

A study to develop and evaluate the effectiveness of structured teaching program on strategies of communication competence while delivering health care services among Nursing Officers in terms of knowledge, attitude and practice in DeenDayalUpadhyay Hospital, New Delhi

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Abstract:

Background: An Effective communication is the key element in providing high-quality nursing care, and leads to patient satisfaction and health.¹American Nurses Association (ANA), American Association of Critical-Care Nurses (AACN, 2005) and Indian Nursing Council Code (INC)of professional conduct have set the standards of communication skills and also stated it's importance in the effective patient care and interpersonal relationships with individuals, families and communities.^{2,3,4}Factors like poor nurse patient ratio, increased workload, poor communication competence and communication breakdowns compromise patient safety, patient satisfaction and quality patient care respectively.^{5,6,7}Communication skills training and education have found to be effective in improving quality patient care as well as in preventing verbal abuse of nurses.^{8,9}

Materials and Methods:An experimental approach, pre-experimental design one group pretest-post-test research design was used. The sample of 100 Nursing officers working in DeenDayalUpadhyay hospital, Harinagar, New Delhi were selected by non-probability purposive sampling. The data were collected with the help of structured knowledge questionnaire, communication competence attitude scale and observation practice checklist. The data collected were organized and analysed using descriptive and inferential statistics according to objectives and hypothesis of the study.

Results: The major findings of the study revealed that the nursing officers were deficit in terms of knowledge, attitude and practice regarding strategies of communication competence as evident from their knowledge, attitude and practice pre-test scores. There was significant difference in level of knowledge, attitude and practice of nursing officers after administration of structured teaching program on strategies of communication competence while delivering health care services. There was a high positive correlation between post-test knowledge scores and post-test attitude scores of nursing officers and also between post-test knowledge scores and post observation practice scores of nursing officers. There was a significant association between post-test knowledge scores of nursing officers and their gender, professional qualification, exposure to in-service education on communication, nurse patient ratio. There was a significant association between post-test attitude scores of nursing officers and in-service education on communication, nurse patient ratio. There was a significant association between post-test practice scores of nursing officers and their professional qualification, exposure to in-service education on communication, nurse patient ratio and department.

Conclusion:Study findings revealed that the structured teaching program was highly effective in enhancing knowledge, attitude and practice level of nursing officers regarding strategies of communication competence while delivering health care services.

Key Word: Communication competence; Nursing Officers; Knowledge, attitude and practice; structured teaching program.

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I. Introduction

Communication is the foundation of society and the most primary aspect of a nurse-patient interaction. The role of communication is central to all the nursing roles. Without clear communication, it is impossible to give care and education effectively, make decisions with clients and family, protect clients from

anythreat of well-being, co-ordinate and manage client care, assist the client in rehabilitation, offer comfort or teach him/her.¹⁰Communication skills are the building blocks of professional relationships between nurse and patient, nurse and nurse, and nurse and other health-team members.¹¹As nurses cultivate communication skills to develop professional relationships with fellow health care professionals, connect to patients and become more well-rounded and effective individuals, education and on-the-job training can maximize the impact and improved communication skills will have in the workplace.¹²

II. Material And Methods

The study usingan experimental approach was conducted on Nursing officers working in various departments ofDeenDayalUpadhyay hospital, New Delhi from 17th December 2017 to 7th January 2018. A total sample of 100Nursing officers were used in this study.

Study Design:One group pre-test post-test design (Pre-experimental)

Study Location:DeenDayalUpadhyay hospital, New Delhi

Study Duration:17th December 2017 to 7th January 2018.

Sample size: Try out: 10Nursing officers.

Pilot study: 10Nursing officers.

Final study: 100 Nursing officers.

Sampling technique:Selection of the sample was done by purposive sampling.

Inclusion criteria:

- Nursing Officers who were willing to participate in the study.
- Nursing Officers who worked in the wards, OPDs, ICUs and emergency department of selected Hospital.
- Nursing Officers who were available during the study.
- Nursing Officers who were above 20 years of age.
- Nursing Officers were able to speak Hindi /English.

Procedure methodology

After obtaining formal administrative permission from DeenDayalUpadhyay hospital, New Delhi, final study was conducted from 17th Dec. 2017 to 7th Jan. 2018 to assess the knowledge, attitude and practice of nursing officers regarding communication competence while delivering health care services. A sample of 100 nursing officers who met the sampling criteria were selected using non probability purposive sampling technique and then their consent were obtained.

TABLE 1: Description of data collection tools

S.NO.	TOOL	PURPOSE	RELIABILITY METHOD USED	RELIABILITY (r)	DATA COLLECTION TECHNIQUE
1.	Structured knowledge questionnaire SECTION I: Personal data SECTION II: structured knowledge questionnaire	To collect background data To assess knowledge of nursing officers regarding strategies of communication competence while delivering health care services	KUDER RICHARD 20 FORMULA	0.70	Paper and pencil Paper and pencil
2.	Communication competence attitude scale	To assess attitude of nursing officers regarding communication competence while delivering health care services	CRONBACH ALPHA FORMULA	0.87	Paper and pencil
3.	Observation practice checklist	To assess practice of nursing officers regarding communication competence while delivering health care services.	KUDER RICHARD 20 FORMULA	0.74	Observing

DESCRIPTION OF DATA COLLECTION TOOLS:

All the data collection tools were developed on the basis of experience of the investigator, review of literature and consultation with experts.

TOOL 1: STRUCTURED KNOWLEDGE QUESTIONNAIRE

Section I: Personal information-This section consisted of items related to sample characteristics such as age, gender, marital status, religion, educational qualification, years of experience, exposure to in-service education on communication, nurse patient ratio, monthly income.

