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"A Study To Assess The Effectiveness Of Nursing Interventional TrainingProgramme On Back Massage Among Family Member Of Individual With Back Pain In Selected Area Of The City."

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Abstract: OBJECTIVES OF THE STUDY: 1. To assess the level of existing knowledge of back massage among family members of individual with back pain in selected area of the city. 2. To evaluate the effectiveness of nursing interventional training programme on back massage among family members of individual with back pain in selected area of the city. 3. To associate pre test knowledge score on back massage among family members of individual with selected demographic variables. **HYPOTHESIS:** H_0 – There will be no significant difference between pre test and post test knowledge score of back massage among family members of individual with back pain in selected area of the city. H_{01} - There will be no significant association between pre test score of back massage among family members of individual with back pain in selected area of the city. **Dependent Variable:** In the present study, dependent variable was Knowledge regarding back massage among individuals of family members **Independent Variables:** In the present study, independent variable was nursing interventional programme regarding back massage among individuals of family members with back pain. **Setting Of The Study:** The study was conducted in the selected area of the city. **Population:** In the present study accessible population was individuals of family members having back pain **Sample**: The study sample comprised of the family members of an individuals with a back pain. **Sampling Technique:** Snow ball sampling technique is a technique where in the sample is gathered in a process that does give all the individuals of a family members who have a back pain in the population. **SAMPLE SIZE:** The sample size was 70, within the age group of 25 to 45 years. **Major Findings Of Study:** The 18.57% of family members of individuals had poor level of knowledge score and 81.43% of them had average level of knowledge score. Before providing the nursing interventional training Programme and after providing nursing interventional training Programme, 31.43% of family members of individuals with back pain in selected area of the city had good level of knowledge score and 68.57% of them had excellent level of knowledge score.. After the Mean,

standard deviation and mean difference values are compared and student's paired 't' test is applied at 5% level of significance. The tabulated value for n=70-69 i.e., 69 degrees of freedom was 2.00. The calculated 't' value i.e., 37.42 are much higher than the tabulated value at 5% level of significance for overall knowledge score of family members of individuals with back pain which is statistically acceptable level of significance. Hence it is statistically interpreted that the Nursing Interventional Training Programme on knowledge regarding back massage among family members of individuals with back pain from selected area of the city was effective.

RESEARCH METHODOLOGY:

RESEARCH APPROACH: According to Sassaroli, (2005) Research approach is a systematic investigation to establish facts or principles or to collect the information on a subject[67] . The research approach indicates the basic procedure for conducting research. The choice and appropriate approaches depend on the purpose of study. A Quantitative research approach was used for this present study.

RESERACH DESIGN: According to Polite and Beck (2021), Research design is the Overall Plan for addressing a research question, including specifications for enhancing the study's integrity[68].

POPULATION: The target population selected for study was the individuals of family members with back pain. Accessible population selected for study was the family members of an individual who are included in the study. **SAMPLE:** The study sample comprised of the family members of an individuals with a back pain. **SAMPLING TECHNIQUE: I**n this study Snow ball sampling technique is used for selecting the samples. **SAMPLE SIZE:** The sample size was 70, within the agegroup of 25 to 45 years

DATA AND SOURCES OF DATA

SETTINGS OF THE STUDY: The study was conducted in the selected area of the city

The conceptual framework adapted for the study is based on Modified General System Theory by J W Kenny. According to modified general system theory, it is a science of wholeness and its purpose is to unite scientific thinking across disciplines and which provides frame work for analyzing the whole of any system. The system has a specific purpose or goal and uses a process to achieve the goal. The system theory can be resolved into an aggregation of feedback circuit such as input, throughput and output[63].

1.Input: It is the process which consists of varying types and amount of matter, material or human energy, information received from the environment. In the present study input refers to individual of family members with back pain in selected area the of the city (the participants of the study) comprising with their demographic features including Age, Type of work, diet pattern, Body Mass Index, Habits, Cause of back pain, Duration of back pain. It also includes the pretest of the participants. **2.Throughput**: It is the process whereby the system transforms, creates and organizes for its ready use. In this study throughput refers to Nursing interventional training programme on back massage among family members of individual with back pain. The content included were Structured knowledge regarding back pain and structured knowledge regarding back massage on relieving back pain **3.Output**: It is an energy, information or material that is transformed into the new environment. In this study the improvement in knowledge level from the predetermined level on knowledge regarding back pain among individual of family members having a back pain is considered as the output. Feedback Information of environment responses to the system's output. So, the information was acquired could be feedback to the system which could help in maintenance and improvement of the system. **4)Feedback** Information of environment responses to the system's output. So, the information was acquired could be feedback to the system which could help in maintenance and improvement of the system.

