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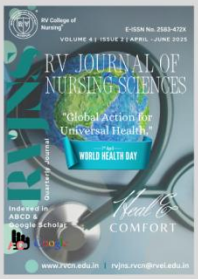

Effectiveness of Structured Instructional Module on Knowledge, Attitude and Practice Regarding Prevention of Oral Cancer among Adolescents in Urban Colleges of Bangalore South, Karnataka.

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ABSTRACT

Cancer is a universal and non-communicable disease that affects people without regard to race, gender; socio economic status or culture. It can occur at any site or tissue of the body and involves any type of cells. A quasi experimental design was used for the study. The subjects were selected by using proportionate stratified random sampling technique from urban colleges of Bangalore South; Karnataka. The total subjects under the study were 500 adolescents (250 for experimental group and 250 for control group).The results of the study showed that there was a significant increase in knowledge, attitude and practice scores after administration of Structured Instructional Module as evident by the improvement knowledge mean percentage 27.7% with 't' value 44.24 which is significant at 0.05 level in experimental group and improvement knowledge mean percentage 0.2% with 't' value 1.37, which is nonsignificant at 0.05 level in control group. Experimental group knowledge shows highly positive correlation between attitude & practice (r=0.8188*), Practice indicates moderately positive correlation between knowledge & attitude (0.7886*) and Attitude has low positive correlation between knowledge and practice(0.6786*).Where as in control group Practice has highly positive correlation between knowledge &attitude (r=0.8618*), knowledge shows moderately positive correlation between attitude & practice (r=0.8513*), and Attitude indicates low positive correlation between knowledge and practice (0.6525*). There was significant association with post test knowledge level and demographic variables such as age, gender, class studying, branch in PUC and number of siblings and the demographic variables such as age, gender, class studying, and type of family shows association with post test knowledge scores in control group.

Introduction:

Cancer is a universal and non communicable disease that affects people without regard to race, gender, socio economic status or culture. It can occur at any site or tissue of the body and involve any type of cells. There are wide variations in the distribution of cancer throughout the world. Cancer is the second most common killer disease in the world. Cancer is known to be the most feared of all diseases, and feared more than synonymous with death, pain and disfigurement.

The term oral cancer encompasses all malignancies which originate in the oral tissues. Primary tumors of the oral cavity may arise from epithelium, minor salivary glands or sub mucous tissues, tumors of dental origin, bone tumors and tumors of neuromuscular origin are also common. The tongue, alveolar, gingival- buccal sulcus, buccal mucosa are some common sites of carcinoma.

A substantial proportion of the world's population is engaged in chewing areca nut. Smoking is the habit which is endemic throughout the Indian subcontinent. Smoking is becoming a fashion for youth which ultimately becomes their habit and addiction. Tobacco

Chewing is another habit which is becoming quite popular in youth which is responsible for oral cancer. Smoking affects gums, teeth, lungs and heart. All these problems may not occur in adolescents and young age but in later years.

Need for The Study

Oral cancer is a major problem in India, during the year 2008 estimated incidence of 9.8 cases per 100,000 population for males and 5.2 cases per 100,000 population in females.

Tobacco is responsible for 1/3rd of all cancers and about almost 50% of the cancers in males is due to tobacco. Tobacco causes cancers of mouth, lungs, larynx and esophagus. Control of tobacco menace could prevent large number of cancers in India

India is a high-risk region for oral cancer due to high prevalence of tobacco use, particularly chewing (in both sexes), bidi smoking and alcohol drinking in male population. Alcohol has been implicated as a causative factor and the effects of alcohol and tobacco seem to be synergetic. In most of the countries, men have higher rate of oral cancer than women (due to tobacco use) and higher rate of lip cancer (due to sunlight exposure from outdoor occupation).

Objective:

1. To assess the existing level of Knowledge, Attitude and Practice of adolescents on prevention of oral cancer among.
2. To evaluate the effectiveness of Structured Instructional Module on Knowledge, Attitude and Practice of adolescents regarding prevention of oral cancer.
3. To find the association between post-test levels of Knowledge of adolescents on prevention of oral cancer with their selected demographic variables.

Research hypothesis:

H1: There will be a significant difference between the Knowledge, Attitude and Practice scores of adolescents regarding prevention of oral cancer.

H2: There will be significant association between level of Knowledge, Attitude and Practice of adolescents on prevention of oral cancer with selected socio demographic variables.

