30%) subjects in control group and only 9(13.84%) subjects in experimental group had positive attitude. But in posttest 57 (87.69%) subjects had highly positive attitude and 8(12.30%) subjects had positive attitude in experimental group whereas only 7(10.76%) had positive attitude and none had highly positive attitude towards nursing in control group. The findings of the present study revealed that there was a significant gain in knowledge and attitude regarding nursing profession among pre university course students following structure teaching programme. There was a statistically significant association between mean pretest knowledge score and selected baseline variable such as a family member/ blood relative is a nurse (df=1, p=0.041). There was no statistically significant association between mean pretest attitude score and selected baseline variables. There is no correlation between the knowledge and attitude regarding nursing profession. Hence structure teaching programme can be used to improve the knowledge regarding nursing profession among pre university course students.

Keywords: structured teaching programme, knowledge, attitude, nursing profession, pre university course students.

INTRODUCTION

"Never lose an opportunity of urging a practical beginning, however small, for it is wonderful how often in such matters the mustard-seed germinates and roots itself."   - Florence Nightingale
          Nursing is a nation's largest health care profession which provides care to people throughout the continuum of life. [1] Nurses care for individuals of all ages and cultural backgrounds who are healthy and ill in a holistic manner based on the individual's physical, emotional, psychological, intellectual, social, and spiritual needs. The profession combines physical science, social science, nursing theory, and technology in caring for those individuals. A professional nurse therefore is a person who has completed a basic nursing education programme and is licensed in his/her country to practice professional nursing. [2] Nursing profession is not attractive for meritorious as well as other students. In India, a number of factors determine this negative attitude of students which may include low reputation of the profession in society, no definite job description for nurses, no criteria for various administrative posts in nursing, no consideration of higher degrees for higher post, dominance of doctors, no autonomy to the profession and low salary. [3-5] Demand for health services and nurses continues to grow due to aging populations, population explosion and a growing burden of chronic and non-communicable disease. [6] India has a shortage of two million nurses in comparison to the population ratio. The problem apparently has occurred from the fact that the young generation in the country is not showing interest in nursing jobs. [7] There are 19.3 million nurses and midwives in the world according to the world health organization's world health statistics report, 2011. [8]
          A study was conducted to assess the knowledge and attitude of higher secondary school students regarding nursing profession in a selected school in Kanyakumari district, South India. Data were collected from 100 students studying in 11th standard. The study showed that 60% of the students had moderately adequate knowledge and 90% of them had unfavorable attitude towards nursing profession. [9]
          A study was conducted among 200; class 12 students revealed that only 3.9% of students were interested in nursing as a first priority. Their knowledge of nursing as a profession was also poor with 66% students having a knowledge score below 50%. The study suggested that a career guide for nursing should be developed to improve the level of knowledge regarding nursing. This will help to improve the image of nursing. [10] According to health ministry estimates, by the end of the 11th Plan (2007-2012), India will require 10.43 lakh nurses. India which has 1,597 nursing schools, 833 BSc (nursing) colleges and 97 MSc (nursing) colleges, has a capacity to train 79,850 diploma nurses, 41,650 graduate nurses and 1,940 post-graduate nurses a year. States like UP, Bihar, Orissa, MP and Rajasthan are the worst affected by shortage of nurses. Also, for every doctor, there should be three nurses. But at present, the doctor nurse ratio in India is 1:1.5. To add to the ministry's woes, a recent survey published in the Nursing Journal of India found a tremendously low interest among students wanting to take up nursing as a profession. [10]
          In reality, the rate of entry into the nursing profession is decreasing whereas the rate of exiting the nursing profession is increasing. [11] To strengthen the profession; we need to attract the brightest students into nursing programs. [12] Shortage of nurses is a world-wide problem that continues unless and until drastic measures are taken. There is also a need to increase awareness about nursing which should begin at the primary school level. [13] The present nursing shortage requires nursing as a profession to be marketed effectively to obtain the quality and quantity of candidates to ensure the continued existence of the profession. [14]