Statistical tools and econometric models

DEVELOPMENT OF RESEARCH TOOL According to Polite and Beck (2009), the tool acts as a instrument to assess and collect the data from the respondent of the study[75] . The tool was used for gathering relevant data was structured knowledge questionnaire to assess the knowledge regarding back massage among family members of individual with back pain. **PREPRATION OF TOOL.** The following steps were carried out in preparing the tool are:1)Literature review. 2)Validity of tool. 3)Pre-Testing. 4)Reliability

DESCRIPTION OF THE TOOL: After considering the suggestion and modification of the tool by the experts; the final tool consists of two parts structured questionnaire.

Descriptive Statistics

Section A : Distribution of family members of individuals with back pain with regards to demographic variables.**Section B :** Assessment of level of pre test and post test knowledge regarding back massage among family members of individuals with back pain in selected area of the city.**Section C:** Assessment of effectiveness of Nursing Interventional Training Programme on knowledge regarding back massage among family members of individuals with back pain in selected area of the city.**Section D:** Association of pre test knowledge score regarding back massage among family members of individuals with back pain in selected area of the city with their demographic variables.

RESULTS AND DISCUSSION

The Mean, standard deviation and mean difference values are compared and student's paired 't' test is applied at 5% level of significance. The tabulated value for n=70-1 i.e., 69 degrees of freedom was
2.00. The calculated 't' value i.e., 37.42 are much higher than the tabulated value at 5% level of significance for overall knowledge score of individuals of family members which is statistically acceptable level of significance.
The data was analyzed and presented in the following section:

Section A : Distribution of family members of individuals with back pain with regards to demographic variables.

Section B : Assessment of level of pre test and post test knowledge regarding back massage among family members of individuals with back pain in selected area of the city.

Section C: Assessment of effectiveness of Nursing Interventional Training Programme on knowledge regarding back massage among family members of individuals with back pain in selected area of the city.

Section D: Association of pre test knowledge score regarding back massage among family members of individuals with back pain in selected area of the city with their demographic variables

SECTION A

This section deals with percentage wise distribution of family members of individuals with back pain with regards to their demographic characteristics. A convenient sample of 70 subjects was drawn from the study population, who were from selected area of the city. The data obtained to describe the sample characteristics including age, type of work, diet pattern, BMI, habits, cause of back pain and duration of back pain respectively.

TABLE 4.1: PERCENTAGE WISE DISTRIBUTION OF FAMILY MEMBERS ACCORDINGTO THEIR DEMOGRAPHIC CHARACTERISTICS.

n=70

Demographic Variables	No of family members	Percentage(%)
Age(yrs)		
25-30 yrs	37	52.9
31-40 yrs	26	37.1
41-45 yrs	7	10.0
Type of work		
Heavy	29	41.4
Moderate	29	41.4
Sedentary	12	17.1

Diet pattern		
Vegetarian	52	74.3
Non Vegetarian	8	11.4
Mixed	10	14.3
BMI(kg/m2)		
13.5-17.5 kg/m2	58	82.9
18.5-24.9 kg/m2	3	4.3
25-29.5 kg/m2	9	12.9
Habit		
Smoking	45	64.3
Alcohol	7	10.0
Tobacco	18	25.7
Others	0	0
Cause of back pain		
Sitting	53	75.7
Standing	17	24.3
Duration of back pain		
6 mths-1 yr	33	47.1
2-3 yrs	26	37.1
>3 yrs	11	15.7

1. Regarding age, 52.90% of family members of individuals with back pain were in the age group of 25-30 years, 37.10% of them were in the age group of 31-40 years and 10% of them were in the age group of 41-45 years.

2. Regarding type of work, 41.40% of family members of individuals with back pain were doing heavy and moderate work and 17.10% of family members were doing sedentary work.

3. Regarding diet pattern, 74.30% of family members of individuals with back pain were vegetarian, 11.40% of them were non vegetarian and 14.30% of them were consuming mixed diet.

4. About Body Mass Index, 82.90% of family members of individuals with back pain were having BMI of 13.5-17.5 kg/m2, 4.30% had between 18.5-24.9 kg/m2 and 12.90% of family member of individuals with back pain had BMI of 25-29.9 kg/m2.

