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ABSTRACT: A quasi-experimental study to assess the effectiveness of pelvic floor exercises on urinary among stroke patients at selected hospital, Coimbatore. 60 samples were selected which based on the inclusion criteria of this study. Revised Urinary Incontinence scale was used to assess the level of urinary incontinence among stroke patients. Informational booklet on pelvic floor exercises was distributed to the samples.

KEY WORDS: Stroke, Urinary Incontinence, informational booklet and pelvic floor exercises

INTRODUCTION:

Urinary system's function is to filter blood and create urine as a waste by-product. It also be balanced the body fluids and electrolytes, releasing hormones in controlling blood pressure and red blood cell production.

The bladder is musculo membranous sac which acts as a reservoir for the urine. It is the most anterior element of the pelvic viscera. It is situated in the pelvic cavity when empty; it expands superiorly in to the abdomen when full. The size of a large grapefruit, about 2 inches long, but can stretch up to 6 inches when it is full. Urinary problems are more common in stroke patients. Urinary incontinence is the loss of bladder control. It can range from mild leaking to uncontrollable wetting. Prevalence figures increase with increasing age and in both men & women aged 70years and above, more than 40% -60% of the population is affected. Half of persons admitted to hospital with a stroke have urinary incontinence. It is present with 25% still having problems on hospital discharge and 15% remaining incontinent at one year. There are numerous lifestyle changes in relieving this symptom as pelvic floor exercises, cessation of smoking, avoidance of lifting, weight loss measures, prompt treatment of constipation and cut down caffeine and alcohol..

1.1 NEED FOR STUDY:

Urinary incontinence is a health problem and is one of the major complaints among stroke patients. It has an enormous economic, psychological, social and physical effect on every patient. The prevalence of urinary incontinence is also related to the type of incontinence. Around half of stroke patients will suffer from some kind of incontinence, It is a dynamic state; some women

move back and forth along a continuum between continence and incontinence, with increasing age being a significant predictor.

Plenty of ways to improve incontinence in stroke patients. Only around 15% of stroke patients will still have continence issues a year on from their stroke. Pelvic floor muscles help to support the bladder & bowel plus the womb in women. These exercises are designed to improve strength, mobility & coordination following a stroke.

Acknowledging the knowledge gap on urinary incontinence among stroke patients, this study helps to effect of pelvic floor exercises on urinary incontinence among hospitalized stroke patients and informational booklet will help to modify their lifestyle by following pelvic floor exercise and practice it in daily routine.

1.2 Statement of the Problem

Effect of Pelvic floor exercises on Urinary incontinence among hospitalized stroke patients at Selected Hospital, Coimbatore.

1.3 Objectives of the Study

- 1.3.1 To assess the level of urinary incontinence among hospitalized stroke patients
- 1.3.2. Effect of pelvic floor exercises on urinary incontinence among hospitalized stroke patients
- 1.3.3 To find out the association between the level of urinary incontinence and selected variables among hospitalized stroke patients

1.4 Operational Definitions

1.4.1 Effect: It is the extent to which pelvic floor exercises causes change in the level of urinary incontinence among hospitalized stroke patients.

1.4.2 Pelvic floor exercises: It is also known as Kegel exercise, involves repeatedly contracting and relaxing the part of pelvic floor. It is done by hospitalized stroke patients for twice in a day for 15 minutes.

1.4.3 Urinary incontinence : It is the unintentional passing of urine because of loss of bladder control among hospitalized stroke patients as measured by Revised urinary incontinence scale

1.4.4 Hospitalized stroke patients : Patients who are hospitalized and diagnosed as ischemic stroke, minimum for two weeks of hospitalization

1.5 Hypothesis

 H₁ - There is a significant difference in the level of urinary incontinence between experimental and control group among hospitalized stroke patients after pelvic floor exercises H₂ - There is a significant association between the level of urinary incontinence and selected variables among hospitalized stroke patients

1.6 Conceptual Framework

This study is based on Ludwig Von Bertalanffy's General system model in 1968. According to this model, a system is a set of objects together with a relationship between the objects and between their attributes. The objects constituting the system behave together as a whole. Changes in any part affect the whole. In general system theory, the main concepts are input, throughput and output. Input and output are process in which system is able to communicate reaction with its environment. (Kozier and Erb, 2006).