Perception of advanced secondary school students is important because they offer strategic clues towards successful recruitment of next generation of nurses. A positive image of nursing need to be engendered by nursing education and the general community. [15] Nursing schools must recruit and retain qualified applicants to meet the ever growing demands of nurses. [16]Many strategies are needed by nursing organizations, administrators and the government to address the critical issues of the profession with the goal of reducing the nursing shortage through increased recruitment and retention of practicing nursing. [7]

Objectives of the study:
- To assess the knowledge regarding nursing profession among pre university course students.
- To assess the attitude towards nursing profession among pre university course students.
- To determine the effectiveness of a structured teaching programme on knowledge and attitude regarding nursing profession among pre university course students.
- To identify the association of knowledge and attitude regarding nursing profession with selected baseline variables among Pre University course students.
- To identify the correlation between knowledge and attitude regarding nursing profession.

Hypotheses: All hypotheses were tested at 0.05 level of significance
H_1: There is a significant difference between mean pre-test and post-test knowledge score of experimental group.
H_2: There is a significant difference between the mean pre-test and post-test attitude score of experimental group.

H_3: There is a significant difference in mean post-test knowledge score between control and experimental group.
H_4: There is a significant difference in mean post-test attitude score between control and experimental group.
H_5: There is a significant association between knowledge, attitude and selected baseline variables.
H_6: There is a significant relationship between knowledge and attitude regarding nursing profession.

CONCEPTUAL FRAMEWORK
A conceptual framework is a group of concepts and a set of prepositions that spell out the relationship between them. Conceptual framework plays several interrelated roles in the progress of science. Their overall purpose is to make scientific findings meaningful and generalizable.

In the present study the investigator has adopted a conceptual framework based on Imogene king's goal attainment theory (1981). In the current study the investigator focus on perception, communication, interactions, transactions, and goal setting.

RESEARCH METHDOLOGY
The quantitative approach adopted for this study was true experimental pre-test post-test design with control group. The present study was conducted in a pre university collage located in Anekal Taluk, Bangalore. The study was approved by Institution Ethics Committee and informed consent was obtained from eligible staffs. Data was collected from 130 second year pre university course students (65 in experimental group and 65 in control group) on basis of inclusion and exclusion criteria.
Inclusion criteria: Second year pre university course students with science group and willing to participate in the study
Exclusion criteria: Students who have attended similar structured teaching programme within 6 months.

Description of tool:

The final tool comprised of 3 sections:

Section A: Baseline characteristics Performa.

Section B: Researcher prepared 35 questionnaires to assess knowledge regarding nursing profession.

