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# A study to evaluate the effectiveness of nursing guidelines on epilepsy management among patients in selected hospital, Salem

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**Abstract**

**Objectives:** To evaluate the effectiveness of nursing guidelines on epilepsy management for patients.

**Methods:** A quantitative study with quasi-experimental one group pre-test post test research design was applied. A non probability purposive sample of 30 patients was applied.

**Tools:** Three tools were used: (1) Structured interview questionnaire with demographic variables of patients, knowledge assessment questionnaire. (2) Epilepsy risk awareness scale, (3) patients reported practices questionnaire.

**Results:** The mean pre-test score was 8 with standard deviation 4.23 and mean post-test score was 20.67 with standard deviation 3.06. The paired "t" value of pre-test and post-test was 18.39 which was found to be statistically significant at $p<0.05$ level of significance. This indicated that structured teaching programme was effective to improving the level of knowledge on epilepsy management among patients.

**Conclusion:** The implementation of evidenced based guidelines had positive effects on knowledge and awareness of the studied patients regarding epilepsy management. This proves, nursing guidelines was effective in epilepsy management among patients. Recommendations: There is a need to activate implementation of epileptic guidelines manual in the hospitals.

**Keywords:** Epilepsy, nursing guidelines, evaluate, management

## Introduction

"Epilepsy is a condition in which a person has spontaneously recurring paroxysmal, uncontrolled electrical discharge of neurons in the brain that interrupts normal functions. Epilepsy is one of the most common chronic neurologic diseases, affecting over 50 million people worldwide, including 6 million in Europe and 3.4 million in the United States. In addition, epilepsy is the fifth leading contributor to the global disease burden for neurologic disorders, after stroke, migraine, dementia, and meningitis" (Becker, 2021) [19].

"Nurses play a critical role in promoting the best health outcomes for people with epilepsy by reporting information about the disease, discussing treatment options with patients and their families and teaching self-management skills. The nurse's role in seizures presents numerous psychosocial challenges as the disease is a highly stigmatized, frequently misunderstood condition that may limit mobility and employment, in addition to educational and social opportunities**.** As well as teaching patients and their family members about treatments, nurses must act as advocates, helping patients find appropriate community resources, educating the public at large and promoting positive attitudes toward people with epilepsy" (Abd- Elmageed *et al*., 2022) [15].

## Objectives

- To Assess the pre-test and post-test level of knowledge on epilepsy management among patients.
- To assess the pre-test and post-test level of self-reported practice on epilepsy management among patients.
- Find out the association between pre-test level of knowledge on epilepsy management among patients and their selected demographic variables.
- Find out the association between pre-test level of self-reported practice on epilepsy management among patients and their selected demographic variables.

## Hypotheses (Level of significance at $p<0.05$)

- **$H_1$:** There is a significant difference in the mean post-test knowledge on epilepsy management among patients.
- **$H_2$:** There is a significant difference in the mean post-test self-practice score on epilepsy management among patients.
- **$H_3$:** There is a significant association between the pre-test level of knowledge on epilepsy management among patients with their selected demographic variables.
- **$H_4$:** There is a significant association between the pre-test level of self-reported practice on epilepsy management among patients.

**Operational Definition**

**Effectiveness**

Effectiveness refers to the ability to cause an intended effect on result. In this study it refers to the extent to which the nursing guidelines improves the knowledge and practice level on epilepsy management among patients and their family members.

**Nursing guidelines**

It refers to a systematically developed instructional programme using instructional aids, designed to provide information.

In this study it consist of the information regarding the epilepsy management.

**Materials and Methods**

**Research design**

A research approach tells the researcher about the collection of data that is, what to collect and how to analyse. It also helps the researchers with suggestion of possible conclusions to be drawn from the data.

The selection of research is the basic procedure for conducting the research studies. In view of the nature of the problem selected for the study and objectives was accomplished, the researcher has selected quantitative evaluative research approach for this study.

A quantitative study with quasi-experimental one group pretest post test design was used.

**Schematic presentation of research design**

| Group | Pre-test | Intervention | Post-Test |
|---|---|---|---|
| Samples | $O_1$ | --- | $O_2$ |

**Independent variables**

Independent variables are those variables that are purposely manipulated (or) changed by the researcher (Suresh k Sharma)

In this study Independent variables refers to nursing guidelines on epilepsy management.

**Dependent variables**

Dependent variables are variables that change as the Independent variables is manipulated by the researcher. (Suresh k Sharma)

Dependent variable in the present study was level of knowledge and practice on epilepsy management.

