

Electroconvulsive Therapy: Relating Attitude Towards Treatment and Knowledge Among Mental Health Professionals in a Mental Health Center

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ABSTRACT

Background: The efficacy and safety of Electroconvulsive Therapy (ECT) are well established; nevertheless, public attitude remains stigmatic. To date, few studies have been published that examine the attitudes and practical knowledge of medical staff with regards to ECT. Moreover, the attitudes of different parts of mental health staff still need to be explored. The aim of this study was to assess the knowledge and attitudes towards ECT of mental health staff in different disciplines.

Methods: A multi-group comparative study used questionnaires translated from several similar studies; 120 questionnaires were distributed equally to four groups of professionals in mental health centers in Beer Yaakov - Ness Ziona Complex: psychiatrists, psychologists, nurses and social workers. The questionnaires aimed to measure knowledge and attitude towards ECT treatment.

Results: The questionnaires showed significant differences in knowledge, subjective knowledge and, respectively, attitudes. Psychiatrists and nursing staff demonstrated higher knowledge and more positive approaches compared with social workers and psychologists. No significant differences were found between the knowledge and attitudes of psychiatrists, psychiatry residents and nursing staff.

Conclusions: The mental health sector can serve as an indicator of the level of knowledge and attitude towards ECT treatment. It is necessary to recognize the differences between various sectors and to deepen our knowledge regarding this treatment to all sectors, especially social workers and psychologists.

INTRODUCTION

Electroconvulsive Therapy (ECT) has been used to treat mental illness commonly since the beginning of the last century. Since then, its influence has been investigated by many different research groups around the world (1). Even though the treatment has been found to be effective in the majority of the studies, there remain some studies that question its efficiency and even claim it can cause brain damage (2). Although the therapeutic basis of ECT is yet to be discovered, the indications for its use are clear and diverse and include depression, mania, bipolar disorder and schizophrenia (3).

Most publications that investigated ECT have focused on issues like the use of the treatment in the field of psychiatry and the controversy surrounding it (4-6), technical advantages of different treatment protocols (7) and legal aspects of the treatment. However, very few studies have been conducted to evaluate the knowledge and attitude of mental health care professionals towards ECT (8).

In 1978, a research study surveyed the attitude of 4,000 American psychiatrists towards ECT; 72% of the participants declared that Electroconvulsive Therapy is suitable for treatment of different mental conditions and is safe, less expensive and more efficient than other treatments (9).

In 1981, a British research group published the results of a survey they conducted among 3,221 psychiatrists regarding different aspects of the use of ECT, including their general approach to the treatment. The results showed that 87% believed that ECT is effective for the treatment of several specific psychiatric diagnoses (10).

In 1985, a group of American researchers published a paper about the differences in attitude and knowledge about ECT of four groups of health care professionals

(psychiatrists, nurses, psychologists and social workers). The investigators showed that psychiatrists and nurses had the most extensive amount of knowledge among the four groups, while social workers were placed at the bottom of the knowledge scale. The attitude and the responsiveness to ECT correlated to the level of knowledge (8).

Another study that was published in 1981 used a 7-item questionnaire to evaluate attitudes and feelings about ECT. It was distributed to 1,043 potential participants and completed by 587 of them. Among the participants were mental health professionals, patients who had undergone ECT and subjects from the general population. Despite the general positive approach of the participants to ECT, significant differences were discovered among the groups. Patients who previously had received ECT were the least frightened of the treatment, followed by psychiatrists (11).

In a study that took place in India in 1997, attitude questionnaires were sent to 913 psychiatrists; 263 of them (28.8%) completed the questionnaire. It was evident that the general approach was in favor of ECT (81.4%), and the dominant opinion was that for many patients, ECT was the safest, cheapest and most effective treatment (79.8%) (12).

In 2001, a British group published the results of a study that distributed 268 questions to psychiatrists, nurses, psychologists and social workers, of which 74% were completed. The results showed that there is a great difference in the attitude and knowledge about ECT between the four groups. The psychiatrists showed the least objection to ECT and had the highest level of knowledge, followed by nurses and finally social workers and psychologists. The researchers concluded that there is an association between the profession of the subject and his attitude towards ECT (13). In addition, the study emphasized the importance of implementing knowledge, exposing to treatments and changing the attitude of all professionals in the field of mental health (14).

