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Effectiveness of video-based educational programme regarding ECT on knowledge and anxiety among the caregivers of mentally ill patients in selected tertiary care hospital, Belagavi

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ABSTRACT

Introduction: Electroconvulsive therapy is a therapeutic option for patients suffering from a variety of psychiatric disorders. Though many measures are available and can be adapted to treat mental illness, ECT is the most efficacious, and safest. As caregivers are concerned due to lack of understanding and their perception, an informational education can provide necessary knowledge as it requires. According to the study, the selected experimental group received five consecutive sessions of a VAEP; however, the involvement of placebo groups received a pamphlet source.

Material And Methods: A true-experimental research design was adopted. A questionnaire approach was used to gather data from 84 caregivers at the selected hospital using a purposive sampling technique.

Results: Overall analysis, level of knowledge among participants to gain knowledge was obtained by the subjects' fifty-four percent (54.8%) was good scores and forty-five percent (45%) was average scores. As per the area of analysis, the mean score in the post-test is 2.55 and SD is 0.50 and anxiety ranges entail a reduction in post-test scores.

Conclusion: The outcome of the study shows the statistically significant association of knowledge and anxiety with demographic profiles i.e.; age, type of family, relationship with patients, and received ECT in the past two years at the $p<0.005$ level.

Keywords: *Electroconvulsive therapy, video-assisted educational programme, knowledge, anxiety, caregivers*

1. INTRODUCTION

Mental health is one of the most essential aspects of physical, psychological, as it relates to cognitive capacity, behavioral changes, and emotional well-being. It's not just the absence of mental disorders that impair daily life, relationships, and even activities where an individual thinks, feels, reacts, and behaves appropriately.[1]Whereas anxiety is way more than a transient worrying condition, the sensation of unrest, uneasiness, and maybe natural in a crisis, which is produced by certain events that might trigger itself, as it feels restless, tensed, uncomfortable, rapid heartbeats.[2]

ECT has been one of the most ancient therapeutic techniques in the field of psychiatry. Initially, was introduced in 1938 by the Italian psychiatrist and neurologist; Lucio Bini and Ugo Cerletti. It's indeed a somatic remedy in which an electrical current is supplied to the brain via electrodes that cause seizures, essentially induction of seizures in sufferers that incorporates the administration of the electrical current to the human brain.[3]As it's a contemporary method, with the aid of an anaesthetic and the use of muscle relaxants. Despite the fact that it is the safest, finest treatment, and unquestionably life-saving method for mentally ill individuals.[4]

Regardless of scientific efficacy, a few positive features and unfavorable views regarding treatment components remain linked with it, which is considered a disputed and misunderstood method, just as the usage of electrical leads will cause permanent brain damage. A stigma associated with procedure among clients and families is an impediment, as is a lack of awareness of ECT within the general population, which exhibits negative attributes and thoughts within themselves. In reality, the patients who receive ECT, as well as their families, are one of the most contentious ideas about the treatment.[5,6]

The accomplishment of imparting educational efforts consisting of VAEP can also aid the character to gain some information about the ECT. Despite the fact that global study has shown that terrible patience in regards to this treatment.[7]

OBJECTIVES

- To assess the knowledge and anxiety among caregivers of mentally ill patients regarding ECT.
- To evaluate the effectiveness of video-based educational programme among caregivers of mentally ill patients regarding ECT.
- To find out the association between selected demographic variables with knowledge and anxiety among the caregivers of mentally ill patients regarding ECT.

HYPOTHESIS:

H_0: There is no significant difference between pre-test and post-test knowledge and anxiety score.

H_{01}: There is a significant increase in the post-test score than pre-test score of knowledge regarding ECT.

H_{02}: There is a significant association between a selected demographic variable with a pre-test score of knowledge and anxiety among the caregivers of mentally ill patients regarding ECT.

2. MATERIAL AND METHODS

- Ethical Clearance: -

The study protocol was reviewed and approved by the Institutional Ethical Board of KAHER Institute of Nursing Sciences, Belagavi.

