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COMMENTARY

A study of ECT on 278 children and adolescents; methodological, conceptual, and ethical concerns

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A study of ECT on 278 suicidal children and adolescents aged 12–17 (Chen et al., 2022) reports a 52% response rate and an "acceptable" level of adverse effects. However, the paper contains serious methodological flaws and ignores important conceptual and ethical issues.

1 | METHODOLOGICAL PROBLEMS

All the participants were also receiving antidepressants. Many were also taking antipsychotics (46%), and some were on mood stabilizers (11%). How many were on benzodiazepines is unclear. This is reported as "most" in the abstract, and 23% in table 1 (Chen et al., 2022); and the most frequently prescribed benzodiazepine was reportedly being taken by 29% of the participants. Since participants were on between one and four psychiatric drugs, little can be concluded about which, if any, of the five interventions (four drugs plus ECT) were responsible for outcomes. The authors, however, attributed the reported improvements entirely to ECT.

The authors do not state when the antidepressants were started. If they were started about the same time as the ECT (which seems likely given the participants' relatively high pre-ECT depression scores), it would be impossible to tell how much of the response was due to ECT. The results cannot be interpreted as an effect of ECT without this information.

There was no placebo or control group; therefore, the contribution of placebo to the responses cannot be determined. The high levels of care and attention, and strong expectations, involved with ECT produce substantial placebo effects (Rasmussen, 2009; Read et al., 2019; Ross, 2006).

The evaluation of side effects has several methodological limitations. Memory loss was estimated by "interview" and "observation," not by standardized tests of cognitive functioning (Robertson & Pryor, 2006). It is not stated how long after ECT memory was evaluated. It is not reported whether any evaluation of memory occurred prior to ECT, without which any evaluations after ECT are hard to interpret. The interviews estimating memory loss were conducted by the "psychiatrist who applied ECT" rather than by an independent rater.

The Clinical Global Impression scale (a one-item subjective assessment of degree of unwellness) was also completed by the treating psychiatrists. It is not stated whether the treating psychiatrists also completed the Hamilton Depression Scale. There was no mention in the Limitations section of the need for independent raters of treatment response and adverse effects.

2 | CONCEPTUAL PROBLEMS

No information is provided about the participants' life histories or current circumstances. There is no reference to any trauma or adverse childhood experiences. No mention is made of any prior or ongoing treatment efforts to address these potential causes of the participants' depression, such as individual or family psychotherapy. The authors' decontextualized approach is consistent with no comment being made about the fact that 85% of the participants were girls. This is a highly skewed sample requiring explanation.

ECT is described by Chen et al. as "highly effective" for the treatment of depression. There have, however, been no placebo-controlled studies of ECT for depression since 1985, and all 11 studies prior to that date were very small, severely flawed, and conducted on adults (Read & Bentall, 2010; Read et al., 2019). There have been no placebo-controlled studies on children or adolescents.

3 | ETHICAL PROBLEMS

The use of ECT on adults is controversial (Meechan et al., 2021; Read & Moncrieff, 2022; Read et al., 2018), in part because persistent or permanent memory loss occurs in between 12% (Sackeim et al., 2007) and 55% (Rose et al., 2003) of recipients. Its use on 278 children and adolescents, whose brains were still developing, seems particularly problematic, especially in the absence of any placebo-controlled studies in that age group.

Similarly, it is of concern that all these depressed, suicidal teenagers were given antidepressants. In 2004, the Food and Drug Administration issued a Black Box warning that antidepressants *increase* the risk of suicidality in children and adolescents This has recently been confirmed as being "firmly rooted in solid data" (Spielmans et al., 2020). Government guidelines in the United Kingdom state that, "A child or young person prescribed an antidepressant" (which must only happen "in combination with concurrent psychological intervention") … "should be closely monitored for the appearance of suicidal behaviour" (NICE, 2019).

It is of equal concern that nearly half of these young people were also on antipsychotics, which have serious adverse effects in adults, especially since none had a psychosis-related diagnosis (table 1 inChen et al., 2022). When one considers the fact that "most" of the participants were also on benzodiazepines, these young people were receiving a high level of polypharmacy.

We n ote that 9% of the participants had "cardiovascular disorders." None of these 25 participants were excluded from the study, despite cardiovascular failure being the leading cause of ECT-related deaths (Lindblad et al., 2023; Read et al., 2019).

Readers are not told how many of the children and adolescents who were asked to participate agreed, and how many declined. That raises questions about whether they genuinely had a choice and, if they did, was it a genuinely informed choice? Readers are left wondering what they, and their caregivers, were told about ECT and its various potential adverse effects. Furthermore, we are not told what happened if the children and adolescents declined but their caregivers agreed?

Despite the potential minimizing bias of having the administrators of a treatment estimate its adverse effects, 68% of the participants were reported to have suffered memory problems as a result of the ECT. Furthermore, 34% of the participants were reported to experience delirium. This was interpreted as evidence that the level of adverse effects from ECT for children and adolescents is "acceptable" and that ECT is "a safe choice". We disagree.

4 | CONCLUSION

Conducting research on psychiatric treatments is always a good idea, and the authors are to be commended for their efforts. However, there are so many methodological flaws and conceptual problems that no conclusions can be drawn about the contribution of ECT to the results. We hope that the paper will not be cited as providing evidence that ECT is "safe and effective" for children and adolescents. The paper does not demonstrate that that is the case. It does raise ethical concerns about the well-being of the children and adolescents involved.

CONFLICTS OF INTEREST

John Read has been a paid Expert Witness in two ECT legal cases, in the USA and Canada. The other authors declare no conflict of interest.

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PEER REVIEW

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