From all the studies mentioned above, it appears that knowledge about ECT among health professionals influences their attitude towards the treatment and, subsequently, their recommendations for future treatment of their patients. However, despite the clear evidence of this correlation, this is not yet implemented in the field. A study that was performed in Canada in 2013 showed that 60% of centers that perform ECT had no teaching program about the treatment for psychiatry residents (15). This is unfortunate since health care professionals who are involved in ECT should be able to provide information in a clear, accurate and supportive manner

to both patients who are supposed to receive ECT and their families prior to the treatment. This has been found to be important for the process of the treatment (16).

When psychiatrists refer patients to ECT, the responsibility lies on them to try and refute the negative public image of the treatment by providing accurate information about it (17). On the other hand, a care giver who objects to ECT for different reasons including lack of knowledge might harm the process and the completion of the treatment.

It appears that the greatest opportunity to provide objective and accurate information about ECT lies in the hands of health care professionals, especially those who take part in the process of the treatment. A few studies (18-20) showed that one of the main problems contributing to the attitude towards ECT is that most patients who participate in studies do not have enough knowledge about ECT and its side effects. Various studies emphasized that anxiety prior to medical procedures can make it difficult for patients to learn new information about the treatments themselves (21-23). Additionally, due to the short term memory loss that accompanies ECT, available and continuous information is needed to reduce the anxiety related to the treatment.

Differences in opinions within the psychiatric treatment team about the use of ECT might be transferred to the patient and harm his ability to decide whether or not to agree to the treatment. This in turn might have significant harmful influence since some patients for whom ECT is the most effective and optimal treatment will receive it in delay or not at all. Thus, there is a reasonable possibility for prolonging the illness, increasing suicide risk, and increasing hospitalization duration and all costs related to the treatment (13).

METHODS

SUBJECTS

The study was conducted in the Beer-Yaakov Ness Ziona Mental Health Centers in Israel. Participants were recruited after oral consent, and the study was approved by the ethics committee of the institute and reported to Ministry of Health's highest ethics committee. To be included in the study, the participants were required to be employees of the Beer-Yaakov Ness Ziona Mental Health Centers in the following specialties: psychiatrists and psychiatry residents (one group), nurses, psychologists and social workers. Thirty participants were included in each group.

QUESTIONNAIRES

The participants were asked to complete a questionnaire composed of three different questionnaires previously used in the literature to evaluate knowledge and attitudes towards ECT. The questionnaires chosen included the following: 1. QuAKE (Questionnaire on Attitudes and Knowledge of ECT) composed of 16 statements examining attitude towards ECT and 16 questions examining knowledge (13). 2. Agarwal questionnaire composed of 5 questions and 8 statements rated using the 5-point Likert scale for examining attitudes toward ECT (12). 3. Janicak questionnaire composed of 3 parts examining knowledge and attitudes towards ECT (8).

DATA ANALYSIS

Data were analyzed using SPSS software by performing one-way ANOVA analyses.

RESULTS

DEMOGRAPHIC DATA

The study included 120 participants, 30 from each group (psychiatry residents-psychiatrists, nurses, psychologists and social workers); 50 participants were male and 70 were female, and there was significant female representation in the social workers group (Figure 1.A). There were no significant age differences among the groups (Figure 1.B; mean: 42 years, SD: 8.2), but there were significant and important differences in practical experience as measured by asking the participants the number of times they watched a patient receiving ECT. Psychiatrists and

nurses had significantly more experience than psychologists and social workers (Figure 1.C). Finally, there was also a significant difference in seniority: nurses had the highest seniority with an average of 17 years in the profession, and psychologists had the lowest seniority with an average of 7 years (Figure 1.D).

KNOWLEDGE ABOUT ECT

Knowledge about ECT was assessed using two questionnaires: QuAKE and Janicak. The QuAKE questionnaire contained 16 correct/incorrect questions examining knowledge about ECT. The groups of psychiatrists and nurses had a statistically significant ($p < 0.05$) higher number of correct answers (81% and 71%, respectively) compared to social workers and psychologists (both 42%; Figure 2.A). Additionally, knowledge about ECT was examined using the Janicak questionnaire, which contained 11 statements ranked on a 5-point Likert scale (5-strongly agree, to 1-strongly disagree). In this measurement, there was also a great deal more knowledge for the psychiatrists and nurses versus social workers and psychologists (averages 3.82, 3.71, 3.3, 3.3, respectively; $p < 0.05$; Figure 2.B). Finally, the Janicak questionnaire also had a measurement of “self-reported” knowledge level on a scale of 1-5 (5-well enough, to 1-not enough), in which there was also a significant difference among the groups: psychiatrists and nurses believed they had enough knowledge, while social workers and psychologists felt they did not have enough knowledge (averages 4, 4.4, 2.5, 2, respectively; $p < 0.05$; Figure 2.C), results that correlated with the results of objective knowledge gathered (Figure 2.C).

