

# Knowledge & Attitudes Towards Electroconvulsive Therapy Among Psychiatric Patients & their Spouses.

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**Abstract-** Despite of the debates regarding the procedure and side effects of ECT it is used as an effective and safe treatment of many severe mental disorders (Janicak et al.1997, Weiner 1994, APA 1990) Studies on the clinical efficacy of ECT reported that the clinical efficacy of ECT is affected by many factors such as stigma, Knowledge and attitude towards the efficacy and safety of ECT procedures. (Malcolm, 1989, Johnstone, 1999). There are very few researches on knowledge, attitudes and perceptions of ECT among the patients and their care givers in India. **Aim** The present study was an attempt to estimate and compare the knowledge, attitude towards ECT among psychiatric patients and their spouses. **Method** This was a cross sectional study carried out at Institute of Mental Health and Hospital, Agra , a tertiary centre catering services to major part of UP. One hundred and sixteen patients and their spouses admitted in the family ward of the institute were included in the study. Attitude, knowledge and experience questionnaires developed by Tang et al (2002) was used. **Results** The principal source of information for patients (55%) and relatives (75%) was the treating doctor. 21% had learnt from their own previous experience, while (37%) had learnt about ECT from others. The media was a less common source for both patients (13%) and relatives (17%) .Overall it is found that both the patients and spouses have reasonably adequate knowledge regarding ECT.

**Index Terms-** ECT, Schizophrenia, Spouse ,Attitude

## I. INTRODUCTION

Advancement in medical science has created a platform for using many complex equipments to measure various physical and mental parameters both for diagnostic and therapeutic purposes. Now a days modified ECT machine is used for treating patients with psychiatric disorders. Many clinical practitioners and researcher have conducted many observations as well as experiments about the mechanism, procedure and side effects of ECT. But the exact mechanism of ECT is not yet clear and still controversial for which practitioners hesitate to recommend it as the first line of treatment.(Mohr 2008) Despite of the debates regarding the procedure and side effects of ECT it is used as an effective and safe treatment of many severe mental disorders (Janicak et al.1997, Weiner 1994, APA 1990) In this procedure electric current is used to induce convulsive seizure in the brain which in turn modifies the chemical environment of neurotransmitters leading to alleviate symptoms (Gail et al. 2004).

It is generally well-tolerated by patients (Taieb et al. 2001) and psychiatrists most often recommend ECT for treatment of severe depression in patients those who has poor response to other treatment. It is also used in the treatment of severe mental illness such as mania and schizophrenia. ( Mohr 2008, Scott AIF (Ed) et al. 2005). Jacob Freedman (2012) has reported that ECT is highly effective and works rapidly to decrease the distressing symptoms when compared with other psychiatric treatments.

Studies on the clinical efficacy of ECT reported that the clinical efficacy of ECT is affected by many factors such as stigma, Knowledge and attitude towards the efficacy and safety of ECT procedures. (Malcolm, 1989, Johnstone, 1999). Realizing the significant role of caregivers in patient care few investigators have conducted studies regarding the knowledge and attitude of patients and caregivers towards ECT. (Freeman and Kandal 1980, Benbow 1988, Iodice et al. 2003, Koopowitz et al. 2003, Ramachandra et al.1992.)

Rajgopal &Chakrabarti (2010) conducted a study and reported that maximum number of patients were not well aware about the procedure of ECT and they showed their dissatisfaction in several aspect such as informed consent, fear of treatment and memory impairment. Ambivalent attitudes were also commonly observed .But on the other hand relatives were significantly seen to be more aware, more satisfied with the experience and had more favorable attitudes towards ECT, than patients.

It is observed that in many countries use of ECT is very frequent, but there is no universal pattern of use for which it is very difficult to assess its impact on the caregivers attitudes towards ECT that needs to be properly investigated. ( Agarwal et al. 1992,Tang et al .2002, Chanpattana et al. 2005) Particularly in developing countries the influential role of socio-cultural environment on attitudes towards ECT must be investigated . (Tang et al. 2002 ). Overall there are very few researches on knowledge, attitudes and perceptions of ECT among the patients and their care givers in India. (Chakrabarti et al. 2010, Pathare 2003).Knowledge and awareness regarding ECT among patients and their caregivers could have a significant impact on the efficacy of treatment.