5. Furthermore regarding their habits, 64.30% of family members of individuals with back pain had habit of smoking, 10% had habit of alcohol and 25.70% had habit of tobacco.

6. Regarding cause of back pain, 75.70% of family members of individuals with back pain had cause of back pain sitting and 24.30% had cause of back pain standing.

7. Regarding duration of back pain, 47.10% of family members of individuals with back pain had duration of back pain 6 months-1 years, 37.10% had between 2-3 years and 15.70% of them had duration of back pain more than 3 years.

SECTION B

This section deals with the assessment of level of knowledge regarding back massage among family members of individuals with back pain in selected area of the city. The level of knowledge score is divided under following heading of poor, average, good, and excellent respectively.

TABLE 4.2: ASSESSMENT WITH LEVEL OF PRE TEST KNOWLEDGE

n= 70

Level of pre test knowledge	Score Range	Level of Pre test Knowledge Score	
		No of family members	Percentage
Poor	0-5	13	18.57
Average	6-10	57	81.43
Good	11-15	0	0
Excellent	16-20	0	0
Minimum score		3	
Maximum score		10	
Mean knowledge score		6.74 ± 1.54	
Mean % Knowledge Score		33.71 ± 7.74	

The above table shows that 18.57% of family members of individuals with back pain in selected area of the city had poor level of knowledge score and 81.43% of them had average level of knowledge score. Minimum knowledge score in pretest was 3 and in maximum knowledge score was 10. Mean knowledge score was 6.74 ± 1.54 and mean percentage of knowledge score was 33.71 ± 7.74.

