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"A STUDY TO EVALUATE THE EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME (STP)REGARDINGREHABILITATIVE MEASURES OFLOWER LIMB AMPUTATION AMONG STAFF NURSES WORKING AT SELECTED HOSPITALS IN BENGALURU."

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1.0 INTRODUCTION

Most of us are born as whole complete human beings. Mind and body is connected through nerves, muscles and bone. Unfortunately this system is torn apart by disease or accidents [1]. .

In olden days, people used to cut the body parts as a punishment for crime. Later for some years they were surrendering their body parts as apology. Now cutting a part or organ is used as treatment.[2]

Although medical advances in antibiotics, trauma care, vascular surgery and the treatment for neoplasm have improved the prospects for limb salvage, in many cases prolonged attempts to save a limb that should be amputated lead to excessive morbidity or even death.[4]

Amputation is one of the oldest operations which refer to the removal of leg, foot, hand, toes, fingers or any body part from the body. In most of the time, the parts removed are lower extremities. Amputation can be done either by surgery or they occur by accident (auto amputation). Reason of having amputation are progressive peripheral vascular disease such as Diabetic foot and Raynauds disease, severe trauma to the limb such as crush injuries, Infection that do not go away or become worse which cannot be controlled or healed like gas gangrene, any tumor of the limb like cancerous bone, soft tissue trauma, severe burns or frostbite, any

deformities of digits, Amputation in vitro like amniotic band and others. In some situation it is related to the mistakes done by doctors or other medical professionals including surgical errors, negligence, failure to diagnose or misdiagnosis.[2]

Amputation is a major blow to anyone both physically and physiologically. Loss of limb produces a permanent disability that can impact patient's self image, self care and mobility or it affects all areas of patient's life. It is like losing a relative and it takes time to adopt for change. In certain situation, patient experience psychological or emotional problems. Nearly 50- 80% of patients experience a phenomenon of phantom limb sensation that is they feel body parts that are no longer there. A phenomenon explains that the portion of brain responsible for processing stimulation from amputated limbs. The common complications after amputation are phantom limb sensation, delayed wound healing, folliculitis, post operative edema, joint contracture and wound breakdown. The severity of effect depends on extent of surgery. If the procedure is minor, then patient adjust to situation without struggle, if it is major, then consequences are severe.[3]

Amputation is mainly performed in two ways. In Open or guillotine amputation surgeon does not close the stump with skin flap, but leaves it open allowing the wound to drain freely. In closed or flap amputation surgeon closes or covers the stump with a flap of skin sutured over the end of stump. Other modes of amputation are below knee amputation, above knee amputation, knee bearing amputation, rotationplasty, hip disarticulation, hemi pelvectomy, partial foot amputation and ankle disarticulation.[4]

A survey on nature and incidence of major complications after lower limb amputation says that among all admissions 5.4% of patients were undergoing amputation.
Out of that 24.8% are facing complications like infection, dehiscence, and non union of leg and wound necrosis. They concluded that patients with amputation can expect a significant number of complications.[5]

The success of rehabilitation depends on how many variables including level and type of amputation, degree of any resulting impairment and disabilities, overall health of patient and family support. The goal of rehabilitation after an amputation is to help the patient return to the highest level of function and independence possible, while improving the overall quality of life physically, emotionally and socially.[6]

Evidence suggests that patients who received acute post operative inpatient rehabilitation compared to those who didn't get inpatient rehabilitation had an increased likelihood of one year survival and home discharge. Results support that early post operative inpatient rehabilitation following amputation.[7]

2.0 REVIEW OF LITERATURE

Review of literature is the selection of available documents on the topic which contain information, ideas, data and evidence. It is an examination of the research that has been conducted in a particular field of study.

For the present study, the researcher made an extensive review of to collect information related to the topic. The researcher made use of various journals, research reports, texts, Medline research and internet to avail the information pertaining to lower limb amputation and its rehabilitative measures. In this chapter, the researcher presents the review of literature under the following headings.

The word **'prevalence'** of Amputation usually means the estimated population of people who are managing Amputation at any given time (i.e. people with Amputation). The term **'incidence'** of Amputation means the annual diagnosis rate, or the number of new cases of Amputation diagnosed each year (i.e. getting Amputation). The incidence enumerates the occurrence of problem in a specific geographic area. Hence the researcher wanted to review the literature related to incidence and prevalence of lower limb amputation which signifies magnitude of problem.

A prospective study was conducted on "Epidemiology of diabetic foot problems and predictive factors for major amputation." in china. A sample of 202 patients who got treatment for amputation in national university hospital were selected. Mean age was 60 years with male female ratio 1:1. The main causes for amputation were gangrene (31.7%), infections like abscess, osteomyelitis (28.7%), ulcer (27.7%), cellulites (6.4%), necrotizing fascilitis (3.5%) and Charcot's osteoarthropathy (2%). Finally they concluded that among many factors for major lower limb amputation in patients peripheral vascular disease and infection were significant.[14]

A retrospective study was conducted to "Determine the incidence rate and prognosis of lower limb amputation" in Geneva. Cases were identified over a 10 years of period. The rate of amputation varied from 1.8- 11.4/ 10,000 population/ year. Out of that severe peripheral arterial disease was present in 94% patients. The prognosis looks moderate, over 53% of patients could be equipped with a prosthetic limb. They concluded that the rate of amputation among elderly patients was high, particularly in diabetic cases. Amputation was performed exclusively for severe peripheral arterial diseases.[15]

A descriptive study was conducted to determine the mortality, causes of death and associated risk factors in Taiwanese diabetic patients after lower-extremity amputation (LEA) in Taiwan. A total of 358 diabetic patients (191 men and 167 women, aged 66.6+/-10.3 years) after LEA from 778 cases previously recruited in the multinational Global Lower Extremity Amputation Study were followed. Results showed that with a follow-up period of up to 6.5 years 214 patients died. Crude mortality rate was 172.7 per 1000 patients and median survival time 4.1 years. The underlying cause of death was recorded as amputation and poor rehabilitation in 57.9% of those who died. They concluded that Mortality after LEA in Taiwanese diabetic patients is high. The most common cause of death was recorded as lower-extremity amputation.[16]

A population-based cohort study was conducted to compare the incidence of vascular lower-limb amputation (LLA) in the diabetic and nondiabetic general population in Sweden. All lower-limb amputation vascular (at or proximal to the transmetatarsal level) performed from 1997 through 2006 were consecutively registered and classified into initial unilateral amputation, contralateral amputation, or reamputation. The incidence rates were estimated in the diabetic and nondiabetic general population aged > or =45 years. Results shown that during the 10-year period, LLA was performed on 62 women and 71 men with diabetes and on 79 women and 78 men without diabetes. The incidence increased from the age of 75 years. Of all amputations, 74% were transtibial. This study revealed that in the general population aged > or =45 years, the incidence of vascular LLA at or proximal to the transmetatarsal level is eight times higher in diabetic than in nondiabetic individuals.[17]

A retrospective study was conducted to determine the incidence of Lower Extremity Amputation (LEA) attributable to Peripheral Vascular Disease in diabetic and nondiabetic patients in Finland. The Study was based on a population of 253,000 inhabitants in eastern Finland. All patients with their first LEA performed during the period from 1 January 1998 to 31 December 2004 were identified from the registers of operation theaters in the study area. Furthermore, patient records and death certificates were reviewed. Amputations attributable to causes other than evident atherosclerotic vascular disease were excluded. Altogether, 477 patients (85 diabetic men, 127 nondiabetic men, 169 diabetic women, and 96 nondiabetic women) were identified. The overall LEA rate was 26.9/100,000 per yr, and the incidence increased strongly with age in both diabetic and nondiabetic patients. The proportion of peripheral (toe, leg) amputations was markedly higher in diabetic patients who also tended to have more reamputation during the follow-up than did nondiabetic subjects. The diabetic status was statistically significant risk factor for mortality in women.[18]

3.0 STATEMENT OF THE PROBLEM:

"A STUDY TO EVALUATE THE EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME (STP) REGARDING REHABILITATIVE MEASURES OF LOWER LIMB AMPUTATION AMONG STAFF NURSES WORKING AT SELECTED IN HOSPITALS IN BENGALURU.

