Letter to the Editor
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Comparing the antidepressive effect of electroconvulsive therapy (ECT) versus transcranial magnetic stimulation (TMS) in the treatment of patients with depression

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Dear Editor,

We read with great interest the article entitled "Comparing the antidepressant effect of electroconvulsive therapy (ECT) versus transcranial magnetic stimulation (TMS) in the treatment of patients with depression" by Oxana Chigareva (Chigareva et al., 2023). The article's quest for systematic reviews of the therapies is beneficial, and readers should commend the thorough work done on this important topic. This article focuses on the practice of ECT which involves stimulating the brain with electricity under anesthesia, causing a seizure. TMS uses magnetic pulses to stimulate the brain without causing seizures or requiring anesthesia (Lisanby et al., 2000). However, a few additional elements could have strengthened the article.

Firstly, this study compares the efficacy of ECT and TMS but a relatively small number of studies have been included that are 14 from 391 articles as mentioned in the methods section of the article. This leads to reduced statistical power and as a consequence, the results are not representative of the entire population of patients with depression. The authors should've addressed the publication bias, which could've overestimated the effects of ECT and TMS on depression. To overcome this, the authors must incorporate funnel plots in the study (Van der Willik et al., 2021). Funnel plots are considered a suitable graphical method to present information on hospital performance in comparison to a reference standard and by taking random variation into account. The authors must do comprehensive literature searches on all studies available even those with negative findings or post-treatment missing data, and should mention it in this study.

In the results section, assessment tests (e.g., HDRS, MADRS) are only sometimes reported. The study by Siddiqi et al. published in 2019 should not be included in Table 2 as all others include HDRS as an assessment test but this study includes only MADRS, hence not resulting in a fair test. Similarly, the study by Basso et al. published in 2020 and Schoeyen et al. published in 2015 should not be included in Table 3 for the same reason. The assessment test affects the observed sample size and it leads to biased comparisons. If these studies are included, then it is mandatory to conduct a sensitivity analysis that shows the impact of using different assessment tools on the outcome of the study. Sensitivity analyses play a crucial role in assessing the robustness of the findings or conclusions based on primary data analyses in clinical trials (Thabane et al., 2013).

The article mentions studies using various TMS protocols such as frequency, coil type, number, and duration of sessions which is highly appreciated. However, subgroup analysis could assess if a specific protocol is more effective for achieving remission in patients with severe depression compared to others hence, readers can gain a deeper understanding of how TMS and ECT work for different patient profiles, leading to more informed and personalized treatment decisions (Shi et al., 2024). The study does not provide any information regarding patient heterogeneity which should be included based on the severity of depression, post-treatment depression, and other comorbidities. The study must include factors that influence treatment outcomes such as the severity of depression, and the adverse side effects endured by the patient after treatment through ECT or TMS.

The discussion mentions missing data on coil type in two studies, these can be excluded from the primary analysis, and a sensitivity analysis can be conducted to assess the impact of including or excluding these studies on the overall results. In the conclusion, the authors have highlighted the need for research on this topic due to the lack of available data and called out for a placebo-controlled crossover study which will be an improvement to the existing literature.

The article offers a valuable overview of ECT and TMS for depression, though limitations in study design, smaller sample sizes, and inconsistent assessment tools restrict the generalizability of findings. Future research should prioritize larger samples, standardized assessments, and detailed protocol reporting to improve the evidence base for these treatments.

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Psychoeducation and mHealth apps: Bipolar disorder management in the post-pandemic world – The BeepMood app

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Dear Editor,

Bipolar disorder(BD) is a chronic and debilitating mental health condition that affects millions globally, posing challenges in both diagnosis and management. Traditional treatments, while effective, often leave gaps that can be addressed through complementary therapeutic strategies in a combined approach. Psychoeducation is one of the complementary strategies recommended (Britvić et al., 2009).

Bessana, 2023 provides a thorough review of the importance of bipolar-specific psychoeducation, while reviewing the manual by Colom and Vieta, 2006. Their effectiveness is well established, and the results have shown reduced hospitalization rates and an overall improvement in quality of life(Dietch, 2015; Bessana et al., 2023). These measures should be implemented early on (Filaković, 2011).

However, like all therapeutic interventions, psychoeducation is not without its challenges. It requires trained facilitators, consistent attendance from participants, and a tailored curriculum that caters to the diverse needs of those with BD. More recently, psychoeducational interventions involving technological tools have been developed, such as the use of dedicated apps (García-Estela et al., 2022; Depp et al,. 2015).

Mental health apps are a rapidly growing category and with high demand. These apps are readily available, inexpensive and used by many patients. However, the great majority are not clinically validated nor use evidence-based information. The development of mHealth smartphone apps should assess consumer needs in its development (Nicholas et al., 2015) and their efficacy has been addressed by recent systematic review (Anmella et al., 2022).

Their value proved remarkable during recent pandemic times, where social interaction and group settings were discouraged by local health authorities. After more than 10 years of providing psychoeducational groups and in order to improve accessibility we developed the BeepMood app, the first european portuguese mHealth app developed with