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Potential longer term project`s benefits are following:

- a) promotion of life - long learning among senior adults
- b) activating senior adults by participating in science research projects
- c) popularizing citizen science among science community in countries represented in the project.

To maximize the dissemination of projects results will be organized two multiplier events for participants outside the consortium. Important feature of the intended project is to gather institutions from countries with different experience and achievements in the area of senior adults engagement. It will allow to develop universal solution to universal challenge which is a longevity revolution. Consortium members have an extraordinary opportunity to engage senior adults with science in ways that can benefit both individuals and societies.

The researcher's attitudes towards the educational needs of seniors

The study involved **61 researchers** representing various fields of science from four countries: Poland, the Czech Republic, Slovenia and Bulgaria.

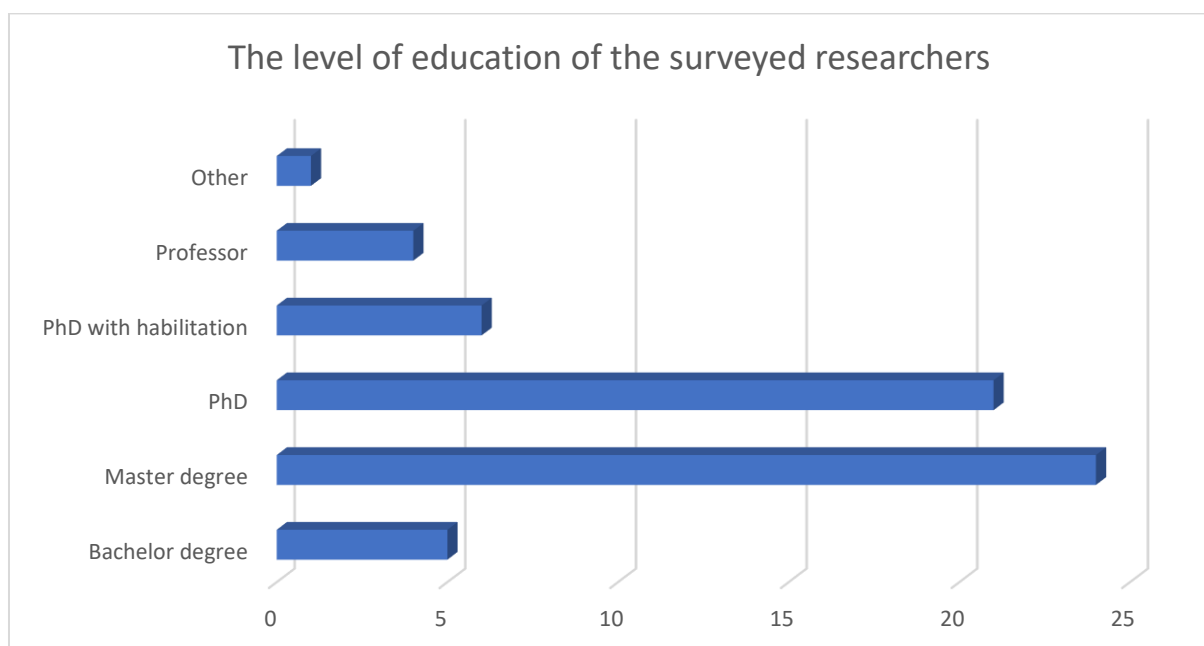


Chart 1. The level of education of the surveyed researchers.

The respondents were asked about the level of education. The largest number of respondents were masters (including doctoral students) and doctors. This should not come as a surprise, as it is often young scientists who cooperate with non-governmental organizations, create their structures and have contact with recipients of activities (including seniors). The next group of scientists participating in the study were habilitated doctors (including the so-called university professors) The next groups are bachelor's (often technicians or beginning scientists) and full professors.

