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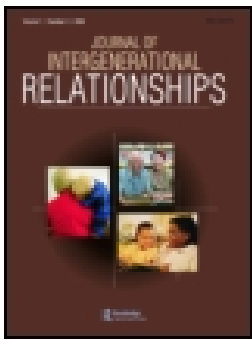**21** PUBLICATIONS   **80** CITATIONS

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SeniorTec: Senior Tutorial Program to Teach Technologies to Students

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ABSTRACT

The SeniorTec program was carried out in the framework of the European project Cordon Gris, its objective was to promote intergenerational relationships. The activity was hosted by the old persons who participate in the European project Cordon Gris and was attended by university students from Higher School of Health of Alcoitão and ISCTE-University Institute of Lisbon. Learning sessions were delivered in this action: a Nutrition Workshop and a Financial Education Workshop. After this, an intergenerational contact session took place by using the Cordon Gris app. The SeniorTec program could promote a more positive image of aging and deconstruct negative stereotypes. Valuing older people in technology can act as a powerful vehicle to improve images of aging and to encourage intergenerational contact

Introduction

Stereotypes toward aging and older people are internalized throughout life in two directions: top-down (from society to individuals) and over time (from childhood to old age) (Levy, 1996). A growing aging population demands an active role from all the institutions toward the construction of a society for all ages.

SeniorTec was an inter-generational activity aimed at improving the attitudes toward aging and older people. It was developed within the context of the European project *Cordon Gris.* The goal of Cordon Gris was to fight malnutrition by offering a system that assists older people in maintaining a healthy and independent life (learn more at http://cordongris.eu/). The system provides, among other services, meal recommendations, health tracking and grocery shopping assistance. Also, the system tries to enhance consciousness among older people in terms of their diet and lifestyle in an efficient and cost saving way. To determine if the application meets the

requirements and business goals, the prototype of the Cordon Gris system was tested among 75 older people in three different countries.

In the course of the project Cordon Gris, older people were closely involved. The end-users participated in the developing stage in prior phases of the project through expressing their wishes and needs, among others, by using a survey and participating in focus groups. During the technical development three intermediate tests were carried out. In the last phase of the project an evaluation of information regarding the end user and predetermined goals was made. During the project, the training sessions played a major role in achieving the intended results. By providing ongoing support to participants across 6 months, they became more and more autonomous in using the Cordon Gris system and its different functionalities. Cordon Gris field trial had a great impact on users since it enabled their acquaintance with information and communications technology (ICT). As a result, when participants were asked what the role of technology in their lives was, the majority mentioned "*learning*" and "*entertainme*nt". Many participants also mentioned that technology promoted their "*cognitive stimulation*", "*well-being*" and "*security*". Users also reported that using technology gave them a feeling of "*being updated*" and "*being ahead of their time*". Cordon Gris services were also identified as enhancers of users' wellbeing as provided them with information on nutrition and/or healthy eating.

Afterward we had a significant increase in the use of smartphones due to the Cordon Gris application. Based on this positive finding, we wanted to innovate by proposing an intergenerational program that would allow older users to share their knowledge with others and specifically with younger people – the SeniorTec Program. In fact, although Cordon Gris has been designed exclusively for senior audiences, we considered that it could also be useful for other generations.

The Senior Tec program had three goals: (1) ensuring that older people truly knew how to use the technology before presenting it to others and stimulate their confidence; (2) helping to address agism among younger people, e.g. usually it is younger people who have more experience using technology; and (3) allowing older adults to share their wisdom and teach younger people practical skills about financial education and nutrition. In the SeniorTec program we did demonstrate the capacities of older people to use the *Cordon Gris* APP.

The most distinctive feature of *SeniorTec* was using technology as a mediator for intergenerational contacts between older people and university students (Table 1). The *ISCTE-University Institute of Lisbon*, who has great experience in leading intergenerational programs, played the role of adviser. Faculty departments from the *Higher School of Health of Alcoitão* and the *ISCTE University Institute of Lisbon* were also involved and played an important role in promoting the event among students. The leading authors belong to the *Cordon Gris* project and played the role of moderators.

Table 1. Activities and participants.