**Aim :** The present study was an attempt to estimate and compare the knowledge, attitude towards ECT among psychiatric patients and their spouses.

II. MATERIAL & METHODS

This was a cross sectional study carried out at Institute of Mental Health and Hospital, Agra , a tertiary centre catering services to major part of UP. The institute has outpatient facilities of 300 patients everyday and inpatient facility of 800 beds. A well equipped ECT room is available with all modern equipments , trained doctors and staffs to take care of the post complications. Five to six patients are receiving ECT per day.

Data collection was carried out from January 2019 to and December 2019. One hundred and sixteen patients and their spouses admitted in the family ward of the institute with the following inclusion and exclusion criteria were included in the study.

**Inclusion criteria**

Patients who gave consent to receive at least 3 ECT.  
Spouses of patients who were staying with the patients during  
The age range of both the patients and spouses were 20 -50 years.  
Both the patients and spouses were communicable in English and Hindi.

**Exclusion criteria**

Spouses who were unable to communicate in English and Hindi.

Spouses who were suffering with any chronic physical or psychiatric illness.

Spouses who were unwilling to participate in this study.

Before initiation of the study the research protocol was approved by the Institute Research and Ethics Committee. Then the purpose of the study was explained to the patients and their spouses and consent was taken from them in individual sheets prepared for the study purpose.

The necessary physical assessment and investigations of all the patients were made by the anaesthetist and physician posted in the ECT. If the patient is found suitable then brief-pulse, bilateral, modified ECT was individually administered on the basis of review of each patient's clinical condition and prior treatment history under the supervision of psychiatrist ,the consultant-in-charge of the patient and the treatment team. A second opinion is usually sought from other consultants if required. Spouses of patients were actively involved throughout the whole process of treatment.

**Tools :** Demographic and clinical details of the participants and their spouses were treatment recorded in separate sheets designed for the study. Patients were assessed with the following tools after completion of ECT.

Attitude, knowledge and experience questionnaires developed by Tang *et al* (2002) was used. This tool has been used subsequently in other studies from developing countries (Virit *et a.l* 2007, Malekian *et al.* 2009) and also validated among a large population of caregivers (Grover *et al .*2018).It has 31 questions in assessing the knowledge. This questionnaire measures the knowledge under domains such as procedure, informed consent, indications, effectiveness and side effects. The subjects responded to each question either in 'Yes' or 'No'. The correct answer was scored as 1 and wrong answer was scored as 0. The Attitude component of the questionnaire consisted of 16 items which measured Postive attitude ,Negative attitude and Ambivalent attitude. These were scored as 1, 0 and 2 respectively.

III. RESULTS:

Descriptive statistics such as frequency, percentages, mean and standard deviations were used.

**Table -1**

Demographics	Patients n=116	Spouses n=116
Age	32.4 ± 8.08	32.3 ± 8.14
Gender Male	63 (54.3%)	53(45.7%)
Female	53 (45.7%)	63(54.3%)
Education Up to 10 <sup>th</sup>	79(68.1%)	81 (69.8%)
Above 10 <sup>th</sup>	37 (31.9%)	35 (30.2%)
Marital status	116 (100%)	116(100%)
Married		
Unmarried	0(0%)	0(0%)
Occupation Employed	60(51.7%)	79(68.1%)
Not Employed	56 (48.3%)	37(31.9%)
Family Type:	55(47.4%)	55(47.4%)
Neuclear		
Joint	61(52.6%)	61(52.6%)
Domicile Urban	49(42.2%)	49(42.2%)
Rural	67(57.8%)	67(57.8%)
Religion Hindu	104(89.6%)	104(89.6%)
Others	12(10.4%)	12(10.4%)
Family psy.Illness H/O Yes	23(19.9%)	21(18.1%)
No	93(80.1%)	95(81.9%)
Duration of illness	7.05 ± 5.69	5.96 ± 5.05
Age of onset	25.3 ± 6.19	