Section C: Researcher prepared likert scale with 25 statements to measure attitude regarding nursing profession.
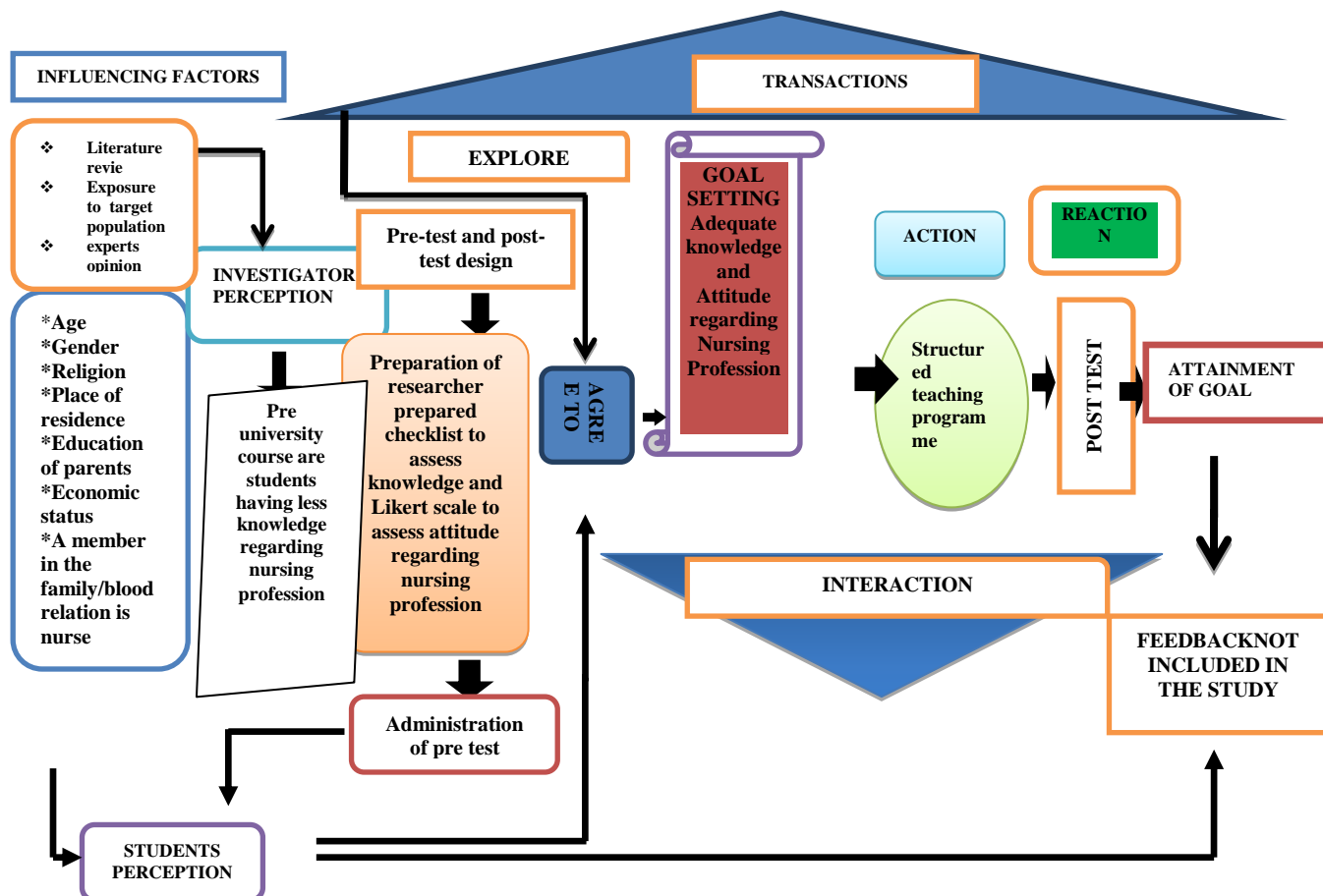
Fig: 1 Conceptual Framework- Modified Imogene King's Goal Attainment Theory

Method of data collection:

- A prior permission was obtained from the principal of a selected pre university college.
- Informed consent was obtained from the students who met the inclusion criteria
- Subjects were randomly assigned to either experimental and control group
- Pre-test was conducted for both experimental and control group
- The structured teaching programme regarding nursing was administered to experimental group after pretest.

- On the 7th day post-test was conducted to both experimental and control group using the same tool.

Statistical methods

Data was planned to analyse using descriptive and inferential statistics. Significance is assessed at the 5% level of significance.

Descriptive statistics: frequency, percentage, mean and standard deviation.

Inferential statistics: chi square, paired and independent 't' test.

RESULTS

Table 1: Frequency and percentage distribution of baseline characteristics of Pre University course students. N=130