	Learning sessions	Contact session
Older adults (n)	9	20
Students (n)	15	15

Finally, this article intends to share best practices in implementing programs that counter agism and allow positive intergenerational relationships. To that end we provide an extensive description of *SeniorTec* and its different phases of development, as well as different testimonies from both students and older adults.

Methods

20 older (*M*age = 77) and 15 younger (*M*age = 21) individuals participated in the SeniorTec Program. All older participants were users of day-care centers at SCML, whereas younger participants were university students who came from two different higher education institutions – *Higher School of Health of Alcoitão* and the *ISCTE University Institute of Lisbon*. All students were recruited based on the assumption that they would be working with older adults in their future work environments.

Following the methodology described by Marques et al. (2014), *SeniorTec* was split in two learning sessions and one contact session. In the learning sessions, older people gave a "Nutrition Workshop" and a "Financial Education Workshop" aiming at providing students with information on some of the *Cordon Gris* project issues. In the contact session (Figure 1), older people presented, in an interactive manner, the *Cordon Gris* app. The goal was to gather students and older people around technology and promote intergenerational contact.

Figure 1. Intergenerational contact session.

SeniorTec took place at the premises of the *Santa Casa da Misericórdia de Lisboa* and lasted for two hours.[1] Each workshop took 20 minutes and included 4–5 PowerPoint individual presentations. The Nutrition workshop started with a short presentation introducing the *Cordon Gris* project. Afterward, older adults advised students on different topics regarding nutrition such as the variety and the seasonality of nutriment for a healthy diet, the Mediterranean diet, and aliment portions. This session was supervised by a nutritionist belonging to the *Cordon Gris* project (pb. 1). The main topics of the financial education workshop (Figure 2) were budgeting, saving strategies and tips, as well as food waste. Older adults had the chance to give their testimonies on how they manage their everyday life.

In the contact session (40 min.) (Figure 3), older and younger participants were mixed and placed in round tables with 3–4 people each. Following this, another group of older adults introduced the *Cordon Gris* app, its different functionalities (meal plan creation and shopping list) and its usefulness for their everyday life. Students were invited to use the app as well.

For evaluating the SeniorTec program we used two methodologies: focus group and interviews with both older and younger participants in the program. The use of these type of qualitative methods was especially useful to evaluate the program´s activities because it allowed us to gather people's opinions in a structured manner, while also giving the chance to participants to express their own point of views on their participation in these activities.

In total, SCML conducted 4 focus groups with service users. A total of 29 users attended this evaluation activity, divided by the 4 groups. Moreover, and in order to get a deeper understanding of the program benefits, 5 in-depth

Figure 2. Financial Education Workshop.

Figure 3. Intergenerational contact session.

interviews were also conducted with both younger and older participants in the program (Appendix Tables A1 and Table A2). The results of the focus-groups and interviews were transcribed and analyzed using a discourse analysis methodology. This method´s intention was to analyze textual citations and to find response trends and differences between participants.

Benefits for old and young

Valuing elderly people and promoting their social participation

Students considered original having older people in charge of leading the activity and presenting the *Cordon Gris* results. "*Just the fact that they were doing the presentations was amazing. It is not common to see these people actively participating in these projects*" (Participant, man, 21 years old).

Learning sessions were considered "*useful*" as older people provided a lot of strategies and tips to save money. "*They could put themselves in our perspective* (Participant, woman, 22 years old)". Overall, students found older people to be "*dynamic*", "*outgoing*", "*skilled*" – both in their ability to learn and teach – and "*agile*" in using technology. They were surprised by older people easiness in understanding "*how things work*" and in adopting technology to their everyday life ("*technology as part of their lives*"). For some, the contact with older people was a moment to recognize him or her as an individual. "*It was like two adults speaking. I also enjoyed [SeniorTec] because of this*" (Participant, woman, 20 years old).

Value of seniortec for older adults

SeniorTec played an important role in promoting older people' **self-esteem**, namely by giving them the chance to present themselves and their skills to an audience: "*It was amazing and I think they have also appreciated our capacities and presence. They were paying attention and I could show my skills, talk about what I like to do and advise them*" (Participant, woman, 75 years old). Another participant reported that she "*enjoyed doing the presentation and seeing that people were paying attention*" (Participant, woman, 76 years old).