Research variables:

Materials and methods:

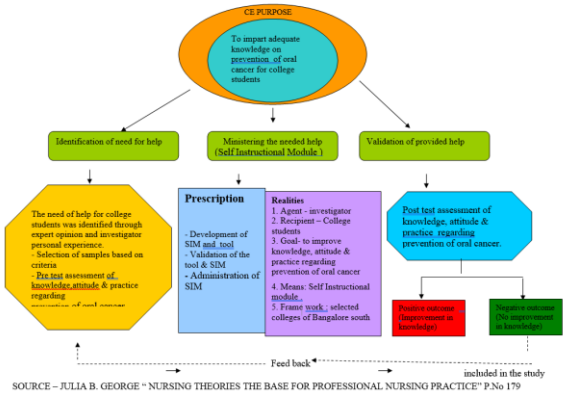
Research design:

quasi experimental design

Research Setting: The present study was conducted at PU Colleges, Bengaluru. The criteria for selecting a setting were determined according to the geographical proximity, feasibility of conducting the study, and availability of samples.

Population: Adolescents in PU Colleges, Bengaluru.

1 CONCEPTUAL MODEL BASED ON MODIFIED ERNESTINE WIEDENBACHS HELPING ART OF CLINICAL NURSING THEORY1969



SOURCE – JULIA B. GEORGE " NURSING THEORIES THE BASE FOR PROFESSIONAL NURSING PRACTICE" P.No 179

Methods of data collection:

In this study Structured instructional module is used.

Sampling Technique:

In this study the samples are selected through Proportionate stratified random sampling technique.

Sample Size:

The sample size is 500 Pre-university urban college students, who are distributed between Experimental group (250) and Control group (250).

Inclusion Criteria for Sampling:

The study includes Pre university urban college students Bengaluru.

- In the age group of 15 to 19 years
- Willing to participate in the study
- Available at the time of data collection

Exclusive Criteria For Sampling:

The study excludes the Pre-university urban college students Bengaluru

- Participants :
  - In the age group of below15 &above19 years
  - Kannada medium students

Delimitation:

The study is delimited to the Pre university urban college students Bengaluru.

Instrument Used:

In this study the data will be collected through Structured instructional module is used

Plan for Data Analysis:

The data will be analyzed by descriptive and inferential statistics.

Result and Interpretation:

SECTION A: Frequency and Percentage of Demographic variables

Result and Interpretation:

SECTION- A, PRETEST LEVEL OF KNOWLEDGE, ATTITUDE AND PRACTICE OF ADOLESCENTS ON PREVENTION OF ORAL CANCER. AMONG EXPERIMENTAL AND CONTROL GROUP.

Table -1: Aspect wise Pre test Mean Knowledge scores of Respondents on Prevention of Oral Cancer of Experimental and Control Group.

N=500

No.	Knowledge Aspects	Max. Score	Experimental Group(n1-250)				Control Group(n2-250)			
			Mean	SD	Mean (%)	SD (%)	Mean	SD	Mean (%)	SD (%)
I	Meaning &Definition	3	1.52	0.7	50.8	24.1	1.55	0.6	51.7	21.1
II	Causes and predisposing Factors	7	3.66	1.3	52.2	18.4	3.66	1.2	52.3	17.3
III	Effects of Areca nut, betel nut & Tobacco	6	3.27	1.2	54.5	20.2	3.20	0.8	53.3	13.9
IV	Signs & Symptoms	3	1.64	0.7	54.7	23.9	1.40	0.6	46.8	20.9
V	Diagnosis of Oral Cancer	2	1.14	0.7	57.0	32.6	0.97	0.4	48.6	19.7
VI	Preventive measures of Oral Cancer	9	4.42	1.4	49.1	16.1	4.16	1.5	46.2	16.2
	Combined	30	15.65	2.9	52.2	9.5	14.95	3.3	49.8	10.9

Table - 4.2a shows that the highest mean knowledge score 4.42 with SD1.4 found in the area of preventive measures of oral cancer. Mean knowledge score 3.66 with SD 1.3 found in the area of causes and predisposing factors, the least mean knowledge score 1.14 with SD 0.7 found in the area of diagnosis of oral cancer in the experimental group.

The highest mean knowledge score 4.16 with SD1.5 found in the area of preventive measures of oral cancer. Mean knowledge score 3.66 with SD 1.2 found in the area of causes and predisposing factors and the least mean knowledge score 0.97 with SD 0.4 was found in the area of diagnosis of oral cancer in the control group.