OBJECTIVES OF THE STUDY:

1) To assess the knowledge level of staff nurses about rehabilitative measures of lower limb amputation before the administration of STP.
2) To asses the knowledge level of staff nurses about rehabilitative measures of lower limb amputation after the administration of STP.
3) To evaluate the effectiveness of STP on knowledge level of staff nurses regarding rehabilitative measures of lower limb amputation.
4) To find out the association between knowledge scores of staff nurses with their selected socio demographic variables.

HYPOTHESIS:

H1 - There will be significant differences between pretest and posttest knowledge scores of staff nurses regarding rehabilitative measures of lower limb amputation after STP.

H2 - There will be significant association between the knowledge scores with their selected socio demographic variables**.**

ASSUMPTIONS:

1. The staff nurses may not have adequate knowledge about rehabilitation of lower limb amputation.
2. There will be an improvement in the knowledge level of staff nurses after the STP.
3. Structured Teaching Programme is an effective method of imparting knowledge to the staff nurses.

OPERATIONAL DEFINITIONS:

1. **Evaluate:**

   It involves ascertain the difference between pretest and posttest scores with appropriate statistical methods.

2. **Effectiveness:**

   It refers to statistical measurement of difference between pretest and Posttest knowledge scores.

3. **Structured Teaching Programme:**

   It refers to systematically organized teaching strategy for duration of 45 minutes to 1 hour for staff nurses on rehabilitation of lower limb amputation by verbal interaction with the use of power point .It includes rehabilitation lower limb amputation towards limb prosthesis, exercise and prevention of complication

4. **Lower limb amputation:**

   It is the removal of a body extremity by trauma or surgery. It includes both above and below knee amputation.

5. **Rehabilitative measures**:

   They are the interventions designed to facilitate the process of recovery from an injury or illness to as normal condition as possible.

7. **Staff nurses**:

   It refers to nurses working in orthopedic department in selected hospitals, at Bengaluru.

4.0 RESULT

SECTION-1

DISTRIBUTION OF THE SUBJECTS ACCORDING TO SOCIO -DEMOGRAPHIC VARIABLES:

N=60

Demographic variables		No. of nurses(n)	Percentage %
Age	23 years	26	43.3
	26 years	26	43.3
	24 years	8	13.3
Gender	Female	56	93.3
	Male	4	6.7
Religion	Hindu	12	20.0
	Muslim	3	5.0
	Christian	45	75.0
Place of residence	Rural	11	18.3
	Urban	18	30.0
	Semi urban	31	51.7
Educational status of father	Primary school	4	6.7
	Secondary school	16	26.7
	Higher secondary	26	43.3
	Graduate	6	10.0
	Others	8	13.3
Educational status of mother	Primary school	3	5.0
	Secondary school	15	25.0
	Higher secondary	27	45.0
	Graduate	15	25.0
Occupation of father	Agriculture	27	45.0
	Official	6	10.0
	Business	19	31.7
	Others	8	13.3
Previous information about rehabilitation	< 5years experience	24	40.0
	>2year experience	33	55.0
	Workshop	1	1.7
	Others	2	3.3
Exposure to mass media regarding rehabilitation	News paper	24	40.0
	Radio	1	1.7
	Television	12	20.0
	No exposure	23	38.3
Previous experience	Family	1	1.7
	Neighbors	25	41.7
	No previous experience	34	56.7

Table 3: shows the socio demographic information of Staff nurses who participated in the study.

Interpretation:

1. Distribution of age indicates that 43.3% of the staff nurses were in the age group of 23 years, 43.3% of them were 26 years and 13.3% of them were 24 years of age.
2. Distribution of gender shows that majority of the Nurses (N= 56) were females with 93.3% and 6.7% were males.
3. Distribution of religion reveals that majority of the Nurses (N=45) belongs to Christian religion with 75%, 20% of them were from Hindu religion and 5% of were in Muslim religion.
4. Distribution of place of residence that 51.7% of Nurses were from semi urban area, 30% of them were belongs to urban area and 18.3% of the samples resided in rural areas.
5. Distribution of educational status of father represents 43.3% of fathers got their higher secondary education, 26.7% got secondary school education, 13.3% were illiterate, 10% of fathers were graduates and 6.7% of them completed primary school.
6. Distribution of educational status of mother reveals that 45% of mothers had higher secondary education, 25% of were graduates, 25% of mothers completed secondary school education and 5% of them got only primary education.
7. Distribution of occupation of father depicts that 45% of fathers were agriculturists, 31.7% were depending on business, 13.3% were not having specific work and 10% of them were officials.
8. distribution of previous information about rehabilitation reveals that most of the nurses (N=33) got information in their probationary period with 55% , 40 % of them worked in 1st year,3.3% of nurses got information from other sources and 1.7% of them received information from workshop.
9. Distribution of exposure to mass media regarding rehabilitation shows that 40% of nurses read about rehabilitation in news paper, 38.3% of them didn't get any exposure regarding the topic, 20% of them seen in television and 1.7% of them heard a programme in radio.
10. Distribution of previous experience explains that most of the nurses (N = 34) didn't get any experience regarding rehabilitation, 41.7% of them got experience from their neighbors, where as 1.7% of nurses experienced in their family.

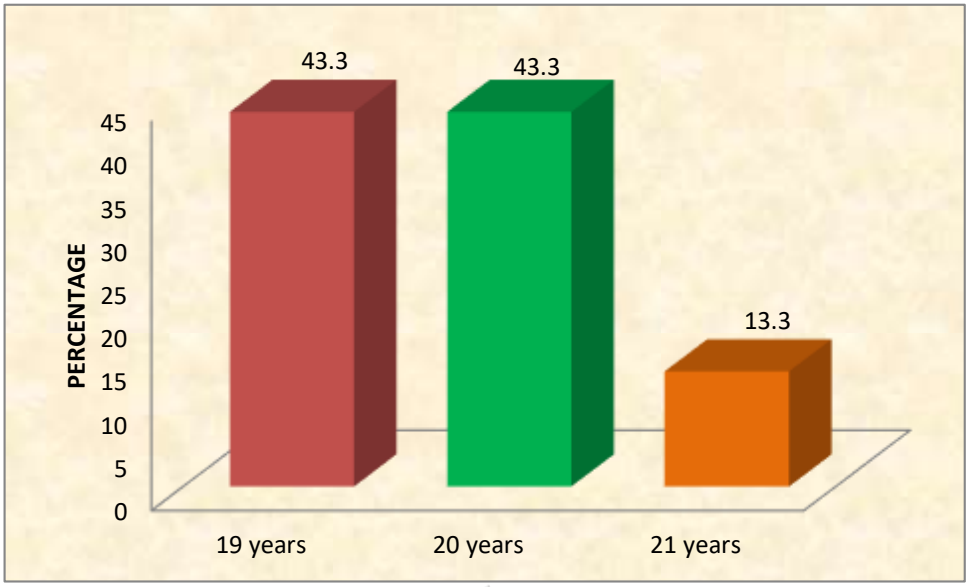

Fig 4: Simple bar diagram showing the distribution of age of the study population.

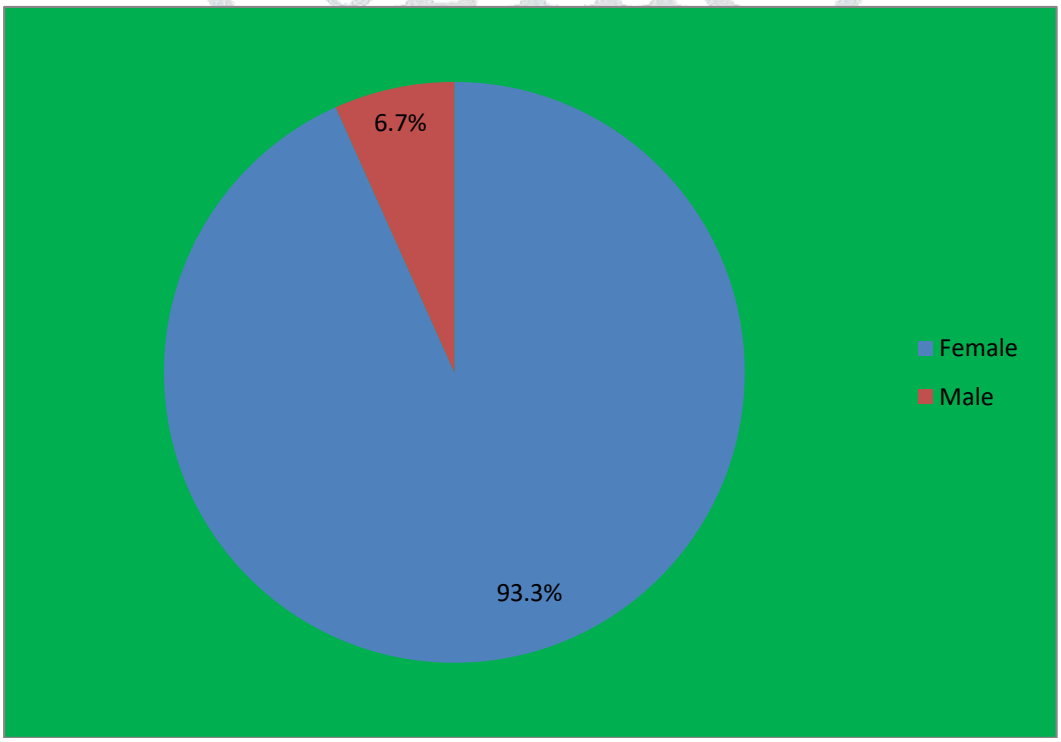

Fig 5: Pie diagram showing the distribution of the sample by gender.