Section II: Structured knowledge questionnaire-This section consisted of 30 items to assess knowledge of nursing officers regarding communication competence while delivering health care services. Their responses were scored as 1 for correct answer and 0 for incorrect answer respectively.

TOOL 2: A COMMUNICATION COMPETENCE ATTITUDE SCALE (CCAS)

It is a 20 items Communication competence attitude scale (CCAS) and was developed to assess the attitude of nursing officers regarding communication competence while delivering health care services. It is basically a (3) three point likert scale with the responses scored from 1 to 3 i.e. from disagree, neutral to agree respectively. Respondents were asked to rate how strongly they agreed or disagreed with the statements on a three-point likert-type scale from disagree, neutral to agree, with the responses scored from 1 to 3 respectively.

The question items were mainly selected from mainly four dimensions:-

- I. Nurse's attitude towards need of communication competence in general.
- II. Nurse's attitude towards communication importance for nurses.
- III. Nurse's attitude towards communication importance in nurse patient relationship.
- IV. Nurse's attitude towards communication competence strategies while delivering health care services.

TOOL 3: AN OBSERVATION PRACTICE CHECKLIST

Observation practice checklist was developed to assess practice of nursing officers regarding communication competence while delivering health care services. The researcher observed the practice carefully among nursing officer regarding communication competence while delivering health care services and had put tick (✓) mark against the appropriate option. (YES or NO)

15 objective statements were prepared and the items were mainly selected from areas mainly-

1. Purpose of Communication competence
2. Communication competence standards
3. Process of communication and it's principles
4. Barriers of communication
5. Strategies of communication competence while delivering health care services
6. How to overcome barriers of communication.

On 18th to 21st December 2017 pre-test on knowledge, attitude was done and practice was observed by the investigator herself. Then after that structured teaching program was administered .On the 10th day i.e. 28th to 31st December 2017 post-test (knowledge and attitude) was taken and post-practice was also observed respectively.

TABLE 2: RESEARCH METHODOLOGY

PRE-TEST (DAY 1)	ADMINISTRATION OF STRUCTURED TEACHING PROGRAMME on strategies of communication competence while delivering health care services (DAY 1)	POST-TEST (DAY 10)
Data was collected department wise with the help of structured knowledge questionnaire, communication competence attitude scale (CCAS) and observational practice checklist. Average time taken to observe nursing officers for practice was 15-20 minutes.	<p>The content outline of structured teaching program covers 9 main areas:</p> <ol style="list-style-type: none"> 1. Introduction of Communication competence, its meaning, definition, purpose & its Importance in nursing. 2. Communication competence throughout nursing process and Communication competence standards by ANA 2010² & Indian Nursing Council (INC)⁴ 3. Process of communication, its types, principles 4. Barriers of communication 5. Strategies of communication competence <ul style="list-style-type: none"> • Therapeutic communication techniques.¹³ • Assertive communication techniques.¹⁴ • Strategies to promote patient safety.¹⁵ • OARS strategy to increase patient adherence and satisfaction.¹⁶ • SPIKES strategy to deal with breaking bad news to terminally-ill patients.¹⁶ • DE-ESCALATION strategy to deal with violent and aggressive behaviour.¹⁶ • SBAR strategy to increase patient safety.¹⁶ • APAC strategy (given by WHO) to counsel the patients.¹⁷ 6. How to overcome barriers of communication.¹⁸ 7. Guidelines for communication competence of nursing officers <p>Lecture cum discussion was used for teaching. Power point presentation, chart, flashcard, flipchart were used as audio visual aids for teaching.</p>	Data was collected department wise with the help of structured knowledge questionnaire, communication competence attitude scale (CCAS) and observational practice checklist. Average time taken to observe nursing officers for practice was 15-20 minutes.

Statistical analysis

The data was described and analysed using descriptive and inferential statistics. The level $P < 0.05$ was considered as the cutoff value or significance.

1. Frequency and percentage distribution of sample characteristics used for description of sample characteristics.
2. For evaluation of structured teaching program on strategies of communication competence while delivering health care services in terms of knowledge, attitude and practice of nursing officers working in DeenDayalUpadhyay hospital.
 - a) **Mean, median, standard deviation** of pre-test & post-test knowledge, attitude and practice scores of nursing officers
 - b) "**t**" value of pre-test and post-test knowledge, attitude and practice scores of nursing officers respectively were used.
3. **Karl Pearson Co-efficient of correlation** used to find the:
 - a) Relationship between post-test knowledge scores and attitude scores of Nursing officers on strategies of communication competence while delivering health care services
 - b) Relationship between post-test knowledge scores and practice scores of Nursing officers on strategies of communication competence while delivering health care services
4. **Chi square** is used for finding the:
 - a) Association between post-test knowledge scores of Nursing officers and selected factors
 - b) Association between post-test attitude scores of Nursing officers and selected factors
 - c) Association between post-test practice scores of Nursing officers and selected factors

III. Result

SECTION I: DESCRIPTION OF SAMPLE CHARACTERISTICS

This section describes the frequency and percentage distribution of sample characteristics of the sample, which provides background information of the sample. Frequency and percentage distribution of characteristics of nursing officers has been presented in Table 3.

