

Perceived gains of participating in a large vocal stimulation group for people with Parkinson's disease

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1- Context

- People with Parkinson's Disease (PwPD) reported negative consequences related to the COVID-19 confinement (e.g., increased anxiety and symptoms^{1,2}).
- To break the isolation of PwPD and foster a minimum of vocal activity despite confinement, our team developed the activity *Musculatation de la Voix* (MdIV) in partnership with Parkinson Quebec.
- MdIV is a daily online vocal practice group offered since April 2020 and gathering an average of 51 participants each day.

2- Objective

- Considering the popularity of MdIV, we wanted to understand participants' perceived gain from participating in this activity.

3- Methodology

Participants (n=149) self-perceived gains were explored in a pre-post study design by means of an online survey distributed once at the start of the spring semester and 3 months later at the end. The surveys contained the VHI-10³ as well as multiple choice and open-ended questions focussing on participants' expectations (pre-survey), and perceived outcomes (post-survey).

4- Analyses

- Pre-post VHI-10 scores were analyzed with Friedman's ANOVA. Multiple-choice questions were analyzed by descriptive statistics and open-ended questions were analyzed by means of an inductive content analysis.

4- Participants

- Pre-survey: 66 participants answered the pre-survey, 28 women (42,4%) and 38 men (57,6%). Mean age was 70 years (SD=7,3; Min=48; Max=85).
- Post-survey: 71 participants answered the post-survey, 30 women (42,3%) and 41 men (57,7%). Mean age was 70,25 years (SD=6,8; Min=52; Max=85).
- 30 participants completed both surveys, 13 women (40,63%) and 19 men (59,38%). Mean age was 71,27 years (SD=5,71; Min=60; Max=85).

5- Quantitative results

- 18,2% of the 66 participants who answered the pre-survey had had SLP services before and 60,6% had already participated in former MdIV sessions.
- 69% of the 71 participants who answered the post-semester survey reported positive changes in their communication that they attributed to their participation in MdIV. 53,5% reported MdIV met their expectations and 9,9% that their expectations were not met.
- VHI-10 results for the 30 participants who completed both surveys showed mean pre-scores of 16,94 (SD=8,49; Min=1, Max=35) and mean post-scores of 16,66 (SD=8,57; Min=0, Max=36) (NS). In the subgroup who reported positive changes in communication attributed to MdIV (n=16), a statistically significant decrease in VHI-10 scores was observed (pre: Mean=18; SD=9,28; Min=1; Max=34, versus post: Mean=15,75; SD=7,86; Min=0; Max=30; p=0,012).

6- Qualitative results

Our qualitative analysis of participants' expectations, perceived changes due to MdIV and general appraisal of MdIV revealed three themes: 1) Improvement of speech components perceived by oneself and conversation partners; "*The people who speak to me find that my voice is better and I can speak longer.*"; 2) Vocal knowledge and strategies gained from MdIV: "*Because since I started MdIV, I think of speaking louder and I practice that.*"; 3) Enjoyment felt during MdIV: "*It gave me confidence in the importance of being part of a group of people who face the same difficulties. It's very motivating.*"

7- Conclusion

Our results provide input to the reflection on the linkage and complementarity between community and rehabilitation settings in the continuum of care aimed at the social participation of people with a communication disorder. Moreover, our results also support the role of speech and language pathologists as key actors in creating meaningful community spaces for communication stimulation and communication awareness for and with PwPD. Future studies could study the communicational and social outcomes of MdIV with direct measures and by interrogating communication partners as well.

8- References

1. de Rus Jacquet, A., Bogard, S., Normandeau, C. P., Degroot, C., Postuma, R. B., Dupré, N., ... & Cicchetti, F. (2021). Clinical perception and management of Parkinson's disease during the COVID-19 pandemic: a Canadian experience. *Parkinsonism & related disorders*.
2. Salari, M., Zali, A., Ashrafi, F., Etemadifar, M., Sharma, S., Hajizadeh, N., and & Ashourizadeh, H. (2020). Incidence of anxiety in Parkinson's disease during the coronavirus disease (COVID-19) pandemic. *Movement Disorders*, 35(7) 1095–1096.
3. Arffa, R.E., Krishna, P., Gartner-Schmidt, J., Rosen, CA. (2012). Normative values for the voice handicap Index-10. *Journal of Voice*, 26(4), 462-465.

9- Acknowledgements and contact information

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