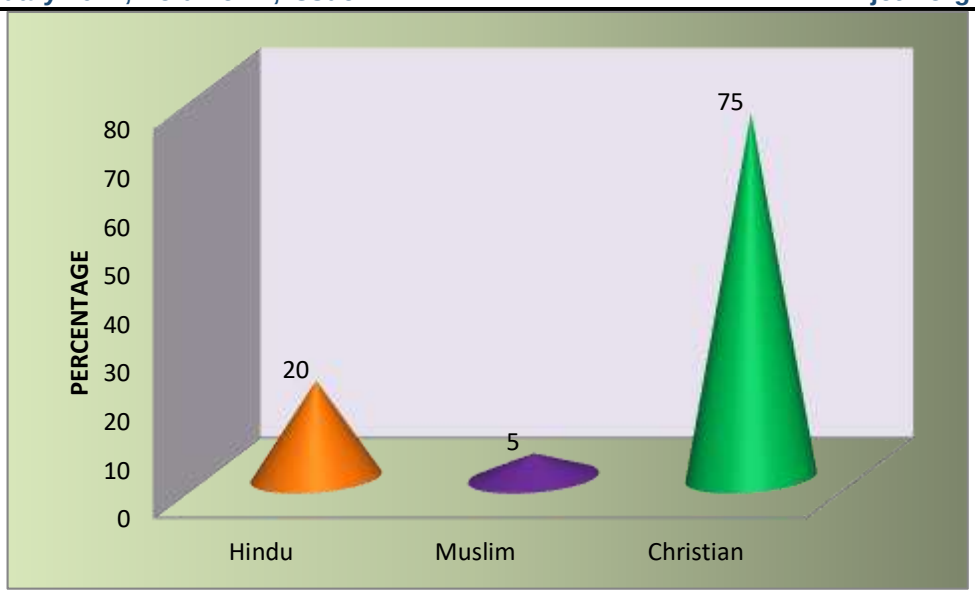

Fig 6: Simple cone diagram showing the distribution of the sample by religion.

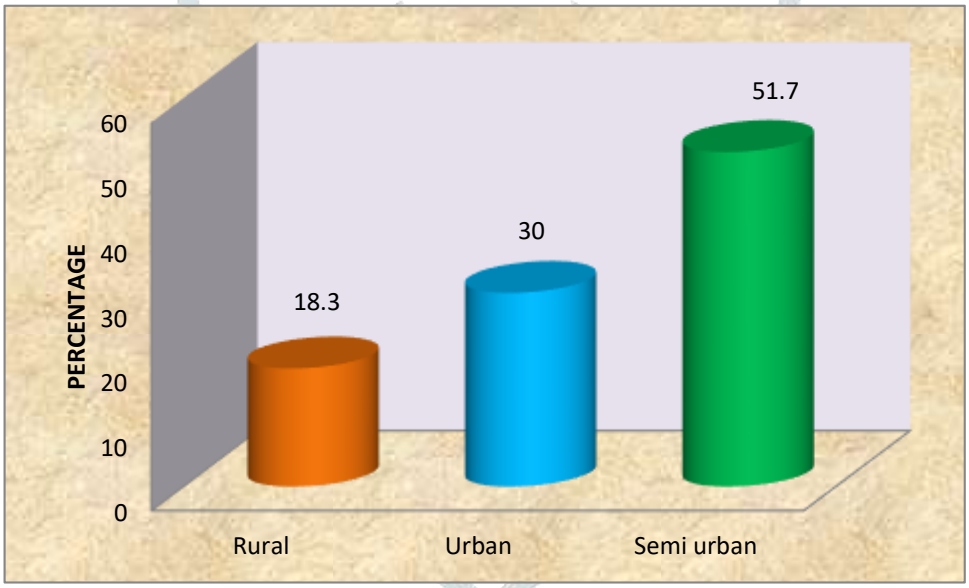

Fig 7: Simple Cylindrical diagram showing the distribution of the sample by place of residence.

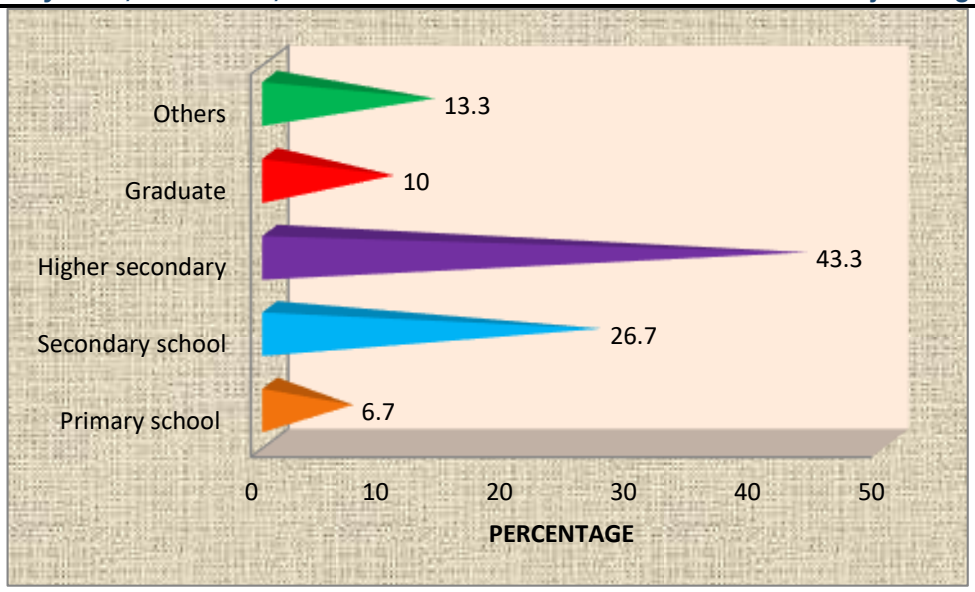

Fig 8: Simple Pyramid diagram showing the distribution of sample by the father's educational status.

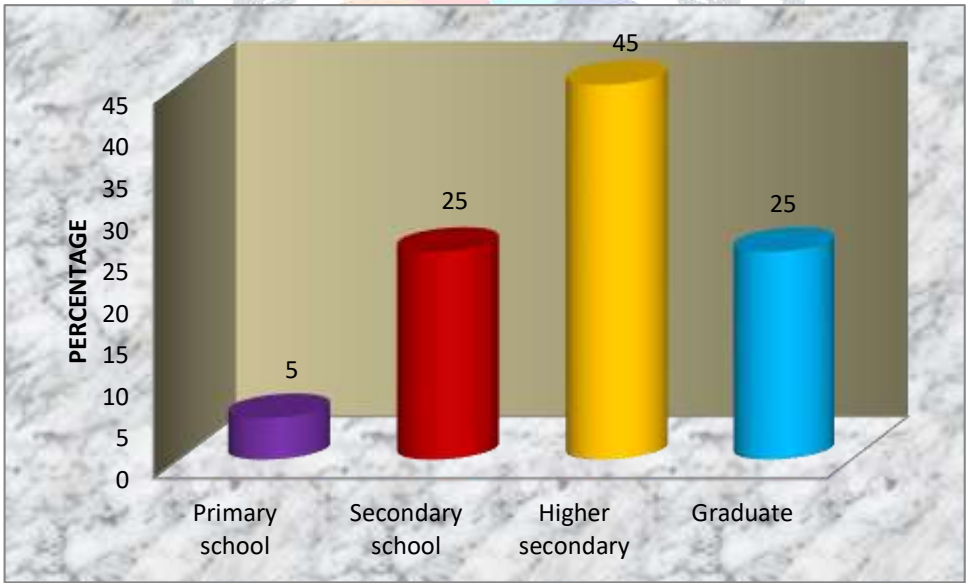

Fig 9: Simple cylindrical diagram showing the distribution of sample by the mother's educational status.