GRAPH 4.8: ASSESSMENT WITH PRE TEST KNOWLEDGE SCORE

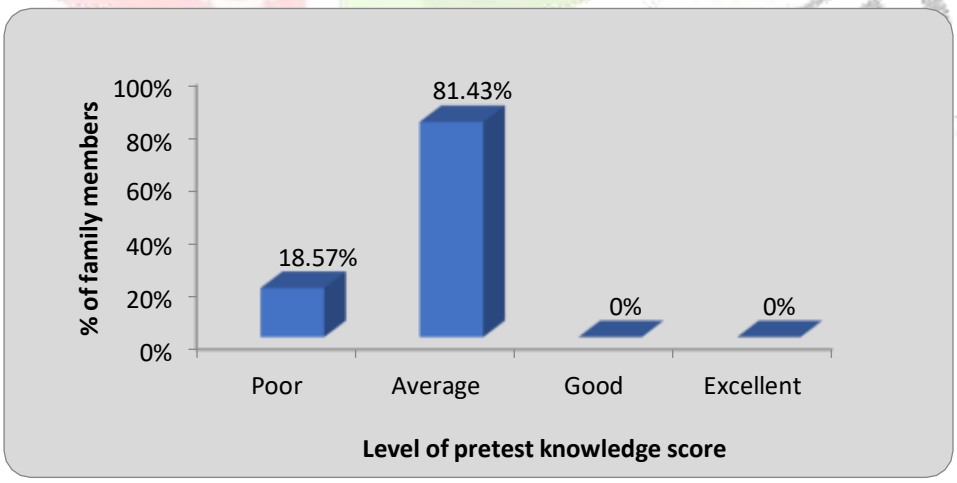


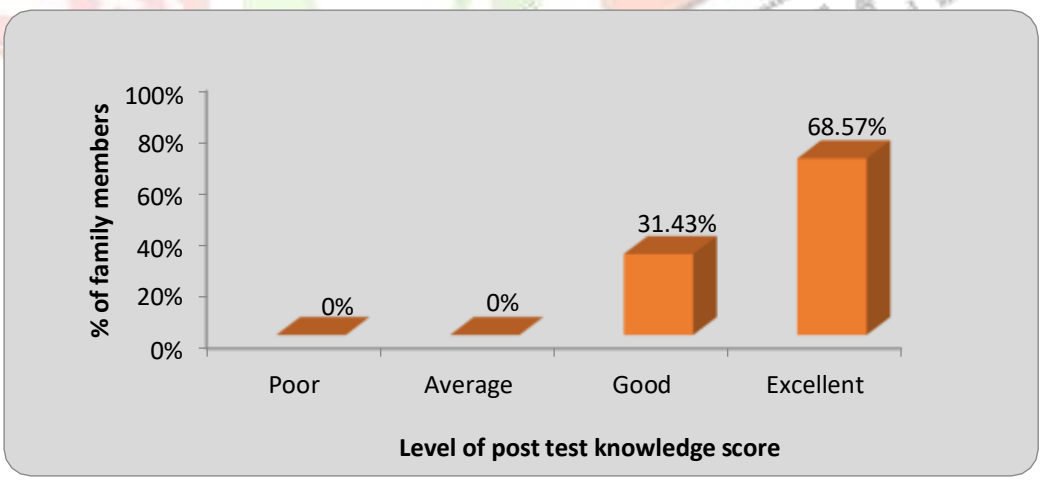
TABLE 4.3: ASSESSMENT WITH LEVEL OF POST TEST KNOWLEDGE

n= 70

Level of post test knowledge	Score Range	Level of Post test Knowledge Score	
		No of family members	Percentage
Poor	0-5	0	0
Average	6-10	0	0
Good	11-15	22	31.43
Excellent	16-20	48	68.57
Minimum score		13	
Maximum score		20	
Mean knowledge score		16.54 ± 1.90	
Mean % Knowledge Score		82.71 ± 9.54	

The above table shows that 31.43% of family members of individuals with back pain in selected area of the city had good level of knowledge score and 68.57% of them had excellent level of knowledge score.Minimum knowledge score in post-test was 13 and in maximum knowledge score was 20.Mean knowledge score was 16.54± 1.90 and mean percentage of knowledge score was 82.71
± 9.54.

GRAPH 4.9: ASSESSMENT WITH POST TEST KNOWLEDGE SCORE



SECTION C

This section deals with the effectiveness of Nursing Interventional Training Programme on back massage among family members of individuals with back pain in selected area of the city. The hypothesis is tested statistically with distribution of pretest and posttest mean, standard deviation and mean percentage knowledge score. The levels of knowledge during the pretest and post test are compared to prove the effectiveness of Nursing Interventional Training Programme. Significance of difference at 5% level of significance is tested with student's paired 't' test and tabulated 't' value is compared with calculated 't' value. Also the calculated 'p' values are compared with acceptable 'p' value i.e. 0.05.

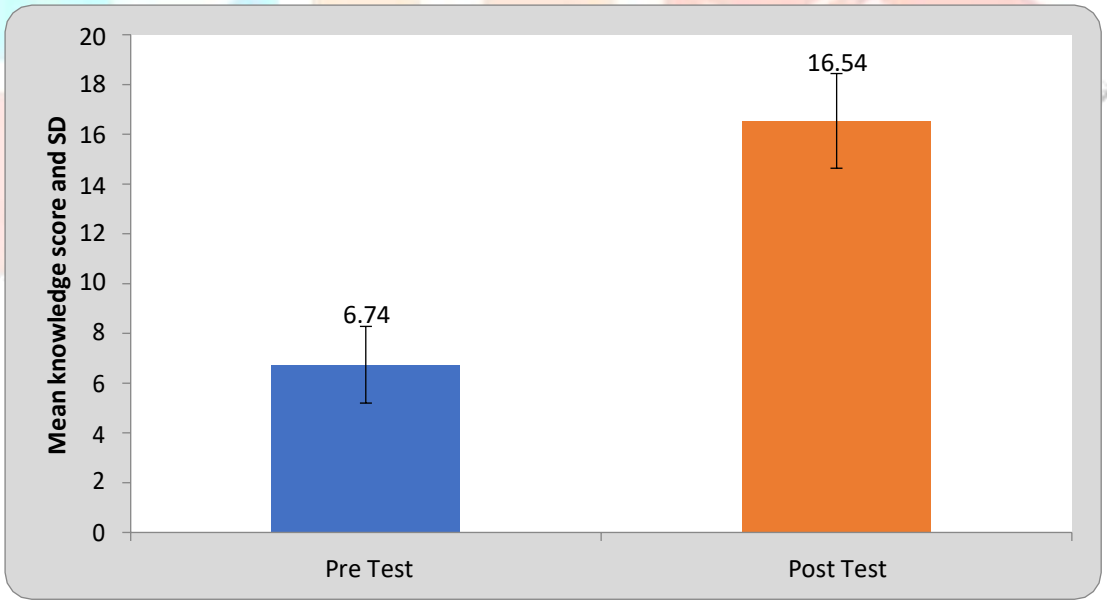
TABLE 4.4 : SIGNIFICANCE OF DIFFERENCE BETWEEN KNOWLEDGE SCORE IN PRE AND POST TEST OF FAMILY MEMBERS

n=70

Test	Mean	SD	Mean Difference	t-value	p-value
Pre Test	6.74	1.54	9.80±2.19	37.42	0.0001 S,p<0.05
Post Test	16.54	1.90			