- Study Design: -

The study design was true experimental research concerning knowledge and anxiety among 84 caregivers of mentally ill clients of the selected hospital, Belagavi. The non-probability sampling technique was used to avoid inconsistency of responses purposing technique was chosen. The participants have been recruited as per the study into two groups; an experimental group, and a control group. A video-based educational programme was scheduled for the experimental group and it was given to 42 caregivers for five consecutive sessions, and also for the control group a pamphlet source. Two scales were used to assess knowledge and anxiety as a questionnaire method. Before gathering data from respondents', written consent has been taken from the eighty-four caregivers.

- Inclusion criteria: -
    a) Caregivers who are available during the time of data collection.
    b) Extended family.
    c) Client's relatives who have not undergone any educational programme regarding ECT.
- Exclusion criteria: -
    a) Caregivers who are only on medication and not any psychotherapies.
    b) Not willing to take participation in the study.
    c) Not able to read and write English, Kanada, Marathi, or Hindi.
- Questionnaire designing: -

The questionnaire was divided into three aspects; sociodemographic, knowledge, and anxiety. The structured scale was prepared for knowledge and demographics as per the previous studies, and the standardized scale was used HAM-A for anxiety ranges. The tool was prepared in English but translated into Kannada, Marathi, and Hindi language which was easy to understand for the caregivers as per their lay language.

Part-I: Information on demographic variables of the respondents containing 9 items i.e., age, gender, religion, educational status, occupation, type of family, relationship with clients, source of information, and the client received ECT in the past 2 years?

Part-II: Structured knowledge assessment scale consists of 20 items in regard to ECT procedure.

Part III- Standardized HAM-A rating scale consists of 14 items.

- Statistical analysis: -

The gathered data were analyzed by using the percentages, frequency, Z-test, mean and SD, Chi-square.

3. RESULT

SECTION I : Distribution of sample characteristics according to the socio-demographic variables of the respondents.

The socio-demographic distribution of the respondents is shown in (Table 1) which is divided into two consecutive groups.

Table 1: Frequency and percentage distribution of caregivers according to the demographic characteristics.

N= 42+42=84

SR.NO.	VARIABLES	EXPERIMENTAL GROUP		CONTROL GROUP	
		Frequency	Percentage	Frequency	Percentage
1.	**Age**				
	21-30 years	29	69	26	61.9
	31-40 years	06	14.3	11	26.2
	41-50 years	07	16.7	05	11.9
	51 years & above.	00	00	01	0.1
2.	**Gender**				
	Male	19	45.2	19	45.2
	Female	23	54.8	23	54.8
3.	**Religion**				
	Hindu	31	73.8	29	69
	Muslim	10	23.8	07	16.7
	Christian	01	2.4	01	2.4
	Jain	00	00	05	11.9
4.	**Educational status**				
	No formal	02	4.8	06	14.3
	Primary	09	21.4	04	9.5
	Secondary	15	35.7	12	28.6
	Intermediate	08	19.0	13	31.0
	Graduation and above	08	19.0	07	16.7
5.	**Occupation**				
	Professionals	06	14.3	02	4.8
	Skilled worker	08	19.0	06	14.3
	Clerical/ Shopkeeper/	14	33.3	16	38.1

	Farmer				
	Housemaker	11	26.2	11	26.2
	Others	03	7.1	07	16.7
6.	**Type of family**				
	Nuclear family	10	23.8	02	4.8
	Joint family	29	69.0	23	54.8
	Single parent	02	4.8	07	16.7
	Extended	01	2.4	10	23.8
7.	**Relationship with clients**				
	Spouse	08	19	05	11.9
	Parents	07	40.5	10	23.8
	Siblings	15	35.7	17	40.5
	In-laws	02	4.8	10	23.8
8.	**Source of information**				
	Internet	11	26.2	12	28.6
	Health professional	22	52.4	20	47.6
	Books/ Magazines	06	14.3	03	7.1
	Others	03	7.1	07	16.7
9.	**Client received ECT in past two years.**				
	Yes	05	11.9	08	19
	No	37	88.1	34	81

SECTION II: Findings related to existing levels of knowledge and anxiety among the experimental and control group.

