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# The Study of Education Effect on Knowledge of, and Attitudes toward Electroconvulsive Therapy among Iranian Nurses and Patients' Relatives in a Psychiatric Hospital, 2009-2010

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## Abstract

Electroconvulsive therapy (ECT) is a cost effective method in the treatment of some psychiatric disorders. Although, service users such as health providers and nurses, also patients and their relatives may refuse ECT when indicated, due to the myths and little or lack of knowledge about the procedure. The knowledge of and attitudes toward ECT among nurses, may reflect on patients and influence treatment choice. For doing this procedure relatives informed consent is necessary, so their knowledge of and attitude toward ECT is important for getting informed consent and following treatment sessions. Objective: This research was conducted as a quasi-experimental study to measure knowledge of and attitudes toward ECT in 2 groups: relatives and nursing. Also, to study the effect of education on knowledge of and attitudes toward ECT in 2 groups. Methods: In this research the pre and post test self – administered questionnaires were completed by 46 relatives and 46 nurses before and after education about ECT. Results: Nurses in this research received a mean score of X=34.97 knowledge before education and X=39.78 after education (t=2.02, p<0.05), and a mean score of X=33.41 attitude before education and, X=42.82 after education (t= -14.25, p<0.001). Relatives received a mean score of X=23.41 knowledge before education and X=30.15 after education (t= -12.44, p<0.001), and a mean score of X=33.39 attitude before education and, X=41.13 after education (t= -9.10, p<0.001). The differences between the 2 means among two groups were found to be statistically significant. Conclusion: Education given to nurses and relatives about ECT increased their knowledge of, and improved their attitudes toward ECT. For this reason it is recommended that continuing education about ECT process should be planned and given at regular intervals.

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*Keywords: education, nurses, relatives, electroconvulsive therapy, attitude, knowledge*

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## 1. Introduction

It has been just over seven decades since electroconvulsive therapy (ECT) was introduced into psychiatry by the Italian psychiatrist and neuropathologist, Ugo Cerletti (1). Over the years, the procedure of ECT has undergone modification (the use of anesthesia to limit convulsion) enabling it to become more acceptable to health

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professionals, patients and the general public (1). The clinical literature establishing the safety and efficacy of electroconvulsive therapy (ECT) in specific disorders is substantial (2).

Several studies have examined the attitudes, knowledge, and opinions of patients, physicians, nurses, other mental health professionals, attorneys, psychiatric residents, and medical students toward ECT. Results of these studies are varied. Surveys of ECT patients and their families have shown positive views of ECT, whereas those in nonpatient/family groups have shown more negative attitudes, with the majority of people reporting that their attitudes stemmed from viewing movies in which ECT administration had been depicted (2). Nurses responsible for the care of patients being treated with ECT are responsible for teaching the patient and family about the procedure before it is begun. They also allow time for patients to verbalize their feelings and concerns before preparing the patients physically for the treatment. During ECT, nurses are responsible for monitoring the patients' electroencephalogram and electrocardiogram, and after the successful completion of ECT, they reorient patients to ensure the patients' safety and help them return to their former state of wellness before the treatment.(3).

Although the use of ECT was begun in 1938 by Cerletti and Bini, a review of the literature shows that there is a lack of standards in this area of nursing care. The reasons for this deficit include not only an insufficient number of psychiatric nurses but also a knowledge deficit about ECT in those who are psychiatric nurses, having very few educational programs about ECT for psychiatric nurses, having the current educational programs given by physicians, not knowing exactly what the duties and responsibilities of psychiatric nurses are, and health care professionals' negative attitudes about ECT (3).

Nurses, because of the nature of their work, have closer and more frequent contact with patients undergoing electroconvulsive therapy than other health professionals. Consequently, their attitudes are likely to be formed by their patients' experience; conversely, nurses' attitudes are likely to influence their patients' attitudes. This puts nurses in a good position to reflect the patients' experience and to influence their patients' views and decision making on the use of ECT (4). In our country, there are a few published documents by Iranian authors on ECT, but their work is limited to areas of the efficacy and side effects (5). Generally, psychiatric patients and their family in the city of Tabriz sounds not to be familiar with this treatment method and, their (100%) main reasons for giving consent is based on doctors' recommendation.

This research was conducted for the purpose of evaluating the effect of education about ECT given to nurses, who work on a psychiatric ward, also to relatives on their knowledge of and attitudes toward ECT. Because, nursing care is important from patients who receive ECT, we aimed to compare the knowledge of and attitudes toward ECT among two groups before and after education about ECT. The data from this study will be used to develop and improve the quality of health services and responsibilities of nurses in the care of patients undergoing ECT and to improve the quality of patient care. It will be used to improve relatives' positive attitude toward ECT, also. By means of this research's results nursing managers will be able to determine weak and power points in this field, and will plan ECT continuing education programs at regular intervals for psychiatric nurses, students, patients and their family too.