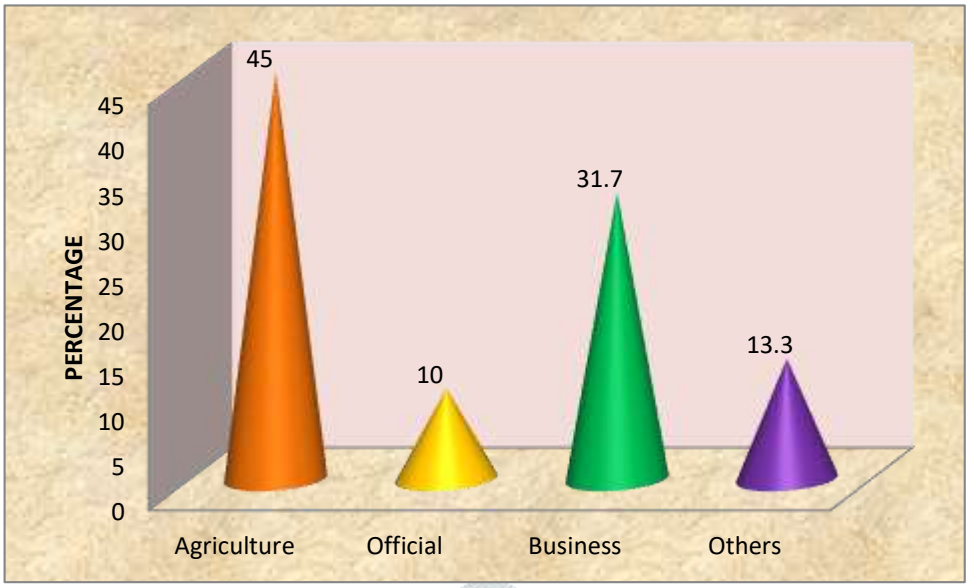

Fig 10: Simple Cone diagram showing the distribution of sample by the Occupation of father.

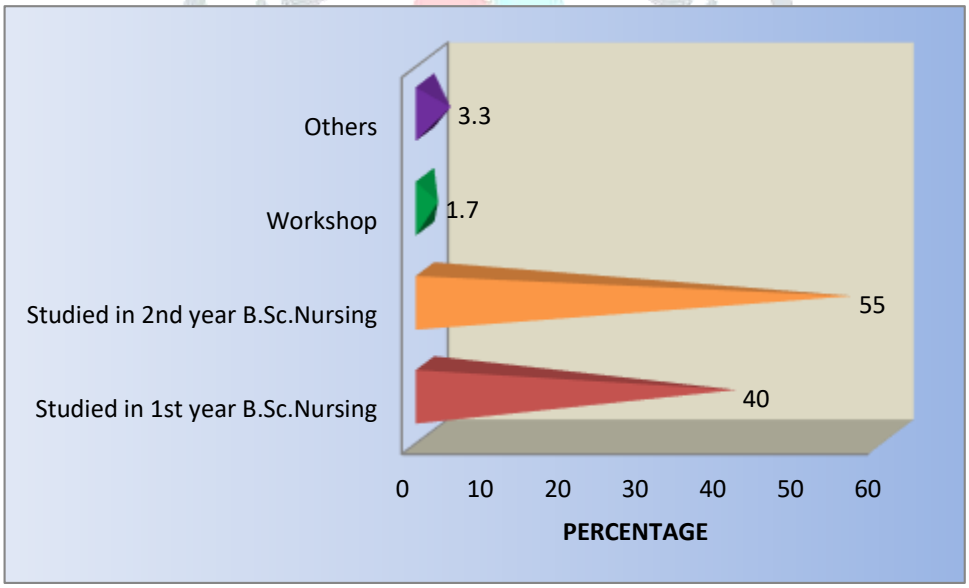

Fig 11: Simple Pyramid diagram showing the distribution of sample by previous information about rehabilitation.

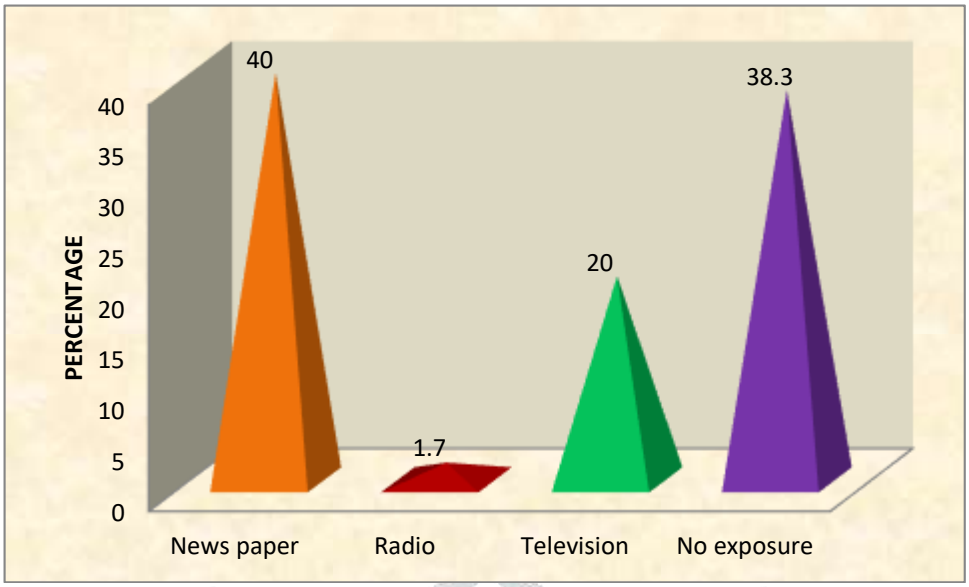

Fig 12: Pyramid diagram showing the distribution of the sample by Exposure to mass media regarding rehabilitation.

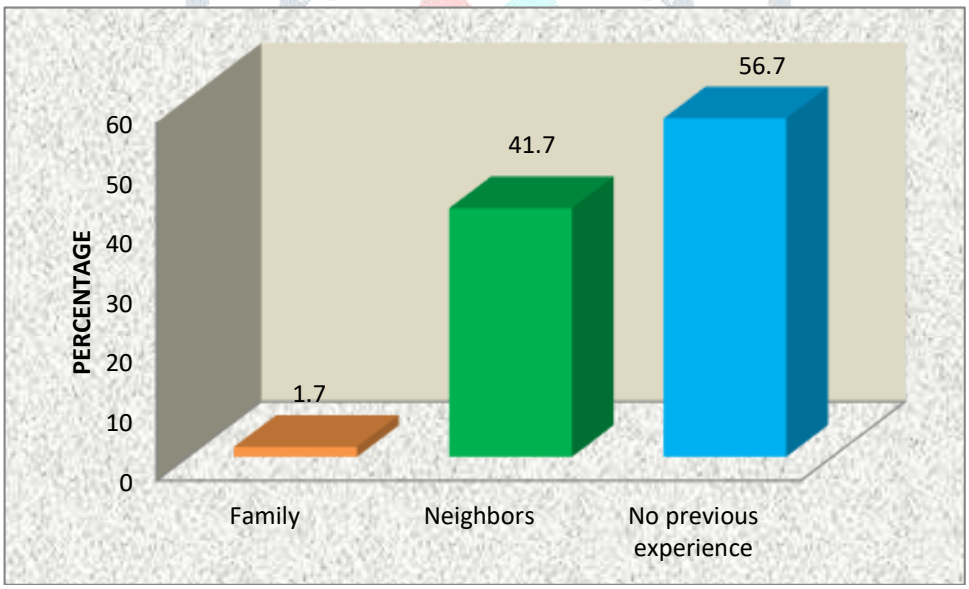

Fig 13: Bar diagram showing the distribution of the sample by previous experience.

