OLDER PEOPLE IN TECHNOLOGICAL ERA

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Abstract. Starting from Cicero's idea that "older people could give to youngest one from their knowledge and their wisdom" it appears the question "how willing are older people to receive from the knowledge and technological education of young people in order to benefit from advantages of technology in everyday life?" Technology could offer to older people possibility to renew social contacts or to make new ones, to be actively involved in the community they are part of and the most important role of using technology is to create to elderly a sort of independency. The objective of this paper was to verify the opening of elderly regarding the use of technology, their availability to learn new things about technology and to establish the link between quality of life and the use of technology from older people perspective. Methodology: selected subjects for this paper were part from a group of subjects hospitalized at National Institute of Gerontology and Geriatrics "Ana Aslan" with ages between 65 and 90 years old, to which a proper questionnaire called TEQ- Technology for Elderly Questionnaire was applied. Following the study, it was concluded that most of elderly people are open to learn how to use technology, understand benefits of using it but it is quite a difficult process and not everyone has the availability to learn more than they already know.
Key words: older people, technology, quality of life, benefits

Rezumat. Plecând de la ideea lui Cicero cum că "oamenii mai în vârstă pot da mai departe celor tineri din cunoştinţele şi înţelepciunea lor" apare întrebarea "cât de dispuşi sunt cei mai în vârstă să primească din cunoştinţele şi educaţia tehnologică a celor tineri pentru a beneficia de avantajele tehnologiei în viaţa de zi cu zi?". Tehnologia poate oferi persoanelor vârstnice posibilitatea de a reînnoi contacte sociale sau de a forma altele noi, de a se implica activ în comunitatea din care fac parte şi cel mai important rol al tehnologiei este acela de a-i crea persoanei vârstnice o oarecare independenţă. Obiectivul acestei lucrări a fost de a verifica deschiderea persoanelor vârstnice în ceea ce priveşte utilizarea tehnologiei, dispozibilitatea acestora de a învăţa lucruri noi legate de tehnologie şi stabilirea legăturii dintre calitatea vieţii şi utilizarea tehnologiei din perspectiva persoanei vârstnice. Metodologie: subiecţii selectaţi pentru această lucrare au făcut parte dintr-un loc de subiecţi internaţi la INGG "Ana Aslan", cu vârste cuprinse între 65 ani şi 90 ani, cărora li s-a aplicat un chestionar propriu denumit TEQ- Technology for Elderly Questionnaire. În urma studiului efectuat, s-a concluzionat faptul că majoritatea persoanelor vârstnice au deschidere pentru a învăţa să utilizeze tehnologia, înţeleg beneficiile pe care le au în urma utilizării acesteia, însă este un proces destul de greoi şi nu toţi au disponibilitatea să înveţe mai mult decât ştiu deja.
Cuvinte cheie: persoane vârstnice, tehnologie, calitatea vieţii, beneficii

INTRODUCTION

"Older people could give to youngest ones from their knowledge and their wisdom", said Cicero, but how willing are elderly people to receive from the knowledge and technological education of young people in order to benefit from advantages of technology in everyday life? [1] As the person is growing old, bio-psycho-social changes begin to occur. Most frequent and most visible are usually biological, among which we can mention sensory senescence [2]. It appears constantly and it is felt by decreasing visual and auditory acuity, tactile, olfactory and taste sensitivities. There are a number of psychological changes that can occur during this process like diminishing attention, memory reduction, frequent returns in the past to long acquired experiences [3]. It decreases the spontaneity of thinking but synthesis, generalization and schematic functions are even preserved. Language reflects difficulties of thinking; the verbal flow decreases and it appears a slowness of rhythm and vocabulary. Also, affectivity is disturbed, most frequent being depression and anxiety. All of these personality changes reflect present deterioration. The social status is changing, too, including the circle of friends as well as their activities. There are no longer socially involved in

activities avoiding meetings with close friends because of the fear of being rejected or because of the fear of new things [3].

Because the standard age for retirement in Romania is 63 years old for women and 65 years old for men, an age in which most of the people are still active, it is important for them to supply their physical and mental activity during work days, through other methods [4]. Technology could offer to elderly people the possibility to renew social contacts or to form new ones and to be actively involved in the community they are part of. Because in generally after the retirement everything became a routine, technology could prevent social isolation of elderly [5]. Another important objective of using technology is to create to elderly a sort of independency. Older people could use technology to communicate with close persons, with medical personnel if any medical condition occurs, to be informed about daily events, to relax, but last but not least to keep their memory by training it.