The activity also boosted their **confidence** in speaking to young people. "*It was easy to speak with them, they even told me that they would like to visit our day-care center*" (Participant, woman, 65 years old). "*It went well, I didn't experience difficulties. Next time, it will be more comfortable to be with young people*" (Participant, man, 79 years old).

Some older participants managed to create a closer link with students. "*It would be important to do it for real, not just because of SeniorTec. I would be glad if they called me as if they were a nephew or a grandson*". Some invited students to visit their day-care centers, which eventually happened less than 1 month later with the authors' mediation.

Lessons learned

This program was the initial test for the model we want to develop in various contexts on a regular basis. Based on this experience, we firmly believe that SeniorTec follows the most adequate methodology to increase older people's self-esteem and confidence, while also promoting a more positive image of aging and deconstructing negative stereotypes. Especially the learning session, where older people acted as teachers, informing university students on nutrition and financial management, was fundamental to gain the respect and admiration from the students. The position of teachers gave older adults confidence and the feeling of being useful for society. The learning sessions also allowed the contact session to be more productive, without the need to break the ice, since the old person-student relationship was already previously established. Currently we are planning to change the program by offering more learning sessions, allowing older adults to present themes they like, and thus sharing their knowledge with students.

It is crucial to start developing this program with young people who have some interest in the subject of aging. They may be students in the areas of engineering, technology, design, social sciences or health. This initial interest in the issues of aging is a motor of curiosity to know older adults and contact them. These programs deconstruct many of the *a priori* images about older adults. In the future, many of these students may be working in organizations

or services for older adults. If they developed positive images of older persons, they will be able to contribute to a less ageist society.

Conclusions

Much effort has been put to increase smartphone use among older people and to provide them with technology that fits their interests and characteristics. A recent study shows that Portuguese older people don't feel too old to learn how to use technology (Neves & Amaro, 2012). Yet, picturing older people as not capable of handling technology is a common ageist prejudice.

Valuing older people in using technology can act as a powerful vehicle to promote positive images of aging and to encourage intergenerational contact. Technology is, in a certain sense, a common language for different generations.

We see that most students initially disregarded the skills of older people in voicing their knowledge and experiences in a public event. They were surprised by older participant' skills in using ICT (Information and Communication Technology) and staying updated with the new trends. Indeed, thinking of older people as resistant to change is a common ageist view (Cutler, 2005). In turn, older participants felt valued in presenting the *Cordon Gris* app and confident during their interaction with younger people. We believe this was related to their involvement and good command of technology, which was fostered by the *Cordon Gris* proje*ct*. Overall, *SeniorTec* exceeded the expectations of all that were involved.

SeniorTec progam's contributions to the field of intergenerational programming are:

- Technology as a mediating element of the intergenerational relationship is beneficial for older people, who increase their usability as a form of social integration, but also as a means to promote their autonomy since ICTs can help them to live more actively and healthier. As these two issues are relevant today, technology can play an important role in improving the quality of life of older people, increasing safety and independence in their daily lives (Neves & Amaro, 2012; Rogers, Stronge, & Fisk, 2015; Schulz et al., 2014).
- Giving older people a leading role in teaching activities is crucial to deconstruct ageist stereotypes among the younger generations. Technology may especially useful in this regard in the sense it can act as a *"common language between different generations"*
- In the future, technology will be a fundamental professional aid for younger people working in the fields of social and health care in aging. If they know better what older adults like and need, they will be able to build more suitable and adapted technology for this target group.

Note

1. Promotional video available here: https://www.youtube.com/watch?v=0A4t1tCmSCc.

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Appendix

Table A1. Characterization – interviewed students.

Participant	Sex	Age	Higher education	Year
1	Female	21	Occupational Therapy (Graduation)	2
2	Female	19	Occupational Therapy (Graduation)	2
3	Female	20	Occupational Therapy (Graduation)	2
4	Female	35	Community Psychology, Protection of Children and Youth at Risk (MSc)	1
5	Female	22	Community Psychology, Protection of Children and Youth at Risk (MSc)	1

Table A2. Characterization – interviewed older adults.

Participant	Sex	Age	Marital status
1	Female	75	Widow
2	Female	75	Married
3	Female	76	Married
4	Female	65	Divorced
5	Female	79	Married