Figure 1. Demographic data. Gender (A) and Age (B) distribution among the four group participants in the study: psychiatry residents –psychiatrists (MD), nurses, social workers, psychologists. Practical experience in ECT expressed as number of treatments watched by participants (C). Seniority distribution presented as number of years in profession (D)

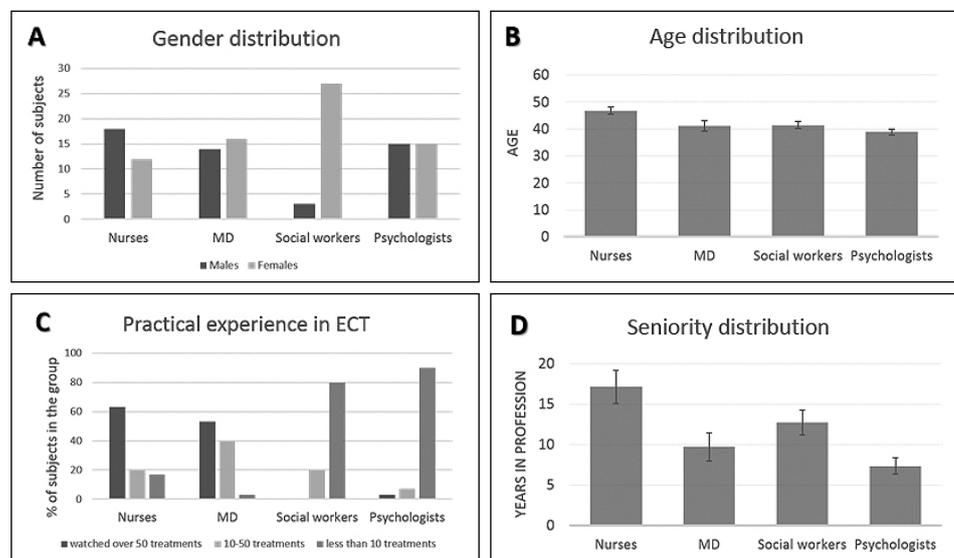
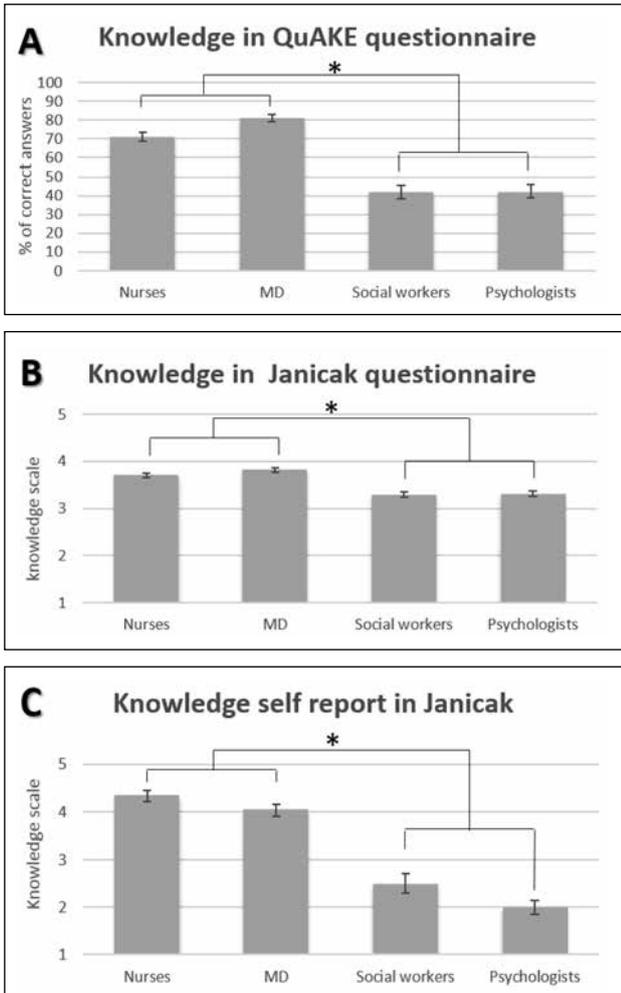