When talking about elderly - meaning 65 years old according to WHO, we cannot speak about homogeneous group [6]. There are major differences between a 65 years old person who is still active or just retired and has contact with technology and an 80 years old person who did not use technology or technological devices and even more, consider himself/ herself too old for starting now to use technology. Also, it occurs some characteristics of elderly personality like suspicion, rigidity, interpretability which can make the process more difficult [7]. Older person lives more in the past than in the future, fact which leads to a psychological isolation, a more distant attitude even aggressive towards other people. Older people tend to be more conservative and it is pretty difficult for them to understand that even there are new things; it could be beneficial for them. It is difficult enough for them to accept that even they have an old age; there are a lot of things that they could learn from younger people who are

more experienced in technology. There is also a feeling of embarrassment towards the person who tries to help them with technology because often technically means speeds and accuracy and most of the elderly begin to show changes in the motor-sensory plan – they become more weaker, more insecure, more rigid in the movements, slower in generally.

The reason why I chose this subject for the paper is that I personally consider it very important for the elderly to have a minimum of knowledge regarding the use of technology, because there are many devices designed to alert in case of changes in health, in case of natural disasters and the elderly must know how to access such a warning message. Moreover, every home appliance requires a minimum of technological knowledge for the recognition and understanding of the various warnings: sound, light, color. It exists also devices developed for permanently monitoring elderly and for transmitting to their family's warnings about leaving home, changes of their health status, even falls or administrating medication. Assistive technology is mainly used to facilitate the daily life of both elderly and their family members and to increase the quality of the user's life [8]

MATERIALS AND METHODS

The purpose of this study is to verify the interest of older in the use of technology in their daily lives in order to increase the quality of their life, which is one the objectives of AAL projects ("Active and Assisted Living" Program). The objective of preliminary study was to verify the opening of the elderly in the use of technology, the availability of elderly to learn new thing about technology and to establish the link between quality of life and the use of technology from the older person's perspective.

There were three hypotheses for this study:
I. First hypothesis assumes that most of older people use a technological device like mobile phone, tablet, laptop or

personal computer. II. The second hypothesis assumes that older people are willing to learn to use technology. III. The third hypothesis assumes that older people who were questioned consider that technology could change their quality of life. All subjects were evaluated from the gerontopsychological point of view and then it was applied a questionnaire named TEQ –Technology for Elderly Question-naire, which contains 10 questions about

using technological devices, having fixed or mobile internet, the purpose of using the internet and a personal opinion about technology in relation to quality of life. The study was conducted on a total number of 65 subjects, older people hospitalized at National Institute of Gerontology and Geriatrics "Ana Aslan", with ages between 65 and 90 years old, and the age average being 73 years old.
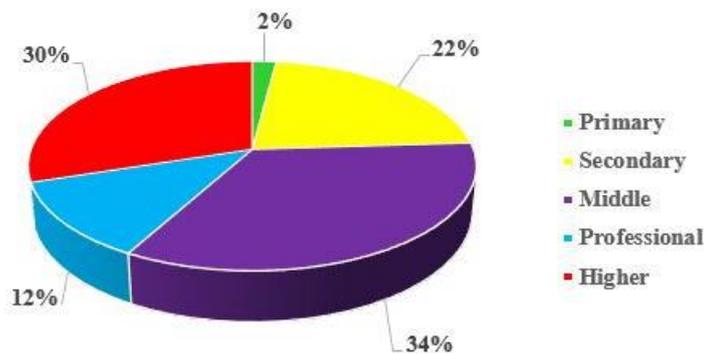

Fig. 1 Subjects distribution by residence area

The distribution of subjects by gender, residence area and educational level was as follows:

• 20% of subjects were males and 80% of them were females

• 29% of subjects came from rural area, while 71% came from urban area.

Educational level was divided into five categories: primary, secondary, middle, professional and higher education. Most of questioned subjects representing 39% from total have middle education.
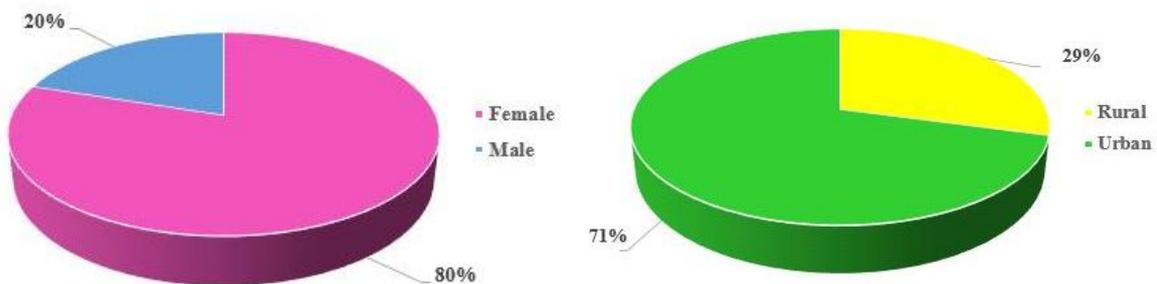

Fig. 2-3 Subjects distribution by gender and by residence area

RESULTS

The first hypothesis was tested with questions 1&2 from TEQ: *1) Do you use a mobile phone?*; *2) Do you use personal computer, laptop or tablet?*.