TABLE 3: Frequency and percentage distribution of nursing officers by their demographic characteristics
N=100

S.NO.	SAMPLE CHARACTERISTICS	FREQUENCY	PERCENTAGE
1.	AGE		
1.1	20-29 years	29	29%
1.2	30-39 years	47	47%
	40 & above	34	34%
2.	GENDER		
2.1	Male	26	26%
2.2	Female	74	74%
3.	MARITAL STATUS		
3.1	Married	88	88%
3.2	Unmarried	12	12%
4.	RELIGION		
4.1	Hindu	63	63%
4.2	Muslim	7	7%
4.3	Christian	27	27%
4.4	Sikh	3	3%
4.5	Others	0	0%
5.	PROFESSIONAL QUALIFICATION		
5.1	Diploma in GNM	63	63%
5.2	Post B.Sc. Nursing	20	20%
5.3	B.Sc. Nursing	13	13%
5.4	Post-graduation	4	4%
6.	YEARS OF EXPERIENCE		
6.1	0-5 years	11	11%
6.2	6-10 years	28	28%
6.3	11-15 years	30	30%
6.4	More than 15 years	31	31%
7.	EXPOSURE TO INSERVICE EDUCATION ON COMMUNICATION		
7.1	Yes	35	35%
7.2	No	65	65%
8.	NURSE PATIENT RATIO (AS PER S.I.U RECOMMENDATIONS)		

8.1	1:1	0	0%
8.2	1:2	0	0%
8.3	1:4	23	23%
8.4	1:6	68	68%
8.5	1:100	9	9%
9.	MONTHLY INCOME		
9.1	Rs 1- 50,000	0	0%
9.2	Rs. 51,001-1,00,000	87	87%
9.3	Rs. 1,00,001-1,50,000	13	13%
9.4	Rs. >1,51,001	0	0%
10.	DEPARTMENT		
10.1	Normal wards	48	48%
10.2	Special wards	18	18%
10.3	ICU settings	16	16%
10.4	Casualty	9	9%
10.5	OPDs	9	9%

SECTION II:
FINDING RELATED TO EVALUATION OF STRUCTURED TEACHING PROGRAM ON STRATEGIES OF COMMUNICATION COMPETENCE IN TERMS OF KNOWLEDGE OF NURSING OFFICERS WHILE DELIVERING HEALTH CARE SERVICES IN TERMS OF KNOWLEDGE OF NURSING OFFICERS WORKING IN DEEN DAYAL UPADHYAY HOSPITAL

a.) **Mean, median, standard deviation of pre-test & post-test knowledge scores of nursing officers**

TABLE 4: Mean, median, standard deviation of pre-test& post-test knowledge scores

N=100

S.NO.	TEST	MEAN	MEDIAN	STANDARD DEVIATION
1.	PRE-TEST	9.1	8	4.52
2.	POST-TEST	21.29	20	2.93

Maximum possible Scores = 30

The data given in the above table shows that the mean post-test knowledge scores of nursing officers on strategies of communication competence while delivering health care services (21.29) is higher than the mean of pre-test knowledge scores (9.1).

The median post-test knowledge scores of nursing officers on strategies of communication competence while delivering health care services (20) is higher than the median of pre-test knowledge scores (8). The data further shows that the Median for the Pre-test was 8 whereas for the Post-test was 20, which both are closer to the Pre-test (9.1) and Post-test Mean (21.29) respectively, indicating a fairly normal probability curve, which means all the measures of central tendency coincide at the centre of the distribution to a great extent.

The standard deviation of post-test knowledge scores (2.93) is lower than the standard deviation of pre-test knowledge scores (4.52) suggesting an equal and homogenous grasping of knowledge post exposure to the structured teaching programme.

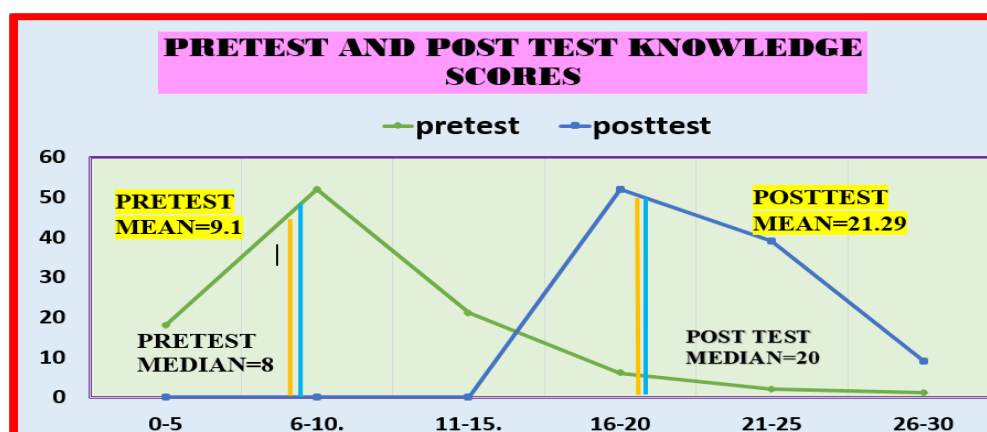


FIGURE NO. 1: A frequency polygon showing comparison between Pre-test and post-test knowledge scores

The frequency polygon in **Fig. 1** shows the distribution of knowledge scores of nursing officers regarding strategies of communication competence while delivering health care services. The position of Mean, and Median is also depicted. From the Fig. 1 it is evident that Mean and Median falls close to each other in both Pre-test and Post-test, hence the distribution is close to normal rather than skewed. The figure also depicts scores of Post-test were higher than scores of Pre-test. This indicates that there was a considerable gain in knowledge of nursing officers regarding strategies of communication competence while delivering health care services suggesting the effectiveness of structured teaching programme.

b.) "t" value of pre-test and post-test knowledge scores of nursing officers

TABLE 5: Mean, mean difference, standard deviation of difference, standard error of mean difference from pre-test to post-test knowledge scores and "t" value on strategies of communication competence while delivering health care services among nursing officers.