Figure 2. Knowledge about ECT. Percent of correct answers of each study group (psychiatrists and residents [MD], nurses, social workers, psychologists) as measured by the QuAKE questionnaire (A). Average score in knowledge scale in the Janicak questionnaire (B). And self-report of knowledge from the Janicak questionnaire (C)

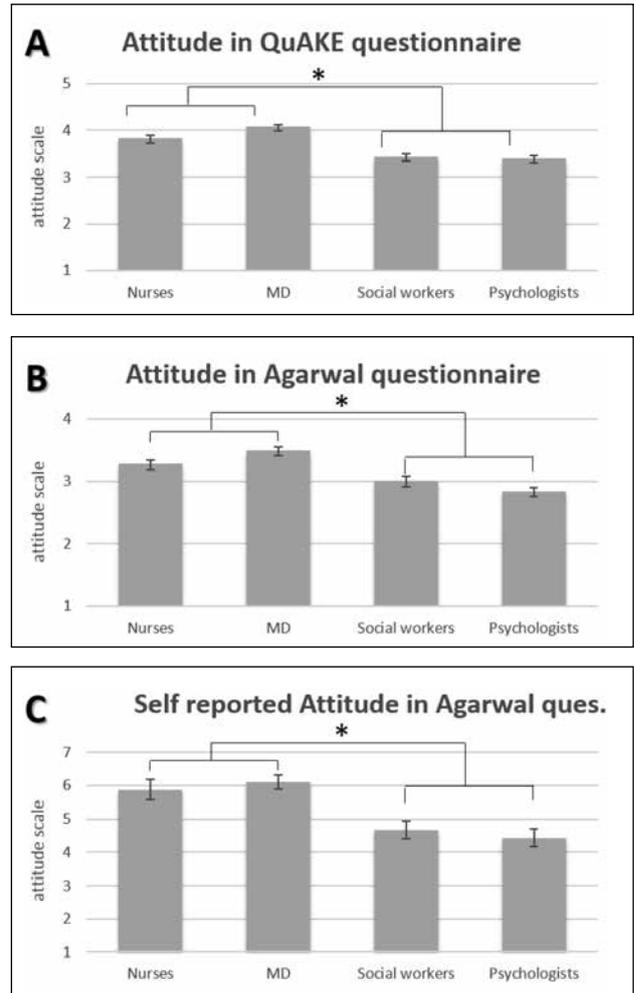


*P<0.05

ATTITUDES TOWARDS ECT

Attitudes towards ECT were assessed using two questionnaires: QuAKE and Agarwal. The QuAKE questionnaire contained 16 statements ranked in a 5-point Likert scale (5-strongly agree, to 1-strongly disagree), examining attitudes towards ECT. The groups of psychiatrists and nurses had statistically significant ($p < 0.05$) more positive attitudes towards ECT (averages 4, 3.8, respectively) compared to social workers and psychologists (averages 3.4 and 3.3, respectively; Figure 3.A). Additionally, attitudes toward ECT were examined using the Agarwal questionnaire, which contained 8 statements ranked on a 5-point Likert

Figure 3. Attitudes towards ECT. Average score in attitude scale in the QuAKE questionnaire of the four study groups: psychiatrists-psychiatry residents (MD), nurses, social workers, psychologists (A). Average score in attitude scale in the Agarwal questionnaire (B). And self-report of general attitude from the Agarwal questionnaire (C)



*P<0.05

scale (5-strongly agree, to 1-strongly disagree). In this measurement, there was also a significant difference in scores: psychiatrists and nurses had more positive attitudes towards ECT than social workers and psychologists (averages 3.4, 3.2, 3, 2.8, respectively; $p < 0.05$; Figure 3.B). Finally, the Agarwal questionnaire measured the “general attitude” of participants on a scale of 1-7 (7-decidedly favorable towards ECT, to 1-totally opposed to ECT), in which there was also a significant difference between the groups: psychiatrists and nurses had significantly more positive attitudes towards ECT than social workers and psychologists (averages 6.1, 5.8, 4.6, 4.4, respectively; $p < 0.05$; Figure 3.C).

