Chapter 15
What's Memory All About?
The Importance of Memory in Alzheimer's Patients

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ABSTRACT

Dementia is, unfortunately, a well-known problem of nowadays, product of a set of generational transformations and a result of better life conditions. There are different kinds of dementia but Alzheimer is the one with predominance. Memory is the key factor in this type of illness and it is nuclear to understand how it is constructed to hypothesise and try to determine how it degenerates. In this chapter, memory structures are presented as a starting point of the research and then through the use of narrative intelligence we devise a method to present small excerpts of patient's history and simultaneously illness progression is evaluated. To do this, a small prototype of MEM+ has been developed, and for its development a participatory design was conducted. With this approach, we aim to devise the right application to be used by the patients themselves and by their caregivers. During this stage of the project special attention was paid to usability issues, and some adaptations made to better the human computer interaction.

INTRODUCTION

The Alzheimer disease is a type of dementia which causes a global, progressive and irreversible deterioration of the several cognitive functions (memory, attention, concentration, language, and reasoning, among others). This deterioration has some consequences such as changes in behaviour, character, and functional capability of the patient, making it difficult to complete its daily routine (Alzheimer Association, 2012). Currently Alzheimer already affects 7.3 million people only in Europe, by this century's midpoint, global demographic changes will double or even triple the number of people over age 65 in many countries, also increasing the numbers of the disease, causing therefore a major social and medi-
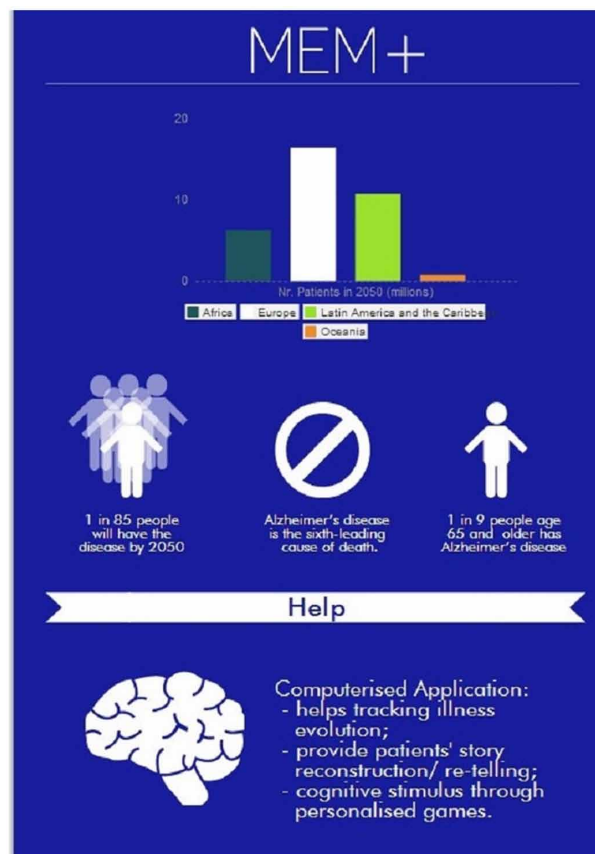
cal problem. Worldwide the number of people with dementia is estimated by 44.4 million people. This number will increase to an estimated 75.6 million in 2030, and 135.5 million in 2050 (Alzheimer's Disease International, 2014) - see Figure 1.

The initial symptoms of the disease include loss of memory, spatial and time disorientation, confusion, reasoning and thinking problems. These symptoms become increasingly worse as the brain cells continue to die and their inter-connections alters. To help Alzheimer's patients it is important to understand how memory is structured and how it stores the information gathered during lifetime.

To date, no cure was found to Alzheimer disease. However, there are some medicines that allow the symptomatic treatment of most of the cognitive and behavioural changes. Although, they cannot avoid the progressive neurological loss, the existent medicines can help to stabilize and minimize some symptoms. Nevertheless, Alzheimer disease curing should gather the pharmacological and non-pharmacological interventions.

The non-pharmacological ones, belongs to a group of interventions that strive to maximize the cognitive function and person well-being, as well as helping her/him in the process of the disease adaption. The activities developed try to stimulate people's capabilities, preserving, most of the time, their autonomy, comfort and dignity.

Figure 1. MEM+'s Infographic

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