This table shows the comparison of pretest and post test knowledge scores of family members of individuals with back pain regarding back massage from selected area of the city. Mean, standard deviation and mean difference values are compared and student's paired 't' test is applied at 5% level of significance. The tabulated value for n=70-1 i.e. 69 degrees of freedom was 2.00. The calculated 't' value i.e. 37.42 are much higher than the tabulated value at 5% level of significance for overall knowledge score of family members of individuals with back pain which is statistically acceptable level of significance. Hence it is statistically interpreted that the Nursing Interventional Training Programme on knowledge regarding back massage among family members of individuals with back pain from selected area of the city was effective. Thus the H_1 is accepted.

GRAPH 4.9: SIGNIFICANCE OF DIFFERENCE BETWEEN KNOWLEDGE SCOREIN PRE AND POST TEST OF FAMILY MEMBERS



SECTION D

Association of level of pre test knowledge score regarding back massage among family members of individuals with back pain from selected area of the city in relation to their demographic variables

TABLE 4.5: ASSOCIATION OF PRE TEST KNOWLEDGE SCORE REGARDING BACK MASSAGE AMONG FAMILY MEMBERS OF INDIVIDUALS WITH BACK PAIN IN RELATION TO THEIR AGE IN YEARS.

n=70

Age (yrs)	No. of family members	Poor	Average	Good	Excellent	χ^2-value	p-value
25-30 yrs	37	13	24	0	0	14.23	0.001 S,p<0.05
31-40 yrs	26	0	26	0	0		
41-45 yrs	7	0	7	0	0		

This table shows the association of knowledge score with age in years of family members of individuals from selected area of the city. The tabulated 'χ^2' values was 5.99(df=2) which is less than the calculated 'χ^2' i.e. 14.23 at 5% level of significance. Also the calculated 'p'=0.001 which was less than the acceptable level of significance i.e. 'p'=0.05. Hence it is interpreted that age in years of family members of individuals is statistically associated with their pre test knowledge score.

TABLE 4.6: ASSOCIATION OF PRE TEST KNOWLEDGE SCORE REGARDING BACK MASSAGE AMONG FAMILY MEMBERS OF INDIVIDUALS WITH BACK PAIN IN RELATION TO THEIR TYPE OF WORK.

n=70

Type of work	No. of family members	Poor	Average	Good	Excellent	χ^2-value	p-value
Heavy	29	6	23	0	0	0.85	0.65 NS,p>0.05
Moderate	29	4	25	0	0		
Sedentary	12	3	9	0	0		

This table shows the association of knowledge score with type of work of family members of individuals from selected area of the city. The tabulated 'χ^2' values was 5.99(df=2) which is higher than the calculated 'χ^2' i.e. 0.85 at 5% level of significance. Also the calculated 'p'=0.65 which was higher than the acceptable level of significance i.e. 'p'=0.05. Hence it is interpreted that type of work of family members of individuals is statistically not associated with their pre test knowledge score.

TABLE 4.7: ASSOCIATION OF PRE TEST KNOWLEDGE SCORE REGARDING BACK MASSAGE AMONG FAMILY MEMBERS OF INDIVIDUALS WITH BACK PAIN IN RELATION TO THEIR DIET PATTERN.

n=70

Diet Pattern	No. of family members	Poor	Average	Good	Excellent	χ^2-value	p-value
Vegetarian	52	12	40	0	0	3.17	0.20 NS,p>0.05
Non Vegetarian	8	1	7	0	0		
Mixed	10	0	10	0	0		

This table shows the association of knowledge score with diet pattern of family members of individuals from selected area of the city. The tabulated 'χ^2' values was 5.99(df=2) which is higher than the calculated 'χ^2' i.e. 3.17 at 5% level of significance. Also the calculated 'p'=0.20 which was higher than the acceptable level of significance i.e. 'p'=0.05. Hence it is interpreted that diet pattern of family members of individuals is statistically not associated with their pre test knowledge score.