N=100

KNOWLEDGE TEST	MEAN	MEAN DIFFERENCE	SD _D	SE _{MD}	"t" value
PRETEST	9.1	12.19	1.60	0.34	35.85*
POSTTEST	21.29				

Significant at 0.05 level of significance at df (99) = 1.99

The data presented in above table shows that the mean post-test knowledge scores (21.29) was higher than the mean pre-test knowledge score (9.1) with a mean difference of (12.19) .The obtained mean difference was found to be statistically significant as evident from 't' value 35.85 for degree of freedom 99 at 0.05 level of significance.

Therefore the obtained mean difference was a true difference and not by chance so the research hypothesis was accepted. This shows that the structured teaching programme was effective in enhancing the knowledge of nursing officers regarding strategies of communication competence while delivering health care services.

SECTION III:

FINDING RELATED TO EVALUATION OF STRUCTURED TEACHING PROGRAM ON STRATEGIES OF COMMUNICATION COMPETENCE WHILE DELIVERING HEALTH CARE SERVICES IN TERMS OF ATTITUDE OF NURSING OFFICERS WORKING IN DEEN DAYAL UPADHYAY HOSPITAL

a.) Mean, median, standard deviation of pre-test & post-test attitude scores of nursing officers

TABLE NO 6: Mean, median, standard deviation of pre-test & post-test attitude scores

N=100

S.NO.	TEST	MEAN	MEDIAN	STANDARD DEVIATION
1.	Pre-test	33.32	33	7.36
2.	Post-test	48.55	48	5.30

Maximum possible Scores = 60

The data given in the above table show that the mean post-test attitude scores of nursing officers on strategies of communication competence while delivering health care services (**48.55**) is higher than the mean of pre-test attitude scores (**33.32**).

The median post-test attitude scores of nursing officers on strategies of communication competence while delivering health care services(**48**) is higher than the median of pre-test attitude scores (**33**). The data further shows that the Median for the Pre-test was 33 whereas for the Post- test was 48, which both are closer to the Pre-test (**33.32**)and Post-test Mean (**48.55**)respectively, indicating a fairly normal probability curve, which means all the measures of central tendency coincide at the centre of the distribution to a great extent.

The standard deviation of post-test attitude scores (**5.30**) is lower than the standard deviation of pre-test attitude scores (**7.36**) suggesting an equal and homogeneous grasping of attitude post exposure to the structured teaching programme.

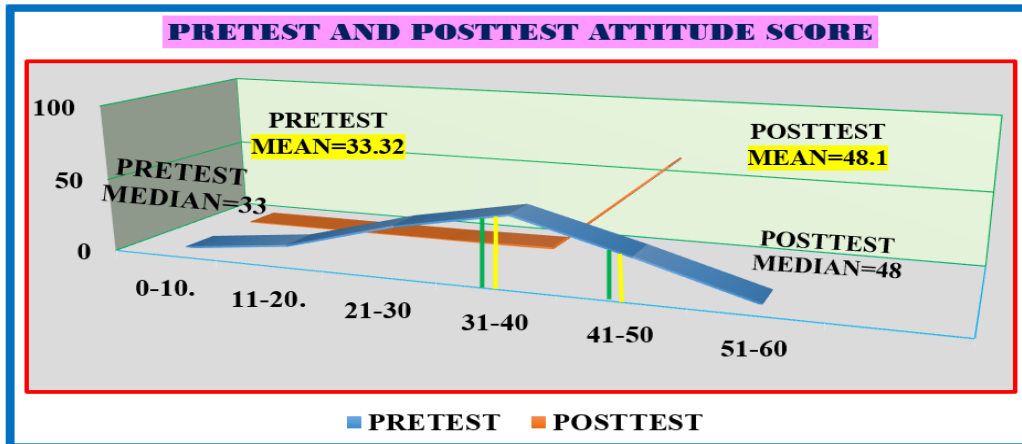


FIGURE NO. 2: A frequency polygon showing comparison Between pre-test and post-test attitude scores

The frequency polygon in Fig. 2 shows the distribution of attitude scores of nursing officers regarding strategies of communication competence while delivering health care services. The position of Mean, and Median is also depicted. From the Fig. 2 it is evident that Mean and Median falls close to each other in both Pre-test and Post-test, hence the distribution is close to normal rather than skewed. The figure also depicts scores of Post-test were higher than scores of Pre-test. This indicates that there was a considerable gain in attitude of nursing officers regarding strategies of communication competence while delivering health care services suggesting the effectiveness of structured teaching programme.

b.) "t" value of pre-test and post-test attitude scores of nursing officers

TABLE 7: Mean, mean difference, standard deviation of difference, standard error of mean difference from pre-test to post-test attitude scores and "t" value on strategies of communication competence while delivering health care services among nursing officers.

ATTITUDE TEST	MEAN	MEAN DIFFERENCE	SD _D	SE _{MD}	"t" value
PRETEST	33.32	15.23	2.07	0.55	27.69*
POSTTEST	48.55				

N=100

Significant at 0.05 level of significance at df (99) = 1.99

The data presented in above table shows that the mean post-test attitude scores (48.55) was higher than the mean pre-test attitude score (33.32) with a mean difference of (15.23). The obtained mean difference was found to be statistically significant as evident from 't' value 27.69 for degree of freedom 99 at 0.05 level of significance. Therefore the obtained mean difference was a true difference and not by chance so the research hypothesis was accepted. This shows that the structured teaching programme was effective in enhancing the attitude of nursing officers regarding strategies of communication competence while delivering health care services.