Input

Input can be defined as any form of information, energy or materials that enter into general system through its boundary. In this study it is the collection of data and plan for administration of pelvic floor exercises to the hospitalized stroke patients at selected Hospital, Coimbatore.

Throughput

Throughput is a process that occurs at some point between the input and output process. It enables its input to be transferred in such a way that it can be used readily by the systems. In this study throughput includes the administration of pelvic floor exercises, twice in a day for 15 minutes duration to the hospitalized stroke patients at selected Hospital Coimbatore.

Output

Output is any energy information or matter that is transferred to the environment. In this study output is the assessment of changes in the level of urinary incontinence among hospitalized stroke patients at Selected hospital after pelvic floor exercises.





1.7 Projected outcome of the study

Administration of pelvic floor exercises will reduce the level of urinary incontinence among hospitalized stroke patients

REVIEW OF LITERATURE:

- Lois H Thomas, Jacqueline Coupe (2019), done & searched the Cochrane Incontinence and Cochrane stroke specialized registers which contain trials identified from the CENTRAL, MEDLINE,MEDLINE Epub Ahead of Print and conference proceedings. It was assessed the effects of interventions for treating urinary incontinence after stroke in adults at least onemonth post-stroke. They included randomized or quasi-randomized controlled trials. They included 20 trials with 1338 participants. They have included behavioral interventions, specialized professional input interventions, and complementary therapy, physical therapy and pharmacology interventions. Author's concluded that there is insufficient evidence to guide continence care of adults in the rehabilitative phase after stroke. Multicenter trials of interventions are required to provide robust evidence for interventions to improve urinary incontinence after stroke.
- Chantale Dumoulin (2007), investigated the distressing problem after stroke. Six hundred sixty-three OTs and 656 PTs working in stroke rehabilitation in Canada were randomly selected and interviewed with a telephone-administered questionnaire. Each responded to a series of open-ended questions related to a generated case of a typical client with stroke who was experiencing UI. Only 39% of OTs and 41% of PTs identified UI after stroke as a problem. Fewer than 20% of OTs and 15% of PTs used best-practice interventions. Canadian OTs and PTs do not routinely identify poststroke UI as a problem, and best-practice assessments and interventions are underused.

METHODOLOGY

3.1 Research Approach

In this study the researcher aimed to determine the effect of pelvic floor exercises on urinary incontinence among hospitalized stroke patients at selected hospital, Coimbatore. Hence to achieve the objectives of the study, quantitative research approach was found to be appropriate and adopted in the study. The researcher manipulated the independent variable and measured the changes in the dependent variable.

3.2 Research Design

A sub type of pre experimental, non-equivalent posttest only control group design was used in the present study. Pelvic floor exercises were practiced by the experimental group whereas routine treatment was given to the control group. Post test was administered to both experimental and control group to examine the

effect of pelvic floor exercises on urinary incontinence among hospitalized stroke patients

3.3 Setting

The study was conducted in the general, special wards & neurology ward of Sri

Ramakrishna Hospital, a750 bedded super specialty hospital at Coimbatore. Sri Ramakrishna Institute of heart foundation and research has been founded to make a distinct mark in the treatment of neuro disease with the most advanced equipment & treatment

3.4 Population

Target populations for the present study were neurology patients. The accessible population includes the hospitalized stroke patients admitted in the general, special wards & neurology ward of Sri Ramakrishna Hospital, Coimbatore.

3.5 Sampling and sample size

=

A total of 60 hospitalized stroke patients were selected for the study using purposive sampling technique. Sample size was determined by the following formula.

$$\frac{t^2 X p(1-p)}{(ME)^2}$$

Where,

n

| n | = | Sample size |
|-------------|---------|---|
| t | = | Significance or confidence level |
| р | = | Proportion |
| ME | = | Margin of error |
| t | = | 95% or 1.96 |
| р | = | 4% or 0.04 |
| ME | = | 5% or 0.05 |
| n | = | $(1.96)^2 \times 0.04(1-0.04) \div (0.05)^2 = 59.0$ |
| Sample size | e (n) = | 60 |
| | | |

3.6 Criteria for Sample Selection

The samples were selected based on the following inclusion and exclusion criteria.

