

The effect of sensory interventions on cognition and life quality in old age

Van Hooren SAH, Valentijn SAM, Bosma H, Jolles J, Ponds RWHM, Van Boxtel MPJ*

Brain & Behavior Institute, Maastricht University, Maastricht, *Department of Health Care Studies, Maastricht University, Maastricht

The prevalence of both auditory and visual impairments rises sharply with age. Research has indicated that sensory impairments can interfere with quality of life and cognitive abilities. The effects of interventions aimed at reestablishment of sensory functioning on quality of life and cognitive performance were examined using data from two controlled experiments. The first experiment evaluated the application of a hearing device, the second a cataract surgery. Subjects who underwent an intervention were compared with control participants who were afflicted with sensory deficits of a comparable severity and had identical background characteristics. Experimental and control groups were assessed three times. After the baseline assessment, people with cataract underwent eye lens replacement, afterwards the subjects were tested a second time. This group was reassessed after nine months. After a dual baseline measurement and application of the hearing aid, hearing-impaired subjects were assessed again after twelve months. Analysis of variance revealed that hearing thresholds and visual acuity improved after intervention. Hearing devices and a cataract surgery have positive effects on subjective sensory ability; both at a short-term and long-term interval. A subgroup of hearing aid users reported also better physical and social functioning, less physical problems, a better mental health, and more vitality compared to the control group. A cataract surgery had a positive effect on memory and the ability to inhibit a habitual response, but hearing aid use did not affect cognitive functioning. These findings suggest that interventions to improve auditory and visual functioning may increase quality of life and may have positive effects on cognitive functioning. Therefore, it is recommended to screen for hearing and visual impairments in older adults and if necessary treat the sensory impairments adequately.

Susan A.H. van Hooren, Brain & Behavior Institute, Department of Psychiatry & Neuropsychology, Maastricht University, P.O. Box 616, 6200 MD Maastricht, t 043-3872446, e-mail s.vanhooren@np.unimaas.nl

session 42