An Indigenous Framework on Brain Computer Interfaces Technology

Solomon, M. & Chau, T.

Background

What is assistive technology?

What is BCI technology?

What is missing?
- An Indigenous perspective
- Risk that BCI advancements will not support the unique needs of Indigenous communities.
- May guide further understanding of interpersonal synchrony, the tendency for people to become attuned to each other, especially in the context of a social interaction.

Objectives

(1) To amplify Indigenous voices with regards to state-of-the-art assistive device research.
(2) Expand our understanding of the universal need for human connection/interdependence across spiritual, mental, physical, and emotional domains and clarify the role of the brain in this circle.
(3) Understand Indigenous views of assistive technology generally and brain-computer interfaces specifically.

Research Questions

- What traditional teachings might relate to AT/BCI?
- What is the Indigenous perspective with regards to disability and AT/BCI?
- What are the common disabilities within Indigenous communities in Ontario?

Methods

Eligibility criteria
- Identify as Indigenous with lived experiences with regards to having or living with someone with a disability.
- Indigenous knowledge keeper (ie: Elders, Medicine person, Spiritual healer…)

Three groups will participate in a sharing circle which may last up to 3 hours.

Group 1 - Youth
Group 2 - Adults
Group 3 - Knowledge keepers

Analysis

- An inductive thematic content analysis
- The sharing circles will be recorded and notes will be taken throughout the sessions.
- The researcher, student, and lead facilitator will identify common themes.
- The identified themes will be presented to the participants, via sharing circles, to include participants throughout research process and confirm that what they share belongs to them and they have the right to choose what will be included in the final report.

Dissemination

- The participants will have the opportunity to choose how the results will be presented (ie: art-based information sharing…)
- The aim is to publish the results with feedback from the participants.
- The results could be shared with Indigenous leadership in upcoming conferences.
- At the end of the project, there will be a presentation and a traditional feast to honour the participants.

Conclusion

The stories from the participants will help build a strong foundation to an Indigenous framework with regards to BCI technology. Hearing from families and those with lived experiences with regards to severe disabilities will inform further development and ensure that Indigenous voices are included.