3.6.1 Inclusion criteria

Hospitalized stroke patients who were:

- 1. diagnosed as ischemic stroke
- 2. minimum for two weeks of hospitalization
- 3. age group of above 20
- 4. willing to participate in this study.
- 5. Available at the time of data collection
- 6. Both male & female

3.6.2 Exclusion criteria

Hospitalized stroke Patients who were:

- 1. Ventilator, sedation and critically ill
- 2. Patients with hearing impairment

3.7 Variables of the Study

The Independent Variable in the present study is Pelvic floor exercises and Dependent Variable is the level of urinary incontinence among hospitalized stroke patients at Sri Ramakrishna Hospital.

3.8 Tools for data collection

The demographic data and Questionnaire on assessment of level of urinary incontinence were framed by using the expert opinion and the supporting literatures and following tools were used for the data collection.

The following tools were used for the study:

- 3.8.1 Questionnaire to collect demographic profile
- 3.8.2 Revised Urinary Incontinence scale to assess the level of urinary incontinence among hospitalized stroke patients

3.8.1 Questionnaire to Collect Demographic Profile

Demographic profile consists of Sample number, IP/OP number, Age, Gender, Religion, Educational status, Occupation, Marital status, type of family,

3.8.2 Revised Urinary Incontinence scale

It was used to measure the urinary incontinence of the stroke patients. This tool was developed by Sansoni N Marosszeky in the year of 2008. This is a highly validated scale and is being used worldwide to measure the incontinence. It contains 5 items drawn from the Urogenital Distress Inentory-6 and the Incontinence Severity INDEX. The RUIS was developed to provide a short psychometrically sound measure for outcome research.

The total score ranges from 0-16. The minimum score of 0 indicates no incontinence and the maximum score of 16 indicates severe incontinence.

| - | |
|--------|-----------------------|
| Scores | Level of incontinence |
| 0 | No incontinence |
| 1-6 | Mild |
| 7-12 | Moderate |
| 13-16 | Severe |

The scores were interpreted as follows:-

3.9 Pelvic floor exercises

The intervention used in the study was pelvic floor exercises. It is also known as Kegel exercise, involves repeatedly contracting and relaxing the part of pelvic floor, meant for reducing urinary incontinence. It is done by hospitalized stroke patients in the experimental group for twice in a day for 15 minutes.

3.9.1 Steps of Procedure

After obtaining permission from the Hospital Authority, samples were selected according to the inclusion and exclusion criteria. Informed consent was obtained from patients after explaining the procedure. Demographic variables were collected. Pelvic floor exercises were taught by using video method and stroke patients were instructed to listen and practice, twice in a day for 15 minutes in experimental group. Routine treatment was provided to the control group. Two weeks after intervention, post test was administered using Revised urinary incontinence scale to assess the level of incontinence among hospitalized stroke patients in both groups.

3.10 Validity and Reliability of the Tool

Validity

The English version of Revise urinary incontinence is being used worldwide for many years. After the validation, the tools were used for data collection.

Reliability

The Cronbach's alpha method was used to find out the reliability of the Revised urinary incontinence scale was 0.76.

3.11 Ethical Clearance

Ethical clearance approval for the present study was obtained from Institutional Ethical Committee of Sri Ramakrishna Hospital, Coimbatore. Each participant was explained about the study and obtained their consent.

3.12 Pilot Study

The pilot study was conducted for a period of one week. The study was conducted at general ward of Sri Ramakrishna Hospital, Coimbatore. During the period of data collection, 20 samples were drawn purposively allotted 10 to experimental and 10 to the control group. Pelvic floor exercises taught to hospitalized stroke patients in the experimental group, twice in a day for a duration of 15 minutes. Control group received routine treatment. Post test was collected after two weeks of an intervention, using the same scale to evaluate the level of incontinence among stroke patients in both experimental and control group.