SECTION- II:

A STUDY TO EVALUATE THE EFFECTIVENESS OF STRUCTURE TEACHING PROGRAMME (STP)| REGARDING REHABILITATIVE MEASURES OF LOWER LIMB AMPUTATION AMONG STAFF NURSES WORKING AT SELECTED HOSPITALS IN BANGALORE

OBJECTIVE 1: To asses the knowledge level of Staff nurses about rehabilitative measures of lower limb amputation before the administration of STP.

Table 4: Pretest knowledge scores on different aspects of respondents on rehabilitative measures of lower limb amputation.

N = 60

Area of Knowledge	No of items	Pre-test Knowledge		
		Mean score	SD	Mean %
Anatomy and physiology	6	4.58	0.996	76.33
Amputation	13	6.02	1.621	46.31
Rehabilitation	19	7.60	1.933	40

The above table reveals that percentage of knowledge level of samples in each aspect of rehabilitative measures of lower limb amputation. Staff nurses are having below average knowledge in amputation and rehabilitation aspects.

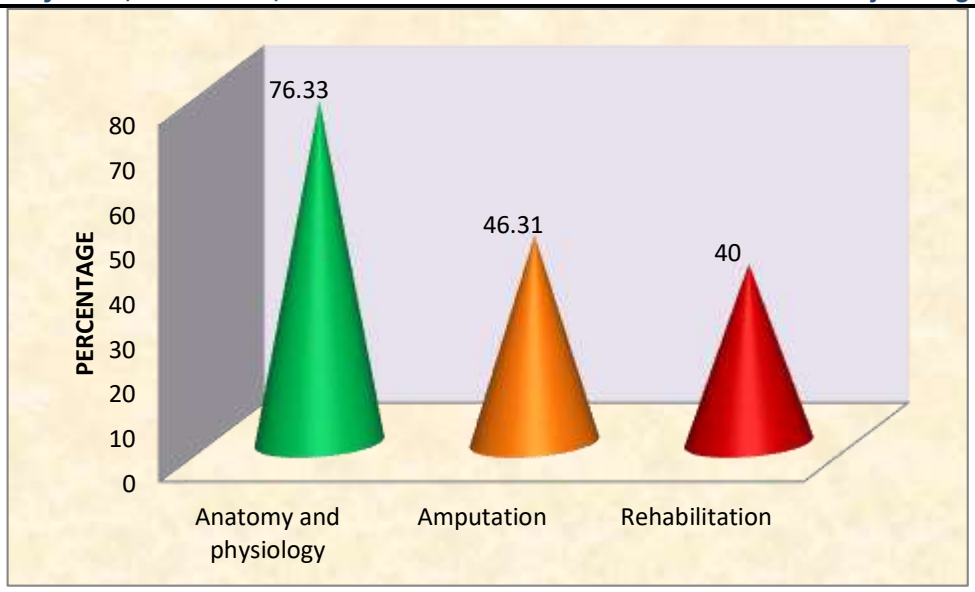

Fig 14: Simple Cone diagram showing the distribution of pretest knowledge scores in different aspects.

Table 5: Pretest overall knowledge score on rehabilitative measures of lower limb amputation.

Questions	Mean	SD	Mean % of Knowledge
Overall pre-test Knowledge	18.20	3.188	47.89

The above table shows the overall pretest knowledge scores of samples on rehabilitative measures of lower limb amputation. They are having 47.89% of knowledge before the administration of Structured Teaching Programme.

Table 6: Distribution of pretest level of knowledge on rehabilitative measures of lower limb amputation.

Level of Knowledge	Frequency	Percentage
Moderately adequate Knowledge	25	41.7
Inadequate Knowledge	35	58.3
Total	**60**	**100.0**

The above table reveals the pretest knowledge level of samples on rehabilitative measures of lower limb amputation before the structure teaching programme.

In pretest 58.3% of the Nurses are having inadequate knowledge and 41.7% of them are having moderately adequate knowledge and none of them are having adequate knowledge.

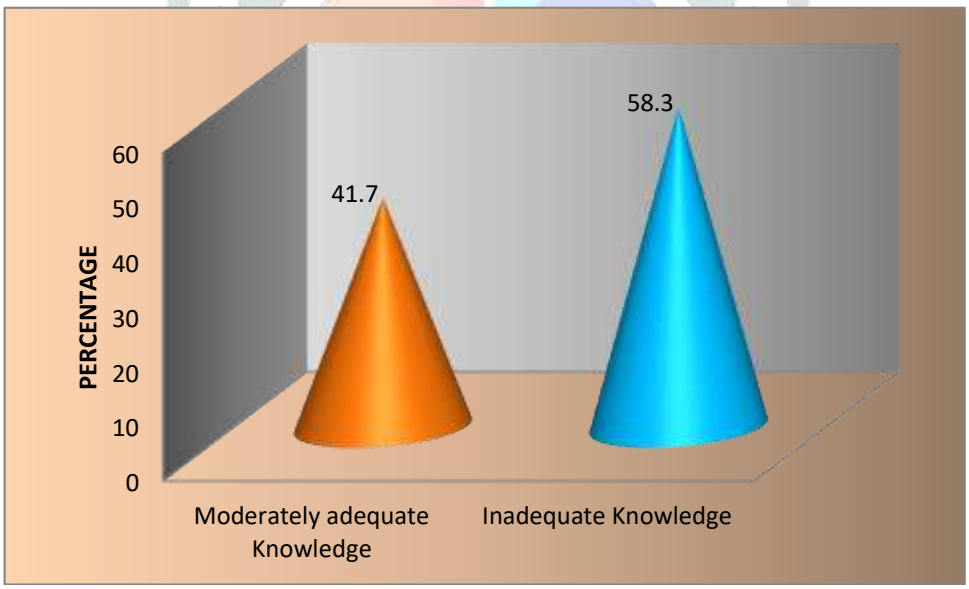

Fig 15: Above Cone diagram showing the pretest level of knowledge.

SECTION – III

ASSESSMENT OF POST-TEST KNOWLEDGE OF STAFF NURSES REGARDING REHABILITATIVE MEASURES OF LOWER LIMB AMPUTATION.

OBJECTIVE 2: to asses the knowledge level of Staff nurses about rehabilitative measures of lower limb amputation after the administration of STP.

TABLE 7: Post Test Knowledge Score on Different Aspects of Rehabilitative Measures of Lower Limb Amputation.

N=60

Area of Knowledge	No of items	Post -test Knowledge		
		Mean score	SD	Mean %
Anatomy and physiology	6	5.55	0.565	92.5
Amputation	13	10.68	1.200	82.15
Rehabilitation	19	14.63	2.083	77

The above table shows percentage of posttest level of knowledge in different aspects of rehabilitative measures of lower limb amputation. They have adequate knowledge on all aspects.

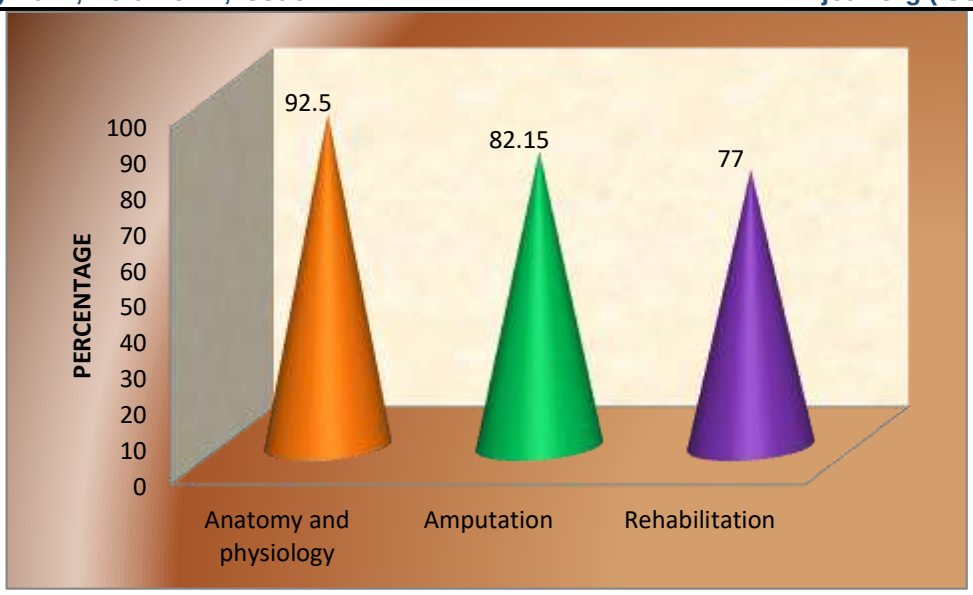

Fig 16: Simple cone diagram showing the posttest knowledge scores on different aspects of rehabilitative measures of lower limb amputation.

