

Pir, Religious Leader, Molvi, Imam or Religious Cleric) while only 1/5 of the patients approached to psychiatrists for treatment of first psychotic episode. The mean time duration to approach to psychiatrist after first episode psychosis was reported to be 73 ± 38 months (around 6 years).

Conclusion. The study showed that most frequent source of health care for psychiatric patients were faith healers (Aamil Baba, Witch Doctor, Pir, Religious Leader, Molvi, Imam or Religious Cleric) as compared with one-third who went to qualified healthcare providers like psychiatrists or physicians. There is a huge delay in proper help seeking among psychiatric patients. Health education aiming at increasing awareness among general population regarding treatment options for psychiatric illness is recommended to improve the quality of life of people living in our locality.

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Determinants of Physical Health Outcomes in Individuals With Schizophrenia, Schizoaffective Disorder, and Bipolar Affective Disorder

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Aims. Individuals with schizophrenia, schizoaffective disorder, and bipolar affective disorder have higher rates of cardiometabolic disease and have a reduced life expectancy compared with healthy controls. These mental health conditions are highly heritable and neurodevelopmental copy number variants (CNVs) are known to increase the risk of these disorders. Neurodevelopmental CNVs have also been associated with a range of cardiometabolic disorders. The aim of this research was to examine the relationship between neurodevelopmental CNVs and cardiometabolic disease in individuals with schizophrenia, schizoaffective disorder, and bipolar disorder.

Methods. Using data from the UK Biobank, a group of individuals with schizophrenia, schizoaffective disorder and bipolar affective disorder was defined ($n = 2,611$) based on first-occurrence data. CNVs had previously been called using PennCNV and a set of 53 neurodevelopmental loci annotated. I carried out association analyses between neurodevelopmental CNVs and cardiometabolic disease phenotypes using logistic regression with age and sex as covariates.

Results. There was a higher frequency of ischaemic heart disease, hypertension, obesity, and type 2 diabetes mellitus in individuals with schizophrenia, schizoaffective disorder and bipolar disorder than in controls. 2.1% of individuals with these mental health conditions carried a neurodevelopmental CNV. Carrying a neurodevelopmental CNV was significantly associated with type 2 diabetes mellitus (OR = 1.94, 95% CI 1.09–3.57, $p = 0.025$). However, this result did not survive Bonferroni correction for four tests (p value threshold 0.0125). I did not find any mediators of the neurodevelopmental CNV – type 2 diabetes mellitus association (of obesity, hypertension, cognition, smoking and socioeconomic status).

Conclusion. The relationship between neurodevelopmental CNVs and type 2 diabetes mellitus should be examined in independent samples.

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Efficacy of Transcranial Magnetic Stimulation (TMS) on Negative and Cognitive Symptoms in Schizophrenia – a Systematic Review and Meta-Analysis

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Aims. Traditional antipsychotic treatment improves positive symptoms in schizophrenia but has little impact on negative and cognitive symptoms. TMS is a non-invasive neuromodulation technique which has been suggested to impact negative and cognitive symptoms of schizophrenia. This systematic review critically appraised the research evaluating the effect of TMS on negative and cognitive symptoms of schizophrenia. Furthermore, we carried out a meta-analysis of randomised controlled trials of the effect of TMS on negative symptoms in schizophrenia.

Methods. Systematic review was carried out according to PRISMA guidelines. Cochrane Library, Ovid Medline, Science Direct and PubMed databases were searched for relevant studies using the search terms: “transcranial magnetic stimulation” OR “TMS” OR “repetitive transcranial magnetic stimulation” OR “r-TMS” OR “theta burst stimulation” OR “TBS” AND “negative symptoms” OR “cognitive dysfunction” OR “cognitive impairment” AND “schizophrenia” OR “psychosis”. Only randomised controlled trials evaluating the effect of TMS (rTMS or iTBS, intermittent theta burst) on negative and/or cognitive symptoms in schizophrenia were selected. Thirty-three studies were included in the systematic review. The Standardised mean difference (SMD) with 95% confidence interval (CI) was calculated for each study and pooled across studies using an inverse variance random effect model.

Results. Sixteen studies demonstrated significant improvement in negative symptoms with a superior effect of TMS compared with sham intervention. Eight studies showed improvement in certain domains of cognition and one study showed a delayed effect on negative symptoms. Studies which showed positive effects on negative symptoms have used similar TMS parameters such as 10 Hz over L-DLPFC (Left dorsolateral prefrontal cortex) except for a few studies. Ten studies reported negative results for negative and/or cognitive symptoms, TMS parameters and duration of treatment used varied among these studies. Overall, SMD for SANS (Scale for Assessment of Negative Symptoms) was 0.89 (95%CI: 0.46–1.32, $P < 0.00001$) and for PANSS-N (Positive and Negative Syndrome scale-negative) was 0.67 (95%CI: 0.22–1.12, $P < 0.00001$), both in favour of TMS. The heterogeneity of the included studies was high, I^2 = 85% for SANS and 92% for the PANSS-N subscale with a small to moderate risk of publication bias.