3.13 Procedure for Data Collection

The main study was conducted after the pilot study. During the period of data collection, 60 samples were drawn purposively and allotted 30 to experimental and 30 to control group. Pelvic floor exercises taught to stroke patients in the experimental group, twice in a day for 15 minutes. Control group received routine treatment. Two weeks of intervention, Posttest was collected using the same scale to evaluate the level of incontinence among stroke patients in both experimental and control group.

3.14 Technique of Data Analysis and Interpretation

Descriptive and inferential statistical methods were used for data analysis.

DATA ANALYSIS AND INTERPRETATION

4.1 Demographic Variables of hospitalized stroke Patients

(n=60)

Table 4.1.1 : Age of stroke Patients

| S.No | Ago in yoors | Experimental group (n=30) | | Control group (n=30) | |
|------|--------------|---------------------------|----------------|-------------------------|-------------------|
| | Age in years | Frequency | Percentage (%) | Frequency | Percentage (%) |
| 1 | <40 | 4 | 13.34 | 2 | 6.67 |
| 2 | 41-50 | 2 | 6.67 | 8 | 26.67 |
| 3 | 51-60 | 19 | 63.33 | 9 | 30 |
| 4 | > 60 | 5 | 16.66 | 11 | 36.66 |

The above table 4.1.1 depicts that in the experimental group, majority 19 (63.33%) stroke patients belonged to the age group of 51-60 years and in control group, 11 (36.66%) patients were above 60 years.





| | | | | | (n=60) |
|------|---------------------------|-----------|-------------------------|-----------|-------------------|
| S.No | Experimental group (n=30) | | Control group (n=30) | | |
| | Gender | Frequency | Percentage (%) | Frequency | Percentage (%) |
| 1 | Male | 24 | 80 | 24 | 80 |
| 2 | Female | 6 | 20 | 6 | 20 |

The above table 4.1.2 depicts that, majority of stroke patients were males in experimental group 24 (80%) and in the control group 24 (80%) respectively.





 Table 4.1.3 : Religion of stroke patients

(**n=60**)

| | | Experiment | tal group (n=30) | Control group (n=30) | | |
|------|-----------|------------|-------------------|----------------------|-------------------|--|
| S.No | Religion | Frequency | Percentage (%) | Frequency | Percentage (%) | |
| 1 | Hindu | 28 | 93.34 | 27 | 90 | |
| 2 | Muslim | 2 | 6.66 | 1 | 3.34 | |
| 3 | Christian | 0 | 0 | 2 | 6.66 | |

The above table 4.1.3 shows the data on religion which reveals that, majority, 28 (93.33%) in the experimental and 27 (90 %) in control group were Hindus respectively.



Figure 4.1.3

| Table 4.1.4 : Education | al Status of stroke patients |
|-------------------------|------------------------------|
|-------------------------|------------------------------|

(n=60)

| S.No | Educational status | Experimental group (n=30) | | Control group (n=30) | |
|------|--------------------|---------------------------|-------------------|-------------------------|-------------------|
| | | Frequency | Percentage (%) | Frequency | Percentage (%) |
| 1 | Illiterate | 6 | 20 | 9 | 30 |
| 2 | Schooling | 20 | 66.67 | 15 | 50 |
| 3 | Graduate | 3 | 10 | 5 | 16.67 |
| 4 | Postgraduate | 1 | 3.33 | 1 | 3.33 |

The above table 4.1.4 depicts the educational status of stroke patients which reveals that, majority studied up to school in both experimental 20(66.67%) and control group 15 (50%) respectively.



Figure 4.1.4 Educational Status of stroke patients

| Table 4.1.5 |
|-------------------------------|
| Occupation of stroke patients |

(n=60)

| S.No | Occupational status | Experimenta | l group (n=30) | Control group (n=30) | |
|------|---|-------------|-------------------|-------------------------|-------------------|
| | | Frequency | Percentage (%) | Frequency | Percentage (%) |
| 1 | Coolie worker | 15 | 50 | 12 | 40 |
| 2 | Working in professional organizations | 6 | 20 | 6 | 20 |
| 3 | Company worker | 4 | 13.34 | 7 | 23.34 |
| 4 | Any other | 5 | 16.66 | 5 | 16.66 |

The above table 4.1.5 shows the occupation of stroke patients. The results shows that majority, 15 (50%) of patients in experimental group and 12 (40%) in control group were coolie workers respectively.