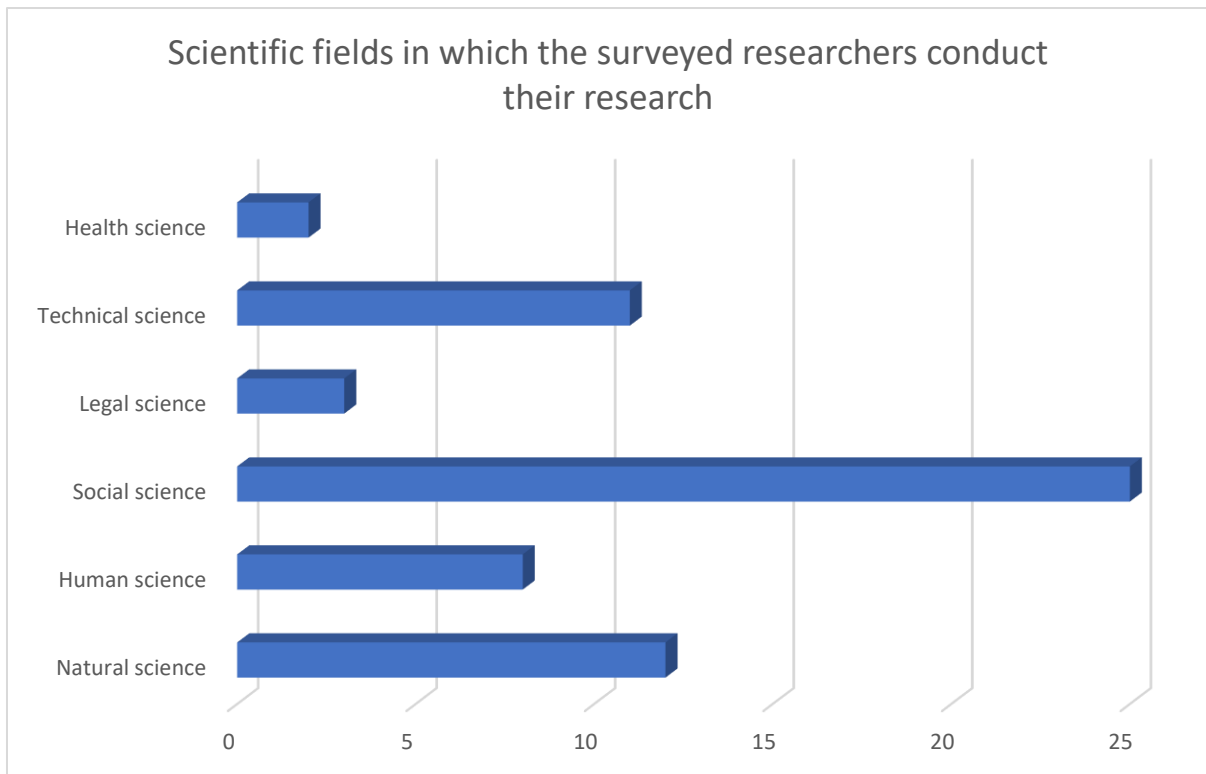


Chart 2. Scientific fields covered by the surveyed researchers.

Among the respondents, the largest group are researchers from disciplines related to social sciences. Secondly, they are researchers in the field of natural sciences and technical sciences. The next group are representatives of the humanities. The least numerous representation in the conducted research are representatives of legal sciences and health sciences.