TABLE 4.8: ASSOCIATION OF PRE TEST KNOWLEDGE SCORE REGARDING BACK MASSAGE AMONG FAMILY MEMBERS OF INDIVIDUALS WITH BACK PAIN IN RELATION TO THEIR BMI(KG/M2).

n=70

Body Mass Index(kg/m2)	No. of family members	Poor	Average	Good	Excellent	χ^2-value	p-value
13.5-17.5 kg/m2	58	12	46	0	0	2.65	0.26 NS,p>0.05
18.5-24.9 kg/m2	3	1	2	0	0		
25-29.5 kg/m2	9	0	9	0	0		

This table shows the association of knowledge score with Body Mass Index(kg/m2) of family members of individuals from selected area of the city. The tabulated 'χ^2' values was 5.99(df=2) which is higher than the calculated 'χ^2' i.e. 2.65 at 5% level of significance. Also the calculated 'p'=0.26 which was higher than the acceptable level of significance i.e. 'p'=0.05. Hence it is interpreted that Body Mass Index(kg/m2) of family members of individuals is statistically not associated with their pre test knowledge score.

TABLE 4.9: ASSOCIATION OF PRE TEST KNOWLEDGE SCORE REGARDING BACK MASSAGE AMONG FAMILY MEMBERS OF INDIVIDUALS WITH BACK PAIN IN

RELATION TO THEIR HABITS

n=70

Habits	No. of family members	Poor	Average	Good	Excellent	χ^2-value	p-value
Smoking	45	5	40	0	0	11.22	0.004 S,p<0.05
Alcohol	7	0	7	0	0		
Tobacco	18	8	10	0	0		
Others	0	0	0	0	0		

This table shows the association of knowledge score with habits of family members of individuals from selected area of the city. The tabulated 'χ^2' values was 5.99(df=2) which is less than the calculated 'χ^2' i.e. 11.22 at 5% level of significance. Also the calculated 'p'=0.004 which was less than the acceptable level of significance i.e. 'p'=0.05. Hence it is interpreted that habits of family members of individuals is statistically associated with their pre test knowledge score.

TABLE 4.10: ASSOCIATION OF PRE TEST KNOWLEDGE SCORE REGARDING BACK MASSAGE AMONG FAMILY MEMBERS OF INDIVIDUALS WITH BACK PAIN IN RELATION TO CAUSE OF BACK PAIN

n=70

Cause of backpain	No. of family members	Poor	Average	Good	Excellent	χ^2-value	p-value
Sitting	53	11	42	0	0	0.68	0.40 NS,p>0.05
Standing	17	2	15	0	0		

This table shows the association of knowledge score with cause of back pain of family members of individuals from selected area of the city. The tabulated 'χ^2' values was 3.84(df=1) which is higher than the calculated 'χ^2' i.e. 0.68 at 5% level of significance. Also the calculated 'p'=0.40 which was higher than the acceptable level of significance i.e. 'p'=0.05. Hence it is interpreted that cause of back pain of family members of individuals is statistically not associated with their pre test knowledge score.

TABLE 4.11: ASSOCIATION OF PRE TEST KNOWLEDGE SCORE REGARDING BACK MASSAGE AMONG FAMILY MEMBERS OF INDIVIDUALS WITH BACK PAIN IN RELATION TO DURATION OF BACK PAIN

n=70

Duration of back pain	No. of family members	Poor	Average	Good	Excellent	χ^2-value	p-value
6 mths-1 yr	33	8	25	0	0	1.55	0.46 NS,p>0.05
2-3 yrs	26	3	23	0	0		
>3 yrs	11	2	9	0	0		

This table shows the association of knowledge score with duration of back pain of family members of individuals from selected area of the city. The tabulated 'χ^2' values was 5.99(df=2) which is higher than the calculated 'χ^2' i.e. 1.55 at 5% level of significance. Also the calculated 'p'=0.46 which was higher than the acceptable level of significance i.e. 'p'=0.05. Hence it is interpreted that duration of back pain of family members of individuals is statistically not associated with their pre test knowledgescore.

MAJOR FINDINGS OF STUDY:

The 18.57% of family members of individuals had poor level of knowledge score and 81.43% of them had average level of knowledge score. before providing the nursing interventional training Programme and after providing nursing interventional training Programme, 31.43% of family members of individuals with back pain in selected area of the city had good level of knowledge score and 68.57% of them had excellent level of knowledge score.. After the Mean, standard deviation and mean difference values are compared and student's paired 't' test is applied at 5% level of significance. The tabulated value for n=70-69 i.e., 69 degrees of freedom was 2.00. The calculated 't' value i.e., 37.42 are much higher than the tabulated value at 5% level of significance for overall knowledge score of family members of individuals with back pain which is statistically acceptable level of significance. Hence it is statistically interpreted that the Nursing Interventional Training Programme on knowledge regarding back massage among family members of individuals with back pain from selected area of the city was effective.

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