Figure 4.1.5 Occupation of stroke patients

| Table 4.1.6: | Marital | status | of | stroke | patients |
|--------------|---------|--------|----|--------|----------|
|--------------|---------|--------|----|--------|----------|

| | | | | | (n=60) |
|------|-----------------|--------------|-------------------|-------------------------|-------------------|
| S.No | Marital status | Experimental | group (n=30) | Control group (n=30) | |
| | Maritar status | Frequency | Percentage (%) | Frequency | Percentage (%) |
| 1 | Single | 1 | 3.33 | 2 | 6.67 |
| 2 | Married | 28 | 93.34 | 27 | 90 |
| 3 | Widow / Widower | 1 | 3.33 | 1 | 3.33 |

The above table 4.1.6 shows the Marital status of stroke patients which reveals that, majority were married in both experimental 28(93.34%) and control group 27 (90%). **Table 4.1.7 : Type of family of stroke patients**

| | | | | | (n=60) |
|------|-----------------|------------|-----------------|-------------------------|-------------------|
| S.No | Type of family | Experiment | al group (n=30) | Control group (n=30) | |
| | i ype or ranniy | Frequency | Percentage (%) | Frequency | Percentage (%) |
| 1 | Nuclear | 12 | 40 | 22 | 73.34 |
| 2 | Joint | 18 | 60 | 8 | 26.66 |

The above table 4.1.7 depicts the type of family of stroke patients which reveals that, majority belonged to joint family in experimental 18(60%) and 22(73.34%) belonged to nuclear family in control group.

| Table 4.2.1: Level of Urinary incontinence Scores among Experimental and Control Control | Froup |
|--|-------|
| after pelvic floor exercises | |

| S. No | Incontinence Scores | Experin | nental group n=30) | Control group (n=30) | | |
|-------|---------------------|---------|-----------------------|-------------------------|-------|--|
| | | F | (%) | \mathbf{F} | (%) | |
| 1. | No incontinence (0) | 1 | 3.33 | 1 | 3.33 | |
| 2. | Mild (1-6) | 5 | 16.66 | 4 | 13.33 | |
| 3. | Moderate (7-112) | 17 | 56.67 | 15 | 53.34 | |
| 4. | Severe (13-16) | 7 | 23.34 | 10 | 30 | |

The Above table shows that, among experimental group there was 1 patient had no urinary incontinence, 5 patients had mild incontinence, 17 patients had moderate incontinence & 7 patients had severe incontinence scores In the control group, 1 patient had no incontinence, 4 patients had mild incontinent scores, 15 patients had moderate incontinent scores & 10 patients had severe incontinent scores

Table4.3.1:Level of incontinence among Experimental and Control Groupafter pelvic floor exercises

| S. No | Level of | Experime (n= | ental group = 30) | Control group (n=30) | | |
|-------|----------|-----------------|----------------------|-------------------------|-------------------|--|
| | Anxiety | Frequency | Percentage (%) | Frequency | Percentage (%) | |
| 1. | Mild | 23 | 76.66 | 0 | 0 | |
| 2. | Moderate | 7 | 23.34 | 20 | 66.67 | |
| 3. | Severe | 0 | 0 | 10 | 33.33 | |

It was found that 23 (76.66 %) had mild level of incontinent score and 7 (23.33%) had moderate level of incontinent in experimental group. Among the control group 20 (66.66%) patients had moderate level of incontinent, 10 (33.33 %) had severe level of incontinent.

(n=60)

| Group | Mean SD | | Mean difference | 't' value |
|--------------------|---------|------|--------------------|-----------|
| Experimental Group | 75.9 | 7.16 | 40.0 | 22 41 *** |
| Control Group | 118.26 | 8.04 | 42.3 | 22.41*** |

***Significant at 0.001 level

Un paired't' test was used to compare the posttest level of incontinence among experimental and control group. It was identified that the mean level of incontinence among stroke patients in experimental and control group was 75.9 and 118.29 respectively with a mean difference of 42.3. Likewise the standard deviation of the experimental and control group was 7.16 and 8.04 respectively. The calculated 't' value 22.41 was greater than the table value 3.29 at 0.001 level of significance.