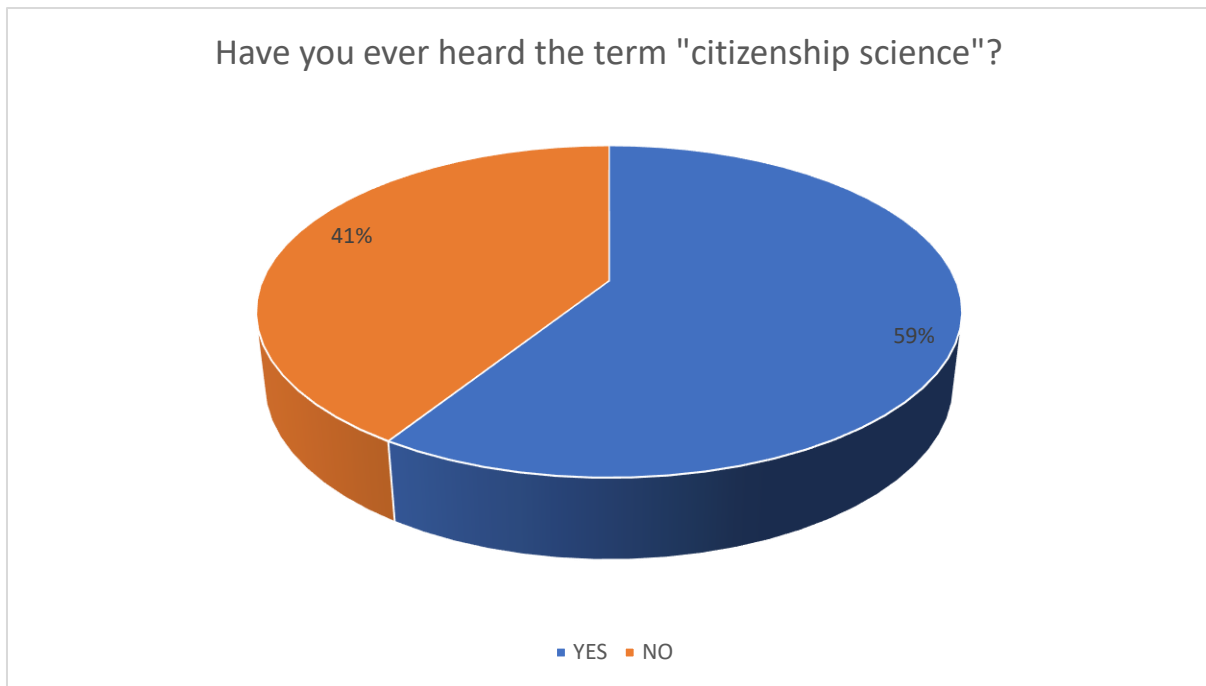


Chart 3. Knowledge of the term "civic science" among the surveyed researchers.

The respondents were asked if they had ever encountered the term citizenship science. In this case, 59% answered in the affirmative.

Another question was about how the respondents assess the possibility of working with older people (over 60) in civic education projects. The vast majority answered positively (yes and definitely yes answers). Some of the respondents had no opinion on this topic, and only a few responded negatively.

In the opinion of the researchers, seniors are the appropriate group to implement a project in the field of civic science.