Classification of Subjects by their Pre test Knowledge level on prevention of oral cancer in Experimental and Control group.

N=500

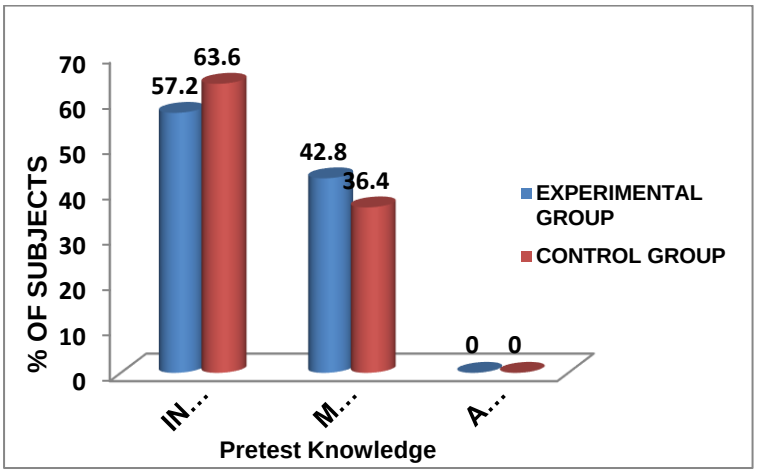


Figure- 15 Distribution of subjects by Pretest Level of Knowledge.

Classification of subjects by their Pre test Attitude level on prevention of oral cancer - experimental and control Group.

N=500

Attitude Level	Category	Experimental (n_1-250)		Control (n_2-250)	
		Number	Percent	Number	Percent
Unfavourable	≤ 50% Score	122	48.8	108	43.2
Moderate	51-75 % Score	128	51.2	142	56.8
Favourable	100.0	0	0.0	0	0.0
Total		250	100.0	250	100

Table -4.3d depicts that majority, 51.2% (128) of the subjects had moderate degree of attitude and 48.8 %(122) of the subjects had unfavorable attitude and no one with favorable degree of attitude in pre test experimental group. Whereas majority, 56.8% (142) of the subjects had moderate degree of attitude, 43.2 % (108) of the subjects had unfavorable degree of attitude and no one with favorable degree of attitude in pre test control group.

Section- B, Post Test Level Of Knowledge, Attitude and Practice of Adolescents On Prevention Of Oral Cancer Among Experimental And Control Group.

Table-4.3a: Aspect wise Post test Mean Knowledge scores of subjects on Prevention of Oral Cancer in Experimental and Control Group.

N=500

No	Knowledge Aspects	Max. Score	Experimental Group				Control Group			
			Mean	SD	Mean (%)	SD (%)	Mean	SD	Mean (%)	SD (%)
I	Meaning & Definition	3	2.52	0.5	83.9	18.2	1.56	0.6	52.1	21.1
II	Causes & predisposing Factors	7	5.71	1.0	81.5	15.0	3.68	1.2	52.5	17.4
III	Effects of Areca nut, betel nut & Tobacco	6	5.02	0.8	83.7	13.4	3.22	0.8	53.6	13.7
IV	Signs & Symptoms	3	2.40	0.6	80.0	21.1	1.41	0.6	47.1	21.2
V	Diagnosis of Oral Cancer	2	1.45	0.5	72.4	27.2	0.98	0.4	49.2	20.5
VI	Preventive measures of Oral Cancer	9	6.86	1.5	76.2	16.7	4.18	1.5	46.4	16.2
	Combined	30	23.95	3.1	79.8	10.3	15.03	3.2	50.1	10.8

Table-4.3a shows that the highest post test mean knowledge score 6.86 with SD1.5 found in the area of preventive measures of oral cancer, mean knowledge score 5.71 with SD 1.0 found in the area of causes and predisposing factors, the least mean knowledge score 1.45 with SD 0.5 found in the area of diagnosis of oral cancer in the experimental group.
The highest post test mean knowledge score 4.18 with SD1.5 found in the area of preventive measures of oral cancer. Mean knowledge score 3.68 with SD 1.2 found in the area of causes and predisposing factors, the least mean knowledge score 0.98 with SD 0.4 found in the area of diagnosis of oral cancer in the control group.

Classification of Subjects by Post test Level of knowledge on Prevention of Oral Cancer among Experimental Group and Control Group.