SECTION IV:

FINDING RELATED TO EVALUATION OF STRUCTURED TEACHING PROGRAM STRATEGIES OF COMMUNICATION COMPETENCE WHILE DELIVERING HEALTH CARE SERVICES IN TERMS IN TERMS OF PRACTICE OF NURSING OFFICERS WORKING IN DEEN DAYAL UPADHYAY HOSPITAL

a.) Mean, median, standard deviation of pre-test & post-test practice scores of nursing officers

TABLE 8: Mean, median, standard deviation of pre-test & post-test practice scores

N=100

S.NO.	TEST	MEAN	MEDIAN	STANDARD DEVIATION
1.	PRE-TEST	3.71	3	1.81
2.	POST-TEST	8.68	8	1.73

Maximum possible Scores = 15

The data given in the above table show that the mean post-test practice scores of nursing officers on strategies of communication competence while delivering health care services in terms (8.68) is higher than the mean of pre-test practice scores (3.71).

The median post-test practice scores of nursing officers on strategies of communication competence while delivering health care services (8) is higher than the median of pre-test practice scores (3). The data further shows that the Median for the Pre-test was 3 whereas for the Post- test was 8, which both are closer to the Pre-test and Post-test Mean, indicating a fairly normal probability curve, which means all the measures of central tendency coincide at the centre of the distribution to a great extent.

The standard deviation of post-test practice scores (1.73) is lower than the standard deviation of pre-test practice scores (1.81) suggesting an equal and homogeneous grasping of practice post exposure to the structured teaching programme.

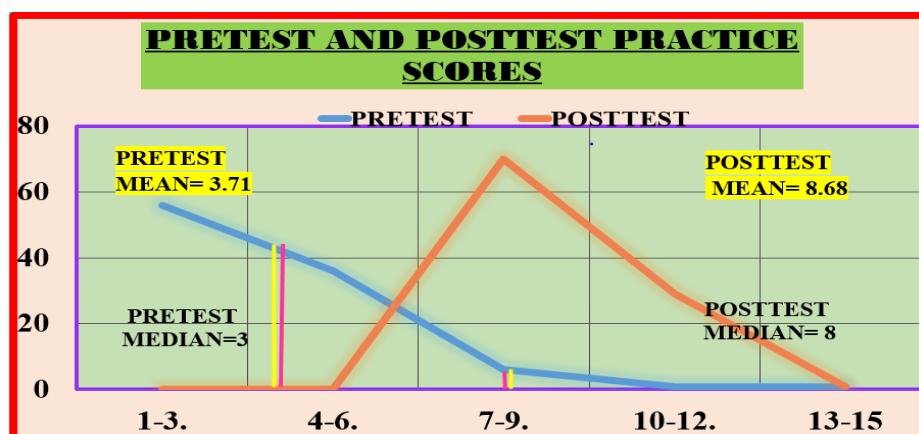


FIGURE NO. 3: A frequency polygon comparison between Pre-test and post-test practice scores

The frequency polygon in Fig 3 shows the distribution of practice scores of nursing officers regarding strategies of communication competence while delivering health care services. The position of Mean, and Median is also depicted. From the Fig. 3 it is evident that Mean and Median falls close to each other in both Pre-test and Post-test, hence the distribution is close to normal rather than skewed. The figure also depicts scores of Post-test were higher than scores of Pre-test. This indicates that there was a considerable gain in Practice of nursing officers in terms of strategies of communication competence while delivering health care services suggesting the effectiveness of structured teaching programme.

b.)"t" value of pre-test and post-test practice scores of nursing officers

TABLE 9: Mean, mean difference, standard deviation of difference, standard error of mean difference from pre-test to post-test practice scores and "t" value on strategies of communication competence while delivering health care services among nursing officers.

N=100					
PRACTICEE TEST	MEAN	MEAN DIFFERENCE	SD _D	SE _{MD}	"t" value
PRETEST	3.71	4.97	0.08	0.15	33.13*
POSTTEST	8.68				

Significant at 0.05 level of significance at df (99) = 1.99

The data presented in above table shows that the mean post-test practice scores (8.68) was higher than the mean pre-test practice score (3.71) with a mean difference of (4.97) .The obtained mean difference was found to be statistically significant as evident from 't' value 33.13 for degree of freedom 99 at 0.05 level of significance. Therefore the obtained mean difference was a true difference and not by chance so the research hypothesis was accepted. This shows that the structured teaching programme was effective in enhancing the practice of nursing officers regarding strategies of communication competence while delivering health care services.

SECTION V:
FINDING RELATED TO RELATIONSHIP BETWEEN POST-TEST KNOWLEDGE SCORES AND ATTITUDE SCORES OF NURSING OFFICERS ON STRATEGIES OF COMMUNICATION COMPETENCE WHILE DELIVERING HEALTH CARE SERVICES.

To find out the coefficient of correlation between post-test knowledge scores and post observation practice scores of nursing officers, Karl Pearson co-efficient of correlation was computed.

TABLE 10: Karl Pearson co-efficient of correlation between post-test Knowledge scores & post-test attitude scores of nursing officers

VARIABLES	POSTTEST MEAN	POSTTEST SD	“r” value
KNOWLEDGE SCORES	21.29	2.93	0.81
ATTITUDE SCORES	48.55	5.30	

N=100

(significant at 0.05 level of significance at df (98) “r”= 0.205)

The data presented in the above table shows that there was a positive correlation (0.81) between post-test knowledge scores and post attitude scores of nursing officers, which is found to be statistically significant at 0.05 level of significance. The positive correlation shows that as the knowledge scores increases, it enhances the attitude regarding strategies of communication competence while delivering health care services.

SECTION VI:
FINDING RELATED TO RELATIONSHIP BETWEEN POST-TEST KNOWLEDGE SCORES AND OBSERVATION PRACTICE SCORES OF NURSING OFFICERS ON STRATEGIES OF COMMUNICATION COMPETENCE WHILE DELIVERING HEALTH CARE SERVICES.

