WARNING: MEDICAL RECORDS ABOUT ECT-INDUCED MEMORY IMPAIRMENT MATTER

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A study at Zhengzhou University Hospital in China (Li et al., 2023) reported that 76 of 110 teenagers (69 %), average age 15.5 years, suffered 'memory impairment' because of ECT.

I subsequently wrote (Read, 2024) to raise multiple concerns about the study, not least the worrying fact that the researchers thought this extraordinary rate of impairment somehow represented a 'high' level of safety.

In a further letter, 11 US psychiatrists and academics (Ghaziuddin et al., 2024) have written to argue that severely disturbed teenagers should have 'ready access to ECT'. They claim that the 69% rate of memory impairment was 'not a valid representation of cognitive effects of ETC and should not be viewed as clinically meaningful, as was subsequently claimed in a subsequent response by Read (2024)'. They support their position by suggesting that the memory impairment was assessed by what they call 'investigator-driven medical record review without any operational definition'.

It is rather unclear how the researchers measured the impairment. All they wrote was 'We recorded the side effects of all depressed patients during and after ECT' and 'When collecting the clinical data of patients, the data were reviewed by two authors against the medical records' (Li et al.).

Let us grant that Ghaziuddin and colleagues are correct to assume that medical records were reviewed for side effects as well as for signs of improvement. It is still unclear to me why medical staff recording some form of 'memory impairment' in 69% of files 'should not be viewed as clinically meaningful'. What can be more clinically meaningful than the reports of the clinicians involved in the care of patients? Medical notes are, of course, somewhat subjective. But medical records should not just be swept aside as irrelevant when they reveal inconvenient facts. One might even hypothesise that the rate of adverse effects recorded by the same people who prescribe and administer a treatment might, if anything, be biased against full reporting and thereby, in this case, underestimate the true rate of memory impairment.

Ghaziuddin and colleagues are right to point out the lack of an operational definition for 'memory impairment' in the Chinese study. And yet they uncritically highlight the 81% 'improved' or 'very much improved' scores on the 'Clinical Global Impressions-Improvement scale (CGI-I)' as evidence of efficacy. The CGI-I consists of the subjective opinions of raters, often the psychiatrists who prescribed the treatment, on a single seven point scale, with no operational definition of improvement.

Ghaziuddin and colleagues chose not to respond to any of the other concerns I raised, listed here:

- The lack of a placebo group, rendering Li and colleagues' efficacy claims relatively meaningless
- The absence of *any* placebo-controlled studies since 1985 (Read et al. 2019)
- Li and colleagues' claim that the memory impairment was 'transient', without any follow up data to verify that

- Their failure to address the social context of these very depressed young people
- The dangers of passing electricity through, and causing convulsions in, the developing brains of children and adolescents
- Another, similar study (Chen et al., 2022) finding a very similar rate (68%) of memory problems in Chinese adolescent ECT recipients (and the fact that both samples were mostly girls) (Read et al., 2023)
- The fact that Guidance by the World Health Organisation and the United Nations states: 'People being offered ECT should also be made aware of all its risks and potential short- and long-term harmful effects, such as memory loss and brain damage. ECT is not recommended for children, and this should be prohibited through legislation.' (W.H.O & U.N., 2023, p. 53)

On a more positive note, unlike in China (Chen et al.; Li et al.), only about 1% of people given ECT in the USA and the UK are under 18 (Castaneda-Ramirez et al., 2022; Read et al., 2021). Since only 2% of US psychiatrists ever use ECT at all (Kellner et al., 2019), the number using ECT on adolescents and children is, fortunately, miniscule.

Reports of two thirds of young people sustaining memory impairment from ECT, however that impairment is assessed, should not be so lightly dismissed. Nor should the very real dangers of repeated administration of electricity, and of the consequent repeat convulsions, especially at a time when brains and bodies are still maturing.

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