**Setting**

The study sample was conducted at the Neurological ward and outpatient clinic at selected hospitals, Salem.

**Sample**

A purposive sample of 30 patients were selected.

**Inclusion criteria**

- Patients with epilepsy
- Willing to participate in the study.
- Able to communicate and answer questions.

**Exclusion criteria**

- Patients who had previous history of psychosis or mental disorders.
- Patients who are unconscious and critically ill.

**Tools for data collection**

Tool is defined as anything that becomes means of collecting information for the research **(**Suresh k Sharma)

For the purpose of present study, the following instruments were developed by the researcher. The tools were prepared with help of literature review, published and unpublished articles, suggestions and recommendation from experts. The content validity was established by obtaining opinion from 5 experts (2 medical experts and 3 nursing experts)

**The tool consists of**

**Tool I- Structured interview questionnaire**

It was developed based on recent literature review. It included the following parts:

**Part 1: Patients' personal characteristics** as age, gender, educational level, occupation and family history of epilepsy.

**Part 2: knowledge assessment questionnaire**

- The knowledge assessment questionnaire consisted of 25 closed-ended questions and formed of multiple choice, the score 1 for the correct answer, and 0 for incorrect answer.
- The total knowledge scores ranged from 0 to 25 and were categorized as satisfactory if the score ≥ 75% of the total score and unsatisfactory < 75% of total scores. The questions reflecting 4 parts - meaning of epilepsy (3 items) and causes and risk factors of epilepsy (4 items), signs and symptoms of epilepsy (3 items) epilepsy management (4 items), diet management (3 items), seizure first aids (5 items) and reducing unexplained death in epilepsy (3 items)

**Tool II: Epilepsy risk awareness scale (ERA scale)**

This scale was adapted from Ison *et al*., (2020) to assess the risk level of people with epilepsy. It consisted of 30 items and reflecting 3 parts: personal safety (10 items), health care (11 items) and quality of life (9 items).

**Scoring system of epilepsy risk awareness scale**

Each item of the scale had 2 responses and was scored as 1 for yes and zero for no response. The mean scores were calculated pre and post implementation and total scores ranged from 0 to 30 with higher scores reflecting higher awareness of patients with epilepsy regarding personal safety, health care and quality of life.

**Tool III: Reported practices questionnaire**.

This questionnaire was developed by the researchers based on literature review **(**Al. Zubaidi *et al*., 2017; Chaitra *et al*., 2019) [17, 20]. It consisted of 5 items to assess practices.

**Scoring system of reported practices questionnaire**

Each item of the questionnaire had 2 responses and was scored as 1 for "done" and zero for "not done". The mean scores were calculated pre and post implementation and total scores ranged from 0 to 5 and were categorized as satisfactory if the score ≥ 75% of the total score and unsatisfactory < 75% of total scores.

**Data collection procedure**

A systemic collection and analysis of data are most vital to study and empirical research (Suresh K Sharma)

The study was conducted in selected hospital at Salem district Tamil Nadu. Initially the researcher was got written permission from the concern authority after explaining the procedure and purpose of the study. Then the researcher was selected the samples by using non probability purposive sampling techniques. The sample size was 30 for patients.30 samples were selected based on sampling criteria and samples were divided into groups, each group has 5 samples and there are 6 groups. The researcher was explained the purpose and nature of the study and informed consent was obtained. After that pre-test was conducted by using structured questionnaire for the selected samples. Responses for the questionnaire and the self-reported practice was obtained. Followed that Structured teaching programme was given to samples for 30min with the help of power point presentation.

**Results and Discussion**

After data collection, all data was checked and verified to ensure its correctness and managed for consistency to minimize error.

**Frequency distribution of demographic variables of patients:** It deals with evaluation of the distribution of demographic variables of patients. The demographic variables were age, gender, educational qualifications, family history of epilepsy.