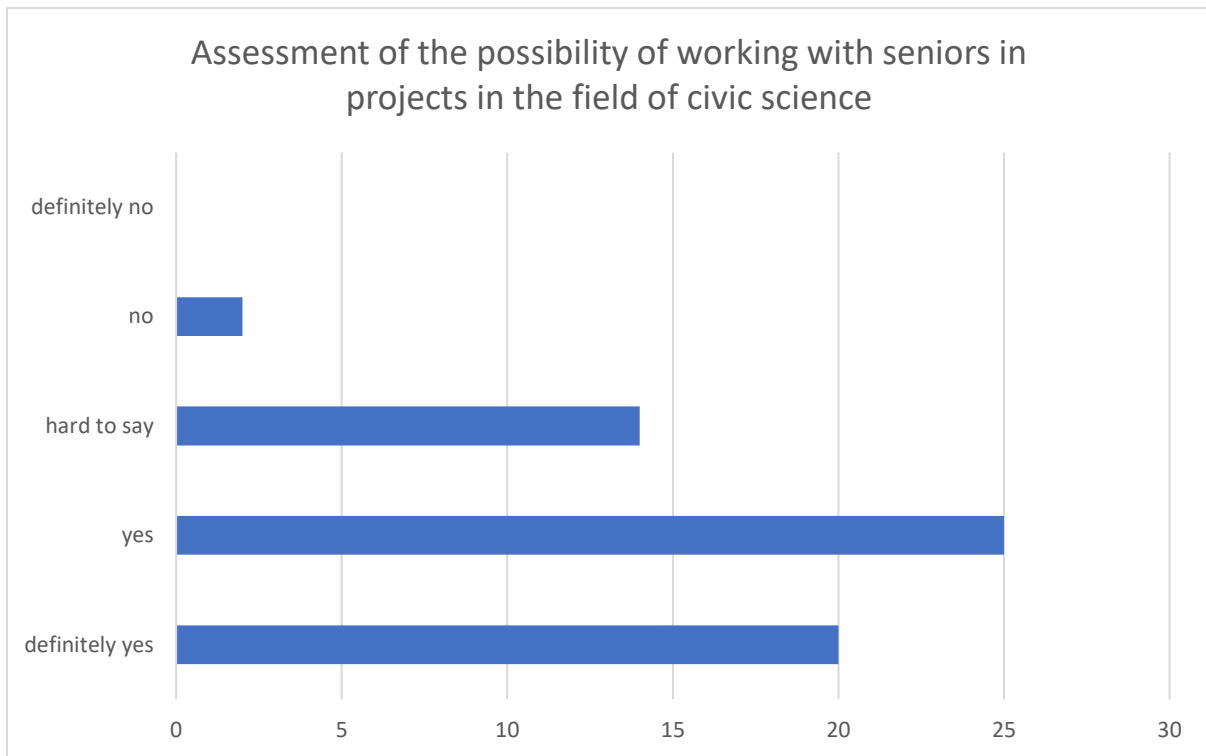


Chart 4. Assessment of respondents regarding the possibility of working with seniors in projects in the field of civic science.

Researchers were also asked if they were interested in participating in a citizen science project with older people. In this case, the majority answered yes (yes and definitely yes). However, a large group of scientists who could not determine whether they would be interested in such activities also took part in the study. A small group of respondents replied negatively.

Another question concerned the real interest of researchers in this type of projects. The aim was to confirm their possible involvement in the next stages of this project and in future activities. Researchers who answered yes to the previous question were asked if their declaration was only informative, or if they considered such projects valuable. As many as 92% said that their interest stems from the fact that the project can be useful.