Table 2(a): - Experimental group based on Z-test.

N=42

Analysis area	Mean	Standard deviation	Z -value	Significancy
Pre-knowledge	1.69	0.643	0.0455	S
Post-knowledge	2.57	0.501	0.0051	S
Pre- anxiety	2.50	0.672	0.0062	S
Post-anxiety	1.36	0.485	0.0869	NS

The table2.a) Data states that there is significance among knowledge and in post-anxiety the, z-value is greater than the significance value.

Table 2(b): - Control group based on Z-test.

N=42

Analysis area	Mean	Standard deviation	Z -value	Significancy
Pre-knowledge	1.45	0.504	0.0735	NS
Post-knowledge	1.86	0.566	0.0314	S
Pre- anxiety	2.76	0.431	0.0029	S
Post-anxiety	2.21	0.750	0.0136	S

The table2.b) Data depicts that there is significance among anxiety and in pre-knowledge scores entails that significance value is smaller than the Z-value. The null hypotheses are rejected because the above tables imply the significance level among both groups.

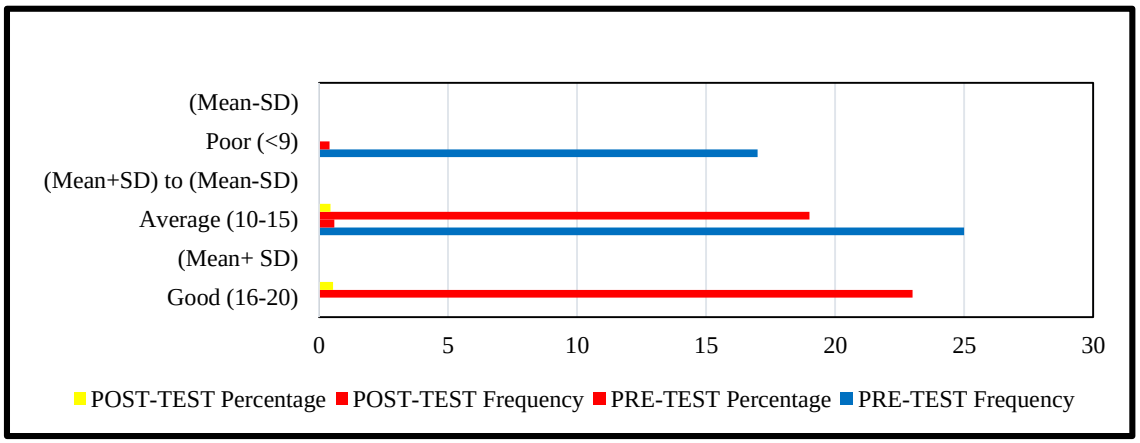
SECTION III : Findings on knowledge regarding ECT among selected caregivers.

Table 3 (a): - Frequency(f) and percentage (%) distribution of knowledge scores regarding ECT among caregivers of mentally ill patients.