**Table 1:** Frequency Distribution of Demographic Variables in Patients with Epilepsy

| S. No | Demographic Variables | Samples | |
|---|---|---|---|
| | | F | % |
| 1. | **Age In Years** | | |
| | 20 TO 40 years | 11 | 36.6 |
| | 41 years to 60 years | 13 | 43.3 |
| | 61 years to 80 years | 6 | 20 |
| 2. | **Gender** | | |
| | Male | 18 | 60 |
| | Female | 12 | 40 |
| 3. | **Educational Qualification** | | |
| | No formal education | 11 | 36.6 |
| | School education | 8 | 26.6 |
| | Graduate | 8 | 26.6 |
| | Post graduate | 3 | 10 |
| 4. | **Family history of epilepsy** | | |
| | Yes | 8 | 26.6 |
| | no | 22 | 73.3 |

- 11(36.6%) of samples aged 20 to 40 years, 13(43.3%) of samples were in 41 to 60 years, 6(20%) of samples were in 60 years to 80 years.
- 18(60%) of samples were males and 12(40%) of samples were females.
- 11(36.6%) samples with no formal education, 8(26.6%) with school education, 8(26.6%) were graduates, and 3 (10%) were postgraduates.
- 8 (26.6%) samples had family history of epilepsy; 22 (73.3%) samples had no family history of epilepsy.

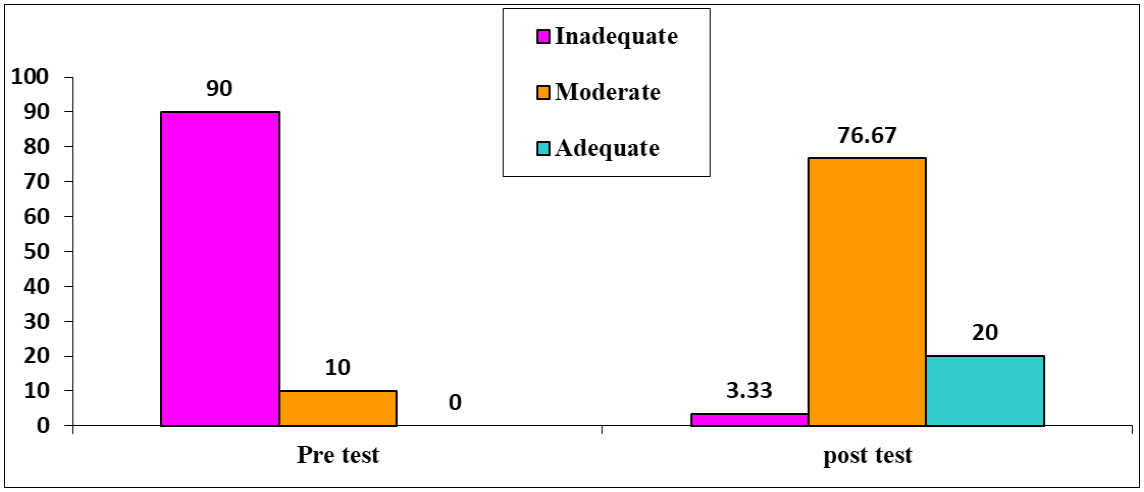


**Fig 1:** Frequency and percentage distribution based on pre-test and post-test knowledge score on epilepsy management among patients

Samples during pre-test in experimental group 27(90%) of samples had inadequate knowledge 3(10%) samples had moderate knowledge and none of the samples had adequate knowledge on epilepsy management. During post-test 23 (76.67%) samples had Moderate knowledge, 6 (10%) samples had adequate knowledge, and 1(3.33%) sample had inadequate knowledge on epilepsy management, which indicates structured teaching programme was effective.

**Table 2:** Mean, SD, mean difference and paired t value of pre-test and post-test knowledge score on epilepsy management among patients. n1=30

| Level of knowledge | Experimental Pre test | | Experimental Post test | | Mean difference | 't' value |
|---|---|---|---|---|---|---|
| | Mean | SD | Mean | SD | | |
| General Aspects | 0.93 | 1.01 | 2.93 | 0.82 | 2.0 | 8.89* |
| Causes and signs and symptoms | 1.43 | 1.27 | 3.17 | 0.87 | 1.73 | 6.03* |
| Management | 0.8 | 0.88 | 2.1 | 0.80 | 1.3 | 6.04* |
| Diet Management | 1.37 | 1.13 | 3.37 | 0.99 | 2.0 | 8.34* |
| Seizure first aid | 3.47 | 2.75 | 9.1 | 1.84 | 5.63 | 11.89* |
| Overall | 8 | 4.23 | 20.67 | 3.06 | 12.67 | 18.39* |

*- significant at $p<0.05$ level; NS-not significant; paired t29 =2.05

The table depicts that mean pre-test score was 8 with standard deviation 4.23 and mean post-test score was 20.67 with standard deviation 3.06. The paired "t" value of pre-test and post-test was 18.39 which was found to be statistically significant at $p<0.05$ level of significance.
This indicated that structured teaching programme was effective to improving the level of knowledge on epilepsy management among patients.

