

ATTITUDES TOWARDS ECT: A SURVEY OF POLISH MENTAL HEALTH PROFESSIONALS

Anna Antosik-Wójcińska¹, Gabor Gazdag^{2,3}, Łukasz Święcicki¹, Beata Majtczak⁴,
Janusz Rybakowski⁵, Paweł Gosek⁶ & Adam Wichniak⁷

¹Second Department of Psychiatry, Institute of Psychiatry and Neurology, Warsaw, Poland

²Centre for Psychiatry and Addiction Medicine, Jahn Ferenc South Pest Hospital, Budapest, Hungary

³Department of Psychiatry and Psychotherapy, Semmelweis University, Budapest, Hungary

⁴Sixth Department of Psychiatry, Hospital in Gostynin, Poland

⁵Department of Adult Psychiatry, Poznan University of Medical Sciences, Poland

⁶Forensic Psychiatry Clinic, Institute of Psychiatry and Neurology, Warsaw, Poland

⁷Third Department of Psychiatry and Department of Clinical Neurophysiology,
Institute of Psychiatry and Neurology, Warsaw, Poland

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SUMMARY

Background: Although the efficacy of electroconvulsive therapy (ECT) has been well established, the utilization rate of ECT has decreased in Poland in recent years. One of the main reasons could be the negative attitude towards ECT in the community and by mental health professionals. The aim of this study was to assess the knowledge about and attitudes toward ECT in Polish mental health professionals including psychiatrists and non-physicians: nurses, psychologists, social workers.

Subject and methods: Psychiatrists and other mental health professionals in two large Polish hospitals were approached to participate in the survey by completing a 28-item questionnaire. The specific hospitals have been selected due to the fact that they were located in the same province of Poland (Mazowsze), had similar catchment area and profile, provided similar mental health services with only one exception; one offered ECT while the other did not. Of the 185 questionnaires that had been distributed, 165 were completed yielding a response rate of 89.19%. The study population consists of 85 psychiatrists and trainees and 80 non-physicians.

Results: Psychiatrists did not differ from other mental health professionals with respect to the knowledge and attitudes toward ECT. However, there were significant differences in the attitude (9.1 ± 3.8 vs 7.1 ± 3.3 ; $p<0.001$) and knowledge (5.9 ± 3.8 vs 2.8 ± 4.1 ; $p<0.001$) scores between those professionals, who have ever worked in a psychiatric ward where they could observe ECT sessions and those who have not had such an opportunity.

Conclusions: Frequent witnessing of ECT sessions seems to be the most effective educational intervention to change negative attitudes towards ECT.

Key words: electroconvulsive therapy - ACT - attitudes - mental health professionals - Poland

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INTRODUCTION

Electroconvulsive therapy (ECT) was introduced in the therapeutic armamentarium of psychiatry in the 1930s. Before the era of modern psychopharmacology ECT was extensively used for a wide variety of psychiatric disorders (Krepela et al. 2019). Although the efficacy of electroconvulsive therapy has been well established particularly in depression and catatonia and it is included in most recent treatment guidelines (Grunze et al. 2009, 2010, Bauer et al. 2013, Hasan et al. 2012, 2015, Ellis et al. 2004, Royal Australian and New Zealand College of Psychiatrists Clinical Practice Guidelines Team for Bipolar Disorder, Australian and New Zealand clinical practice guidelines for the treatment of bipolar disorder 2004), its utilization rate has declined in some countries in the past decades (Leiknes et al. 2012, Palińska et al. 2008), while in some Eastern European countries ECT has been long under-utilized (Palińska et al. 2008). Causes identified to account for the low frequency of ECT use include negative attitudes

towards and insufficient knowledge about the method in the professional community (Golenkov et al. 2010, Gazdag et al. 2004, 2011, 2009a,b, Chanpattana 1999, Finch et al. 1999). Negative attitude and misbeliefs play an important role in the refusal of being treated with ECT from the lay public side (Janicak et al. 1985, Lauber et al. 2005). Beside psychological causes, financial reasons, lack of modern ECT machines and separate financing for the procedure as well as unavailability of anesthesiologist were also reported (Janicak et al. 1985, Lauber et al. 2005).