Table- 1 reveals the profile of the study subjects. The study-sample consisted of 116 patients and 116 spouses. The mean and SD of the age of patients were 32.4 ± 8.08 and the mean and SD of the age of spouses were 32.3 ± 8.14..The male patients were more (63) than female patients (53) .79 patients had education of 10<sup>th</sup> standard and 37 had education above 10<sup>th</sup> . More spouses were

employed(68.1%) than the patients(51.7%) and almost equal no patients as well as spouses had family history of psychiatric illness. 55 patients belonged to nuclear family and 61 patients belonged to joint family.49 patients were from urban background and 67 were from rural areas. The mean and SD of duration of

illness of patients were  $7.05 \pm 5.69$  and duration of spousal exposure to illness were  $5.96 \pm 5.05$  and the mean and SD of age of onset of illness of patients were  $25.3 \pm 6.19$ .

Table-2 Knowledge regarding ECT

Sl.No	Items <u>(Procedure)</u>	Correct response	Patients YES	No	Spouses Yes	No
1	During ECT, anaesthetic/other medications are used?	Yes	89(77%)	27(23%)	93(80%)	23(20%)
2	How often is ECT given per week ?	1-3 Times	69(59%)	47(41%)	51(44%)	65(56%)
3	How many ECTS do most patients require in one course?	1-10	0(0%)	116(100%)	10(9%)	106(91%)
4	Where is the current applied?	To the head	116(100%)	0(0%)	111(96%)	5(4%)
5	Who can administer ECT?	Psychiatrist/Doctors	116(100%)	0(0%)	111(96%)	5(4%)
6	What is ECT?	Treatment using electricity	79(68%)	37(32%)	112(97%)	5(3%)
7	Certain investigations are needed before ECT?	Yes	6(5%)	110(95%)	44(38%)	72(62%)
8	How long is the current applied?	Seconds	42(36%)	74(64%)	61(53%)	55(47%)
9	How is ECT given?	By a special machine	109(94%)	7(6%)	71(61%)	45(39%)
	<b>Informed consent</b>					
10	Is written Permission of the patient or his/her family member always necessary?	Yes	90(76%)	26(24%)	103(89%)	13(11%)
11	ECT can be given against the wishes of the patient?	No	18(16%)	98(84%)	37(32%)	79(68%)
12	ECT can be given against the wishes of the family?	No	40(34%)	76(66%)	57(49%)	59(51%)
	<b>Indications</b>					
13	ETC is often used to	Treat acute psychiatric conditions not responding to drugs	24(21%)	92(79%)	94(81%)	22(19%)
14	ETC is given to only those parties who have little chance of improvement?	No	102(88%)	14(12%)	43(37%)	73(63%)
15	ECT can also be given to old patients. (>60-650)	Yes	56(48%)	60(52%)	82(71%)	34(29%)
16	ECT is given to only inpatients.	No	107(92%)	9(8%)	30(26%)	86(74%)
17	Pregnant women can also receive ECT	Yes	25(22%)	91(78%)	58(50%)	58(50%)
	<b>Effectiveness</b>					

18	ECT is useful in Psychiatric disorders	yes	114(98%)	2(2%)	112(97%)	4(3%)
19	Compared to medication how useful is ECT ?	More or equal useful.	105(91%)	11(9%)	111(96%)	5(4%)
20	ECT often worsen the psychiatric illness	No	63(54%)	53(46%)	34(29%)	82(71%)
21	How does ECT work?	By correcting brain changes by causing symptoms	38(33%)	78(67%)	48(41%)	68(59%)
22	Effects of ECT lasts only for short while	Yes	84(72%)	32(28%)	101(87%)	15(13%)
23	Does ECT result in a permanent cure?	No	4(3%)	112(97%)	39(34%)	77(66%)
24	Scientific evidence for usefulness of ECT	Yes	13(11%)	103(89%)	66(57%)	50(43%)
	<b>Side effects</b>					
25	Use of ECT leads to temporary impairment of memory	Yes	65(56%)	51(44%)	73(63%)	43(37%)
26	Use of ECT lead to Permanent loss of memory.	No	67(58%)	49(42%)	41(35%)	75(65%)
27	ECT results in permanent damage to Brain	No	91(78%)	25(22%)	99(85%)	17(15%)
28	ECT can damage other body parts permanently	No	66(57%)	50(43%)	71(61%)	45(39%)
29	During the ECT chances of death are very high	No	98(84%)	18(16%)	94(81%)	22(19%)
30	Headache is a common side effect of ECT.	Yes	112(97%)	4(3%)	99(85%)	17(15%)
31	Most of the patients receive ECT develop epilepsy later.	No	107(92%)	9(8%)	78(67%)	38(33%)