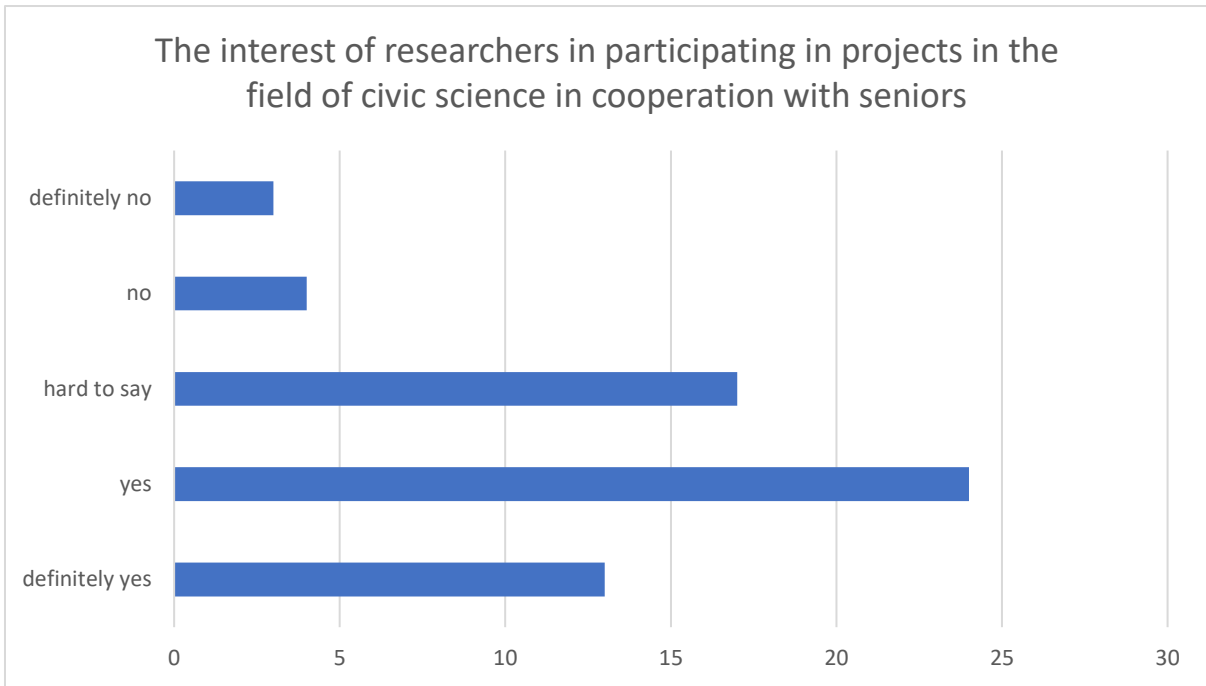


Chart 5. The respondents' interest in participating in projects in the field of civic science in cooperation with the elderly.

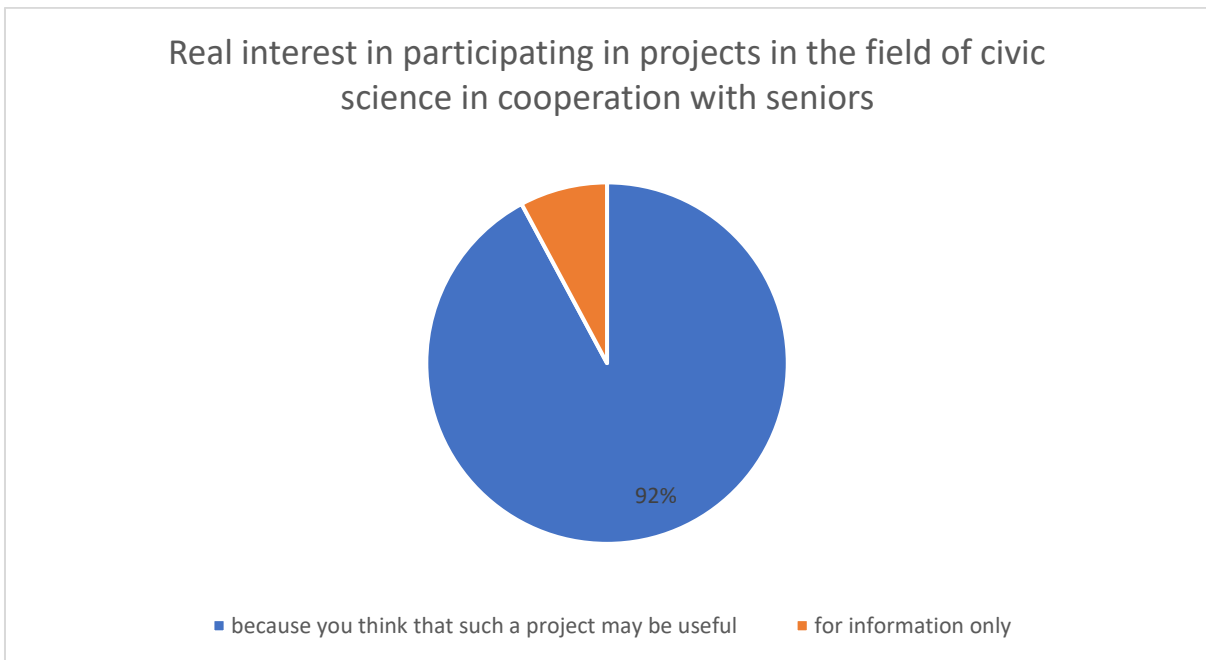


Chart 6. Real interest in participating in projects in the field of citizenship science in cooperation with the elderly (answers of people who answered the previous question in the affirmative).

