

Background: Electroconvulsive Therapy (ECT) has been used for over 80 years to treat a range of mental illnesses including: depression, bipolar disorder, and schizophrenia (Krzewicka-Romaniuk et al., 2020). However, its role remains controversial (Aki et al., 2013). Stigma and lack of training about ECT is prevalent in medical students and the general population (Kitay et al., 2020) Often there is a lack of information about ECT in medical students' education. Studies have shown that educational material and direct observation can improve knowledge and reduce stigma (Aki et al., 2013)

Methodology: The 1 hour, online educational resource was created by a multi-disciplinary team with special interest in ECT. It contained a range of asynchronous learning materials including written information, videos, case studies, quizzes, and contributions from people with lived experience of ECT. Content focused on the safe delivery of ECT, along with indications, contra-indications, potential benefits and adverse effects, and stigma. **Medical students were asked to complete an online anonymized questionnaire before and after the course.** Ethical approval was obtained from the MVLS Ethics committee.

Aim: To explore 4th and 5th year medical students' knowledge and attitudes towards ECT before and after exposure to an ECT educational resource.

Results: 46 medical students completed the pre-course questionnaire, and 30 completed the post-course questionnaire. In the pre-course questionnaire, medical students with personal experience of mental health problems (loved-one or self) tended to have more positive attitudes towards ECT and higher knowledge scores. Students considering specializing in psychiatry had higher knowledge and attitude scores. **Gender was not a factor in the knowledge or attitudes of students.** 9 students reported no knowledge of ECT and nearly 1/3 of students were not aware that ECT caused a seizure (32.6%, n=15).

A statistically significant increase in knowledge scores were found post-course questionnaire (15.80 vs. 21.17, p<0.001).

A statistically significant increase in attitude scores were found post-course questionnaire (16.87 vs. 21.80, p=0.032).

After the course, all students agreed that ECT is useful in treating mental illness, compared with (93.5%, n=43, p<0.001). 93.3% (n=28) students recognized that there is significant scientific evidence for ECT. The effectiveness of ECT (p=0.033), and that it is at times lifesaving (p=0.689). After the course, all students agreed that they would recommend ECT for a patient if clinically indicated (100%, n=30, p=0.041)

Question	Agreement pre-teaching % (n=46)	Agreement post-teaching % (n=30)	P-value
ECT is the worst treatment option under any circumstances	4.3% 2	0.0% 0	0.247
ECT is a cruel treatment	6.5% 3	0.0% 0	0.154
ECT is more likely to be beneficial than harmful	67.4% 31	83.3% 25	0.122
I would recommend ECT for a patient if indicated	80.4% 37	96.7% 29	0.041
ECT is an embarrassing experience contributing to the stigma of mental illness	4.3% 2	0.0% 0	0.247
People should not be afraid of ECT	73.9% 34	93.3% 28	<0.005
I am not opposed to its use, but I would not recommend it to my patients	4.3% 2	0.0% 0	<0.005
ECT is a frightening treatment to have	58.7% 27	43.3% 13	0.190
Sometimes ECT may be preferable to alternative treatments	78.3% 36	93.3% 28	0.025

Discussion: In this sample, the increase in scores for attitudes and knowledge appeared to indicate that the ECT course improved knowledge and reduced negative attitudes.

Limitations: The questionnaire was not piloted prior to the study. Response rate was low, with less medical students completing the post-course questionnaire compared to the pre-course questionnaire. Due to the study occurring in a single university, the findings cannot be generalized.