S.NO	Baseline Characteristics	Control group		Experimental group	
		Frequency (f)	Percentage (%)	Frequency (f)	Percentage (%)
1.	Age in years				
	15 -17	64	98.46	63	96.92
	18-20	1	1.53	2	3.07
2.	Gender				
	Male	34	52.30	35	53.84
	Female	31	47.69	30	46.15
3.	Religion				
	Christian	3	4.61	9	13.84
	Hindu	57	87.69	51	78.46
	Muslim	5	7.69	4	6.15
	Others(sheikh)	0	0	1	1.53
4.	Place of residence				
	Rural	5	7.69	33	50.76
	Urban	40	61.53	20	30.76
	Semi urban	20	30.76	12	18.46
5.	Educational status				
	Fathers				
	Illiterate	5	7.69	9	13.84
	Up to 10th std	20	30.76	26	40
	Higher secondary	17	26.15	16	24.61
	≥Graduation	23	35.38	14	21.53
	Mothers				
	Illiterate	7	10.76	6	9.23
	Up to 10th std	28	43.07	31	47.69
	Higher secondary	14	21.53	14	21.53
	≥Graduation	16	24.61	14	21.53
6	Occupation				
	Fathers				
	Agriculture	0	0	0	0
	Garment worker	15	23.07	34	52.31
	Private firm	48	73.84	28	43.08
	Government	2	3.07	3	4.61
	Mothers				
	Housewife	48	73.84	48	73.84
	Garment worker	4	6.15	5	7.69
	Private firm	4	6.15	8	12.31
	Government	9	13.85	4	6.54
7	Monthly income of the family in rupees				
	≤ 5000	1	1.53	10	15.38
	5001-10,000	14	21.54	17	26.15
	10,001-15,000	23	35.38	16	24.62
	≥15,001	27	41.54	22	33.84
8	Number of siblings				
	0	18	27.69	11	16.92
	1	32	49.23	32	49.23
	2	14	21.54	12	18.46
	3 or more	1	1.53	10	15.38
9	Birth order				
	First	42	64.62	40	61.54
	Second	20	30.77	19	29.23
	Third	3	4.61	4	6.54
	Fourth or more	0	0	2	3.77
10	A family member/ blood relative is nurse				
	Yes	7	10.77	5	7.69
	No	58	89.23	60	92.31
11	Previous knowledge regarding nursing profession				
	Yes	4	6.54	0	0
	No	61	93.85	65	100
12	Has Interest in nursing course				
	Yes	45	69.23	46	70.77
	No	20	30.77	19	29.23

Table 2: Frequency and percentage distribution of level of knowledge of pre university course students regarding nursing profession N=130

Level of knowledge	Control group				Experimental group			
	Pre test Knowledge		Post test Knowledge		Pre test Knowledge		Post test Knowledge	
	F	%	F	%	f	%	f	%
Poor (<50%)	28	43.07	28	43.07	28	43.07	-	-
Good (51 to 75%)	36	55.38	36	55.38	37	56.92	-	-
Very good (76 to 100%)	1	1.5	1	1.5	-	-	65	100%

Table 3: Frequency and percentage distribution of level of attitude of pre university course students regarding nursing profession. N=130

Level of attitude	Control group				Experimental Group			
	Pre test Attitude		Post test Attitude		Pretest Attitude		Pretest Attitude	
	F	%	f	%	F	%	F	%
Negative (32-63)	57	87.69	58	89.23	56	86.15	-	-
Positive (64-95)	8	12.30	7	10.76	9	13.84	8	12.30
Highly Positive (96-125)	-	-	-	-	-	-	57	87.69

Table 4: Mean, Mean difference, 't' value and P value of pretest and post test knowledge score of experimental group. N=65

Experimental group	Knowledge score		df	"t" value	P value
	Mean	MD			
Pre test	19.292				
Post test	32.938	13.646	64	37.500	0.001*

*Significant

The data depicts that the mean posttest knowledge score (32.938) of the experimental group was significantly higher than the mean pretest knowledge score (19.292). The calculated paired "t" value (t_{64} = 37.500, p = 0.001) was greater than the table value. Therefore, formulated research hypothesis (H1) was accepted at 0.001 level of significance.

Table 5: Mean, Mean difference. 't' value and P value of pretest and post test attitude score of experimental group. N=65

Experimental group	Attitude score		df	"t" value	P value
	Mean	MD			
Pre test	57.015				
Post test	102.446	45.451	64	45.874	0.001*

*Significant

The data depicts that the mean posttest attitude score (102.446) of the experimental group was significantly higher than the mean pretest attitude score (57.015). The calculated paired "t" value (t_{64} = 45.874, p = 0.001) was greater than the table value. Therefore, formulated research hypothesis (H2) was accepted at 0.001 level of significance.