Table 4.5.1 Association between the Level of incontinence and Selected Variables among stroke patients

| | | | | | | | | (n=60) | |
|------|--------------------------|-------------|-----------|------|---------------|--------|---------|---|----------------------|
| | Demographic variables | Category | Frequency | Lev | el of inconti | nence | χ²value | Degree of freedom (r-1)(c- 1) | 2 |
| S.No | | | | Mild | Moderate | Severe | | | χ² Table Value |
| 1. | Age | 31-40 years | 6 | 2 | 4 | 0 | 16.106* | | |
| | | 41-50 years | 10 | 2 | 4 | 4 | | 6 | 12 50 |
| | | 51-60 years | 28 | 16 | 11 | 1 | | 0 | 12.39 |
| | | Above 60 | 16 | 3 | 8 | 5 | | | |
| 2. | Gender | Male | 48 | 17 | 24 | 7 | 2 4 8 0 | 2 | 5.00 |
| | | Female | 12 | 6 | 3 | 3 | 2.489 | Z | 5.99 |
| 3. | Religion | Hindu | 55 | 21 | 24 | 10 | | | |
| | | Muslim | 3 | 2 | 1 | 0 | 3.688 | 4 | 9.49 |
| | | Christian | 2 | 0 | 2 | 0 | | | |

| | | | | Lev | el of inconti | nence | | Degree | 2 |
|------|--------------------------|----------------|-----------|------|---------------|--------|---------|---------------------------------|-------------------------|
| S.No | Demographic variables | Category | Frequency | Mild | Moderate | Severe | χ²value | of freedom | χ ² Table |
| | | | | | | | | (r-1)(c- 1) | Value |
| 4. | Educational | Illiterate | 15 | 4 | 8 | 3 | | | |
| | status | Schooling | 35 | 17 | 12 | 6 | 6.188 | r. | 12.50 |
| | | Undergraduate | 8 | 1 | 6 | 1 | | 0 | 12.39 |
| | | Post graduate | 2 | 1 | 1 | 0 | | | |
| 5. | Occupation | Coolie worker | 27 | 13 | 11 | 3 | 11.213 | | |
| | | Professional | 12 | 4 | 7 | 1 | | | |
| | | worker | | | | | | 6 | 12.59 |
| | | Company | 11 | 2 | 7 | 2 | | | |
| | | Any other | 10 | 4 | 2 | 4 | | | |
| 6. | Marital status | Single | 3 | 1 | 2 | 0 | | | |
| | | Married | 55 | 22 | 23 | 10 | 3.438 | 4 | 0.40 |
| | | Widow/widower | 2 | 0 | 2 | 0 | | | 9.49 |
| | | | | | | | | | |
| 7. | Type of | Nuclear family | 34 | 11 | 16 | 7 | 1.500 | 2 | 5.00 |
| | family | Joint family | 26 | 12 | 11 | 3 | 1.552 | 2 | 5.99 |

*Significance at 0.05 level

Table 4.5.1 shows the association between the level of incontinence and selected variables among stroke patients. Stated variables were age, gender, religion, educational status, occupation, marital status, and type of family. It was found that chi square value for age, $(\chi^2=16.106)$ had association with the level of incontinence among stroke patients at 0.05 level of significance.

It was found that chi square value for gender (χ^2 =2.489), religion (χ^2 = 3.688), educational status (χ^2 =6.188), occupation (χ^2 =11.213), marital status (χ^2 = 3.438), Type of family (χ^2 =1.532) had no association with the level of incontinence among stroke patients