**Table-3 Attitudes towards ECT**

Sl. N	Items	Patient Positive	Negative	Ambivalent	Spouse Positive	Negative	Ambivalent
1	ECT is dangerous and should not be used.	91(78%)	17(15%)	8(7%)	50(43%)	39(34%)	27(23%)
2	ECT is an inhuman treatment.	93(80%)	28(24%)	5(4%)	61(53%)	42 (36%)	13(11%)
3	I will advise a close relative to receive ECT if recommended.	73(63%)	28(24%)	15(13%)	65(56%)	18(16%)	33(28%)
4	If required I will undergo ECT treatment.	91(78%)	15(13%)	10(9%)	91(78%)	8(7%)	17(15%)

5	ECT is often given as punishment to violent /angry patients.	70(60%)	27(23%)	19(16 %)	59(51%)	35(30%)	22(19%)
6	Following discovery of new medications , treatment with ECT is never required	84(72%)	18(16%)	14(12%)	79(68%)	16(14%)	21(18%)
7	If ECT fails in a patient then no other treatment will succeed	78(67%0	10(9%)	28(24%)	66(57%)	15(13%)	35(30%)
8	ECT at times life saving..	99(85%)	1(9%)0	7(6%)	112(97% )	4(3%)	0(0%)
9	Treatment of ECT is cruel.	87(75%)	21(18%)	8(7%)	81(%)	16(%)	19(%)
10	Treatment with ECT is outdated.	90(78%)	7(6%)	19(16%)	84(72%)	23(20%)	9(8%)
11	Treatment with ECT is outlawed.	76(66%)	19(16%)	21(18%)	80(69%)	23(20%)	13(11%)
12	Once a person is given ECT, in future whenever he becomes ill ECT is only treatment options.	76(66%)	20(17%)	20(17%)	69(59%)	29(25%)	18(16%)
13	ECT gets out better and quicker than medication.	58(50%)	45(39%)	13(11%)	88(76%)	23(20%)	5(4%)
14	ECT is given indiscriminantly to people.	88(76%)	18(16%)	10(9%)	45(39%)	39(34%)	32(27%)
15	ECT is the worst treatment option under any circumstances.	81(70%)	15(13%)	20(17%)	89(76%)	20(18%)	7(6%)
16	ECT is often given to people who do not need it.	78(67%)	15(13%)	23(20%)	90(78%)	19(16%)	7(6%)

#### IV. DISCUSSION

The treatment and efficacy of ECT very much depends on good knowledge and positive attitude towards electric shock therapy by the patients and their caregivers.( Salzman 1998) It is suggested that factors like sources of information about ECT and prevailing myths about ECT shape the knowledge and attitude toward ECT. This study made an attempt to estimate the existing knowledge and attitudes in one hundred and sixteen patients who received ECT during the study period and their spouses. Knowledge was assessed using a 30-item questionnaire. Each item had a correct, an incorrect and a 'don't know' response.

