

FC4: Behavioural and Psychological Symptoms of Dementia (BPSD)

The influence of acoustical environmental factors on the behavioral and psychological symptoms of dementia: a participatory observation study in five nursing homes in Flanders (Belgium)

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Introduction: Behavior- and psychological symptoms of dementia (BPSD) occur in persons with dementia (PwD), influencing the quality of life (QoL) of the PwD and the caregivers. In the majority of PwD living in a Nursing Home (NH) in Flanders (Belgium) BPSD occur in the trajectory. Although BPSD are considered as a characteristic of dementia, environmental factors can prevent, reduce, activate or/and reinforce them. Acoustical aspects – as part of the environment - probably play a role in BPSD.

Objectives: This study aimed to explore the acoustical factors that are on the onset and progression of or – on the other hand – prevent BPSD in PwD living in a NH.

Method: Fifteen PwD were included in a 24/7 participatory-observation in five NHs conducted by one researcher. Field notes were taken and subsequently analysed by the team. Results were discussed between the research-team and the NH-professionals of the five NHs to support the iterative analysis-process and the constant-comparative method as has been used. Results then were described in themes.

Results: Factors impacting BPSD were (1) a complex sound environment (e.g. several simultaneous conversations), and (2) PwD's position to the sound-source (e.g. sitting with back to kitchen where meal is served). If they were consistently present they boosted the BPSD. On the other hand, acoustical factors that prevented BPSD were (1) familiar human voices (e.g. voice of husband), (2) the background noise (e.g. well-known music lead to a conversation, television during the night) and (3) familiar sounds (e.g. tinkle bells in the morning, soft noise of a train, kitchen noises).

Conclusions: Although the onset and progression of BPSD is highly individual (relying on personality and typical features of dementia) it seemed that it also depended on the interaction between personal and acoustical environmental factors. Being aware of the particular soundscape – defined as an environment of sound (or sonic environment) with emphasis on the way it is perceived and understood by the individual - enables the caregivers to actively influence this (e.g. support a recognizable sound environment) or to design the physical acoustical environment to the needs of the residents with dementia.

Developing a method for soundscape design for people with dementia living in nursing homes: validation of four persona

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Introduction: Soundscapes – defined as an environment of sound (or sonic environment) with emphasis on the way it is perceived and understood by the individual, or by a society - influences human behavior and Quality of Life (QoL). This might also be the case for people with dementia (PwD). Current soundscape-models are based on three basic components: a sound can be pleasant (or annoying), eventful (or boring) and familiar (or unknown). Due to disturbed cognition in dementia, it is not clear whether such a model is applicable in dementia-care.

Objectives: This study aimed to investigate the impact of sounds on PwD and to develop a valid model for soundscape design in order to modifying behavior in PwD and subsequently enhancing their QoL.

Method: An ethnographic design employing 24/7 participatory observations in five NH including 15 residents with dementia was used. Data-analysis was characterized by an iterative process and a constant comparison method. Peer-debriefing with professional caregivers ensured the credibility.

Results: The influence of sounds on the behavior and QoL of PwD was subject to two dimensions (1) the ability to correctly interpret the sound and (2) the ability to adequately react on it. These two dimensions were interrelated and have led to four different types of PwD: (1) the PwD who can interpret correctly and react adequately, (2) the PwD who can interpret correctly, but cannot react adequately, (3) the PwD who cannot interpret correctly but reacts adequately and (4) the PwD who cannot interpret sounds correctly and cannot react adequately.

Conclusions

Four persona emerged from the qualitative data, offering opportunities to better understand the PwD's reactions on the sound environment and develop adequate soundscapes. Further research should validate and refine this model. The final goal is to use the model in everyday practice to enable caregivers to create an optimal soundscape for PwD.



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