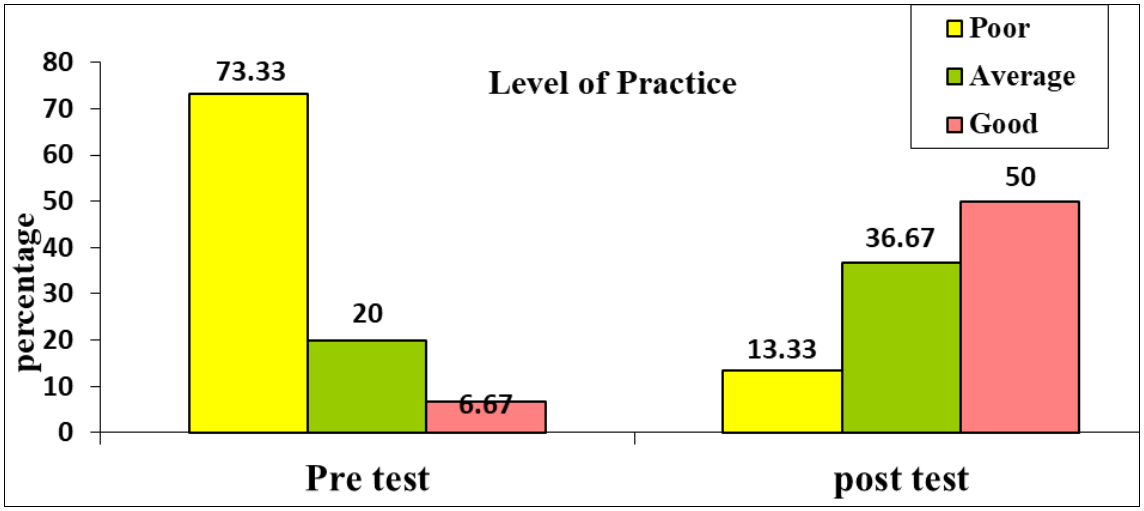


**Fig 2:** Frequency and percentage distribution based on pre-test and post-test parctice score on epilepsy management among patients

This figure depicts that pre-test in Experimental group 22(73.33%) of samples had poor practice about prevention of needle stick injury, 6(20%) samples had average practice about prevention of needle stick injury and 2(6.67%) samples had good practice about prevention of needle stick injury. In Control group 21 (70%) samples had poor practice about prevention of needle stick injury, 8(26.67%) samples had average practice about prevention of needle stick injury and 1(3.3%) sample had good practice level on prevention of needle stick injury in supportive staffs.

**Table 3:** Mean, SD, mean difference and paired t value of pre-test and post-test self-reported practice score on epilepsy management

| Level of practice | Pre- test | | Post-test | | Mean difference | 't'-value |
|---|---|---|---|---|---|---|
| | Mean | SD | Mean | SD | | |
| Overall | 5.33 | 3.31 | 10.7 | 2.23 | 5.37 | 7.38* |

*significant at $p<0.05$ level; NS - Not significant; paired $t_{29}= 2.05$

Hence research hypothesis $H_2$ is accepted and null hypothesis $H_{0\,(2)}$ was not accepted.
Table 3 shows that in experimental group the mean pre-test score (5.33) was less than the mean post-test score (10.7), the standard deviation of pre-test and post-test was 3.31 and2.23. The mean difference between pre-test and post-test score was (5.37). The paired' value (7.38) is greater than the table value (2.05) at 0.05 level of significance.
This indicated that structured teaching programme was effective to improving the level of practice on epilepsy management among patients.

## Ethical considerations

- Administrative authority of the hospital provided authorization.
- All details collected from subjects was kept confidential.
- Written authorization was acquired from samples.

## Delimitations

- Patients with epilepsy.
- 30 samples only.
- Weeks of data collection only.

## Recommendations

- A broad study can be carried out to generalize the research data.
- Comparative studies will be conducted in different settings.

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**Conflict of interest**
There is no conflict of interest.

## Conclusion
According to the results and hypothesis of the current study; the implementation of evidence based guidelines had a positive effect on improving patients level of knowledge regarding epilepsy management, patients' awareness regarding self-reported practices regarding epilepsy management.

## Recommendations
- There is a need to activate implementation of epileptic guidelines manual in the hospitals.
- Educational programs about epilepsy should be provided periodically and continually to family members to equip them with the necessary knowledge and skills for proper management of the epileptic patients.

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