



Research Article

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## ***Effect of nursing supportive care on state anxiety of patients receiving ECT: A controlled Randomized clinical trial***

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### ABSTRACT

**Introduction:** high prevalence of mental disorders and effectiveness of ECT as a curative method makes it a beneficial tool which is highly considered however patients undergoing this method usually experience severe anxiety which can develop negative consequences. About the factors affecting this anxiety such as nursing supportive care during ECT there is not much evidence. The aim of this study was to examine the effect of nursing supportive care during ECT on state anxiety of patients receiving this procedure. **Method:** This is clinical trial which was done in zahedan (Iran). 70 in patient undergoing ECT .randomly assigned to control (n=35) and intervention group (n=35). Subjects provided responses to Demographic and Spielberger's State Anxiety Inventory. Supportive care was provided through trained nurses to intervention group and control group received routine care only. State anxiety was assessed before and after intervention in both groups. Data analyzed using SPSS software. Chi-square test, independent and paired t test was used. **Results:** Results showed that mean difference of state anxiety in intervention group decreased significantly in comparison with control group. **Conclusion:** This study shows the positive effect of nursing supportive care on state anxiety of patients receiving ECT, so it is recommended to reduce state anxiety in patients undergoing ECT.

**Keywords:** supportive care, anxiety, ECT

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### INTRODUCTION

Electroconvulsive Therapy is the most important treatment in a wide range of psychiatric disorders which produce therapeutic effects through inducing convulsion (1). In some cases like cardiac patients, pregnant women and patients who cannot tolerate the adverse effects of medications, it is even more effective than medications (2). Annually, about 100/000 people in United States and more than one million people worldwide receive ECT (3).

To evaluate the effectiveness of ECT, several studies have been conducted. According to a systematic review and Meta analysis in UK (2003), high efficacy of ECT versus placebo and antidepressant medications is shown. Also similar results released by psychiatric nurses association in 2011(5). Regarding high prevalence of mental disorders and its negative consequences (7) and also effectiveness of ECT, it is considered a beneficial treatment method.

Due to frequent usage of ECT, particular attention to nursing care in this area is required including: keep patients informed, encouraging patients to express their feelings, evaluation of negative beliefs and fears (11), supportive

patients to make decision regarding ECT, explaining the reasons of using this method and its benefits and side effects, describing responsibilities of treatment group and providing answers to patients questions (12). A high percent of psychiatric disorders receive ECT (3,6) since ECT has been introduced as a frightening, cruel and penalized method by newspapers, magazines and pictures, patients often experience severe anxiety which even remains after ECT(15). Considering the fact that anxiety can lead to opposite medical effects (17), supportive care in order to decrease the anxiety of patients receiving ECT is of great importance (18).

Present research focuses traditionally on efficiency, side effects and action mechanism of ECT (14). Usually Cognitive and physical dysfunction after ECT have been assessed but adverse psychological effects are not considered properly (20). Therefore given the frequency usage of ECT as an efficient procedure with low side effects, it is important to assess the patients. Although the use of ECT has been started since 1938, lack of standard nursing care program is obvious in this field (21). The aim of this study was to investigate the effect of nursing supportive care on state anxiety of patients receiving ECT.

### Method

Permission to perform this clinical trial was obtained from research department and ethic committee of research and technology of Tabriz University of Medical Sciences and training center (Baharan-zahedan) officials from June to July 2013. The research also was recorded in IRCT.

Subjects were all in patients receiving ECT during the study. To be included in the study, patients had to: be over the age of 18 years, to be able to write and read and also lack of physical illness leading to cognitive impairment and perceptual disorders, reality perception impairment and anxiety disorders is considered.

Exclusion criteria were: acute psychotic patients, patients who refuse to continue participating in the study and patients who receive ECT less than 4 sessions.

To estimated the needed sample size first a pilot study was done on 24 patient receiving ECT which had inclusion criteria. Confidence interval of 95% and p\_ value less than 0.05 was considered as significant. Considering mean and standard deviations before and after intervention and possible attrition the final sample size was estimated 35 in each group. A total of 70 eligible patients were included in the study. Allocation to control and case group was random

TO collect Data a 2 part questionnaire was used. First part was demographic questions like age, gender, marriage and education. Second part was Spielberger's State Anxiety Inventory which assesses present anxiety, The 4-point scale for S-anxiety is as follows: 1.) not at all, 2.)A little 3.) Somewhat 4.) Very so much. In state anxiety inventory, score of 20 to 31 shows mild,32 to 42 medium to low, 43 to 53 medium to high, 54 to 64 relatively severe, 65 to 75 severe and 76 to 80 very severe anxiety, respectively. Mahram in 1994 assessed the reliability and validity of Spielberger's State Anxiety Inventory. He evaluated the reliability in normal and case groups separately. The reliability for the normal group (n=600) is 0.908 based on cronbach alpha and for case (n=130) was equal to 0.941 and based on the ratio of true variance to observed variance was 0.945score (22).