To find out the coefficient of correlation between post-test knowledge scores and post observation practice scores of nursing officers, Karl Pearson co-efficient of correlation was computed.

TABLE 11: Karl Pearson co-efficient of correlation between post-test Knowledge scores & post-test practice scores of nursing officers

VARIABLES	POSTTEST MEAN	POSTTESTSD	“r” value
KNOWLEDGE SCORES	21.29	2.93	0.78
PRACTICE SCORES	3.68	1.73	

N=100

(significant at 0.05 level of significance at df (98) “r”= 0.205)

The data presented in the above table shows that there was a positive correlation (0.78) between post-test knowledge scores and post-test practice scores of nursing officers, which is found to be statistically significant at 0.05 level of significance. The positive correlation shows that as the knowledge scores increases, it enhances the practice regarding strategies of communication competence while delivering health care services.

SECTION VII:
FINDINGS RELATED TO ASSOCIATION BETWEEN POST-TEST KNOWLEDGE SCORES OF NURSING OFFICERS AND SELECTED FACTORS

To seek the association between post-test knowledge scores and selected factors, chi square value is computed:

TABLE 12: Chi square value showing association between post-test knowledge scores with selected factors of Nursing officers

N=100

S.NO.	ASSOCIATED FACTORS	KNOWLEDGE SCORES		df	X ²
		BELOW MEDIAN	ABOVE MEDIAN		
1.	AGE				
1.1	20-29 years	7	12	2	0.35 ^{NS}
1.2	30-39 years	21	26		
	40 & above	14	20		
2.	GENDER				
2.1	Male	17	9	1	7.88 ^S
2.2	Female	25	49		
3.	MARITAL STATUS				
3.1	Married	36	52	1	0.36 ^{NS}
3.2	Unmarried	6	6		
4.	RELIGION				
4.1	Hindu	28	35	4	1.05 ^{NS}
4.2	Muslim	3	4		
4.3	Christian	9	18		
4.4	Sikh	1	2		
4.5	Others	0	0		
5.	PROFESSIONAL QUALIFICATION				
5.1	Diploma in GNM	36	27	3	22.14 ^S
5.2	Post B.Sc. Nursing	2	18		
5.3	B.Sc. Nursing	1	12		
5.4	Post-graduation	0	4		
6.	YEARS OF EXPERIENCE				
6.1	0-5 years	4	7	3	0.53 ^{NS}
6.2	6-10 years	13	15		
6.3	11-15 years	13	17		
6.4	More than 15 years	12	19		
7.	EXPOSURE TO INSERVICE EDUCATION				
7.1	Yes	1	34	1	45.87 ^S
7.2	No	48	17		
8.	NURSE PATIENT RATIO AS PER STAFF INSPECTION UNIT (S.I.U) RECOMMENDATIONS				
8.1	1:1	0	0	4	27.672 ^S
8.2	1:2	0	0		
8.3	1:4	3	20		
8.4	1:6	51	71		
8.5	100	6	3		
9.	MONTHLY INCOME				
9.1	Rs 1- 50,000	0	0	3	0.04 ^{NS}
9.2	Rs. 51,001-1,00,000	36	51		
9.3	Rs. 1,00,001-1,50,000	5	8		
9.4	Rs. >1,51,001	0	0		
10.	DEPARTMENT				
10.1	Normal wards	12	36	4	9.188 ^{NS}
10.2	Special wards	10	8		
10.3	ICU settings	9	7		
10.4	Casualty	5	4		
10.5	OPDs	3	6		

Significant at 0.05 level of significance at df (1) =3.84, df (2) =5.99, df (3) =7.815, df (4) =9.48

The data presented in the above table shows the computed chi square values between selected factors and knowledge scores of nursing officers. The computed chi square values of selected variables like gender (7.88), professional qualification (22.14), exposure to in-service education on communication (45.87) and nurse patient ratio (27.672) were found to be statistically significant at 0.05 level of significance. And computed chi square values of selected variables like age (0.35), marital status (0.36), religion (1.05), years of experience (0.53), monthly income (0.04) and department (9.188) were found to be statistically non-significant at 0.05 level of significance. This indicates that knowledge was dependent on selected factors i.e. gender, professional

qualification, years of experience, exposure to in-service education on communication and nurse patient ratio. This also indicates that knowledge was independent on its own and not influenced by the selected factors i.e. age, marital status, religion, monthly income and department.

SECTION VIII:
FINDINGS RELATED TO ASSOCIATION BETWEEN POST-TEST ATTITUDE SCORES OF NURSING OFFICERS AND SELECTED FACTORS

To seek the association between post-test attitude scores and selected factors, chi square value is computed:

TABLE 13: Chi square value showing association between post-test attitude scores with selected factors of nursing officers

