

Social Robots in Nursing Homes: Field Work and Ethics



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Abstract

Social robots are an innovative assistive technology in nursing homes. Older people must be informed and be able to decide their relationship with the robot. Their interactions must be easy, satisfactory, and safe. Although social robots may help professionals in their daily work, robots must not replace the human attention received from professionals. This emergent field necessitates the joint work of professionals of different disciplines. This opinion article aims to reflect on the ethical aspects of the introduction of social robots to nursing homes.

Keywords: Social Robots; Older People; Nursing Homes; Field Work; Ethics

Introduction

The increase of older people in Catalonia has increased the number of places in nursing homes [1]. The person-centered care models are currently applied in nursing homes. Understanding and respecting the preferences of older people with respect to their care and activities is crucial to satisfying their needs [2]. Social robots are innovative assistance technology, equipped with a level of Artificial Intelligence (AI) that allows them to interact with the users [3]. Older people must be able to interact with this technology in the easiest, securest, and most satisfactory manner [4].

Devices that use touch interfaces such as tablets are suitable for people with a certain degree of cognitive impairment, due to their intuition and simplicity [5]. Human-robot interaction must be able to stimulate communication and the performance of physical and/or cognitive activities [6-8]. People with cognitive impairment may require reorientation in time or space, due to the disorienting changes on entering a nursing home. However, older people must be informed and able to decide their relationship to and their interaction with the robot [9].

Thus, social robots can have functionalities that provide an orientation to reality [10] and new stimulation tools for people without or with cognitive impairment [11] in nursing homes, to improve their quality of life [12,13]. However, institutionalized older people who are particularly vulnerable must not develop

emotional or attachment feelings towards the robot [14]. On the other hand, social robots must also be able to be an instrument for professionals [8], allowing them to devote quality time to the users they care for. However, robots must not replace the attention, nor the warmth, or the human affect, which they receive from professionals [14].

Legal and ethical aspects are closely related, this being the object of attention within the European Union, due to the need to rethink the applicable legislation and the moral dilemmas presented by the development of robotics [15]. Thus, the introduction of robots to interact with older people without and with cognitive impairment in nursing homes, supposes the emergence of a series of ethical controversies on which it is necessary to reflect since the ethical debate focuses on aspects linked to daily life. Furthermore, it is difficult to find in literature studies in which ethical reflection is accompanied by field work. Furthermore, human-robot interaction is an interdisciplinary field that encourages synergies between professionals in technology, health sciences and law. Thus, our study is going to aim:

i. To evaluate the applicability of the first prototype of an application named Helderly (Humanizing Elderly) that works on a robot called Pepper [15,16] in the human-robot interaction -including individual cognitive and social exercises, and group physical exercises during a month.

ii. To reflect on the legal and ethical aspects involved in the implementation of the Pepper robot, in the human-robot interaction in a nursing home for older people without and with cognitive impairment.

Analyzing applicable regulations and identifying ethical issues related to the use of social robots in the institutional context is essential. We will include ethical recommendations linked to human-robot interaction in a nursing home for the elderly. The implementation of a social robot in a nursing home requires two complementary work methodologies that must be distinguished:

- a. Testing and analysis.
- b. Reflection of the ethical and moral challenges that appear from the interrelationship between the elderly / care professional / robot.

Conclusion

The introduction of social robots in nursing homes allows human-robot interaction. New studies in this field are important to be accompanied by ethical considerations to guarantee high-standard practices in this emergent research.

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