Historically the availability and use of ECT in Poland has been low mainly because of the community and mental health professionals' negative attitude (Palińska et al. 2008, Nasierowski 2002). Current indications for ECT have been restricted to clearly defined situations when rapid improvement is essential, such as life-threatening conditions particularly psychotic depression with suicidal ideation and catatonic stupor. Further indications are pharmacotherapy resistant depression or psychosis (Hese & Zyss 2007, Zyss et al. 2017).

To date, there has been no systematic evaluation of attitudes either in the general population or mental health professionals in Poland. The aim of this study was to survey attitudes towards and knowledge about ECT in Polish mental health professionals working in two Polish psychiatric hospitals.

SUBJECTS AND METHODS

Participants

Participants of the study were psychiatrists, nurses, psychologists, occupational therapists and social workers working in two large hospitals located in the same province of Poland (Mazowsze). Both hospitals were chosen because they differ in the availability of ECT services. At the Institute of Psychiatry and Neurology in Warsaw each year about 700 ECT procedures are performed, while at the Hospital in Gostynin ECT is not used at all. Altogether 185 subjects were invited to participate in the study.

Attitude questionnaire

A self-administered questionnaire (Appendix) comprising basic demographic data and 28 questions on knowledge and attitude towards ECT was given to all mental health professionals at Institute of Psychiatry and Neurology in Warsaw and two psychiatric wards at the hospital in Gostynin, one biologically oriented, acute psychiatric ward and one therapeutically oriented psychiatric rehabilitation ward. The questionnaire was a tailored version of a standard one used in attitude studies in other countries (Golenkov et al. 2010, Gazdag et al. 2004, 2009, 2011).

The first 4 questions were in multiple-choice format concerning education, specialization, place of work and position. Participants were then asked to rate their ECT knowledge in a 3-point Likert scale. The remaining 27 questions had to be answered with simple true/false choices. Five questions were related to professional and personal experiences with ECT (Q2-Q6). Eleven questions concerned knowledge (Q7, Q9, Q10, Q12, Q14, Q16, Q18-19, Q21, Q25, Q28) and 11 questions on the attitude towards ECT (Q8, Q11, Q13, Q15, Q17, Q20, Q22-24, Q26-27). Composite scores were calculated for each participant summarizing answers for the 11 questions concerning attitudes and the 11 questions concerning knowledge. Correct answers or answers suggesting a positive attitude were scored as +1, whereas false answers or the ones suggesting a negative attitude were scored as -1.

Statistical analyses

The data were processed using IBM SPSS Statistics, Version 21.0. Descriptive statistical data are presented as mean values with standard deviation (SD) or as a number of observations and percentages. Chi-square tests were used to compare the distribution of answers

between the groups formed on the basis of workplace and profession. Two-tailed Fisher exact test was used for comparing continuous variables between the above groups. Mann-Whitney U-test was used to compare factor scores between psychiatrists and other mental health professionals and between participants who have ever worked in a psychiatric ward where they could observe ECT sessions and those who have not had such an opportunity (Question 2 in the questionnaire). The correlation between attitudes and knowledge was assessed with the Spearman rank correlation coefficient. The level of significance was set at $p=0.05$.

RESULTS

One hundred and sixty-five participants (response rate: 89%) completed the questionnaire; 35 were male and 130 were female. Their age was 41.7 ± 9.2 years (range: 24-62 years). Eighty-five respondents were qualified psychiatrists or psychiatric residents, and there were 63 nurses, 18 psychologists and 10 social workers. Socio-demographic characteristics is presented in Table 1.

Table 1. Socio-demographic characteristics of the participants

	n	%
Gender		
Male	35	21.2
Female	130	78.8
Profession		
Trainees	28	17.0
Psychiatrists	46	27.9
Psychologists	18	10.9
Nurses	63	38.2
Other (social workers, paramedics)	10	6.1
Age		
Age range		24-62
Mean age		41.7 ± 9.2
Experience		
Have worked in ECT-utilizing department where observed ECT	106	64.2
Have never worked in ECT-utilizing department and not witnessed ECT	59	35.8
Current workplace		
Currently working in ECT-utilizing unit	144	87.3
Currently working in unit which does not utilize ECT	21	12.7

Regarding the questions concerning knowledge about ECT, 53, 95 and 17 professionals rated themselves as having only minimal, medium and high levels of knowledge. Hundred and six of the 165 participants have worked in a hospital where ECT is offered and witnessed ECT. Only 9 participants indicated having a relative or friend who was treated with ECT. One hundred and twenty-seven participants (77%) stated that in case if they suffered from psychotic depression, they would consent to ECT.

