Reducing Patient Anxiety with Use of Music During Electroconvulsive Therapy

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PURPOSE

Electroconvulsive therapy (ECT)-related anxiety is a common but distressing psychological complication of ECT. Decreased levels have been shown to result in decreased depressive symptoms. Despite this, ECT-related anxiety often goes untreated. Music is a non-invasive and relatively simple intervention that has been shown to decrease stress physiologically and psychologically in a variety of situations, including prior to ECT. The purpose of this quality improvement project was to implement a music intervention to decrease the severity of ECT-related anxiety among ECT outpatients in an urban hospital in Minnesota.

Problem & Significance

ECT has existed for over 70 years. Despite this, it's one of the most misunderstood and controversial medical treatments. Years of research have contributed to ECT becoming a safe and relatively well-tolerated procedure for treatment-resistant mental health conditions(1). Anxiety has been labeled as the most distressing psychological complication of ECT(2).

Literature Review

- Non-pharmacological interventions include: music, aromatherapy, a support person prior to the procedure, movies, relaxation techniques, media or face-to-face education on ECT, and animal-assisted therapy.
  - Music is straightforward, doesn't take much time, and has fewer barriers to participation.
- Music decreases stress by decreasing cortisol levels, heart rate, mean arterial pressure, and by influencing brain activity.
- Two studies found a significant decrease in ECT-related anxiety by implementing a music intervention.

Specific Goals

- Decrease the severity or frequency of anxiety among at least 70% of ECT outpatients.
- Reduce the number of canceled ECT appointments by 50%.

Guiding Frameworks

- Katharine Kolcaba's Theory of Comfort
  - Providing headphones to play music promotes comfort by decreasing anxiety during ECT appointments.
- Roger's Five-Stage Change Theory
  - Guides the process for implementing and evaluating the proposed intervention.

Gap Analysis

- ECT is underutilized due to regulations, fewer hospitals offering ECT, misconceptions and stigma, and public disapproval.
- Three studies examined ECT-related anxiety during treatments(2).
  - In those studies, the prevalence of ECT-related anxiety was verbalized between 25-75% of patients.
  - None of the studies attempted to quantify ECT-related anxiety.
- The chosen organization did not have a process for addressing ECT-related anxiety among patients.

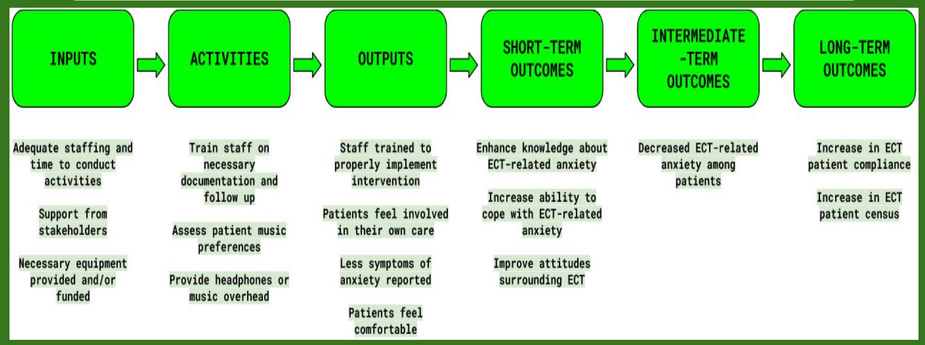
METHODS

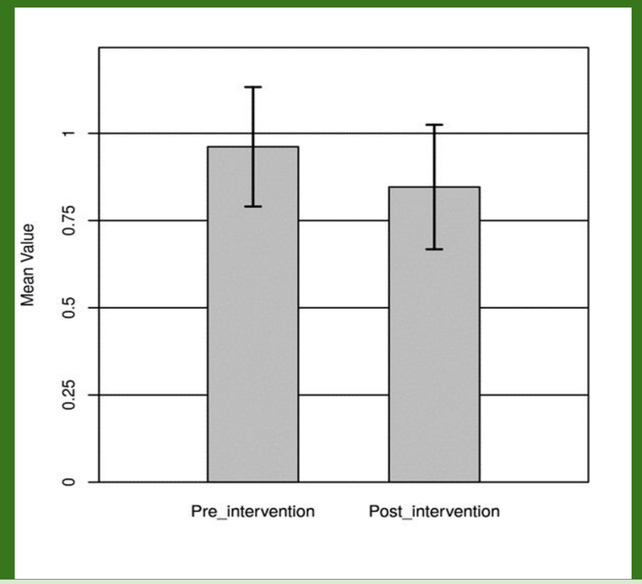
ECT nurses were educated on the purpose and process of the project. Nurses offered and encouraged patients to use headphones to listen to music in the lobby prior to ECT treatments. The patients who opted to listen to music were tracked in the ECT appointment book. The presence, absence, or severity of anxiety is routinely assessed and documented in the EHR by the nurses prior to ECT treatments. This documentation will be coded and scored. Anxiety scores will be compared prior to and after implementing the intervention to determine if headphone use was impactful on levels of ECT-related anxiety.

RESULTS

A report with anxiety charting and patient MRNs were provided by the quality improvement department electronically. Patient anxiety scores were coded, MRNs deleted, and scores transferred to the coded patient anxiety spreadsheet. Scores were compared prior to implementation and subsequently every treatment. The ECT appointment book was used to measure the number of patients participating and the number of canceled appointments. Staff perceptions of the project were verbally assessed with a series of questions after implementation.

The result of the two-tailed paired samples t-test was not significant based on an alpha value of .05, $t(25) = 1.36$, $p = .185$, indicating the null hypothesis cannot be rejected.





- 90% of patients reported anxiety during the project.
- 36 patients were treated, but only 26 patients had more than one treatment in the 4-week time period.
- There were 14 cancellations 4-weeks prior to implementation and 15 cancellations after.
- Four patients experienced a reduction of anxiety and one had increased anxiety.

CONCLUSION

Impact on Practice & Project Sustainability

- Increased knowledge and awareness about ECT and ECT-related anxiety.
- Headphones will continue to be available for patients.
- Based on the results from this project, I recommend implementing a more in depth anxiety screening for this population to better understand and treat anxiety.
- The ECT department could consider generating a list of preferred music genres if they decide to continue offering headphones.

REFERENCES

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2. Obbels, J., Vansteelandt, K., Verwijk, E., Lambrichts, S., Bouckaert, F., & Sienaert, P. (2020). Understanding electroconvulsive therapy-related anxiety: A prospective study. Acta Psychiatrica Scandinavica, 142(2), 132–140. https://doi.org/10.1111/acps.13198