The data depicts that the mean postest knowledge score (32.988) of the experimental group was significantly higher than the mean posttest knowledge score of the control group (19.262). The calculated independent "t" value (t_{128} = 37.468, p = 0.001) was greater than the table value. Therefore, formulated research hypothesis (H3) was accepted at 0.001 level of significance.

Table 6: Mean, Mean difference. 't' value and P value of post test knowledge of experimental group and control group. N=130

Group	Post test knowledge score				
	Mean	MD	df	't' value	P value
Control group	19.262				
Experimental group	32.988	13.726	128	37.468	0.001*

*Significant

Table 7: Mean, Mean difference. 't' value and P value of post test attitude of experimental group and control group. N=130

Group	Posttest attitude score			't' value	P value
	Mean	MD	df		
Control group	55.569				
Experimental Group	102.446	46.877	128	42.074	0.001*

*Significant

The data depicts that the mean posttest attitude score (102.446) of the experimental group was significantly higher than the mean posttest attitude score of control group (55.569). The calculated independent "t" value (t_{128} = 42.074, p = 0.001) was greater than the table value. Therefore, formulated research hypothesis (H4) was accepted at 0.001 level of significance.

Table 8: Association between mean pretest knowledge score and selected baseline variables N= 130

Baseline Characteristics	Pretest knowledge score				df	Chi Square	Inference
	Average (<66%)		Very good (>66%)				
Age in years							
15 -17	64		63		1	-	>0.05** NS
18-21	1		2				
Gender							
Male	63		6		1	0.648	>0.05** NS
Female	57		4				
Religion							
Hindu	98		10		1	0.137	>0.05** NS
Others	22		-				
Place of residence							
Rural	37		1		1	-	>0.05** NS
Urban	55		5				
Semi urban	28		4				
Educational status of parents	(Father)	(Mother)	(Father)	(Mother)			
Illiterate	14	13	0	0	-	-	>0.05** NS
Up to 10th std	43	56	3	3			
Higher secondary	31	26	2	2			
Graduation and above	32	25	5	5			
Monthly income of the family in rupees							
≤5000	10		1		-	-	>0.05** NS
5001-10,000	30		1				
10,001-15,000	35		4				
≥15,000	45		4				
Number of sibling							
0	28		1		-	-	>0.05** NS
1	59		5				
2	24		2				
3 or more	9		2				
Birth order							
First	76		6		2	0.921	>0.05** NS
Second	36		3				
Third	8		1				
A family member /blood relative is a nurse							
Yes	11		3		1	0.041	0.05* S
No	109		7				
Has Interest in nursing course							
Yes	84		7		1	1.000	>0.05** NS
No	36		3				

*Significant   **Not significant

Data shows that there was a statistically significant association between mean pretest knowledge score and selected baseline variable such as a family member/ blood relative is a nurse (df =1, p=0.041).

Table 9: Association between mean pretest attitude score and selected baseline variables N= 130

Baseline Characteristics	Pre test attitude score				df	Chi square	Inference
	Negative attitude (<50%)		Positive attitude (>50%)				
Age in years							
15 -17	63		64		-	-	>0.05** NS
18-22	2		1				
Gender							
Male	64		5		1	0.648	>0.05** NS
Female	58		3				
Religion							
Hindu	101		7		1	0.731	>0.05** NS
Others	21		1				
Place of residence							
Rural	36		2		1	-	>0.05** NS
Urban	56		4				
Semi urban	30		2				
Educational status of parents	(Father)	(Mother)	(Father)	(Mother)			
Illiterate	14	13	0	0	-	-	>0.05** NS
Up to 10th std	44	56	2	3			
Higher secondary	30	27	3	1			
Graduation and above	34	26	3	4			