N=42

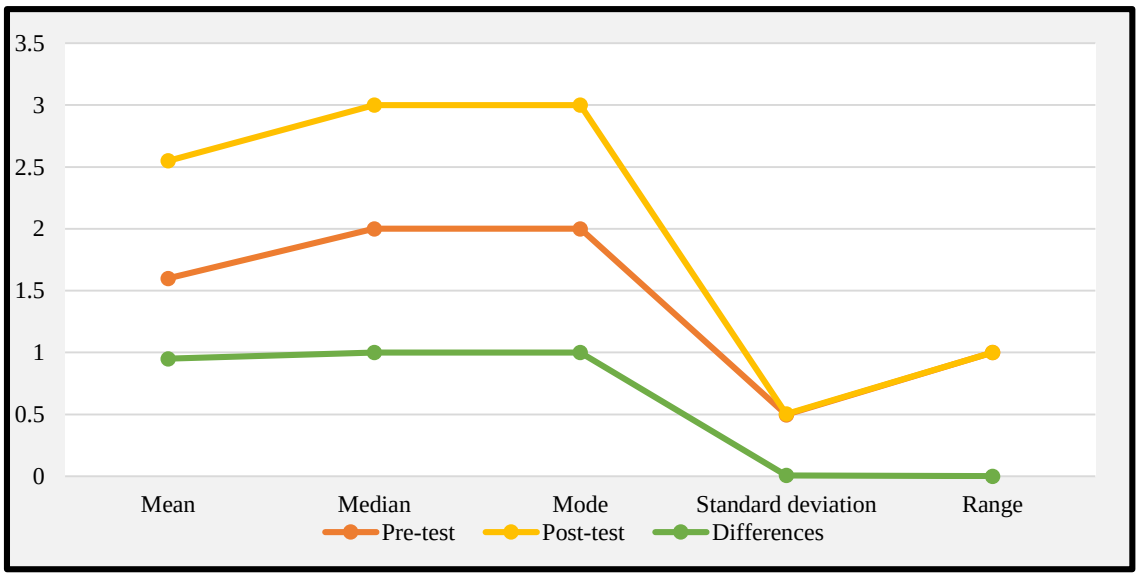
KNOWLEDGE SCORES	PRE-TEST		POST-TEST	
	Frequency	Percentage	Frequency	Percentage
Good (16-20) (Mean+ SD)	00	0	23	54.8
Average (10-15) (Mean+SD) to (Mean-SD)	25	59.5	19	45.2
Poor (<9) (Mean-SD)	17	40.5	00	0

The above table3.a) reveals that in the post-test, it is seen that the majority of the respondents had gained good about 23 and average knowledge among 19. This clarify that there is gain in knowledge scores after administering the interventional programme.



(Fig.1). Bar graph shows that in the pre-test majority of the participants had average knowledge (59.5%) and there was no score in regard to good knowledge score. In the post-test score majority of the responses gain knowledge in the group of good score of knowledge (54.8%) and average knowledge scores (45.2%) and absence of poor knowledge. This shows that there is increase in the knowledge.

Table 3 (b): -Mean, Median, Mode, Standard Deviation, and Range of knowledge score regarding ECT among the caregivers.



(Fig.2). Line graph showing the mean, mode, median, standard deviation, and range scores of the respondents according to the pre-test and post-test scores.

N=42

Area of analysis	Mean	Median	Mode	Standard deviation	Range
Pre-test	1.60	2.00	2	0.497	1
Post-test	2.55	3.00	3	0.504	1
Differences	0.95	1.00	1	0.007	0

In table 3.b) shows that there is a positive gain in the knowledge with regard to mean, median, mode, standard deviation, and range and also table 3(a) frequency, percentage entails that there is an increase in the knowledge in post-assessment than the pre-test scores. after proving the educational resource among caregivers.

SECTION IV: Data describing the association between level of anxiety and knowledge scores with socio-demographic characteristics in the experimental group.

Table4 (a) Association between pre-test of knowledge scores with socio-demographic profiles.

N=42

Profiles	Poor	%	Average	%	Good	%	Total	%	Chi-square	df	p-value
Age in years											
21-30years	13	31.0	12	28.6	01	2.4	26	61.9	9.248	04	0.055