This hypothesis was partially validated because 95% of subjects use a mobile phone but only 38% use a personal computer, tablet or laptop.
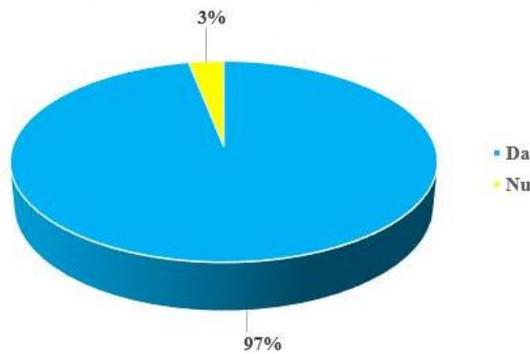
Fig. 4 Answers for question Q1

The second hypothesis was tested with question 7 from TEQ: *7) Would you be willing to learn to use technology?* It was validated with 58% of affirmative answers.
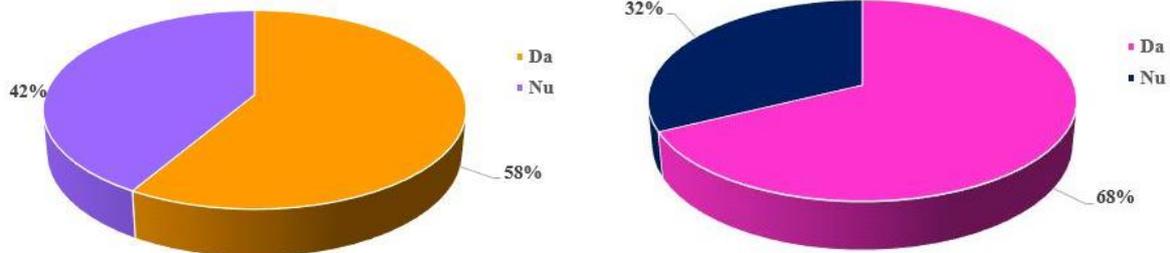

Fig.5-6 Answers for question Q7 and Q10

The third hypothesis was tested with question 10 from TEQ: *10) Do you consider that technology could change your quality of life?* 68% of total answered affirmative which means that the hypothesis was validated.

DISCUSSIONS

The distribution of subjects according to gender is heterogeneous, the number of older women being greater than older men because there are hospitalized more women than men and demographically the ratio is in favor of the female gender. Also, the distribution of the subjects according to the residence environment is hetero-geneous, the number of subjects in the urban area being greater than those in the rural area, because during the application of the questionnaires subjects selected for the study were predominantly from the urban area. Being a small number of subjects, this result isn't relevant for the

interpretation of using technology by persons from both areas. Although results of this study were positive, there are many limits about using technology among older people.

According to the technical data of smartphone devices, the response time in adults on reaching an icon on the screen of the mobile phone is 0.7 seconds, while a person over 65 years old has a response time of 1 second. Using a touchscreen device may be a natural thing for a young person, but for an elderly it may be a challenge for the more open-minded or a stressful element for those with motor disorders or a rigid personality [9]. For an older person touching a screen can be a difficult task because the nerves of fingers become more sensitive with aging, which means that older people would press much harder on the screen [10].

Studies have suggested that if an elderly has a slight tremor of the hands, his/her

movement on the touchscreen will be recorded as a slide on the screen rather than a touch of it [11]. Also, another important problem is the font size and the size of the device itself. Elderly need a large, legible writing and color codes, whether it is a mobile phone, tablet or laptop. The device's system must be intuitive, otherwise will be quite complicated for elderly to remember all steps that have to be taken to access various applications. Because older people tend to lose their patience quickly when it comes to things that they hardly understand, stimulating curiosity is a good solution for them – if used applications are linked to a hobby, ability or a pleasure of them, it will be easier to accept and to use it.

To have a successful process of learning how to use technology it is recommended to do gradual exercises with them to acquire certain skills. Regarding the psychological aspects of the elderly, a rigid person in accepting the use of technology will be rigid in accepting everything that is new: hearing aid if necessary, mobility aids, even a companion if needed.

CONCLUSIONS

Following the study, it was concluded that most elderly people are open to learn how to use technology, understand the benefits of using it, but it is quite a difficult process and not everyone has the availability to learn more than they already know.

Conflicts of interest

The authors declare no conflicts of interest.

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