

their expertise, whereas they are seen by informal caregivers as someone who needs to win their trust. Informal caregivers see themselves as a warrantor for the residents wellbeing, whereas they are seen by professionals as someone who needs to relinquish control over care, so they can return to being the resident's loved one. Although both professionals and informal caregivers ascribe a central role to the resident in the care process, their behaviors unintentionally urge residents towards a more passive role. Residents who are not generally compliant to the norms of the care home appear to view themselves as rebels. These (and more) differences in perceived roles and responsibilities lead to tensions in the co-creative relationships between professionals, informal caregivers, and residents.

**Conclusion:** Professionals, informal caregivers, and residents have differing perspectives on mutual roles and responsibilities in the care process, which hampers their co-creation of good care. This study implies that interventions aimed at improving the co-creation of good care may be focused on those involved first becoming acquainted with each other's perceived roles and responsibilities.

## **P134: Immediate stress responses to music during psychomotor stimulation in 2 study cases with dementia.**

**Authors:** Marlene C. Neves Rosa Sr, Dara Pincegher, Rui Martins, Rui Pedro Jesus, Sr., Susana L. Lopes, Natalia Martins Martins, Emanuel Silva,

**Background:** The use of music in older people with advanced dementia is possible because perception, sensitivity, emotion, and memory of music may remain intact after other types of memory disappear. Previous literature is controversial about stress biomarkers response to music introduction in therapy routines for people with severe cognitive impairment and neural-behavioural disorders. Particularly, for these patients, it is possible that they feel lower pleasure levels with music-based therapies.

**Objective:** To characterize the immediate physiological effects of listening to music during psychomotor stimulation in an old participant with combined dementia and depression disorder and in a participant with a dementia diagnosis.

**Methods:** Two study cases with dementia diagnosis participated in this study (P1: 84yrs; male Parkinson; FAB=9; P2: 85 yrs; female; Alzheimer; FAB=11; depression diagnosis) and were submitted to psychomotor stimulation (2 sessions). The first 20 min. of each session was dedicated to psychomotor stimulation without music (A), followed by 20 minutes with music (B). Heart rate was monitored (H10 Polar sensor) in a continuous mode. Cortisol levels were collected at the beginning of the session (T0) and then repeated at periods A and B ( $\mu\text{g/dL}$ ). The range between minimum and maximum HR values (beats per minute- bpm) and mean values for cortisol levels were considered for the stress response analysis.

**Results:** Salivary cortisol levels were higher at T0 for P1 (0.393 vs 0.203). During period A, the P1 slightly decreased their values ( $\downarrow 0,076$ ) and P2 had no changes. After introducing music, both P1 and P2 increased cortisol levels ( $\uparrow 0,085$ ;  $0,162\uparrow$ ). For both P1 and P2, a wide range of HR was detected during period B (P1: 13 vs 23 bpm) vs (P2: 15 vs 41 bpm).

**Conclusion:** Immediate responses to the music inclusion in a psychomotor intervention caused an augmented stress response in elderly participants with dementia, especially in P2. In specific, the depression diagnosis in this

participant may be associated with a low capacity to handle emotions during new experiences, causing a higher stress response.

## **P135: Electroencephalography-Based Neuro-emotional Responses during interactive scenario therapy in the person with dementia – case study**

**Authors:** Marlene C. Neves Rosa Sr., Dara Pincegher, Emanuel Silva, Susana L. Lopes, Natalia Martins Martins, Filipa Ribeiro, Mariline Ferreira, Duarte Fernandes, Mariana Moreira, Rui Martins, Rui Pedro Jesus, Sr., Alice Gabriel, Rafael Pinheiro

**Background:** Immersive technologies have the potential to control cognitive and behavioural symptoms in people with dementia. A safe environment can be designed through a specific interactive scenario, according to the preferences and experiences of each user.

**Objective:** Mapping neuro-emotional responses during the interactive scenario therapy experience in a case study, with dementia, using electroencephalography (EEG).

**Methods:** A participant, 78 years old and diagnosed with moderate to severe Alzheimer's disease (female; Mini Mental State Examination score of 17 points; frontal assessment battery score of 8 points), underwent EEG analysis (EMOTIV EPOC X) using a protocol with interactive scenarios tailored to the participant's needs and preferences, the scenarios were designed from reminiscence strategies. The protocol included a stimulus that alternated between motor and cognitive activities (3 minutes), and breath-centered relaxation (1 minute). The scenarios used in this study were: setting up a living room; composing a cake recipe; shopping in the market to make a cake; looking for objects in the park; organizing a birthday party. These variables are provided, on a scale of 0 to 100, after processing by the algorithms of the EmotivPRO v3.0 software.

**Results:** The values found in the EEG analysis will be described without stimulus and with stimulus respectively. Thus, engagement (68.57 to 71.86); arousal (57.86 to 49.86), focus (61.57 to 57.00), interest (54.86 to 49.57), relaxation (33.86 to 30.86), and stress (53.71 to 43.00). The EEG data showed an increase in engagement when the patient was stimulated (68.57 to 71.86). Relaxation also increased (30.86 to 33.86) when the stimulus was removed. The stress level, as analysed by the EEG, was also higher in the period without stimulus and reduced in the period with the stimulus (53.71 to 43).

**Conclusion:** During a stimulus period in interactive therapy, there was an increase in engagement, which was related to an increasing focus during the stimulus. Lower values were observed compared to the period without stimulus, indicating a period of recovery after a period of concentration/arousal. Therefore, therapy with an interactive and familiar scenario, using a circuit of stimulus-breathing exercises, promotes a positive and adequate neuro-emotional response in a person with dementia.

## **P141: BRIGHT (Building Resilience in Geriatric Health Today)**

**Authors:** Melissa Hu, Sophie Cheng Xiaolin, Jetaime Muk, Seow Su Yin, Iris Rawtaer