

Gardens for Patients with Alzheimer's Disease

One specific area of mental health in which therapeutic horticulture has found a place is the care and treatment of patients suffering from Alzheimer's disease and other forms of dementia. Gardens have been designed that provide a safe and stimulating environment for patients and sensory stimuli associated with gardens and gardening have been used to provoke memories in reminiscence therapy. The actual design of the garden is of great importance and there has been a lot of interest and research in this aspect. Here are just a few examples of some interesting and thought-provoking work.

The Garden as a Paradise:

Beckwith and Gilster (1997) suggest a model for a '*paradise*' garden which has four key elements - *enclosing wall, water, canopy, and hill*. The enclosing wall is of particular significance because it creates the space of the garden and it is a feature of many gardens designed specifically for patients with Alzheimer's disease.

"The enclosing wall creates the paradise garden. The term '*paradise*' is a transliteration of the Persian word *Pairidaez*: *pairi-*, meaning around and -*daeza* meaning wall. These enclosing walls associated with a residence, originally constructed of mud or stone, provided a degree of privacy essential to family life. The walls sheltered plants from the searing wind which swept the desert; they protected against undesirable entry of thief and wild beast; and they secured the space for pleasure of shade, fruit and flower...

For the individual with Alzheimer's disease, the walled or fenced space serves as a refuge."

Important Elements of the Garden:

Beckwith and Gilster go on to discuss the role of water, the tree canopy and the hill as sources of stimulation to the patient and as symbols of paradise and refuge. They describe the application of the model to the construction of three gardens at the Alois Alzheimer Center in Cincinnati, Ohio. As the dementia of the patient progresses they have different difficulties and requirements and each of these three gardens is designed to address these different physical, environmental and social needs.

Different Activities for Different Stages of Dementia:

Patients with dementia benefit from horticultural therapy particularly if horticultural activities are matched to the stage of deterioration. For example Ebel (1991) suggests the following:

"A rehabilitative approach using behavioural strategies and environmental modifications can improve physical and mental functions of people with dementia, often allowing them to perform at their highest ability. Optimal

functioning and esteem-building need to become the goals of rehabilitation intervention for patients with early-stage dementia; sensory stimulation, awareness outside of self, and bringing pleasure to the patient should become the goals of late stage dementia intervention”.

How Effective are Gardens in Patients with Dementia?

Mooney and Nicell (1992) examined the number of violent incidents and falls at five nursing homes for patients with Alzheimer’s disease. At nursing homes without gardens there was a rise in the number of incidents in two consecutive years as the condition of the residents deteriorated, whilst at the homes with gardens instances of violence and falls actually fell slightly.

“In the garden institutions, the rate of violent incidents declined by 19% between 1989 and 1990 while the total rate of incidents fell by 3.5% over the same period. In the non-garden institutions, the rate of violent incidents increased by 681% and the total rate of incidents increased by 319%”.

They also evaluated the garden of one of the homes that was especially designed for patients with Alzheimer’s disease. This garden had a ‘figure-of-eight’ looped path (ie no dead-ends - this is a feature of many garden designs for Alzheimer’s patients), handrails and a smooth path which produced little glare. They found that all residents were able to use the garden without problem whilst in the garden of one of the other homes only 42% of the residents were observed to move through it without confusion.

They suggest the following design considerations:

- Make the garden a continuous spatial unit with strongly defined boundaries, preferably through which residents cannot see.
- All aspects of micro-climatic comfort should be considered, which means protection from sun and wind and reduction of glare.
- Furniture should be heavy and stable with seat heights of about 18 inches.
- Ideally, the garden should be located at the end of a corridor and the exterior door should allow views and access into the garden. This is because residents tend to walk corridors and ‘get stuck’ at the end of them, not realizing that they can turn around and walk the other way. Since the tendency is to walk forward, circular or loop corridors and walkways minimize frustration. A garden at the end of a corridor is readily discovered and acts as a loop which returns residents to the building and facilitates walking

Can Gardening Protect The Older Person From Dementia?

It is also possible that regular participation in gardening may offer some protection against the development of dementia. In a prospective study of

over 2000 older people living in the Gironde area of France, Fabrigoule *et al* (1995) showed that those who gardened, travelled or carried out odd jobs or knitting were significantly less likely to develop dementia than those who did not.

“Even after adjustment for age, baseline cognitive performance, physical capability, and occupational activities, the risk of dementia for older subjects who travel, do odd jobs, knit or garden was about half that of subjects who did not participate in these activities. These results seem to confirm the possible protective effect of an active life style on cognitive function in older people”.

The mechanism for this apparent protective effect is not clear but the authors suggest that these essentially complex activities may stimulate cognitive functions and thereby protect them. Reading, watching television, playing parlour games, associating with others, child care and visiting friends or family did not lower the risk of developing dementia.

References:

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