M. PINO, C. GRANATA, G. LEGOUVERNEUR, M. BOULAY, A-S. RIGAUD. ***Assessing design features of a graphical user interface for a social assistive robot for older adults with cognitive impairment.*** *Gerontechnology 2012;11(2):383;* doi:10.4017/gt.2012.11.02.490.00 **Purpose** Over the past several years, a variety of assistive technologies have been conceived and developed to support independent living and quality of life of older adults with mild cognitive impairment (MCI) or Alzheimer's disease (AD). Within this area socially-assistive robotics is a growing field[1]. However, although robotics has the potential to support the elderly with cognitive impairment in daily tasks, the development of usable interfaces remains a challenge. For instance, changes in perceptual and cognitive abilities should be addressed in robotics design because they affect technology use[2]. The aim of the QuoVADis project[3] was to develop a socially-assistive robot for elderly people with cognitive impairment. The semi-autonomous remotely controlled robot consists of a mobile platform guided by a computer and electronic system. The robot input devices include speech control and a touch-screen. The system, capable of social interaction, was specifically conceived to provide cognitive and social support to the user through a suite of applications (task reminder, cognitive training, navigation support, and communication). The purpose of this work was to develop the graphical user interface (GUI) through which these services are provided. In a previous study[4] we defined a set of requirements that were used to design the robot's GUI. In this paper we present results from usability testing of the functional prototype of the GUI with target end-users and the modifications made to produce the final version of the applications. **Method** We used a user-centred design approach for the GUI design[5]. Eleven elderly persons with MCI and 11 elderly with normal cognition were recruited for this study. First, the moderator described the purpose of the research, introduced the robot and explained the evaluation procedure. Then participants were asked to complete a series of tasks using the main menu of the GUI and navigate through its different applications. Performance and satisfaction measures were collected (e.g., time to complete each task, number of errors due to manipulation, number of help requests). Tests were conducted individually. **Results & Discussion** Findings confirmed that most of the features of the GUI were adapted to the needs and capacities of older adults with cognitive impairment. However, individual factors (age, education level, and computer experience) were found to affect task performances. Moreover, some particular aspects of the interfaces (icons, navigation system) had to be modified to make the application usable by the largest number of patients suffering from cognitive deficits. These results were used to develop the final version of the GUI. We confirmed that designing and developing assistive technologies to support elderly with cognitive impairment requires end-user involvement throughout all the development and evaluation phases. This study is an example of a successful design process for assistive technologies to support MCI-patients and their caregivers, involving them throughout all the development phases and applying the concept of iterative evaluations.

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