N=100

S.NO.	ASSOCIATED FACTORS	ATTITUDE SCORES		df	X ²
		BELOW MEDIAN	ABOVE MEDIAN		
1.	AGE				
1.1	20-29 years	8	11	2	0.57 ^{NS}
1.2	30-39 years	20	27		
	40 & above	12	22		
2.	GENDER				
2.1	Male	12	14	1	1.57 ^{NS}
2.2	Female	24	50		
3.	MARITAL STATUS				
3.1	Married	30	58	1	0.27 ^{NS}
3.2	Unmarried	5	7		
4.	RELIGION				
4.1	Hindu	23	40	4	0.83 ^{NS}
4.2	Muslim	2	5		
4.3	Christian	12	15		
4.4	Sikh	1	2		
4.5	Others	0	0		
5.	PROFESSIONAL QUALIFICATION				
5.1	Diploma in GNM	32	31	3	5.126 ^{NS}
5.2	Post B.Sc. Nursing	6	14		
5.3	B.Sc. Nursing	3	10		
5.4	Post-graduation	2	2		
6.	YEARS OF EXPERIENCE				
6.1	0-5 years	3	8	3	1.13 ^{NS}
6.2	6-10 years	12	16		
6.3	11-15 years	11	19		
6.4	More than 15 years	10	21		
7.	EXPOSURE TO INSERVICE EDUCATION				
7.1	Yes	2	33	1	46.22 ^S
7.2	No	50	15		
8.	NURSE PATIENT RATIO AS PER STAFF INSPECTION UNIT (S.I.U) RECOMMENDATIONS				
8.1	1:1	0	0	4	27.966 ^S
8.2	1:2	0	0		
8.3	1:4	2	21		
8.4	1:6	48	20		
8.5	100	3	6		
9.	MONTHLY INCOME				
9.1	Rs 1- 50,000	0	0	3	0.33 ^{NS}
9.2	Rs. 51,001-1,00,000	34	53		
9.3	Rs. 1,00,001-1,50,000	4	9		
9.4	Rs. >1,51,001	0	0		
10.	DEPARTMENT				
10.1	Normal wards	20	28	4	7.185 ^{NS}
10.2	Special wards	12	6		
10.3	ICU settings	6	10		

10.4	Casualty	7	2		
10.5	OPDs	4	5		

Significant at 0.05 level of significance at df (1) =3.84, df (2) =5.99, df (3) =7.815,df (4) =9.48

The data presented in the above table shows the computed chi square values between selected factors and attitude scores of nursing officers. The computed chi square values of selected variables like exposure to in-service education on communication (**46.22**) and nurse patient ratio (**27.996**) were found to be statistically significant at 0.05 level of significance. And computed chi square values of selected variables like age (**0.57**), gender (**1.57**), professional qualification (**5.126**), marital status (**0.27**), religion (**0.83**), years of experience (**1.13**), monthly income (**0.33**) and department (**7.185**) were found to be statistically non-significant at 0.05 level of significance. This indicates that attitude was dependent on selected factors i.e. exposure to in-service education on communication and nurse patient ratio. This also indicates that attitude was independent on its own and not influenced by the selected factors i.e. age, gender, marital status, religion, professional qualification, years of experience, monthly income and department.

SECTION IX:
FINDINGS RELATED TO ASSOCIATION BETWEEN POST-TEST PRACTICE SCORES OF NURSING OFFICERS AND SELECTED FACTORS

To seek the association between post-test practice scores and selected factors, chi square value is computed.

TABLE 14: Chi square value showing association between post-test practice scores with selected factors of nursing officers

S.NO.	ASSOCIATED FACTORS	PRACTICE SCORES		df	X ²
		BELOW MEDIAN	ABOVE MEDIAN		
1.	AGE				
1.1	20-29 years	4	15	2	3.21 ^{NS}
1.2	30-39 years	21	26		
	40 & above	13	21		
2.	GENDER				
2.1	Male	13	13	1	2.55 ^{NS}
2.2	Female	24	50		
3.	MARITAL STATUS				
3.1	Married	32	56	1	0.83 ^{NS}
3.2	Unmarried	6	6		
4.	RELIGION				
4.1	Hindu	25	38	4	0.38 ^{NS}
4.2	Muslim	2	5		
4.3	Christian	10	17		
4.4	Sikh	1	2		
4.5	Others	0	0		
5.	PROFESSIONAL QUALIFICATION				
5.1	Diploma in GNM	36	27	3	17.54 ^S
5.2	Post B.Sc. Nursing	4	16		
5.3	B.Sc. Nursing	1	12		
5.4	Post-graduation	0	4		
6.	YEARS OF EXPERIENCE				
6.1	0-5 years	2	9	3	2.12 ^{NS}
6.2	6-10 years	12	17		
6.3	11-15 years	12	17		
6.4	More than 15 years	12	19		
7.	EXPOSURE TO INSERVICE EDUCATION				
7.1	Yes	1	34	1	28.23 ^S
7.2	No	37	28		
8.	NURSE PATIENT RATIO AS PER STAFF INSPECTION UNIT (S.I.U) RECOMMENDATIONS				

8.1	1:1	0	0	4	28.005 ^S
8.2	1:2	0	0		
8.3	1:4	2	21		
8.4	1:6	49	19		
8.5	100	5	4		
9.	MONTHLY INCOME				
9.1	Rs 1- 50,000	0	0	3	0.75 ^{NS}
9.2	Rs. 51,001-1,00,000	33	56		
9.3	Rs. 1,00,001-1,50,000	6	6		
9.4	Rs. >1,51,001	0	0		
10.	DEPARTMENT				
10.1	Normal wards	14	34	4	12.11 ^S
10.2	Special wards	11	7		
10.3	ICU settings	5	11		
10.4	Casualty	5	4		
10.5	OPDs	7	2		

Significant at 0.05 level of significance at df (1) =3.84, df (2) =5.99, df (3) =7.815, df (4) =9.48

The data presented in the above table shows the computed chi square values between selected factors and practice scores of nursing officers. The computed chi square values of selected variables like professional qualification (17.54), exposure to in-service education on communication (28.23), nurse patient ratio (28.005) and department (12.11) were found to be statistically significant at 0.05 level of significance. And computed chi square values of selected variables like age (3.21), gender (2.55), marital status (0.83), religion (0.38), years of experience (2.12) and monthly income (0.75) were found to be statistically non-significant at 0.05 level of significance.

This indicates that practice was dependent on selected factors i.e. professional qualification, exposure to in-service education on communication, nurse patient ratio and department. This also indicates that practice was independent on its own and not influenced by the selected factors i.e. age, gender, marital status, religion, and monthly income.