Table 8: Posttest overall knowledge on rehabilitative measures of lower limb amputation.

Knowledge	Mean	SD	Mean % of Knowledge
Overall post-test Knowledge	30.87	2.677	81.23

The above table shows the posttest overall knowledge on rehabilitative measures of lower limb amputation. They are having 81.23% of knowledge after the administration of structured teaching programme.

TABLE 9: Posttest level of knowledge on rehabilitative measures of lower limb amputation.

Level of Knowledge	Frequency	Percentage
Adequate Knowledge	53	88.3
Moderately adequate Knowledge	7	11.7
Total	**60**	**100**

The above table shows the posttest level of knowledge on overall knowledge on rehabilitative measures of lower limb amputation after the administration of structured as teaching programme. 88.3% of nurses achieved adequate knowledge, 11.7% of nurses got moderate knowledge and none of them shown inadequate knowledge.

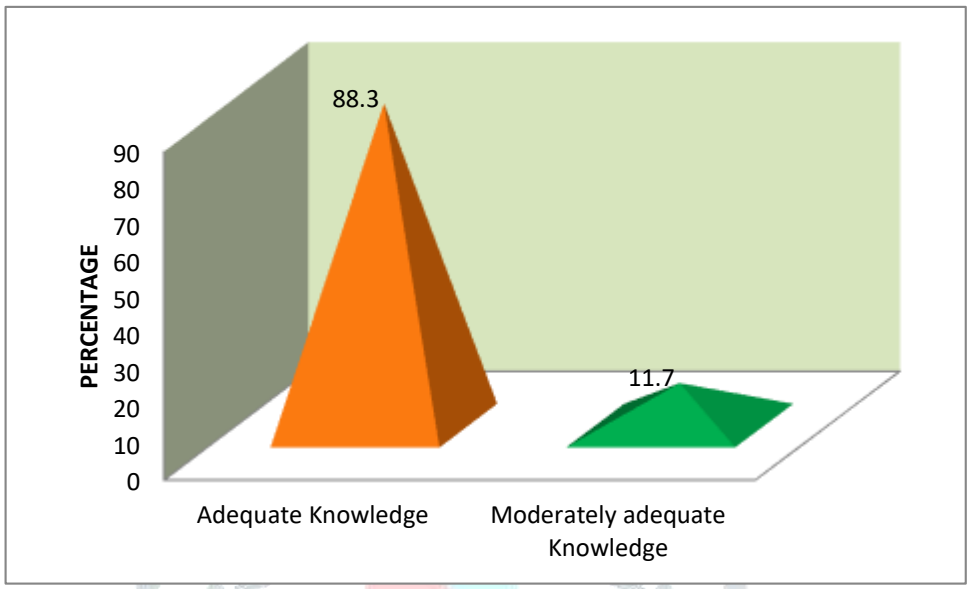

Fig 17: Above Pyramid diagram showing level of posttest knowledge on rehabilitative measures of lower limb amputation.

SECTION – IV

COMPARISON OF PRE AND POST TEST KNOWLEDGE SCORES REGARDING REHABILITATIVE MEASURES OF LOWER LIMB AMPUTATION AMONG STAFF NURSES.

OBJECTIVE 3: To evaluate the effectiveness of STP on knowledge level of Staff nurses regarding rehabilitative measures of lower limb amputation.

TABLE 10: Comparison of Average Knowledge score on Rehabilitative measures of Lower Limb Amputation before and after administration of structured teaching programme .

HS, P-0.000, df =59

Area of Knowledge	Pre-test		Post-test		Student's paired t-test
	Mean	SD	Mean	SD	
Anatomy and physiology	4.58	0.996	5.55	0.565	t=8.486
Amputation	6.02	1.621	10.68	1.200	t=21.337
Rehabilitation	7.60	1.933	14.63	2.083	t=22.832

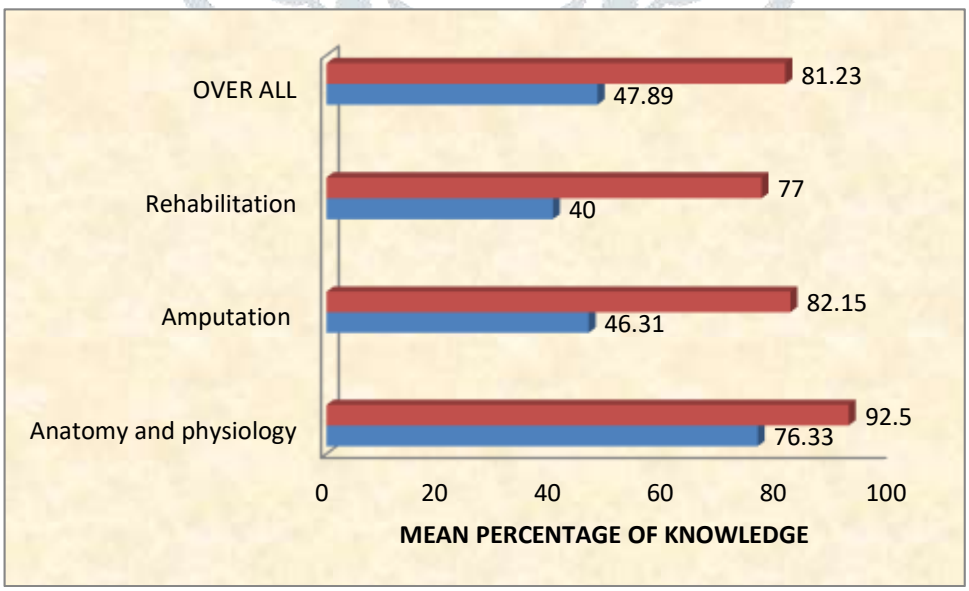

Fig 18: The above diagram showing the comparision of mean percentage of knowledge.

The above table and figure reveals the comparision of knowledge on Rehabilitative measures of Lower Limb Amputation before and after administration of Structured Teaching programme. In all aspects, the nurses improved their knowledge. The difference between pre and posttest knowledge score is large and it is significant. Statistical significance was calculated by using student's paired't' test.

Table 11: Determination of Overall Mean Knowledge Score Before and After Structured teaching programme .

	No. of staff nurses	**Pre-test**	**Post-test**	**Mean Of Differences**	**paired t-test**
Overall Knowledge score	60	18.20	30.87	12.667 (SD=2.808)	t =34.937

The above table reveals overall mean knowledge score before and after Structured Teaching programme. The staff Nurses improved their knowledge from 18.20 to 30.87 after STP. The difference between pre and posttest knowledge score is large and it is significant. Statistical significance was obtained by using paired't' test.

Table 12: Comparison of average knowledge score percentage on Rehabilitative Measures of Lower Limb Amputation before and after administration of Structured Teaching Programme.

HS, P-0.000,

Area of Knowledge	**Pre-test %**	**Post-test %**	**% ENHANCEMENT**
Anatomy and physiology	76.33	92.5	16.17
Amputation	46.31	82.15	34.84
Rehabilitation	40	77	37
OVER ALL	**47.89**	**81.23**	**33.34**

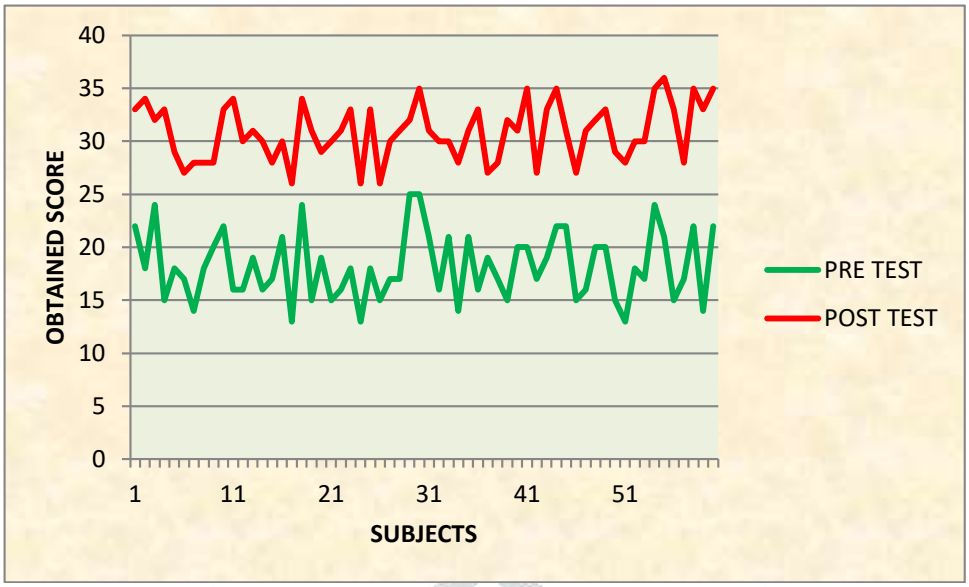

Fig 19: Line diagram showing comparison of each subjects pre-test and post-test knowledge score.

