

## Chapter 1: Introduction

### *1.1 Background*

As the number of older adults with dementia increases, it is critical to recognize the importance of providing them spaces in the landscape that will effectively accommodate their specific needs. However, a major problem in designing therapeutic landscapes for persons with dementia is the gap between existing knowledge about this condition and its availability to and application by landscape architects. In particular, there is a shortage of available research on wander gardens, outdoor settings that are designed to provide the person with Alzheimer's disease and related dementias (ADRD) opportunities to "wander" outdoors safely. However, there is a growing body of work on therapeutic gardens, and specifically horticultural therapy, which promises to provide empirical research related to the design of landscape settings that focus on the needs of older adults with ADRD.

Landscape designers must review empirical research and ideally, should experience outdoor therapeutic environments in institutional settings before creating landscapes for older adults with ADRD (Brawley, 2006). To create effective therapeutic environments, designers must understand the needs and the limitations of the care-recipients. However, this is problematic because few landscape design educational programs focus on or offer adequate information on the specific needs of older adults (Brawley, 2006). Therefore, the challenges for landscape designers are to independently review the available research on ADRD and to develop suitable programs before the designs are begun.

### *1.2 Purpose of the Study*

The purpose of this study is to identify research-based knowledge that can inform the design of successful outdoor spaces for older adults with ADRD. The primary objectives of this study are to develop a palette of landscape architecture design guidelines as a reference for designers who are faced with the challenges of understanding the specific needs of people suffering from ADRD, and to test the effectiveness of the guidelines through interviews with professionals in the fields of landscape architecture and gerontology.

### *1.3 Approaches to the Treatment of Adults with ADRD*

In the past 25 years, an increase in research and knowledge about ADRD has occurred, and the application of nonpharmacological therapies has gained increased popularity and attention (Brawley, 2006). Gene Cohen, a director at the Center on Aging at George Washington University offers an optimistic opinion on the environment as a form of treatment:

Psychosocial approaches, in particular, are underappreciated, even though these offer some of the best contributions to maximizing the quality of life during the course of this tragic disorder. Indeed, thoughtful psychosocial, behavioral, and environmental approaches can often have a faster, safer, and more effective impact than pharmacological interventions in treating a range of secondary symptoms in Alzheimer's disease. (p. 27)

Though there is no cure for ADRD, researchers suggest that the utilization of nonpharmacological approaches aids in managing the behavioral and psychological problems accompanied by the disease. Among the range of effective

nonpharmacological treatment measures are environmental design and programming (Brawley, 2006). Furthermore, applying these approaches to treatment of the disease may result in greater autonomy and an increased quality of life for individuals with ADRD. Brawley (2006) suggests that the most important treatment for individuals experiencing the symptoms of ADRD is to control maladaptive behaviors, and to offer opportunities for care-recipients to discover and express positive emotions. This can be accomplished by incorporating validation therapy, reminiscence therapy, and multi-sensory stimulation in the outdoor environment.

With regard to environmental design approaches, the most relevant research-based theory is the Theory of Environmental Press (TEP), which describes the balance between the older adult's capabilities and the demands the environment places on them (Lawton & Nahemow, 1973). Additional related theories covered in the literature review are the Social Ecological Perspective, the Progressively Lowered Stress Threshold Model, and the Theory of Personhood and Well-Being. Incorporating these theories into the literature review is an important step towards relating the body of available research to the needs of ADRD care-recipients.

These theories serve as a foundation for various nonpharmacological, emotion-oriented approaches that may be incorporated in the outdoor environment, including validation therapy, reminiscence therapy, and multi-sensory stimulation. These approaches are applied through therapeutic programs that provide opportunities for communication, improved well-being, enhanced memory, and increased stimulation. Successfully applied, these forms of treatment may enhance the care-recipient's quality of life (Brawley, 2006). I anticipate that designing landscape settings to support the

application of emotion-oriented treatments will be an effective tool for addressing behavioral issues of persons with ADRD.

#### *1.4 Assumptions*

I propose to address the gaps between the knowledge base regarding ADRD that is available from social science research, and its application by landscape design professionals. I assume that improved landscape design will enhance and compliment other modes of therapy during the various stages of the disease. Through the literature review, I expect to find empirical evidence that will support the proposal that landscape design should target emotion-oriented treatments. Important questions I ask are: When is the onset of the disease and/or when do persons need special accommodations? What is the range of ADRD care-recipients' needs in relation to the landscape? Why do they need validation therapy, reminiscence therapy, and multi-sensory stimulation, and does providing these forms of therapy allow older adults with ADRD to overcome obstacles that ADRD causes? Can validation therapy, reminiscence therapy, and multi-sensory stimulation enhance both pleasurable and functional responses of older adults with ADRD? How can designed outdoor environments respond to the needs of validation, reminiscence, and sensory stimulation by ADRD care-recipients? Answers to these questions will be obtained from a literature review, informal interviews of designers and health-care professionals, and a review of case studies.

#### *1.5 Document Content*

The first chapter of this document introduces the background, purpose, key components, and assumptions of the study. Chapter 2 examines the relevant literature of ADRD, related theories, and environmental issues; the literature review supports a

framework for understanding the needs and limitations of persons with ADRD in the outdoor environment. Upon completion of the literature review, a preliminary set of design guidelines are developed to aid in the evaluation of the case study sites, which are included in chapter 3. Chapter 3 is a summary of critical factors formulated from the literature review and in addition to text, a model of the therapies for persons with ADRD as applied to landscape settings is also included for visual clarity. Chapter 4 describes the methodology of the study.

Interviews and surveys provide an understanding of professionals' views of outdoor environments for persons with ADRD; chapter 5 analyzes the information gathered from these interviews and surveys. Chapter 6 evaluates several outdoor environments designed to serve people with ADRD according to the major design principles outlined in the literature review. Chapter 7 introduces the refined template of design guidelines for landscape designers to refer to when creating outdoor spaces for older adults with ADRD. Lastly, chapter 8 concludes with reflections on the study findings and recommendations for future study.