IV. Discussion

Findings related to exposure to in-service education on communication:

In relation to exposure to in-service education on communication of the studied sample the finding of the present study revealed that the highest percentage of the studied sample (65%) didn't attend any to in-service education on communication. The result comes in agreement with a study¹⁹ which was carried out to assess effectiveness of structured teaching module on therapeutic communication among staff nurses. They reported that the minority of nurses had an exposure to in-service education related to therapeutic communication.

Findings related to the correlation between knowledge and attitude as well as knowledge and practice scores:

The present study showed that there was a positive correlation (0.81) between post-test knowledge scores and post-test attitude scores of nursing officers and positive correlation (0.78) between post-test knowledge scores and post observation practice scores of nursing officers respectively. These research findings of the present study was supported a study²⁰ with the aim to assess the effect of a planned therapeutic communication program on therapeutic communication skills of pediatric nurses. The study was carried out at Shebin El kom and Benha University hospitals. A quasi experimental research design was utilized. All staff nurses (132) who are working at the previously mentioned settings were included. Two tools were used for data collection. The results of this study showed a positive statistical significant correlation between total knowledge score and total practice score of nurses' therapeutic communication skills at each measurement time (pre: $r = 0.52$, $p < .00$; post $r = 0.53$, $p < .001$). Also, a highly statistical significant improvement in pediatric nurses' knowledge, practice and skills regarding therapeutic communication was found $p < .001$.

Findings related to association between knowledge, attitude and practice scores and selected factors:

With regard to association of selected factors in the present study there was a significant association between post-test knowledge scores of nursing officers and their gender, professional qualification, exposure to in-service education on communication, nurse patient ratio. There was a significant association between post-test attitude scores of nursing officers and in-service education on communication, nurse patient ratio. There was a significant association between post-test practice scores of nursing officers and their professional qualification, exposure to in-service education on communication, nurse patient ratio. And there was no significant association between post-test knowledge, attitude and practice scores of nursing officers and their age, gender, marital status, experience, religion and monthly salary

The finding of this result comes in agreement with a study¹⁹ that reported that the post-test knowledge score on therapeutic communication were independent of all selected demographic variables such as age, gender, educational status, experience and exposure to in-service education program.

The findings were also supported by another study²¹ titled Effectiveness of Structured Teaching Program on “Knowledge on Assertive Communication and its benefits in Nurse Patient Relationship” among B.Sc. Nursing students in selected Nursing Colleges at Belgaum which showed that there is no statistically significant association between knowledge scores and selected demographic variables such as age, gender, religion, education of father, education of mother, monthly family income, and source of information.

Findings related to the effectiveness of the structured teaching program on strategies of communication competence while delivering health care services:

The findings of the study revealed that the structured teaching program on strategies of communication competence was effective in enhancing the knowledge, attitude and practice of nursing officers regarding communication competence while delivering health care services. It was evident from the result findings which showed significant increase in pre-test and post-test knowledge, attitude and practice scores of nursing officers before and after administration of structured teaching program on strategies of communication competence respectively.

The result comes in agreement with a similar study¹⁹ with the objective to determine the effectiveness of structured teaching module on therapeutic communication among staff nurses in selected hospital in Mangalore. A pre-experimental research approach with one group pre-test post-test design was adopted for the study. The samples were selected by using non-probability convenient sampling technique. The sample consisted of 50 staff nurses. Result findings showed that the overall pretest mean knowledge score in the area of therapeutic communication was (42%) and interpersonal relationship was (33%) and post test score in the area of therapeutic communication (72%) and interpersonal relationship was (65.6%) and the obtained paired ‘ t ’ value is 24.11 which is significant at $p < 0.05$ level. There was a statistical significant improvement in post-test knowledge scores of staff nurses. Conclusion of the study showed that the structured teaching module was effective in improving the knowledge on therapeutic communication among staff nurses.

This study was supported by a study²² which was carried out to determine the effectiveness of in-service communication training program on enhancement the empathic skills of nurses. They stated that the post-test practice scores of nurses increased and nurses’ empathic skills improved after utilization of communication training program.

V. Conclusion

On the basis of the present study the following conclusions were drawn:

Maximum no of nursing officers 47 (47%) were in the age group of 30-39 Years, Majority of nursing officers 74 (74%) were female. Maximum subjects 88 (88%) were married and mostly 63 (63%) were Hindu, With regard to professional qualification, maximum nursing officers 63 (63%) were GNM diploma holder. 31(31%) of nursing officers had >15 years of experience. Majority of nursing officers 65 (65%) were not exposed to in-service education on communication. 68(68%) were working in the setting where nurse patient ratio was 1:6 and 87 (87%) of the nursing officers were having monthly income between Rs. 51,001-1,00,000 and majority of them were working in normal wards.

- The nursing officers were deficit in terms of knowledge, attitude and practice regarding strategies of communication competence as evident from their knowledge, attitude and practice pre-test scores.

- There was significant difference in level of knowledge, attitude and practice of nursing officers after administration of structured teaching programme on strategies of communication competence.
- There was a positive correlation between post-test knowledge scores and post-test attitude scores of nursing officers and also between post-test knowledge scores and post observation practice scores of nursing officers respectively.
- There was a significant association between post-test knowledge scores of nursing officers and their gender, professional qualification, exposure to In-service education on communication, nurse patient ratio.
- There was a significant association between post-test attitude scores of nursing officers and in-service education on communication, nurse patient ratio.
- There was a significant association between post-test practice scores of nursing officers and their professional qualification, exposure to in-service education on communication, nurse patient ratio and department.

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