31-40years	02	4.8	04	9.5	03	7.1	09	21.4	(S)		
41-50years	02	4.8	05	11.9	00	0.0	07	16.7			
Gender											
Male	06	14.3	10	23.8	03	7.1	19	45.2	2.157	02	0.340
Female	11	26.2	11	26.2	01	2.4	23	54.8	(NS)		
Religion											
Hindu	13	31.0	15	35.7	02	4.8	30	71.4	12.932	04	0.012
Muslim	04	9.5	05	11.9	00	0.0	09	21.4	(S)		
Christian	00	0.0	01	2.4	02	4.8	03	7.1			
Jain	00	0.0	00	0.0	00	0.0	00	0.0			
Education											
No formal education	02	4.8	00	0.0	00	0.0	02	4.8	12.490	08	0.131
Primary	01	2.4	07	16.7	01	2.4	09	21.4	(NS)		
Secondary	09	21.4	06	14.3	00	0.0	15	35.7			
Intermediate	02	4.8	05	11.9	01	2.4	08	19.0			
Graduation and above	03	7.1	03	7.1	02	4.8	08	19.0			
Occupation											
Professionals	02	4.8	03	7.1	01	2.4	06	14.3	8.513	08	0.385
Skilled worker	01	2.4	06	14.3	01	2.4	08	19.0	(NS)		
Clerical/ Shopkeeper/ Farmer	07	16.7	06	14.3	01	2.4	14	33.3			
Housemaker	05	11.9	06	14.3	00	0.0	11	26.2			
Others	02	4.8	00	0.0	01	2.4	03	7.1			
Type of family											
Nuclear	03	7.1	03	7.1	04	9.5	10	23.8	14.564	06	0.024
Joint	12	28.6	14	33.3	00	0.0	26	61.9	(S)		
Single parent family	01	2.4	02	4.8	00	0.0	03	7.1			
Extended family	01	2.4	02	4.8	00	0.0	03	7.1			
Relationship with clients											
Spouse	01	2.4	04	9.5	03	7.1	08	19.0	12.112	06	0.060
Parents	06	14.3	10	23.8	01	2.4	017	40.5	(S)		
Siblings	09	21.4	06	14.3	00	0.0	15	35.7			
In-laws	01	2.4	01	2.4	00	0.0	02	4.8			
Source of information											

Internet	05	11.9	05	11.9	01	2.4	11	26.2	3.922	06	0.687
Health care professionals	08	19.0	13	31.0	01	2.4	22	52.4	(NS)		
Books/ Magazines	03	7.1	02	4.8	01	2.4	06	14.3			
Others	01	2.4	01	2.4	01	2.4	03	7.1			
Received ECT in the past 2 years?											
Yes	00	0.0	03	7.1	04	9.5	07	16.7	23.486	02	0.000
No	17	40.5	18	42.9	00	0.0	35	83.3	(S)		

The table4.a) reveals that the computed ($\chi 2$) has a significant association between the demographic profile of age, religion, type of family, relationship with the client, received ECT in the past 2 years, $p< 0.05$, with the pre-knowledge level among the responses.

Table 4 (b) Association between pre-test of anxiety scores with socio-demographics.

N=42

Demographic	Mild	%	Moderate	%	Severe	%	Total	%	Chi-square	Df	p-value
Age in years											
21-30	02	4.8	04	9.5	20	47.6	26	61.9	11.382	04	0.023
31-40	02	4.8	05	11.9	02	4.8	09	21.4	(S)		
41-50	00	0.0	04	9.5	03	7.1	07	16.7			
Gender											
Male	04	9.5	06	14.3	09	21.4	19	45.2	5.708	02	0.058
Female	00	0.0	07	16.7	16	38.1	23	54.8	(S)		
Religion											
Hindu	03	7.1	09	21.4	18	42.9	30	71.4	6.407	04	0.171
Muslim	00	0.0	02	04.8	07	16.7	09	21.4	(NS)		
Christian	01	2.4	02	4.8	00	0.0	03	7.1			
Jain	00	0.0	00	0.0	00	0.0	00	0.0			
Educational status											
No formal education	00	0.0	00	0.0	02	4.8	02	4.8	7.053	08	0.531
Primary	01	2.4	04	9.5	04	9.5	09	21.4	(NS)		
Secondary	00	0.0	05	11.9	10	23.8	15	35.7			
Intermediate	02	4.8	01	2.4	05	11.9	08	19.0			
Graduation and above	01	2.4	03	7.1	04	9.5	08	19.0			
Occupation											