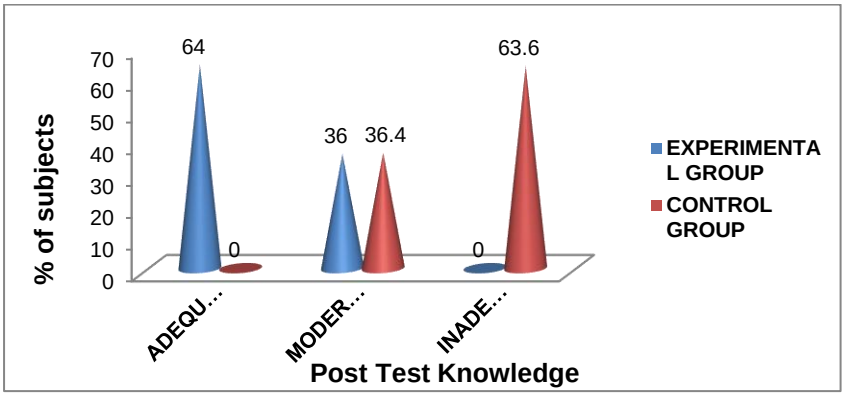


Figure- 16 Distribution of subjects by Post test Level of Knowledge In Experimental and Control Group.

Table-4.3f: Over all Pre test and Post test Mean Attitude scores of respondents on Prevention of Oral Cancer Experimental and Control Group.

N=500

ASPECTS	Max. Score	Experimental (n_1-250)				Paired 't' Test	Control (n_2-250)				Paired 't' Test
		Mean	SD	Mean (%)	SD (%)		Mean	SD	Mean (%)	SD (%)	
Pre test	70	36.02	2.9	51.5	4.2	65.39*	37.22	3.3	53.17	4.7	1.58 NS
Post test	70	53.10	3.1	75.9	4.4		37.23	3.3	53.2	4.7	
Difference	70	17.07	4.2	24.4	5.9		0.01	0.1	0.02	0.2	

NS: Non-Significant, t (0.05, 249df) = 1.96 * Significant at 5% level, t (0.05, 249df) = 1.96

Table4.3f depicts that the pretest mean Attitude score 36.02 and SD 2.9, of Experimental and the pretest mean Attitude score 37.22, SD 3.3 of control group, and the posttest mean Attitude score 53.10, and SD 3.1 of experimental group and the posttest mean Attitude score 37.23 and SD 3.3 of control group.

Whereas, the difference between pretest and post mean Attitude score 17.07, SD 4.2, and mean percentage 24.4 and SD percentage 5.9 of experimental group, the calculated paired 't' test value 65.39 is significant at 0.05 level. Hence, the stated hypothesis (H_1) is accepted, which is the results of having the benefit of Self-Instructional Module.

Whereas, the difference between pretest and post mean Attitude score 0.01, SD 0.1, and mean percentage 0.02 and SD%0.2 of control group, the calculated paired 't' test value 1.58 is not significant at 0.05level. Hence, the stated hypothesis (H_1) is rejected, which is the results of not having the benefit of Self-Instructional Module.

Table – 4.3g: Classification of Subjects by Pretest Practice level on prevention of Oral Cancer in Experimental and Control group.

N=500

Practice Level	Category	Experimental group (n_1-250)		Control group(n_2-250)	
		Number	Percent	Number	Percent
Low	≤ 50% Score	111	44.4	121	48.4
Moderate	51-75 % Score	139	55.6	129	51.6
High	> 75% Score	0	0.0	0	0.0
Total		250	100.0	250	100.0

Table – 4.3g shows that majority, 55.6% (139) of the subjects had moderate practice level, 44.4 %(111) of the subjects had low practice level and no one with high practice level in experimental group. Whereas 51.6% (129) of the subjects had moderate practice level, 48.4% (121) of the subjects had low practice level and no one with high practice level in control group (Figure-19).