The investigator personally visited in patients receiving ECT and enrolled eligible ones, who accepted to participate in the study. First informed consent was obtained, then patients randomly assigned to control or intervention group. After pretest, trained nurses provided supportive care to patients in intervention group. Intervention consisted of several items: teaching patients and support them to make decision regarding ECT, , explaining the reasons of using this method and its benefits and side effects, and also physical care of patient before procedure: fasting, voiding, leaving jewelry and metal things and providing an appropriate intravenous line. Each session lasted by the end of ECT. Control group received routine care (fasting, voiding, leaving jewelry and metal things) and education through other nurses. On completion of all ECT sessions post test was performed through interview.

The data was analyzed using SPSS software (version 13). To describe characteristic of participants and their anxiety, descriptive statistics (frequency, percent, standard deviation), to compare anxiety score and mean differences before and after intervention, independent T test was used. Some characteristics in both groups assessed using chi square and independent T test. p\_ value less than 0.05 was considered as significant.

### Results

Some demographic characteristics of both group is shown in Table 1. Chi-square results shows that both groups had similar demographic characteristics (gender, marriage status, education). Also Independent t test showed no significant age difference between 2 groups (Table 1).

<b>Table 1:</b> Demographic characteristic of patients receiving ECT in intervention and control group						
Demographic		intervention	control	Df	value chisquare	P
		N (%)	N (%)			
Gender	male	)7/45(16	)6/48(17	1	May-00	0.81
	female	)54.3(19	)4/51(18			
Marriage	single	)28.6(10	)1/37(13	2	1.46	0.48
	married	60)(21	)7/45(16			
	divorced	)11.4(4	)1/17(6			
Education	illiterate	)20(7	)6/28(10	5	3.00	0.69
	primary	)11.4(4	)3/14(5			
	secondary	)17.1(6	)6/8(3			
	diploma	)7/45(16	)9/42(15			
	Associate degree	)7/5(2	)9/2(1			
	BS or higher	)0(0	)9/2(1			
Job	employee	)0(0	)9/2(1	4	3.07	0.54
	Self employed	)9/22(8	)1/17(6			
	retired	)7/5(2	)6/8(3			
	jobless	)7/45(16	)1/57(20			
	houskeeper	)7/25(9	)3/14(5			
Age	mean(sd)	10.90) (41	22).11(08.41	68=df	0.03=-t	0.97=p

A paired-samples t-test was conducted to compare state anxiety score in control and intervention groups. There was a significant difference in the scores for intervention group but not for control group. Also an independent-samples t-test was conducted to compare state anxiety score for intervention and control groups before intervention which showed no significant difference while mean score of state anxiety after intervention differs significantly for both groups (Table 2).

<b>Table 2:</b> comparison of state anxiety score before and after intervention in intervention and control group.					
Group	Before intervention		After intervention		Paired t test
	Mean	SD	Mean	SD	
intervention	61.65	6.48	48.51	5.86	10.73=t
					34=df
					0.001=p
Control	61.51	5.81	61.71	6.22	0.21= -t
					34=df
					0.83=p
Independent t test	0.09=t		9.12= -t		
	68=df		68=df		
	=0/92p		0.001=p		

### Discussion

Results of this study demonstrated that supportive care in three dimensions (informational, emotional and physical) by nurses can significantly reduce state anxiety of patients.

Comparison of state anxiety score in control group reveals no difference before and after intervention while it is significant in intervention group and also there was significant difference in mean anxiety score between groups after the intervention (Table 2).

Previous research is more focused on physical side effects following ECT. For example najafi et al. assessed the effect of video education on reduction of post ECT complications and found that education can decrease headache, nausea and memory dysfunction (23) which is consistent with present study. More over in this study we found positive effect of education on reducing anxiety.

Some studies have evaluated the effect of nursing supportive care on different kinds of patients, including Eghtedar et al. that assessed nursing Supportive Care containing educational, physical and emotional care in Breast Cancer patients. Results revealed that improving nursing Supportive Care enhances quality of life in breast cancer patients (10) which confirms the results of present study.

Leung et al. investigated the effect of social and family support on psychological symptoms in elderly Chinese. In their study the effect of emotional support on anxiety and depression of 507 elderly was assessed. Results

demonstrated that emotional support is more important than instrumental support (24) which is similar to the results of current study.

One of the major limitations of this study is that questionnaires were completed by researcher through interview which may have influence the responses of study subjects. Future research in this area should consider a single blind study in which someone other than researcher completes the questionnaire.

#### Conclusion

An overall finding of this study reveals that nursing Supportive Care is effective on reducing state anxiety of patients receiving ECT. Aside from vast application of this procedure, it is stressful and anxiety in psychiatric patients can lead to negative consequences. Thus providing interventions to decrease this anxiety is needed. These interventions can be delivered by nurses. Based on the results of current investigation, nurses should spend more time with patients to meet their needs and reduce their anxiety.

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