

## Chapter 5.8

# Attitudes Toward Intelligent Technologies: Elderly People and Caregivers in Nursing Homes

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### ABSTRACT

*Nursing homes provide long-term care services and can help preserve the quality of life of elderly people subject to physical and cognitive impairments. In this chapter, we explore the role of intelligent technologies as a supplement to human care-giving and the potential to improve quality of life for both older adults and their caregivers in nursing homes. A study was conducted on elderly people's and caregivers' attitudes toward the use of intelligent technologies in nursing homes, with the aim of understanding in which domains of everyday activities the application of intelligent technologies can be more suitable. Results showed that attitude toward the application of intelligent technologies in nursing homes is positive, although multifaceted. Elderly people and caregivers considered intelligent technologies as relevant devices for the improvement of quality of life in different domains. Nonetheless, differences related to the role that technologies played in nursing homes clearly emerged.*

### INTRODUCTION

In the last decades, the increase in life expectancy has been evident especially in industrialised countries. Eurostat data (Giannakouris, 2008)

forecast that the elderly population (older than 65) in Europe will be about 30% of the total in 2060; by the same period, elderly people aged 80, or older, will be about 12%. This phenomenon has tangible consequences for families, health-related services, and society. The huge increase

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in the total number of elderly people is associated with a higher incidence of physical and cognitive impairments. The older the population is, the higher the occurrence of disability, and chronic and degenerative diseases (Strandberg & Pitkälä, 2007). The consequences of the loss of competence of the elderly are manifold, ranging from social to economic, and involving different contexts of everyday life: overall, less autonomous persons are highly demanding, in terms of both human assistance and practical resources.

Frailty in elderly people has been a burden of families for decades. More recently, the change in social customs has affected family roles and practices, thus leading to a fall in informal caregiving to frail elderly, and the need for alternative solutions to this problem. Therefore, the role of an integrated network of healthcare services for the ageing population is becoming more and more important. Nursing homes are conceived as a service providing both support and rehabilitation after an incident or illness and long-term medical, nursing and social/recreational assistance to elderly people. Their aim is to promote the overall quality of life of users, which implies a focus on both physical and psychological needs (Haas, 1999; Janse et al., 2004). Several studies show that both objective (environmental, functional, and organisational features of the nursing homes) and subjective (physical, psychological, social, and cultural characteristics of people) factors – from the two-fold perspective of elderly residents and caregivers – may affect the perception of quality of life in nursing homes (Ball et al., 2000; Faulk, 1988; Kane et al., 2003; Mitchell & Kemp, 2000).

The aim of quality of life could be better achieved through the use of intelligent technologies (IT). Recently, concern about and interest in the application of IT in everyday life of older people has arisen. The huge increase in conferences and projects on this topic and the proliferation of technological solutions emphasise the potential contribution of IT to reducing elderly people's dependence on others (Cook & Hussey, 1995; Haigh

& Yanco, 2002; Labelle & Mihailidis, 2006). In addition, the role of IT in alleviating the burden of and facilitating long-term assistance for caregivers has been underlined (Czaja & Rubert, 2002).

IT are innovative devices that are highly relevant in the management of activities related to health and well-being for the elderly in nursing homes, thus promoting quality of life (Charness, Czaja, Fisk & Rogers, 2002). Haigh and Yanco (2002) have identified different factors that may lead to institutionalisation of frail elderly, and discuss the advantages of many pioneering technologies which are capable of supporting the elderly with physical, cognitive and psychological disabilities, thus reducing the negative effects of impairments in their relationship with the domestic and assistive environment.

On the one hand, IT can be a useful means to promote “ageing in place”, which is highly preferred by elderly people and is related to life satisfaction and well-being (Costa-Font, Elvira & Mascarilla-Mirò, 2009; Horner & Boldy, 2008); on the other hand, IT can also be important in nursing homes, but their use should encompass a comprehensive analysis of the two-fold perspective of elderly guests and caregivers, in which both practical and psychological aspects are to be taken into account.

To this aim, in this chapter we address the issue of the potential role of IT in promoting quality of life in nursing homes from a psycho-social perspective. We first discuss the role of environmental and social factors influencing well-being in nursing homes, and current applications of IT in healthcare settings. We then propose an integrative framework for the use of IT in healthcare settings, and present our study on elderly people's and caregivers' attitudes toward the use of IT for improved quality of life.

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