The principal source of information for patients (55%) and relatives (75%) was the treating doctor. 21% had learnt from their own previous experience, while (37%) had learnt about ECT from others. The media was a less common source for both patients (13%) and relatives (17%). Similar findings have also been observed in other studies.(Rajgopal.et al. 2012) Studies from other

countries where ECT is rarely used have reported that media is the primary source of information for their patients (Bustin et al. 2008) and most of the patients have negative perception of ECT.( Kerr et al. 1982)

Majority of patients have good knowledge regarding the procedure of ECT (77%-100%). On item no2 and 8 patients gave moderate response (42%-68%) and on item no 3 and 7 gave very poor response (0%-6%). Spouses have adequate knowledge on all the items related to procedure of ECT. Similar and better pattern of response is obtained as compared to patients. Most of the patients and spouses have good knowledge regarding the informed consent (59%-98%). Only 8%-22% patients gave correct response to all the items related to indication of ECT which is very poor but spouses gave adequate response (50%-81%).Regarding the efficacy of treatment majority of patients and spouses have good knowledge except item no24.

Overall it is found that both the patients and spouses have reasonably adequate knowledge regarding ECT. Earlier studies from India (Ramachandra et al. 1992, Chavan e tal. 2006) also



reported that more than 65% of patients had adequate knowledge of ECT. The findings are comparable with observations of Freeman and Kendell, 1980, Goodman *et al* (1999). It might be due to proper psycho-education given to the patients and their relatives during their stay in the family ward by the treating doctors and other health professionals. The interaction between the family members who have already exposed to ECT also had significant impact in eradicating the myths regarding ECT and providing correct information. But many studies from developing countries and western countries have reported that patients majority of patients are not aware of various intricate aspects of ECT and have inadequate knowledge. Rajagopal *et al*. 2012, Arshad *et al*. 2007, Rajkumar, *et al*. 2006 Malekian *et al*. 2009, Bustin *et al*. 2008). This could be due to lack of access to proper sources of information. Moreover, among relatives those who had obtained their information from doctors were more knowledgeable about ECT.

The knowledge of spouses were much better than patients and they had developed a clear understanding of benefit of ECT. Several other studies from the developing countries have reported similar trends in relatives (Tang *et al*. 2002, Malekian *et al*. 2009, Rajkumar *et al*. 2006) but this trend has not usually been found in Western studies (Chakrabarti *et al*. 2010) Our findings is in contradiction with other studies where the patients reported that they have not received adequate information prior to ECT. (Rose *et al*. 2005) Now the things have been changed and people are more aware and needs explanation of each and every aspect which is clarified through proper psychoeducation.

But the patients as well as spouses had poor knowledge in certain specific information such as no of ECT required in one course, duration of ECT, investigation required before ECT and regarding the side effects of ECT. It may not be possible to discuss and clarify all aspects due to lack of time and to avoid multiple queries asked by the patients which needs to be explained technically. Motivating the patients and their caregivers for ECT treatment is another important factor that sometimes unintentionally skips certain information specifically with regard to side effects. With regard to side effects memory impairment is very common and usually reported in all most all studies of ECT conducted in various parts of the country. Rates vary from 29 to 79 per cent of the patients, with persistent loss being reported by at least one-third of them (Rose *et al*. 2003)

This study also have reported that patients have more positive attitude and favourable comments regarding ECT (50%-85%) as compared to spouses which is very common and usual phenomena as reported in several literature—(Chakrabarti *et al*. 2010). In this study most of the patients felt that they had benefited from ECT and were willing to repeat it again because they have exposed to ECT. These results were similar to other studies conducted in developing as well as developed countries, which has shown that a majority of the patients perceive ECT to be helpful and most are willing to undergo the treatment again (Chakrabarti *et al*. 2010, [Rajagopal](#) *et al*. 2012)

Both patients as well as spouses have more ambivalent attitude as compared to negative attitudes. Patients ambivalent attitude could be explained due to their state of mind leading to develop negative perception of ECT (Myers 2007). It might be due to their reluctance to reveal their true perception to the treating doctor which is still debatable. (Freeman & Kendell 1980, Sienart & Becker 2005) But this findings might not be applicable across the country as there is no universal patterns of ECT

procedure is followed in all settings (Agarwal *et al*. 1992., Chanpattana *et al*. 2005) But it is a good sign that now a days patients and spouses have developed adequate knowledge and positive attitudes towards ECT.

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