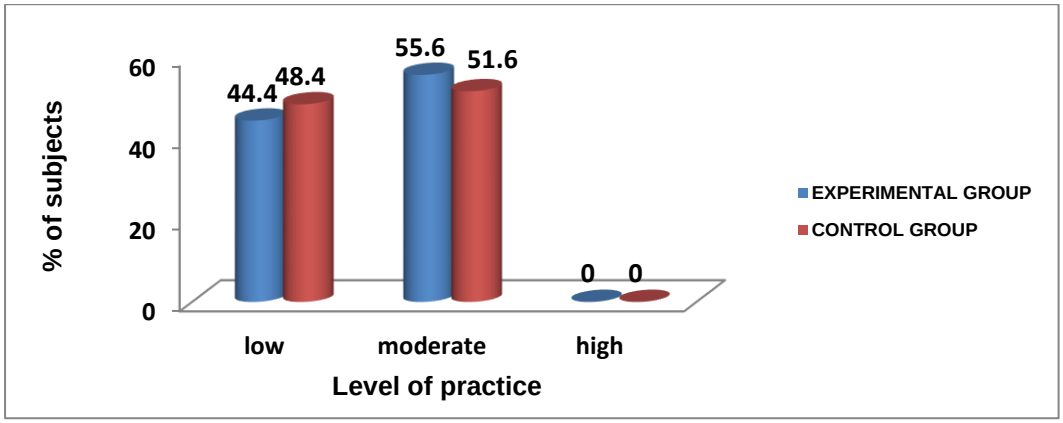


Figure-19 Distribution of subjects by pretest level of practice.

TABLE – 4.3h, Classification Of Subjects By Post test level of practice on Prevention of Oral Cancer among Experimental and Control Group.

N-500

Practice Level	Category	Experimental group (n_1-250)		Control group(n_2-250)	
		N	%	N	%
Low	≤ 50% Score	0	0.0	121	48.4
Moderate	51-75 % Score	100	40.0	129	51.6
High	> 75% Score	150	60.0	0	0.0
Total		250	100.0	250	100.0

Table – 4.3h shows that majority, 51.6% (129) of the subjects had moderate practice level and 48.4%(121)of the subjects had low practice level in posttest control group, whereas 40.0% (100) of the subjects had moderate practice level and 60% (150) of the subjects had high practice level in posttest experimental group (Figure-20).

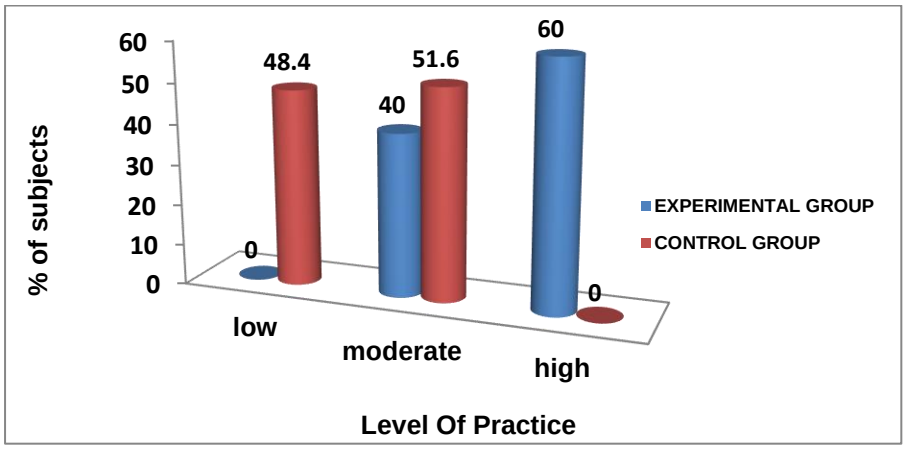


Figure- 20 Distribution of subjects on posttest level of practice

TABLE –4.3i: Comparison between Pre test and Post test practice scores of Experimental and Control Group on Prevention of Oral Cancer.

N=500

Aspects	Max. Score	Experimental group (n_1-250)				Paired 't' Test	Control group(n_2-250)				Paired 't' Test
		Mean	SD	Mean (%)	SD (%)		Mean	SD	Mean (%)	SD (%)	
Pre test	15	7.80	1.7	52.0	11.5	41.14*	7.80	1.7	52.03	11.5	1.90 NS
Post test	15	12.21	1.5	81.4	29.4		7.84	1.7	52.27	11.4	
Difference	15	4.42	1.7	29.4	11.3		0.04	0.3	0.24	2.0	

NS: Non-Significant, S:Significant at 5% level, t (0.05, 249df) = 1.96

Table 4.3i depicts that the pretest mean practice score 7.80 and SD 1.7, of Experimental and the pre test mean practice score 7.80 ,SD 1.7 of control group, and the post test mean practice score 12.21, and SD 1.5 of experimental group and the post test mean practice score 7.84 SD 1.7 of control group.

