

SHORT REPORT:

Effects of Weekly Dance Sessions on Energy Levels of Patients at Royal Hospital for Neuro-disability



INTRODUCTION

Traumatic brain injury (TBI) can cause long-term neurological and electrophysiological repercussions, resulting in the physical and/or cognitive impairments. Dance and music activities and therapies have been shown to improve motor and cognitive functions in many neurological disorders, diseases or injuries such as traumatic brain injury (Kullberg-Turtiainen et al 2019, de Natale et al 2017, Magee et al 2017). Royal Hospital for Neuro-disability, London has partnered with CoDa Dance to deliver weekly dance sessions, designed to have a physically therapeutic benefit, which are based on the multimodal multisensory approach which includes:

- Listening to the music
- Following instructions
- Replicating shown dance movements
- Freestyle dancing
- Interacting with others during the session.

METHOD

To capture and assess the subjective effectiveness of the intervention on the patients, the participants have been asked to report on the energy levels before and after each session using 3-point scale: low (score 1), medium (score 2) and high (score 3) (Bédard et al 2012) during 15 sessions between August and December 2020. If the patient has left the session, or joined after the beginning, for any reason, the score would be 0. This is introduced to reduce the bias. **We hypothesize that there is an increase in energy levels after the dance session when compared to before the session.** Paired t-test statistical analysis was used to test this hypothesis. The data from two wards was analysed separately.

RESULTS

The **results indicate a statistically significant increase in** the mean **energy level** at the end of these 15 sessions **for both wards** Wellesley Ward (P=0.0001) and Chatworth Ward (P=0.0001). Graphical comparison of means and standard deviation at the beginning and end of 15 sessions for each Ward is shown on Figures 1 and 2.

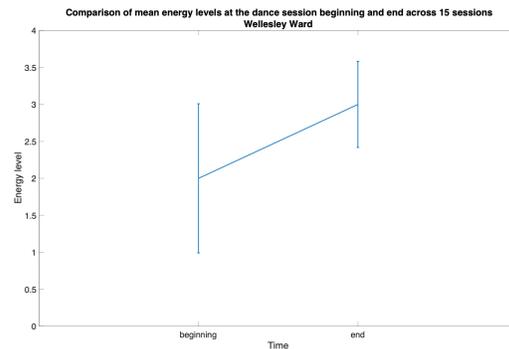
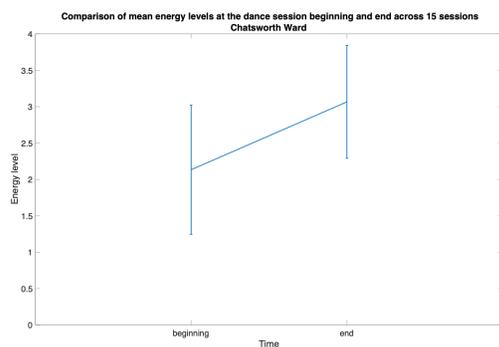
In addition to numerical results, RHN therapists were asked to report on any behavioral observations which might be untypical for the patients. The **reported behavioural outcomes include:**

- Staying awake during the session
- Copying movements
- Paying attention
- Excitement
- Smiling
- Giggling
- Remembering the song
- Feeling great
- Interacting with others.

Reflecting on the effects which traumatic brain injury has on the patients, *these reports are very encouraging and stand as a testimony of subjective cognitive and physical improvements* which patients are reporting.

DISCUSSION

To further understand the impact of the intervention on people with TBI, a follow up pilot study has been designed which will investigate different aspects of quality of life such as motivation, participation, ability to understand and interact with others, feelings, specially tailored of the patients within Wellesley and Chatsworth Wards (von Steinbüchel, et al 2010. Quality of Life after Brain Injury (QOLIBRI): Scale development and metric properties. Journal of Neurotrauma, 27, 7, 1167-1185; EuroQol Group EQ-5DTM). The reporting will be kept as 3-pint scale to accommodate patients' communications abilities.



REFERENCES

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