The above table and figure states the comparision of average knowledge score percentage on Rehabilitative Measures of Lower Limb Amputation before and after administration of Structured Teaching programme. Nurses were having 47.89% of score in pretest and obtained 81.23 % in posttest. 33.34% of enhancement is observed and it is the net benefit of this study, which indicates the effectiveness of structured Teaching programme.

HYPOTHESIS TESTING:

H1: - There will be significant differences between pretest and posttest knowledge scores of Staff nurses regarding rehabilitative measures of lower limb amputation after STP.

Table 9 reveals that there is a significant difference between pretest and posttest knowledge scores. Comparision was calculated by student paired‘t’ test and the value is 34.937 at p=0.000 level of significance in knowledge. Therefore the research hypothesis H1 is accepted.

SECTION – V

ASSOCIATION BETWEEN THE SELECTED DEMOGRAPHIC VARIABLE AND THE PRE TEST LEVEL OF KNOWLEDGE.

OBJECTIVE 4: To find out the association between knowledge scores of Staff Nurses with their selected Socio Demographic variables.

TABLE 13: Association between the Selected Demographic Variables and the Pre Test Level of Knowledge.

Demographic variables		No.of staff nurses(n)	Level of knowledge		Chi-square test
			Moderately adequate	Inadequate	
Age	23 years	26	12	14	**Chi-square =0**.382 P= 0. 826
	26 years	26	10	16	
	24 years	8	3	5	
Gender	Male	56	22	34	**Chi-square =1.959** P= 0. 162
	Female	4	3	1	
Religion	Hindu	12	6	6	**Chi-square =5.234** P= 0.073
	Muslim	3	3	0	
	Christian	45	16	29	
Place of residence	Rural	11	3	8	**Chi-square =1.571** P= 0.456
	Urban	18	7	11	
	Semi urban	31	15	16	
Educational status of father	Primary school	4	2	2	**Chi-square =0.633** P= 0.959
	Secondary school	16	6	10	
	Higher secondary	26	11	15	
	Graduate	6	2	4	
	Others	8	4	4	
Educational status of mother	Primary school	3	2	1	**Chi-square =3.010** P= 0. 390
	Secondary school	15	4	11	
	Higher secondary	27	11	16	
	Graduate	15	8	7	
Occupation of father	Agriculture	27	6	21	**Chi-square =7.859** P= 0.049
	Official	6	3	3	
	Business	19	11	8	
	Others	8	5	3	

Previous information about rehabilitation	<5years experience	24	15	9	**Chi-square =9.927** P= 0.019
	>2years experience	33	9	24	
	Workshop	1	1	0	
	Others	2	0	2	
Exposure to mass media regarding rehabilitation	News paper	24	9	15	**Chi-square =1.602** P= 0.659
	Radio	1	1	0	
	Television	12	5	7	
	No exposure	23	10	13	
Previous experience	Family	1	0	1	**Chi-square =0. 827** P= 0.661
	Neighbors	25	10	15	
	No previous experience	34	15	19	

The above table reveals the association between selected socio demographic variables and the pretest level of knowledge scores on rehabilitative measures of lower limb amputation.

- Occupation of father is significantly associated with their pretest knowledge.
- nurses who got previous information answered well in pretest.

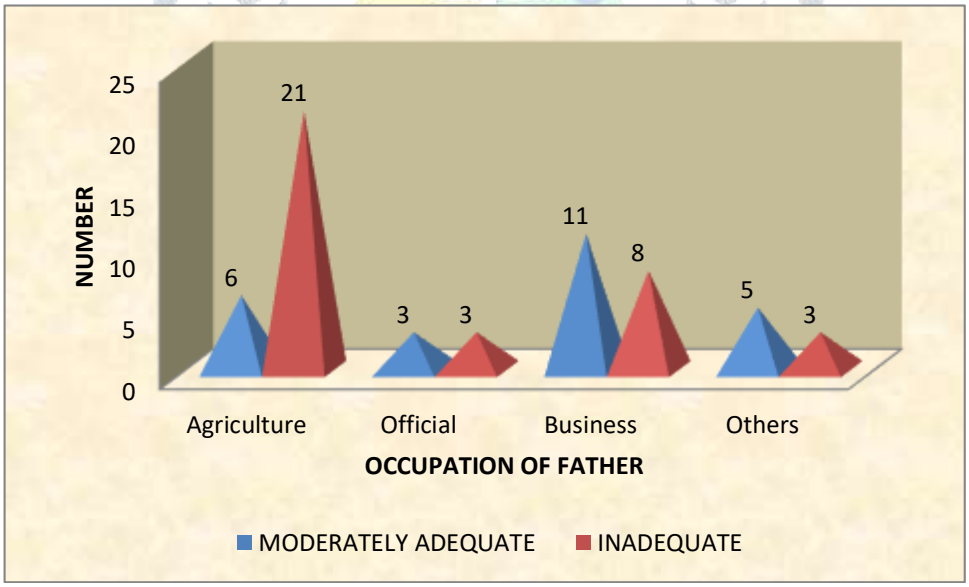

Figure 20: Multiple Pyramid diagram showing association between pretest level of knowledge and occupation of father.

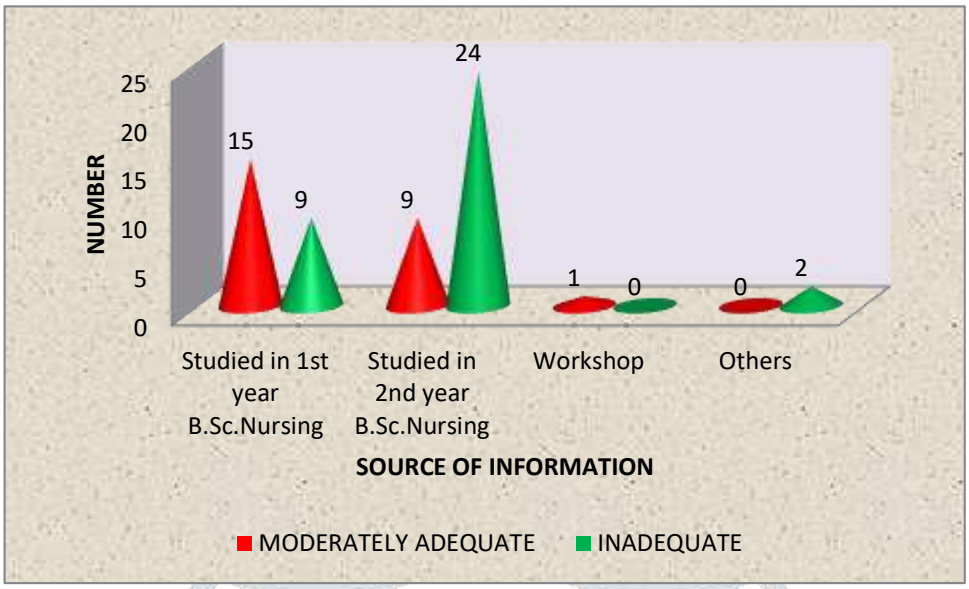

Fig 21: Multiple Cone diagram showing association between pretest level of knowledge and previous source of information.

ASSOCIATION BETWEEN THE SELECTED DEMOGRAPHIC VARIABLE AND THE PRE TEST LEVEL OF KNOWLEDGE.

Table 14: Association between post test Level of Knowledge and their Demographic Variables.