RESULTS AND DISCUSSION

Findings related to Demographic profile

- In the present study, out of 30 patients in experimental group, majority 19 (63.33%) patients belonged to the age group of 51-60 years, 5 (16.66%) were above 60 years of age, 4 (13.34%) were less than 40 years of age and 2 (6.67%) belonged to 41-50 years of age. In control group majority 11 (36.66%) patients were above 60 years, 9 (30%) belonged to 51-60 years of age, 8 (26.67%) belongedto41-50 years of age and 2 (6.67%) were less than 40 years of age.
- The data on gender reveals that, in experimental group majority 24 (80%), were males 6 (20%) were females and in control group 24 (80%) were males, 6 (20%) were females.
- The data on religion reveals that, in experimental group majority 28 (93.34%), were Hindus 2(6.66%) were Muslims and in control group 27 (90%) were Hindus, 2 (6.66%) were Christians and 1 (3.34%) was a Muslim.
- Educational status of patients in experimental group reveals that 20 (66.67%) had completed Schooling, 6 (20%) were Illiterate, 3 (10%) had done graduation and 1 (3.33%) was a post graduate. In control group 15 (50%) had schooling, 9 (30%) were illiterate, 5(16.67%) completed graduation and 1 (3.33%) had completed Post Graduation.
- Regarding occupational status, in experimental group majority 15 (50%) patients were coolie workers, 6 (20%) were working in Professional organizations and 5 (16.66%) were doing other works and 4(13.34%) were company workers and in control group majority 12 (40%) were coolie workers, 7 (23.34%) were company workers and 6 (20%) were working in professional organizations and 5(16.66%) were company workers.
- Marital status reveals that in experimental group, most of them 28(93.34%) were married, 1patient (3.33%) was single and 1patient (3.33%) was a widow and in control group, majority 27 (90%) were married, 2 (6.67%) were single and 1 (3.33%) was a widow.
- Type of family reveals that in experimental group 18 (60%) patients belonged to joint family, 12 (40%) belonged to nuclear family, and in control group 22 (73.34%) belonged to nuclear family, 8 (26.66%) belonged to joint family.

Assessment on the incontinence Scores among Experimental and Control Group after pelvic floor exercises

In the experimental group there was 1 patient had no urinary incontinence, 5 patients had mild incontinence, 17 patients had moderate incontinence & 7 patients had severe incontinence scores In the control group, 1 patient had no incontinence, 4 patients had mild incontinent scores, 15 patients had moderate incontinent scores & 10 patients had severe incontinent scores

Assessment of the Level of incontinence among Experimental and Control Group after pelvic floor exercises

60 samples were drawn purposively and allotted 30 to experimental and 30 to control group. Pelvic floor exercises taught to stroke patients in the experimental group, twice in a day for 15 minutes. Control group received routine treatment. Two weeks of intervention, Posttest was collected using the same scale to evaluate the level of incontinence among stroke patients in both experimental and control group. It was found that 23 (76.66 %) had mild level of incontinent score and 7 (23.33%) had moderate level of incontinent in experimental group. Among the control group 20 (66.66%) patients had moderate level of incontinent, 10 (33.33 %) had severe level of incontinent.

Effect of pelvic floor exercises on urinary incontinence among stroke patients

Un paired't' test was used to compare the posttest level of incontinence among experimental and control group. It was identified that the mean level of incontinence among stroke patients in experimental and control group was 75.9 and 118.29 respectively with a mean difference of 42.3. Likewise the standard deviation of the experimental and control group was 7.16 and 8.04 respectively. The calculated 't' value 22.41 was greater than the table value 3.29 at 0.001 level of significance.

Association between the Level of incontinence and Selected Variables

The association between the level of incontinence and selected variables among stroke patients. Stated variables were age, gender, religion, educational status, occupation, marital status, and type of family. It was found that chi square value for age, (χ^2 =16.106) had association with the level of incontinence among stroke patients at 0.05 level of significance.

It was found that chi square value for gender (χ^2 =2.489), religion (χ^2 = 3.688), educational status (χ^2 =6.188), occupation (χ^2 =11.213), marital status (χ^2 = 3.438), Type of family (χ^2 =1.532) had no association with the level of incontinence among stroke patients

SUMMARY AND CONCLUSION

This chapter deals with the findings, limitations, suggestions for the study and implications in the field of nursing education, practice, administration and nursing research. The study was conducted to see the effect of pelvic floor exercises on urinary incontinence among stroke patients at selected hospital at Coimbatore.

