Chapter 2

Environmental Landscape Design for Alzheimer’s

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ABSTRACT

People suffering from Alzheimer’s may feel anxious or unsettled as a result of these symptoms – in particular the decrease in their cognitive abilities and in their ability to take into account new information or external stimuli – as well from the effects of their medications. Because of their sensitivity, such individuals find it difficult to keep up a positive attitude and remain emotionally stable for long: they experience mood swings, and are unable to keep their negative emotions in check. For this reason, the best practice in treatment is to help them maintain a positive view of their lives and balance their emotions, both personally, in terms of keeping their sense of self, and in social environments, where they have to recognize and interact with others. In this way, good environmental landscape design will have an important role to play in improving their quality of life.

INTRODUCTION

The disorder known as Alzheimer’s disease falls into the general category of dementia, which refers to various symptoms of progressive cognitive deterioration that have an impact on daily life. It is characterized by loss of memory, a decline in cognitive, communicative and decision making abilities, loss of orientation in time and space, and an inability to tolerate intense, or even moderate sensory stimuli.
As such, it may lead to other neurodegenerative disorders, the inability to function normally; and to behavioral problems, for example, if the environment provides too many stimuli to process, or if the intervention poses a cognitive challenge (Detweiler et al., 2012; Chong & Hermreck, 2011).

In cognitive terms, the progress of the disease may lead to the individual’s having confused or fragmented memories, ideas and feelings; these may be accompanied by the frustrations of short-term amnesia, problems in processing or using language, impaired judgment and spatial disorientation. Yet despite these difficulties, Alzheimer’s patients are typically able to carry out such functions as walking, gesturing, and responding to environments that are mildly stimulating. Thus older patients may develop a modicum of control and a feeling of familiarity with their environment by exercising their long-term memories, along with engaging in gentle physical activities outdoors (Garcia, 2014).

This places various restrictions on designing environments for individuals with Alzheimer’s, because both their specific needs and their daily routines must be taken into account. In the first place, they may be living their lives in particular contexts. Patients in the early stages tend to stay in their own homes, but eventually may require support from friends, family members, or carers. Or they may move from an assisted living apartment to a home providing personal care. Such facilities may or may not have specialized healthcare services, depending on the philosophy of their programs, which should both clarify the purposes of the care and explain how it is related to the physical environment provided (Brawley, 1997).

Indeed, one of the characteristics of people with Alzheimer’s is that it becomes more and more difficult for them to relate to their environment. A setting that feels familiar also feels more easily controllable, so patients do not feel the stress or fear associated with a sense of alienation. It is therefore essential that in designing for such people, environments are made to feel more familiar and more like home (Nord, 2004); in addition, there should be recognition of Alzheimer’s sufferers as people who wish to be independent, and to keep their self-respect and dignity. The environment should therefore provide familiarity and a feeling of comfort and confidence; for elderly patients, or others with advanced cognitive or perceptual problems, care should also be taken to see that safety is ensured. This is, of course, a rather complex problem.

Depression, stress, and some of the symptoms of Alzheimer’s, may be reduced by engaging in activities outdoors (Kuo & Taylor, 2004; Mooney & Nicell, 1992). Alzheimer’s sufferers tend to become disoriented more easily in complex environments, where they both lose their way and lose the concept of where they were intending to go or what they were trying to find; they often react to such situations by acting out their frustration and being aggressive. The incidence of such situations
Instrumenting the eHome and Preparing Elderly Pilots: The USEFIL Approach

Empirical Research on the Relationship Between Personality and Evoked Brain Potentials