DISCUSSION

The use of ECT for the treatment of an acute psychotic state began in the 1930s. Years later, due to the use of anesthesia and muscle relaxants, there was a great decrease in side effects like fractures and psychological distress (24). Statistics, furthermore, showed that the mortality rate as a result of the procedure was 1:50,000, which is similar to the mortality rate of anesthesia in minor surgical procedures (25).

Research on ECT over the last decades has focused on indications for treatment, efficacy, mechanism of action and side effects. The efficacy of ECT in major depression has been unquestionably proven (26). In fact, it has been shown that ECT effects are more quickly presented than pharmacological anti-depressant therapy. Additionally, it has been shown to be effective in patients who did not respond to pharmacological treatment.

Public uncertainty regarding the efficacy, safety and ethics of the use of ECT contributed to a thorough examination of its advantages and disadvantages. Moreover, the method of the treatment and the lack of clear indications for it in the past brought some of the public to protest against it. Several studies investigated the attitudes of the general population towards ECT but found mixed results. However, the attitudes of physicians from studies that were conducted in the 1970s and 1980s demonstrated positive attitudes towards ECT regarding its efficacy, safety and cost (9). Since then, very few comprehensive studies have examined the knowledge and attitude towards ECT among treatment givers. Therefore, we performed the first Israeli study on this important topic in our mental health center to understand the current, most updated perspective to ECT among the professionals who are most involved in the ECT process. The results demonstrated that the level of knowledge about ECT among psychiatrists and nurses was significantly higher than that of social workers and psychologists. Moreover, the level of objective knowledge correlated with self-reported levels of knowledge. In addition, the attitudes of staff were examined, and it was found that psychiatrists and nurses had a more positive attitude than the other professions, as evident by both self-report and results of the attitude questionnaires. It should be noted that the professionals with the highest level of knowledge and the more positive attitude, psychiatrists and nurses, had been exposed to a substantially greater number of ECT treatments. The results demonstrated that being exposed to the treatment and probably not the years of

experience is what matters to knowledge and attitude.

Our results are in concordance with the few previous studies that examined the issue. In 1985, a group of American researchers published a study that showed a direct relation between the level of knowledge of psychiatrists, nurses, psychologists and social workers, and their attitudes towards it (8). They found that psychiatrists and nurses had more knowledge and a more positive attitude than psychologists and social workers. Additionally, in 2001, a British group examined the same professional groups and also found that psychiatrists and nurses had the highest levels of knowledge and more positive attitudes. The researchers concluded that there is a correlation between the profession of the subject and the attitude towards ECT (13). Finally, the most updated similar study that examined this issue was published in 2006 and showed that poorer knowledge of ECT was found in the nursing group, and this included psychiatric nurses. The strongest predictor of better knowledge and more positive ECT attitudes was membership of the medical group. There were direct associations between better knowledge and more positive attitudes in the medical group (27).

Even though some additional similar studies have been conducted over the years, these studies did not examine these professions but rather settled for fewer groups of care providers or for subjects who take a less central part in the process of ECT, like medical students. For example, Gass found a relation between knowledge and attitudes towards ECT, but the study only examined nurses (28).

The current study examined the four most central groups of professionals who take care of the population of patients requiring ECT. In addition, it is significant since there were no similar studies during the last decade, and the updated information about the present-day attitudes and knowledge about ECT and the relation between them is of great importance. This is the first Israeli study on the topic which emphasizes the importance of knowledge and attitude toward brain stimulation that becomes more legitimate in our era.

The results of our study confirm the direct association between the knowledge of the mental health professionals and their attitudes towards ECT. Even though different groups take care of the same population of patients, as a team, the differences in knowledge are crucial. It appears that with less knowledge, workers inform their attitudes from the attitude of the general population. Among other explanations for the difference in knowledge, that is reasonable, is that therapists who are more reluctant

to use biological therapies turn to study to become psychologists and social workers. The attitude of the staff is of great importance in the treatment process. Our results show that the gap in knowledge and attitudes inside the clinical setting must first be acknowledged and then hopefully changed. This is of great importance since the gap can influence the quality of the treatment, cooperation of the patient, prognosis, quality of life and even risk for suicide.

These findings emphasize the importance of understanding the knowledge levels of different groups of health care professionals, both during their studies and in the clinical setting. It is both possible and very important to change attitudes towards ECT that are in part based on lack of knowledge.

Conflict of interest

None

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