

COGNITIVE AND AFFECTIVE DISORDERS IN THE ELDERLY

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DESIGNING FOR OLDER PEOPLE WITH COGNITIVE AND AFFECTIVE DISORDERS

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SUMMARY

Knowledge of the design criteria for specific physical environments for elderly people with dementia, together with medical and pharmacological research studies is a very important scientific target with therapeutical implications for cognitive and affective disorders. Safety, comfort and utility are major concerns for the elderly, especially those who have developed perceptual or other mental deficits. Yet designing environments that are safe and respectful of them is a very complicated task. Here we approach that task simultaneously from two distinctly separate vantage points. The first is from the laboratory, involving the psychophysics of human performance, namely, the parameters of the senses, vision, touch and of cognitive and motor performance which can be used to predict accidents in specific settings. The second one is the accident reconstruction: after accidents occur, they are analyzed to find out which aspects of the person interacted with which aspects of the environment to cause the trip or fall or crash. Data from both of these sources can be used to elevate the standards of safety. Research on visual perception, motor activity, orientation and other relevant human functions often cannot be generalized to the field from the psychophysical laboratory. It is often necessary to perform the relevant experimentation in the field where the research setting is more representative of the lives of the patients and the dangers to them. It is necessary to develop standardized research settings such as the Alzheimer's garden. Such settings should, first, be mathematically modeled along the dimensions of interest in concert with the collection of data which can be used to test, validate and extend the model and thus the utility of the setting. Separate sub-models can eventually be combined into larger models.

Keywords: architectural design, Alzheimer's disease, therapeutical environment, care facilities, Alzheimer garden, wandering, visual perception, simulation

INTRODUCTION

In Italy, as in other Western countries, dementia is one of the main causes of admission to sheltered houses and nursing homes. The present situation in Italy is that the 80 % of Alzheimer patients lives at home assisted by relatives. Geriatric care staff and patients' families all agree that the institutional physical setting is inadequate: often behavioral problems are stirred up by stressed interaction between the patient and the physical environment. Designers thus need refined guidelines for designing suitable care facilities for elderly people with dementia. The typical behaviors more influenced by negative environments are: wandering, falling, escaping, temporal and spatial disorientation.

There is a close relationship between architecture and the perception of one's surroundings: for the Alzheimer patients this relationship gradually