Demographic variables		No. of nurse(n)	Level of knowledge		Chi-square test
			Adequate	Moderately adequate	
Age	23 years	26	23	3	**Chi-square =0**.006 P= 0. 997
	26 years	26	23	3	
	24 years	8	7	1	
Gender	Male	56	49	7	**Chi-square =0**.566 P= 0. 452
	Female	4	4	0	
Religion	Hindu	12	12	0	**Chi-square =2.642** P= 0. 267
	Muslim	3	3	0	
	Christian	45	38	7	
Place of residence	Rural	11	11	0	**Chi-square =2.057** P= 0. 358
	Urban	18	16	2	
	Semi urban	31	26	5	
Educational status of father	Primary school	4	3	1	**Chi-square =1.297** P= 0. 862
	Secondary school	16	15	1	
	Higher secondary	26	23	3	
	Graduate	6	5	1	
	Others	8	7	1	
Educational status of mother	Primary school	3	1	2	**Chi-square =11.842** P= 0. 008
	Secondary school	15	14	1	
	Higher secondary	27	26	1	
	Graduate	15	12	3	
Occupation of father	Agriculture	27	22	5	**Chi-square =2.784** P= 0. 426
	Official	6	6	0	
	Business	19	18	1	
	Others	8	7	1	

The above table states the association between selected socio demographic variables and the posttest level of knowledge on rehabilitative measures of lower limb amputation.

- Educational status of the mother is having significant association.

These types of association are statistically significant and it was calculated using chi square test.

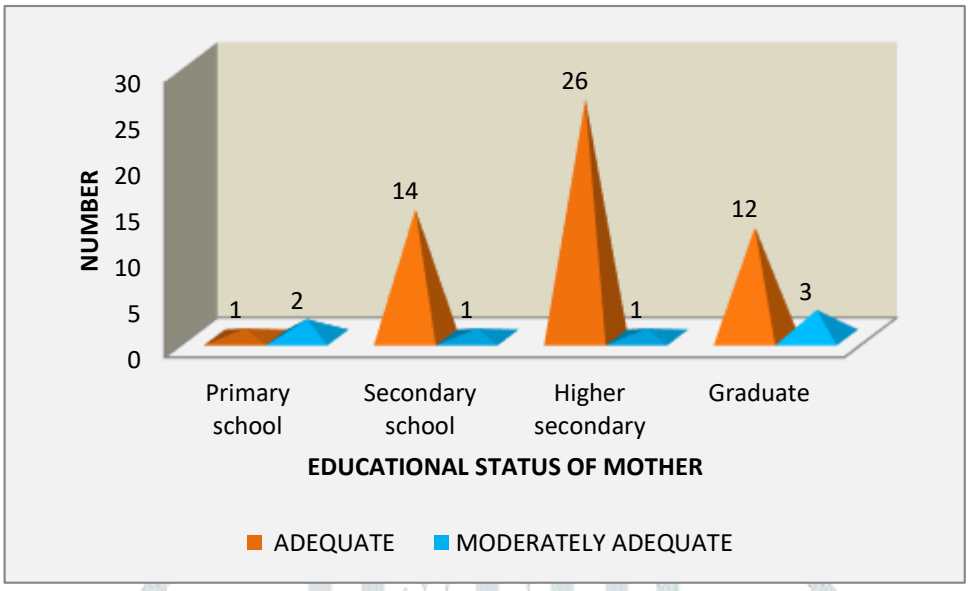

Fig 22: Above multiple pyramid diagram showing association between posttest knowledge score and educational status of mother.

H2 - There will be significant association between the knowledge scores with their selected socio demographic variables.

Table no. 12 and 13 reveals that significant association between pretest knowledge scores with occupation of father ($\chi 2$ = 7.859, at P= 0.049 level of significance), previous information about rehabilitation ($\chi 2$ = 9.927, at P= 0.019 level of significance) and posttest scores with Educational status of mother ($\chi 2$ = 11.842, at

P= 0. 008 level of significance). Therefore the research hypothesis H2 is accepted.

SUMMARY:

This chapter dealt with the analysis and interpretation of findings of the study. The analysis was organized and presented under various sections like sample characteristics, analysis of knowledge, comparision of knowledge and association between knowledge with the demographic variables.

Data were analyzed by applying descriptive and inferential statistics. Demographic variables in categorical / dichotomous were given in frequencies with their percentages. Knowledge scores in quantitative form were given in mean and standard deviation. Different aspects of knowledge were analyzed using student independent‘t’ test. Pretest and posttest differences were analyzed using paired‘t’ test.

Statistical significant differences between converted knowledge score as inadequate, moderately adequate and adequate were analyzed using chi- square test.

5.0 Nursing implications:

The findings of this study have implications in the field of nursing practice, nursing education, nursing research and nursing administration. The dissemination of the knowledge takes place when the research findings are made use of in the following fields.

Nursing practice:

The nursing practice has been undergoing many evolutions in the recent days. The expanded role of the professional nurse emphasizes the activities, which promote health and preventive behaviors among people. Since there is a less knowledge among nursing students and staff nurses regarding rehabilitation after amputation, every professional can make use of these results to update their knowledge and make use of every opportunity to improve subordinates knowledge as well as the knowledge of their clients. Nurses can also motivate their patients to participate in the awareness camps, help them to get to know the newer advancement in limb salvage techniques with many modified rehabilitation measures. Promotion of the health in the high risk group may be done by emphasizing the importance of healthy diet, regular exercises, brisk walking, periodic health check up, proper foot care methods, prevention of injuries and accidents, handling of assistive devices and so on.

Nursing education:

One of the vital functions of nursing is imparting education. With newer knowledge, the scope of education too increases. Nurse educators should get the benefit of these studies to include them in their class room teachings to enhance the knowledge of students. They can make use of STP which is prepared for

teaching as tool. This tool reduces their lecturing hours, is attractive and may also be beneficial as an visual aid. The students should be motivated to give health education using the teaching materials available. There is a direct need to plan the educational programme according to the level of understanding of the beneficiaries, their attitude and the needed improvement in them.

Nursing research:

There are different situations and places where the problems are identified which need a systematic evaluation. The investigators need lot of review materials and one may be obtained by using this study report. Various methods may be used to strengthen the knowledge of the people by the researchers, which should be published for the benefit of those who are not able to participate in the studies. The results of this study indicate that the staff nurses too lack in knowledge regarding rehabilitation measures of lower limb amputation and further insights into the existing situation will enlighten to understand the problems and find a definite way out. By conducting the research on the knowledge on amputation and its various rehabilitative measures, life style modifications, periodic health examination and systematic education may help to prolong life span of amputees and avoid many complications.

Nursing administration:

The nurse administrator faces a challenging role these days, where he/ she need to know the recent developments, the new methods and technologies. Getting in touch with the new findings will strengthen his/her position and improve self confidence. There is a need to improve the facilities in and out patient departments and wards of the hospitals, which may be accomplished by some posters and charts on rehabilitative measures. Next is to modify the behavior of nurses to match the corporate level clients, so that everybody will have faith in health education given by nurses. Patients should follow instructions on foot care measures and prevent incidence of amputation before it happen. The nurse administrators should plan, organize and provide materials for the effective awareness programs regarding rehabilitative measures of lower limb amputation and must get opinions and suggestions from their sub ordinates.

SUGGESTIONS:

1. The nurses should plan for more educative programs for all the age groups irrespective of their disease regarding proper foot care and rehabilitative measures of amputation.

2. More nurses should participate in public awareness and limb prosthesis programme to extend their knowledge.
3. Nurses can involve the general public in mobilizing the spread of knowledge regarding amputation and its rehabilitation.
4. Occupational therapy can be given to the patients after amputation to bring new hope in them.

RECOMMENDATIONS:

1. Similar study can be conducted on student nurses studying in nursing colleges.
2. Comparative study can be conducted on Orthopedics and Medical wards students to compare the knowledge.
3. The studies of the similar type can be replicated in different parts of the state and the country from time to time till there are satisfactory results.
4. Evaluative results may be conducted to acknowledge the positive results of studies on knowledge regarding rehabilitative measures on lower limb amputation.
5. Education program can be conducted by health professionals in every city and panchayat level using STP.
6. Generally diabetic patients can be included in study to reveal risk and prevent chances of amputation.
7. Charts can be shown to amputees to improve the chances of long live through positive reinforcement.

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