Continued table no. 9...					
Monthly income of the family in rupees					
≤ 5000	11	0	-	-	>0.05** NS
5001-10,000	31	0			
10,001-15,000	35	4			
≥ 15,000	45	4			
Number of sibling					
0	27	2	-	-	>0.05** NS
1	59	5			
2	25	1			
3 or more	11	0			
Birth order					
First	75	7	2	0.322	>0.05** NS
Second	38	1			
Third	9	0			
A family blood relative is a nurse					
Yes	13	1			>0.05** NS
No	109	7	1	0.265	
Has Interest in nursing course					
Yes	84	7			>0.05** NS
No	38	1	1	0.265	

*Significant   **Not significant

There were no statistically significant association between mean pretest attitude score and selected baseline variables.

Table 10:   Correlation between knowledge and attitude regarding nursing profession   N=130

Group	"r" value	P valve
Experimental group	0.211	0.92
Control group	0.51	0.686
Mean	0.124	0.160

The data presented in table 13: shows that there is no correlation between the knowledge and attitude regarding nursing profession. Hence H_6 was rejected at 0.05 level of significance.

DISCUSSION

The present study was conducted to assess the effectiveness of a structured teaching programme on knowledge and attitude regarding nursing profession among pre university course students of selected colleges in Bengaluru using simple random sampling technique (lottery method).

In pretest only 1(1.5%) subjects in control group and none of the subjects in experimental group had very good knowledge. But in posttest 65(100%) subjects in experimental group had very good knowledge whereas only 1(1.5%) had very good knowledge in control group. In pretest only 8(12.30%) subjects in control group and only 9(13.84%) subjects in experimental group had positive attitude. But in posttest 57 (87.69%) subjects had highly positive attitude and 8(12.30%) subjects had positive attitude in experimental group whereas only 7(10.76%) had positive attitude and none had highly positive attitude towards nursing in control group. The mean posttest knowledge score (32.938) of the experimental group was significantly higher than the mean pretest knowledge score (19.292). The calculated paired "t" value ($t_{64} = 37.500$, $p = 0.001$) was greater than the table value. Therefore, formulated research hypothesis (H1) was accepted, i.e there is a significance difference between mean pre test and post test score of experimental group. There was a statistically significant association between mean pretest knowledge score and selected baseline variable such as a family member/ blood relative is a nurse ($df=1$, $p=0.041$). In the present study there was no correlation between the knowledge and attitude regarding nursing profession. Hence, H_6 was rejected at 0.05 level of significance.

CONCLUSION

The findings of the study revealed that structured teaching programme was effective in improving the knowledge ($t_{128}=37.468$, $p=0.001$) and attitude ($t_{128}=42.074$, $p=0.001$) regarding nursing

profession among pre university course students. And there was a significant association between pretest knowledge score and baseline variables such a family member or a blood relative is a nurse (df=1, p=0.041).There was an association between knowledge and attitude score (df=1, p=0.001).

Nursing Implications: The investigator has derived the following implications from the study which are vital in concern in the field of nursing administration, nursing practice, nursing education and nursing research.

Nursing Practice

- Current study will help to attract more youngsters into the nursing profession and thus the shortage of nurses in the clinical practice can be reduced.

Nursing education

Nurse educators and student nurses can utilize the module prepared by the researcher to conduct an orientation programme to pre university course students regarding nursing profession. It will help to attract meritorious students into the nursing profession.

Nursing administration

- Nursing administrators can organise in-service education programme for pre university students regarding nursing profession.
- Nursing administrators exemplify positive behaviour and attitude so that more students will be attracted to nursing profession.

Nursing research

- Further research can be conducted on knowledge and attitude regarding nursing profession among other population.
- Findings of the present study can be disseminated through conferences, seminar, publication in journals and World Wide Web.

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How to cite this article: Bhandari S, Jacob J. A study to assess the effectiveness of a structured teaching programme on knowledge and attitude regarding nursing profession among pre university course students of selected colleges, in Bengaluru. Int J Health Sci Res. 2016; 6(12):127-136.

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