The mean scores for the total attitude and knowledge subscales were 8.4 ± 2.8 and 4.8 ± 4.2 , respectively. Answers to the questions concerning attitudes toward ECT revealed several false beliefs; 24.8% of the participants thought that ECT is dangerous and could be fatal, 48.5% believed that ECT should only be used as a last resort, 10.9% deemed ECT to be painful and 14.5% regarded ECT an outdated, obsolete treatment. Six percent of the participants opined that ECT is used more frequently in minor patients and 7.8% asserted that ECT causes permanent brain damage.

There were gaps in the knowledge regarding indications and contraindications for ECT and its course and effectiveness. Thirty-seven percent of the participants thought that ECT is contraindicated in myocardial infarction. According to 21% of the participants, ECT cannot be administered for patients over 65 years of age. Despite much research evidence to the contrary, 60% of the mental health professionals believed that in severe depression medication is more effective in the short term than ECT.

Items concerning attitudes/knowledge, where the rate of the false beliefs/incorrect answers was higher than 10% are presented in Table 2.

Several significant differences in some questions appeared when comparing psychiatrists with other mental health professionals (Table 3), but the mean score for knowledge was not different between psychiatrists and trainees, and other mental health professionals (4.7 ± 4.1 vs 4.8 ± 4.3 , ns). Both groups differed, however, in the mean scores for attitude (8.9 ± 2.3 vs 7.9 ± 3.1 , $p < 0.05$).

A comparison of the answers of participants who have ever worked in a psychiatric ward where they could observe ECT sessions and those who have not had such an opportunity are presented in Table 4. The mean scores for knowledge in the group of professionals, who have ever worked in wards offering ECT treatment vs those who have not had such an opportunity were 5.9 ± 3.8 vs 2.8 ± 4.1 ($p < 0.001$). The corresponding mean scores for attitude were 9.1 ± 3.8 vs 7.1 ± 3.3 ($p < 0.001$). Better knowledge about ECT was also related to more positive attitudes towards ECT ($r_s = 0.366$, $p < 0.001$).

Table 2. Items concerning knowledge of and attitude towards ECT, where the rate of false answers/beliefs was higher than 10%

Item	Correct answer/True	False answer/beliefs
Q8. In Poland ECT is used more frequently than in the USA.	148	17
Q11. ECT was first used in the 1930s.	60	105
Q12. ECT is painful.	147	18
Q13. Convulsive therapy was devised by a Hungarian psychiatrist.	96	69
Q14. ECT is dangerous and may even result in death.	124	41
Q15. During ECT, the patient needs to be anesthetized as deeply as possible.	98	67
Q16. ECT may only be used as a last resort.	85	80
Q17. In severe depression, ECT is more effective in the short term than medication.	99	66
Q20. ECT is contraindicated for patients who have suffered myocardial infarction.	105	61
Q21. ECT is an outdated, obsolete treatment.	141	24
Q24. ECT can be administered in patients over 65 years of age.	130	35
Q26. The effectiveness of ECT is directly related to the duration of the seizure induced.	80	85
Q27. ECT is recommended to be used 2 or 3 times a week.	141	24

Table 3. Comparison of the answers of psychiatrists and trainees with other mental health care professionals. Only items with significant difference are presented