Whereas, the difference between pre test and post mean practice score 0.04, SD 0.3, and mean percentage 0.24 and SD percentage 2.0 of control group, the calculated paired 't' test value 1.90 is nonsignificant at 0.05 level. The difference between pre test and post mean practice score 4.42, SD 1.7, and mean percentage 29.4 and SD percentage 11.3 of experimental group, the calculated paired 't' test value 41.14 is significant at 0.05 level and the stated hypothesis (H_1) is accepted, which is the results of having the benefit of Self Instructional Module.

Section–C. Association between Levels of Knowledge of Adolescents on Prevention of Oral Cancer and Selected Socio Demographic Variables.

Table4.5ashowsthatthedemographicvariablessuchasage (x^2=6.28),gender(x^2=4.96),classstudying(x^2=4.04),combinationinPUC(x^2=6.45)andnumberofsiblings(x^2=7.86) are found significant at 0.05 level and show associationwithposttestknowledge,ThevariablessuchasSourceofInformation (x^2=0.66), type of family (x^2=0.57), Place of Residence (x^2=1.15), Religion (x^2=0.50),Occupation of Fathers (x^2=2.27),Occupation of Mothers (x^2=2.35) and Family Income/month (x^2=0.73) are found nonsignificant at 0.05 level And Shows Association with test level of knowledge in experimental Group.

Table4.5b conveys that the demographic variables,
Age (x^2=9.41), gender (x^2=4.39), class studying (x^2=4.52), and type of family (x^2=6.16), found significant at 0.05 level And shows association with posttest knowledge variable in control group. The variables, combination in PUC (x^2=0.14), number of Siblings (x^2=0.03), source of Information(x^2=4.14),place of residence (x^2=0.02), religion(x^2=0.70), occupation of fathers(x^2=3.15), occupation of mothers(x^2=4.30), and family Income/month(x^2=1.21),are found nonsignificant at 0.05 level and shows no association with post test level of knowledge in control group.

Summary

This chapter dealt with analysis and interpretation of data collected from 500 adolescents of urban colleges, Bangalore South, to assess effectiveness of structured instructional module on knowledge, attitude and practice of adolescents regarding prevention of oral cancer in relation to the objectives of the study. The study findings reveal that structured instructional module is effective in improving knowledge, attitude and practice of adolescents regarding prevention of oral cancer.

Conclusion

Cancer may be regarded as a group of diseases characterized by an abnormal growth of cells, ability to invade adjacent tissues and even distant organs and eventually death of the affected person if the tumor has progressed beyond that stage when it can be successfully removed.

Hence Structured Instructional Module has enhanced the knowledge, attitude and practice of adolescents, which is essential in preventing oral cancer in the future. Therefore, the nurse educator must constantly focus her effort on improving the knowledge, attitude and practice of adolescents on prevention of oral cancer, so that they in turn educate the general public who has the habits which are responsible for oral cancer to take preventive precautions of oral cancer.

Recommendations

Based on the findings of the study the following recommendations were made

1. The study can be replicated on larger samples in different settings.
2. A longitudinal study can be conducted to see the effectiveness of teaching in bringing down the incidence of oral cancer.
3. A longitudinal study can be conducted to find the cause and risk factors for oral cancer
4. A true experimental study could be undertaken for the subjects with the habit of chewing and smoking tobacco with control group.

References:

1. Park.K. (2013).Park's Text Book of Preventive and Social Medicine. 22nd ed. Jabalpur: M/s. Banarsidas Bhanot Publisher. P.302-310.
2. Brunner &Suddartha. (2006). Lippincot Manual of Nursing.8th ed. India: Jaypee brothers Medical Publishers. P.610-615.
3. Lewis. (2004). Medical Surgical Nursing. 6th ed. St. Lewis, Mosby, p.290- 329.
4. Julia B George. (1969).Nursing Theories Base For Professional Nursing Practice.p.179.
5. Kothari. C.R.(2007).Research Methodology and Methods and Techniques. 2nd ed. Kolkata, New age international.p-32-35
6. Denise F. Polit&CherylTatano. (2005).Nursing Research Principles and Methods, 7thed.Philadelphia;New Delhi:Woltckskluwer.p-315-318
7. Burns N. & Grove. S. K.(2007). Understanding Nursing Research, Building evidence based practice.4thed. New Delhi: Lippincot, saunders,Elsevier.P-210-215
8. Parker E (2008).Nursing Theories& Practice: Jaypee brothers Pvt. Ltd.