## **2. Materials and methods**

A quasi-experimental study was carried out among all participants at a psychiatric hospital in Iran for the purpose of evaluating the effect of education about ECT which is given to nurses and relatives who were included research's criteria and volunteer for study. This research was conducted on the psychiatric hospital of medical sciences university in Tabriz, Iran. Participants (n=92) 46 nurses and 46 relatives were involved in this study between May – September, 2010. The questionnaires were self – administered, relatives' attitude statements were a modified version of an instrument used in previous studies such as Tung 2002 (6), Santamaria 1998 (7), Peter Byrne 2006 (8), nurses' attitude statements were from Mehrabiyan's study 2004 (9). The questionnaires consisted of 3 parts. The first section included 10 questions on demographics, the second was the knowledge section, 16 question for relatives and 20 questions for nurses. On this 16 & 20 item scale, answers were true, false or don't know. A correct answers yielded 2 mark, incorrect 1 mark, and don't know 0. The third section on attitudes was devised for this study and consisted of 14 statements for relatives and 15 statements for relatives. A Likert scale was used with 5

possible responses, strongly agree, agree, undecided, disagree, or strongly disagree. Participants scored 1 to 5 for each question, with the score reversed for negative statements. Before administering, the questionnaire's validity was assessed through 10 faculty members and cronbach  $\alpha$  was used to test the reliability of the attitudes section of the questionnaire; it revealed a score of 0.90 for nurses and 0.82 for relatives, suggesting a high degree of internal consistency among 2 groups' items.

### 2.1 ECT Educational booklet

All participants received an educational booklet about ECT which outlines indications for use, mechanism of action, risks, effects and side effects, number of treatments required, and some common misconceptions about ECT. This booklet was in easy conception for relatives.

### 2.2 Procedure

Participants (nurses and relatives) before education completed the questionnaires and after lectures for the same two groups separately and receiving their own booklets, 3 weeks later the same questionnaires were distributed again and completed by them.

### 3. Analysis of data

Statistical analysis was carried out using SPSS version 14.0. Scores on the knowledge and attitudes scales were compared between nurses' and relatives' pre-test and post-test using Paired t test.

### 4. Results

Basic Sociodemographic and clinical data from relatives, including age, sex, marital status, education, occupation, their relationship with patients, length of illness, patients' diagnosis, number of past psychiatric admissions and ECT courses, their information sources about ECT, and nurses' Sociodemographic data included age, sex, marital status, education, occupation, ward, years of experience, were collected.

The mean  $\pm$ SD age of relatives was 37.54 years, 37% of them were female. The mean education level was 14 years (27.1%); 58.7% were unemployed, 41.3% worked as clerk, just 10.9% of them was faculty member of university in Tabriz. Common psychiatric diagnosis included major depression (n=31, 67.4%), schizophrenia (n=5, 10.9%), and mania (n=1, 2.2%). The percent of received ECT courses varied [yes: n=21, (45.7%) no: n=25, (54.3%)].

Primarily their information sources about ECT were psychiatrists (37%), internet (26.1%), seminars (15.2%), media(10.9%), friends(8.7%). Their relationship with patients were as follow: parents (17.4%), spouses(32.6%), children(13%), friends(4.3%). The mean  $\pm$ SD age of nurses was 35.7 years, 63% of them were female. The mean education level was 16 years (93.5%); 91.3% were employed, 50% of them has been worked in psychiatric wards, the mean  $\pm$ SD years of experience was 11 years.

Table 1. Relatives' knowledge and attitude score comparison before & after education:

Relatives	Before education	After education	t-paired
Knowledge	23.41	30.41	P<0.001
SD	$\pm$ 3.89	$\pm$ 1.24	df=45 t=-12.44
Attitude	33.39	41.13	
SD	$\pm$ 5.18	$\pm$ 1.24	P<0.001
Total	46	46	df=45 t=-9.10

According to table 1, relatives' knowledge range raised after education about 6.74, (t= -12.44, p<0.001), and attitude range raised after education about 9.74, on the other hand, it had significant difference (t= -9.10, p<0.001).

Table 2. Nurses' knowledge and attitude score comparison before &amp; after education:

Nurses	Before education	After education	t-paired
Knowledge	34.97	39.78	P<0.05
SD	±2.01	±0.41	df=45 t=2.02
Attitude	33.41	42.82	
SD	±4.64	±0.92	P<0.001
Total	46	46	df=45 t=-14.25

According to table 2, nurses' knowledge range raised after education about 4.81, ( $t= 2.02$ ,  $p<0.05$ ), and attitude range raised after education about 9.41, on the other hand, it had significant difference ( $t= -14.25$ ,  $p<0.001$ ).