Item	Psychiatrists and trainees (n=85)		Nurses and other professionals (n=80)		P value
	Yes n (%)	No n (%)	Yes n (%)	No n (%)	
Q11. ECT was first used in the 1930s.	28 (32.9)	57 (67.1)	32 (40.0)	48 (60.0)	ns
Q12. ECT is painful.	6 (7.1)	79 (92.9)	12 (15.0)	68 (85.0)	ns
Q14. ECT is dangerous, and may even result in death.	17 (20.0)	68 (80.0)	24 (30.0)	56 (70.0)	ns
Q15. During ECT, the patient needs to be anesthetized as deeply as possible.	46 (54.1)	39 (45.9)	52 (65.0)	28 (35.0)	ns
Q16. ECT may only be used as a last resort.	44 (51.8)	41 (48.2)	36 (45.0)	44 (55.0)	ns
Q19. In minority patients, ECT is used more frequently.	1 (1.2)	84 (98.8)	9 (11.3)	71 (88.8)	0.008
Q20. ECT is contraindicated for those who suffered from myocardial infarction.	37 (43.5)	48 (56.5)	24 (30.0)	56 (70.0)	ns
Q21. ECT is an outdated, obsolete treatment.	5 (5.9)	80 (94.1)	19 (23.8)	61 (76.3)	0.002

Table 4. Comparison of the answers between participants who have ever worked in a psychiatric ward where they could observe ECT sessions and those who have not had such an opportunity

Questions	Have observed administration of ECT (n=106)		Have never observed administration of ECT (n=59)		P value
	Yes n (%)	No n (%)	Yes n (%)	No n (%)	
Q10	0 (0)	106 (100.0)	5 (8.5)	54 (91.5)	0.005
Q12	6 (5.7)	100 (94.3)	12 (20.3)	47 (79.7)	0.007
Q14	20 (18.9)	86 (81.1)	21 (35.6)	38 (64.4)	0.024
Q16	42 (39.6)	64 (60.4)	38 (64.4)	21 (35.6)	0.003
Q17	78 (73.6)	28 (26.4)	21 (35.6)	38 (64.4)	0.001
Q18	0 (0)	106 (100.0)	3 (5.1)	56 (94.9)	0.044
Q20	27 (25.5)	79 (74.5)	34 (57.6)	25 (42.4)	<0.001
Q21	9 (8.5)	97 (91.5)	15 (25.4)	44 (74.6)	0.005
Q22	103 (97.2)	3 (2.8)	50 (84.7)	9 (15.3)	0.009
Q24	89 (84.0)	17 (16.0)	41 (69.5)	18 (30.5)	0.046
Q26	64 (60.4)	42 (39.6)	16 (27.1)	43 (72.9)	<0.001
Q27	98 (92.5)	8 (7.5)	8 (33.3)	16 (66.6)	0.001

DISCUSSION

To the best of our knowledge, this was the first survey that evaluated the knowledge about and attitudes towards ECT, in Polish mental health professionals.

The mean knowledge score of the whole sample indicated high rate of incorrect answers. The current knowledge score was 2.5 points lower (4.8 vs. 7.3) than the one found in a similar survey in Hungary (Gazdag et al. 2004), although in the Hungarian study all participants were psychiatrists. Unexpectedly, psychiatrists in this survey scored even lower than other professionals thus the difference in the composition of the samples between the current and the Hungarian study cannot be accounted for the differing results. Nevertheless this finding calls for improving education on ECT for practicing psychiatrists in Poland by making regular ECT training part of the continuing medical education. Also, ECT should occupy a larger part of the curriculum for psychiatry trainees that should include hand-on experience.

The survey revealed several misconceptions and deficits concerning the knowledge about ECT. A number of the respondents gave incorrect answers to the basic questions related to the technique and contraindications of ECT. In line with the general lack of interest in the history of psychiatry among mental health professionals, questions targeting the history of ECT also proved to be difficult for a significant number of participants. The questions concerning the year of the first use of convulsive therapy and the identity of its inventor (Q11 and Q13) had the highest rate of incorrect answers. One of the explanations for this finding could be that in Polish language, the first descriptions and applications of electric current as a treatment in psychiatry can be found as early as in 1861 by the Polish psychiatrist Klemens Maleszewski (Nasierowski 2002, 1998). Many participants recalled that ECT was developed by Bini

and Cerletti in 1938, few participants knew the name of the Hungarian psychiatrist, of Laszlo Meduna, who pioneered convulsive therapy in 1934 (Gazdag et al. 2009c).