Pre experimental, non-equivalent posttest only control group design was used in the present study. General system model was used as a conceptual framework for the study. The Study was conducted in the general, special & neurology ward of Sri Ramakrishna Hospital, Coimbatore. Revised Urinary Incontinence scale was developed by Sansoni N Marosszeky in the year of 2008. This is a highly validated scale and is being used worldwide to measure the incontinence. It contains 5 items drawn from the Urogenital Distress Inentory-6 and the Incontinence Severity INDEX. The RUIS was developed to provide a short psychometrically sound measure for outcome research. The total score ranges from 0-16. The minimum score of 0 indicates no incontinence and the maximum score of 16 indicates severe incontinence. In this study, 30 samples were allotted to experimental group and 30 samples to control group respectively. Pelvic floor exercises were administered for the samples in experimental group by the researcher for a duration of 15 minutes. On the other hand, routine treatment was given for patients in the control group. Post-test was done using same scale after two weeks of intervention for both experimental and control group.

6.1 Major Findings of the Study

- Type of family among stroke patients revealed that, majority belonged to joint family in experimental 18(60%) and majority belonged to nuclear family in control group 22 (73.34%).
- In the experimental group there was 1 patient had no urinary incontinence, 5 patients had mild incontinence, 17 patients had moderate incontinence & 7 patients had severe incontinence scores In the control group, 1 patient had no incontinence, 4 patients had mild incontinent scores, 15 patients had moderate incontinent scores & 10 patients had severe incontinent scores
- It was found that 23 (76.66 %) had mild level of incontinent score and 7 (23.33%) had moderate level of incontinent in experimental group. Among the control group 20 (66.66%) patients had moderate level of incontinent, 10 (33.33 %) had severe level of incontinent.
- Un paired't' test was used to compare the posttest level of incontinence among experimental and control group. It was identified that the mean level of incontinence among stroke patients in experimental and control group was 75.9 and 118.29 respectively with a mean difference of 42.3. Likewise the standard deviation of the experimental and control group was 7.16 and 8.04 respectively. The calculated 't' value 22.41 was greater than the table value 3.29 at 0.001 level of significance.
- It was found that chi square value for age, $(\chi^2=16.106)$ had association with the level of incontinence among stroke patients at 0.05 level of significance. It was found that chi square value for gender ($\chi^2=2.489$), religion ($\chi^2=3.688$), educational status ($\chi^2=6.188$), occupation ($\chi^2=11.213$), marital status ($\chi^2=3.438$), Type of family ($\chi^2=1.532$) had no association with the level of incontinence among stroke patients

6.2 Limitation

6.2.1 Sample size of the study was small which limits the generalization of the study findings.

6.3 Recommendations

6.3.1 The study can be replicated with larger samples

- 6.3.2 All staff nurses have to be trained to implement pelvic floor exercises to decrease the level of incontinence among stroke patients
- 6.3.3 Further research can be carried out to find out the effect of pelvic floor exercises on other urogenital surgical procedures

6.4 Nursing Implication

6.4.1 Nursing Education

Nurse educators need to have knowledge and awareness on pelvic floor exercises, as it is an effective measure to reduce incontinence. So, the importance of pelvic floor exercises can be emphasized and included in the nursing curriculum.

6.4.2 Nursing Administration

The nurse administrator can apply this exercise to reduce the incontinence among stroke patients.

6.4.3 Nursing Practice

Pelvic floor exercise is an effective measure to reduce the incontinence among stroke patients. It can be trained and encouraged to practice in their day to day life. among stroke patients .

6.4.4 Nursing Research

The study has tested the effectiveness of pelvic floor exercise on urinary incontinence among stroke patients. It can be used as evidence based practice for reducing incontinent.

6.5 Conclusion

Stroke is a leading cause of death. Every year, more than 7,95,000 U.S. people have a stroke. Prompt care & treatment for stroke patients, better outcome is likely to be. Pelvic floor exercises, the non-pharmacological interventions such as complimentary therapies reduce changes in incontinent among stroke patients. It is not harmful; it should make them a part of our daily routine. Hence, the researcher concludes that pelvic floor exercises can be one of the methods to reduce the incontinence among stroke patients.

"TIME LOST IS BRAIN LOST"

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