## 5. Discussion

Although ECT is highly effective treatment of major depression, there is a lack of understanding as well as negative attitudes toward ECT among the general public. This study aimed to assess the effect of education on knowledge and attitudes toward ECT among relatives and nurses in order to determine whether providing education increases knowledge and produces more favorable attitudes toward ECT within these two groups. Our results in this study showed that: ECT education is effective on relatives' knowledge ( $p<0.001$ ,  $t=-12.44$ ) and their attitudes ( $p<0.001$ ,  $t=-9.10$ ) also nurses' knowledge ( $p<0.05$ ,  $t=2.02$ ) and their attitudes ( $p<0.001$ ,  $t=-14.25$ ). This research revealed that, age, sex, relationship has no correlation with relatives' attitude, but education level, previous received ECT, and information source had correlation with their knowledge and attitude which is consistent with those expressed with previous research. Andrews et al (2004) in their study indicated the providing individuals with education to improve understanding of ECT, dispel misconceptions, and subsequently produce more favorable attitudes and a positive change in behavioral intent (10). They also showed from Szuba et al (1992), education increases individuals knowledge and improves their attitudes toward ECT and decreases their fear from this treatment (11). Dowman et al (12) in their study reported giving enough information about ECT is necessary for patients undergone ECT and their relatives, and Byrne et al (2006) showed there is direct relationship between individuals' knowledge and attitudes. Our study showed about 61.2% of nurses didn't participate in ECT sessions but after education about 91.4% of them had positive attitude for this item. James et al(2010), in their study revealed nurses with additional years of experience specially in psychiatric wards had more favorable attitudes and good knowledge about ECT. This interaction gradually has important role in formation of positive attitudes toward ECT among nurses and in contrast with patients and their relatives (1). In present study there is no relation between nurses years of experience and their attitudes( $r=-0.275$  ,  $p=0.64$ ) and knowledge( $r=-0.221$  ,  $p=0.140$  ). The present study revealed that relatives had not received adequate information before ECT in our group. Similar findings have been reported previously.

## 6. Conclusion

In summary, it was determined that, after education about ECT, the total scores were higher in nurses and relatives. So, above study demonstrates that providing education to individuals, increases knowledge and produces more favorable attitudes toward ECT. For this reason it is recommended that continuing education about ECT process should be planned and given at regular intervals.

## References

James BO, Lawani AO, Omoaregba JO, Isa EW. (2010). **Electroconvulsive Therapy: A Comparison of Knowledge and Attitudes of Student Nurses and Staff Mental Health Nurses At a Psychiatric In Nigeria.** JECT, 17, 141-146.

- Ronald L. Warnell, M.D., Anthony D. Duk, M.D. George w. christion, M.D., mark g. havland, Ph.D. (2005). **Teaching Electroconvulsive Therapy to Medical Students: Effects of Instructional Method on Knowledge and Attitudes**. *Academic psychiatry*, 29:5, 433-436
- Arkan B, Ustun B. (2008). **Examination of the Effect of Education about Electroconvulsive Therapy on Nursing Practice and Patient Satisfaction**. *JECT*, 24(4), 254-259.
- Wood JH, Chambers M, Phil D, White SJ. (2007). **Nurses' Knowledge of and Attitude to Electroconvulsive Therapy**. *JECT*, 23(4), 251-254.
- Malekian A, Amini Z, Maracy MR, Barekatian M. (2009). **Knowledge of Attitude toward Experience and Satisfaction with Electroconvulsive Therapy in Sample of Iranian Patients**. *Journal of ECT*, 25(2), 106-112.
- Wai Kwong Tang, M.D., Gabor S. Ungvari, M.D., Ph.D, and Grace W. L. Chan, M.Sc. (2002). **Patients' and Their Relatives' Knowledge of, Experience With, Attitude Toward, and Satisfaction With Electroconvulsive Therapy in Hong Kong, China**. *The Journal of ECT*. 18(4): 207-212.
- Michael P. Santa Maria, Alan A. Baumeister, and William Drew Gouvier. (1998) **Public Knowledge about Electroconvulsive Therapy: A Demographically Stratified Investigation**. *International Journal of Rehabilitation and Health*, Vol.4, No. 2.
- Byrne P, Cassidy B, Higgins P. (2006). **Knowledge and Attitude toward Electroconvulsive Therapy among Health Care Professional and Students**. *JECT*, 22(2), 133-138.
- Mehrabiyani S. et al. (2004). **Knowledge and attitude toward Electroconvulsive Therapy among nurses in shahid beheshti hospital, Iran**. *Iranian Psychiatry and Clinical Psychology*. 8 (1)
- Andrews M, Hasking P. (2004). **Effect of Two Educational Interventions on Knowledge of and Attitude towards Electroconvulsive Therapy**. *JECT*, 20(4), 230-236.
- Szuba MP, Guze BH, Liston EH, et al.(1992) **Psychiatry Resident and Medical Student Perspectives on ECT; Influence of Exposure and Education**. *Convulsive Ther*.8:110-117.
- Dowman J, Patel A, Rajput K. (2005). **Electroconvulsive Therapy Attitudes and Misconceptions**. *JECT*, 21(2), 84-87.