Working in the psychiatric ward offering ECT services has reflected in both a greater knowledge about and more positive attitudes towards ECT. More favorable attitudes are positively correlated with better knowledge (Janicak 1985).

It is worth noting that psychiatrists showed more positive attitudes towards ECT than other mental health professionals. It may well be that if no better knowledge, but more extensive personal experience with the therapeutic effect of ECT might be responsible for this result. In accord with the literature (Janicak 1985, Hese et al. 2014), in this survey psychologists and social workers had more negative attitudes towards ECT compared to psychiatrists and nurses.

The rate of false answers and negative attitudes towards ECT was much higher in the group of professionals who have never observed administration of ECT. This finding confirms previous findings (Golenkov et al. 2010, Auquier et al. 1994).

Comparing the results of this survey with those of the similar Romanian and Hungarian studies conducted in 2003 and 2009, respectively several differences can be noted (Gazdag et al. 2004, 2011).

The main difference is that a much higher rate of Hungarian (32%) (Gazdag et al. 2004) and Romanian (53%) psychiatrists (Gazdag et al. 2011) would not consent to ECT if they were severely depressed in contrast to Polish mental health professionals (23%). The rate of 23% found in this survey is still much higher than those in similar surveys in Texas (7.7%) (Finch et al. 1999) or in France (16%) (Auquier et al. 1994) indicating that there is still much to be done in terms of undergraduate and postgraduate education and training that would also lead to better acceptance of ECT (Royal Australian and New Zealand College of Psychiatrists Clinical Practice

Guidelines Team for Bipolar Disorder, Australian and New Zealand clinical practice guidelines for the treatment of bipolar disorder 2004, Leiknes et al. 2012, Pranjkovic et al. 2016, Byrne et al. 2006, Lutchman et al. 2001).

In line with the results of previous studies (Gazdag et al. 2004, 2011), there was no correlation between attitudes towards ECT and psychiatric illness in the participants' family or acquaintances.

Due to methodological limitations, the results of this survey should be viewed with caution. Because of the cross-sectional design, the causality of the associations remains uncertain. The sample size was relatively small, particularly from Gostynin Hospital where ECT is not practiced (21 participants). As participation in the survey was voluntary, it is reasonable to assume that staff members with less favorable attitudes towards and poorer knowledge about ECT were more likely to refuse participation thereby biasing the results. The survey conducted in two hospitals from the same regions of the country may not reflect the situation in Poland (Hese et al. 2014); for instance, surveying academic centers might have yielded different results.

CONCLUSIONS

The main finding of this study is that mental health professionals' attitudes towards ECT is less negative compared to some other countries in the Eastern European region, but are more negative than those reported from western countries. The factor determining attitudes on ECT was working in the psychiatric ward offering such services (Pranjkovic et al. 2016). Psychiatrists showed more positive attitude towards ECT in spite of having the same level of knowledge than other mental health professionals. The findings indicate that more education and training on ECT are warranted (Pranjkovic et al. 2016, Byrne et al. 2006, Lutchman et al. 2001).

Contribution of individual authors:

Research design: Gabor Gazdag, Anna Antosik-Wójcińska & Adam Wichniak;

Data collection: Anna Antosik-Wójcińska, Adam Wichniak & Beata Majtczak;

Statistical analysis and data interpretation of data: Adam Wichniak & Anna Antosik-Wójcińska;

First draft: Anna Antosik-Wójcińska, Adam Wichniak & Gabor Gazdag;

Critical revision: Janusz Rybakowski, Paweł Gosek & Łukasz Świącicki;

Final version of the manuscript: Anna Antosik-Wójcińska (approval of the final version) & Gabor Gazdag (approval of the final version);

Anna Antosik-Wójcińska accepts responsibility for the integrity of the work as a whole from the design to the published article.

Appendix:

Attitude and Knowledge about Electroconvulsive Therapy (ECT) Questionnaire can be obtained from the first author.

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Correspondence:

Anna Antosik-Wójcińska, MD, PhD
Second Department of Psychiatry, Institute of Psychiatry and Neurology
Sobieskiego 9, 02-957 Warsaw, Poland
E-mail: aantosik@ipin.edu.pl