Professionals	00	0.0	02	4.8	04	9.5	06	14.3	6.981	08	0.539
Skilled worker	02	4.8	02	4.8	04	9.5	08	19.0	(NS)		
Clerical/ Shopkeeper/ Farmer	01	2.4	05	11.9	08	19.0	14	33.3			
Housemaker	00	0.0	04	9.5	07	16.7	11	26.2			
Others	01	2.4	00	0.0	02	4.8	03	7.1			
Type of family											
Nuclear	03	7.1	02	4.8	05	11.9	10	23.8	12.289	06	0.056
Joint	00	0.0	09	21.4	17	40.5	26	61.9	(S)		
Single parent family	01	2.4	00	0.0	02	4.8	03	7.1			
Extended family	00	0.0	02	4.8	01	2.4	03	7.1			
Relationship with clients											
Spouse	03	7.1	01	2.4	04	9.5	08	19.0	14.378	06	0.026
Parents	01	2.4	06	14.3	10	23.8	17	40.5	(S)		
Siblings	00	0.0	04	9.5	11	26.2	15	35.7			
In-laws	00	0.0	02	4.8	00	0.0	02	4.8			
Source of information											
Internet	02	4.8	03	7.1	06	14.3	11	26.2	5.416	06	0.492
Health care professionals	01	2.4	08	19.0	13	31.0	22	52.4	(NS)		
Books/ Magazines	00	0.0	01	2.4	05	11.9	06	14.3			
Others	01	2.4	01	2.4	01	2.4	03	7.1			
Received ECT in past 2 years?											
Yes	04	9.5	03	7.1	00	0.0	07	16.7	25.385	02	0.000
No	00	0.0	10	23.8	25	59.5	35	83.3	(S)		

In table 4.b) depicts that the relationship with clients, gender, age, type of family, and individual received ECT in past two years are the subjects that have a statistically significant association with pre-anxiety scores, whereas the source of information, religion, education and occupation are not significantly associated.

4. DISCUSSION

The detailed discussion of the study is interpreted from the analysis which is in relation to the objectives, hypothesis, and a few related kinds of literature of the study.

Major findings of the study:

- **Findings related to socio-demographic data of the subjects.**

Majority of the respondent belongs to the age group of 21-30 years, most of them are females who were available at the time of data collection. Many of them belong to the Hindu religion and are done with them only till primary qualification status.

Most of the participants are occupied under clerical work, shopkeeper or farming, where they belong to joint family and the

nuclear family. The caregivers of the patients are mostly their siblings, and they got information from the health care professionals, and among all only a few patients had received ECT in the last two years.

- **Findings related to the level of knowledge and anxiety.**

The analysis area of pre-test and post-test knowledge and anxiety scores by using the Z-value in an experimental group implies significance in knowledge scores and non-significance in post-anxiety. In control group states not-significance in pre-knowledge scores whereas others show significance levels; which indicates that the null hypothesis got rejected.

- **Findings on knowledge scores regarding ECT among caregivers.**

In the study, the majority of the participants 23(54.8%) are good knowledge scores which were before nil, average scores of 19(45%) which was before 25, and nil poor scores which were before the test among 17 participants.

- **Association between knowledge and anxiety with demographics.**

The computed chi-square value has a statistically significant association between demographics of age, religion, type of family, relationship with patients, received ECT in the past two years; with the pre-knowledge levels. And in pre-anxiety ranges, subjects of demographic significance at ($p<0.05$) associated with age, gender, type of family, relationship with clients, received ECT in the past 2 years.

5. CONCLUSIONS

The study concluded that inadequate knowledge increases the level of anxiety ranges among the general population regarding ECT procedures which is due to gap in educational efforts. This point need further evaluative studies to assess the reason of the lack of educational assets in the general population and also to develop various strategies to improve.

LIMITATION OF THE STUDY

This study is limited to caregivers of mentally ill health who are available at the time of the procedure. The study can take in a large sample from the general population in qualitative research settings.

FINANCIAL SUPPORT ANAND SPONSORSHIP

Nil

CONFLICT OF INTEREST

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