

Exploring acoustical environmental factors influencing the behavior- and psychological symptoms of dementia: a participatory observation study

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Introduction: Behavior- and psychological symptoms of dementia (BPSD) occur very often in persons with dementia (PwD), influencing the quality of life (QoL) of the PwD and the caregivers. Although BPSD are considered as a characteristic of dementia, acoustical environmental factors can prevent and reduce or activate and reinforce them.

Objectives: To explore the acoustical factors that are on the onset and progression of BPSD in PwD living in Nursing Homes (NH).

Method: In a qualitative design, 15 PwD were included in a 24/7 participatory observation in five NH in Flanders. Data were discussed between the researcher and NH professionals to support an iterative process and a constant-comparative method.

Results: Factors that were on the onset of BPSD were (1) a complex sound environment (e.g. several conversations at the same time), (2) PwD's position to the sound source (e.g. sitting with back to kitchen where meal is served). On the other hand, acoustical factors that prevented BPSD were (1) human voices that were familiar (e.g. voice of husband), (2) importance of the background noise such as music (well known songs lead to a conversation) and television during the night.

Conclusions: The onset and progression of BPSD is highly individual (relying on personality and typical features of dementia) and depends on the interaction between personal and acoustical environmental factors. It can be influenced by the caregivers (e.g. support a recognizable sound environment) or the design of the physical acoustical environment.