Conclusion. High-frequency rTMS is more effective than sham in improving negative and cognitive symptoms in schizophrenia. Our results suggest the need for well-designed randomised controlled trials with larger sample sizes and standard harmonised cognitive assessments to assess the effect of TMS on negative and cognitive symptoms to provide sufficient evidence for inclusion in routine clinical practice.

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Introduction of High-Fidelity Simulation (HFS) for Teaching Undergraduate Medical Students About Electroconvulsive Therapy (ECT) and Its Impact on Their Knowledge and Attitudes Towards ECT

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Aims. Learning about and appreciating the use of Electroconvulsive therapy remains an integral part of the undergraduate psychiatry curriculum. The existing literature indicates that medical students frequently have unfavourable views regarding ECT and its adverse effects.

Therefore, this study aimed to introduce a new teaching tool that supplements traditional didactic ECT teaching with simulation-based procedural demonstration thus providing a real-life experience of an ECT room and subsequently evaluate the learning gains conferred by such a curriculum.

Methods. The demonstration was carried out by Clinical teaching Fellow with the help of a high-fidelity manikin and a live actor who played the role of the patient, in the ECT suite in Birmingham.

Participants of the study were fourth year medical students who completed a self-administered questionnaire before and after the simulation session. This survey was designed to explore changes in knowledge, attitudes, and perceptions of the students towards ECT and its side effects.

Results. Within a cohort of 88 students, 52 students successfully completed the pre-session questionnaire, and 43 students completed the post-session questionnaire. Students reported a global improvement in knowledge regarding ECT, when comparing results from both questionnaires. Prior to the simulation, many students used negative terms to describe ECT such as 'torture', 'barbaric' and 'uncontrolled', suggesting outdated stigmas around ECT. However, after the simulation, many students expressed a positive change in opinion, describing ECT as 'controlled', 'beneficial' and 'effective'.

Additionally, students reported improved knowledge about the side effects of ECT, especially regarding pain, memory loss and brain injury. Many students reported that their initial apprehension had been addressed over the course of the ECT simulation. Many noted ECT was more effective and beneficial than originally thought and the process was less extreme and invasive than they believed.

Conclusion. The results of the study reflect that the use of simulated ECT within medical students can help disperse some of the stigma and myths regarding this treatment. Simulation can humanise the process and shift attitudes around ECT by allowing students to become fully immersed into an almost real-life scenario. It can also address knowledge gaps around ECT indications, process, risks, side effects and benefits. This will in turn help educate future clinicians have a better understanding about ECT in the treatment of severe mental illness, thus optimising the utilisation of this effective treatment. Furthermore, such technique can be a useful tool for demonstrating ECT to potentially wider group of students, trainees and other health practitioners.

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Technology Enabled Remote Monitoring in Schools (TERMS): A Case Study Series Using Parallel Testing in Clinical Settings and School Workshops

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Aims. The TERMS (Technology Enabled Remote Monitoring in Schools) project aimed to elucidate the operational dynamics of remote monitoring with bluetooth-enabled physical health monitoring devices. The focus was on measuring key parameters such as usage, perceived value, accuracy, and satisfaction among patients, their families, and healthcare staff. Additionally, we sought to explore the potential future integration of remote monitoring in educational settings through school site workshops.

Background. Digital healthcare has become an indispensable part of effective healthcare provision on a global level. Remote monitoring is the use of technology, to monitor patients outside of a clinical setting with the help of medical devices, questionnaires, and clinical dashboards, allowing clinicians to review the data to assist in clinical assessment and decision-making. While this method is already established for conditions like Diabetes and Asthma it is not for other conditions like ADHD. This is especially a challenge for the younger demographic.

Schools are pivotal for promoting student well-being and early interventions, leading to reduced negative outcomes like exclusion and school absence and enhanced academic attainment. The TERMS project strives to bridge the gap between education and healthcare by collaborating with schools and clinicians. This is in alignment with the digital and data strategy for health and social care in Wales as outlined by the Welsh Government(2023).

Methods. This study had 2 parts:

Clinical Site Testing:

Blue tooth-enabled clinical monitoring device readings were obtained after they were monitored first with traditional clinical monitoring devices. Additional qualitative feedback was also obtained.

Educational Workshops:

Workshops were carried out with students and teaching staff to collect qualitative and quantitative feedback on the remote monitoring equipment and patient-facing dashboard. This also set out to determine if remote monitoring in schools is feasible and how it could be implemented.

Results. A total of 47 clinical patient cases were included. The accuracy of the bluetooth-enabled device readings and those of traditional equipment were compared. Analysis of the qualitative data revealed useful domains and subdomains of opinions along with the user-friendliness of the software interface.

Conclusion. Overall, we have identified that patient and family perception of remote monitoring is positive, suggesting an improved/comparable level of care for their condition. Additionally, school workshops highlight that this service could be implemented within a school setting. As long as considerations were made for who would conduct the remote monitoring and what the role of the school would be.

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