Understanding Patient and Public Perceptions about Psychiatric Electroceutical Interventions and Their Effect on Self

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BACKGROUND
One ethical question about psychiatric electroceutical interventions (PEIs) – therapies that use electrical or magnetic stimulation of the brain to treat psychiatric disorders – is whether their use might affect some aspect of patients’ selves or their personality. Neuroethicists have mainly considered this question with respect to deep brain stimulation (DBS), given documented cases of striking personality changes post-surgery. However, very little discussion exists around interventions (PEIs) – therapies that use electrical or magnetic stimulation of the brain to treat psychiatric disorders – is whether their use might affect some aspect of patients’ selves or their personality. Neuroethicists have mainly considered this question with respect to deep brain stimulation (DBS), given documented cases of striking personality changes post-surgery. However, very little discussion exists around similar effects of other PEIs, e.g., electroconvulsive therapy (ECT) or transcranial magnetic stimulation (TMS). In this study, we sought to capture the perspectives of psychiatrists, patients, and members of the public about the effect of PEIs on the self.

METHODS
- Participant group 1: Patients who had been diagnosed with MDD (n=16)
- Participant group 2: Members of the general public who had not been diagnosed with MDD and who were not psychiatrists (n=16)

With medication and DBS for movement disorder participants

RESULTS

Perceived effect of PEIs on personality and sense of self

- Alleviate depressive symptoms
  - “So ultimately when you’re feeling less depressed, you’re going to be in a better mood and perhaps that would be reflective of your personality, too, over time that people see you as an outgoing, friendly person.” (Patient 03; DBS)

- Treatment failure/ side effects
  - “I think it could be very damaging to their sense of self, especially if they felt a failure in treatment.” (Public 06; ECT)

- Memory loss with ECT
  - “I think sense of self, the biggest thing is that with the short-term memory loss, if that is like very prominent in it, even that can make you feel kind of different by yourself.” (Public 03; ECT)

- Mental illness causes changes to self
  - “I feel like in the same sense as all of them, especially when you’re treating a mental illness, I feel like all of ‘em are going to affect your sense of self and like your personality in some sense just because I feel like mental illness really affects that in a sense, so when you treat that you’re going to see effects either way.” (Public 01; DBS)

Comparisons to common treatments

- Self-reflection
  - “I think psychotherapy would have a more changing effect on your personality from my point of view at least because you’re meeting with someone to talk about your personalities, habits, and the way that you go about your world.” (Patient 11; ECT)

- Location/ specificity
  - “I think it’s just a more dramatic effect so you’re directly stimulating – you’re directly changing the firing patterns of the neurons. Whereas when you’re taking the medication, if it’s the SSRI or whatever, it’s having like a marginal chemical effect on the neurotransmitters.” (Patient 16; DBS)

- Site of stimulation
  - “I think that it’s higher for [depression] just because of the difference in targeting. I do think that depending on the target, it can have a much greater likelihood of effecting your personality.” (Patient 01; DBS)

- DBS for movement disorder

- Medication

- Psychotherapy

Comparisons to common treatments:
- The majority of patients and members of the public believed PEIs potential to positively or negatively effect sense of self depended on the success or failure of alleviating depressive symptoms.
- Memory loss with ECT was connected to a negative effect on self suggesting people feel memories make up a key component of who you are.
- Similar to how previous scholars have argued that changes to self are to be expected when treating a mental illness, some participants were uncertain as to whether the changes to self are positive or negative, arguing that mental illness causes changes to self.

DISCUSSION

Perceptions of PEIs:
- The majority of patients and members of the public believed PEIs potential to positively or negatively effect sense of self depended on the success or failure of alleviating depressive symptoms.
- Memory loss with ECT was connected to a negative effect on self suggesting people feel memories make up a key component of who you are.
- Similar to how previous scholars have argued that changes to self are to be expected when treating a mental illness, some participants were uncertain as to whether the changes to self are positive or negative, arguing that mental illness causes changes to self.

Comparisons to common treatments:
- Some participants emphasized that psychotherapy involves the patient more by talking about/reflecting on the self which would cause more meaningful changes to self than PEIs.
- With medication and DBS for movement disorder participants talked about the specificity/location of neural effects and the permanence of the effects as influencing aspects of personality.

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