The next question was about the nature of the knowledge that should be passed on to older people. Most of the researchers decided that the best way to conduct classes is to convey popular science news, knowledge about everyday life and counseling. The next result was scientific knowledge, and at the very end there was information about the latest scientific discoveries.

Looking at the general data on the diagnosis of seniors' needs made as part of our study, it turns out that seniors and researchers in this area have similar preferences.

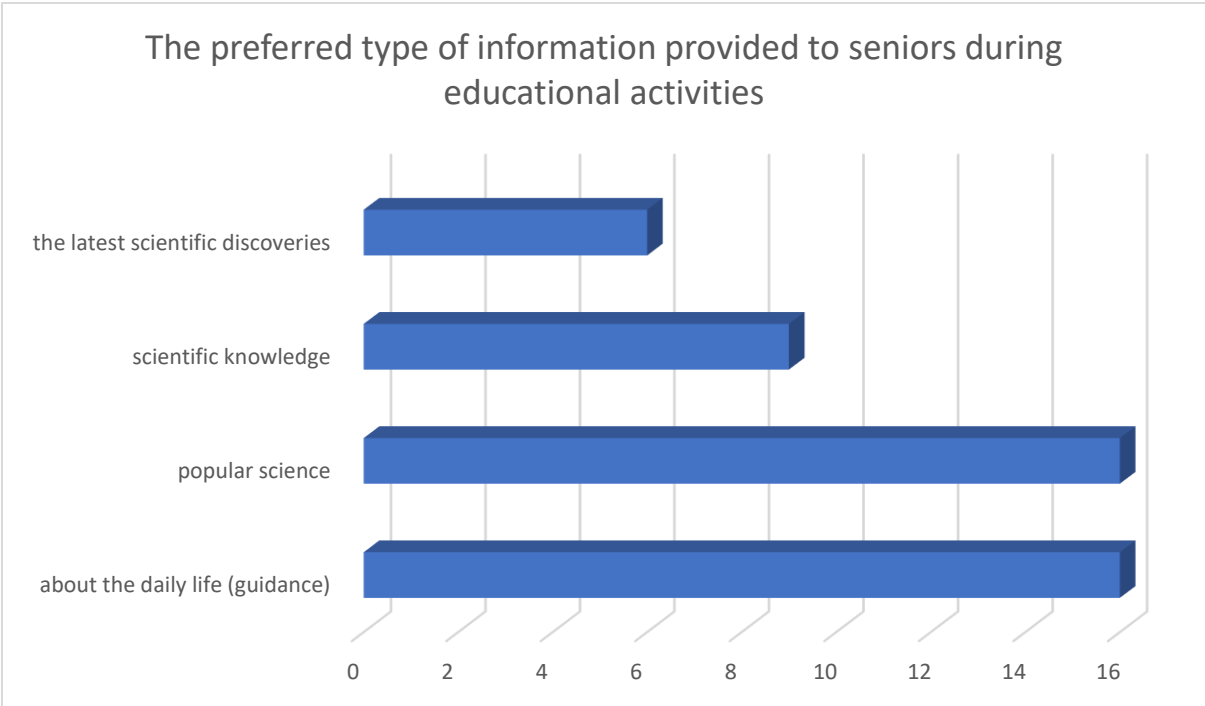


Chart 7. The type of information provided to seniors during educational activities preferred by researchers.

Researchers were also asked to assess what type of activities would be best suited to the implementation of tasks in the field of education of the elderly. Most people were in favor of the workshop, where the teacher can collaborate with the group and not just provide information to the audience. The second in line are open-air classes, i.e. those that allow you to go beyond the walls of the lecture hall. The next place was taken by tours and lectures.

Researchers see the least value in online classes and role-playing. One of the last places was also occupied by housework.

These preferences of researchers coincide with the previously diagnosed needs of seniors.

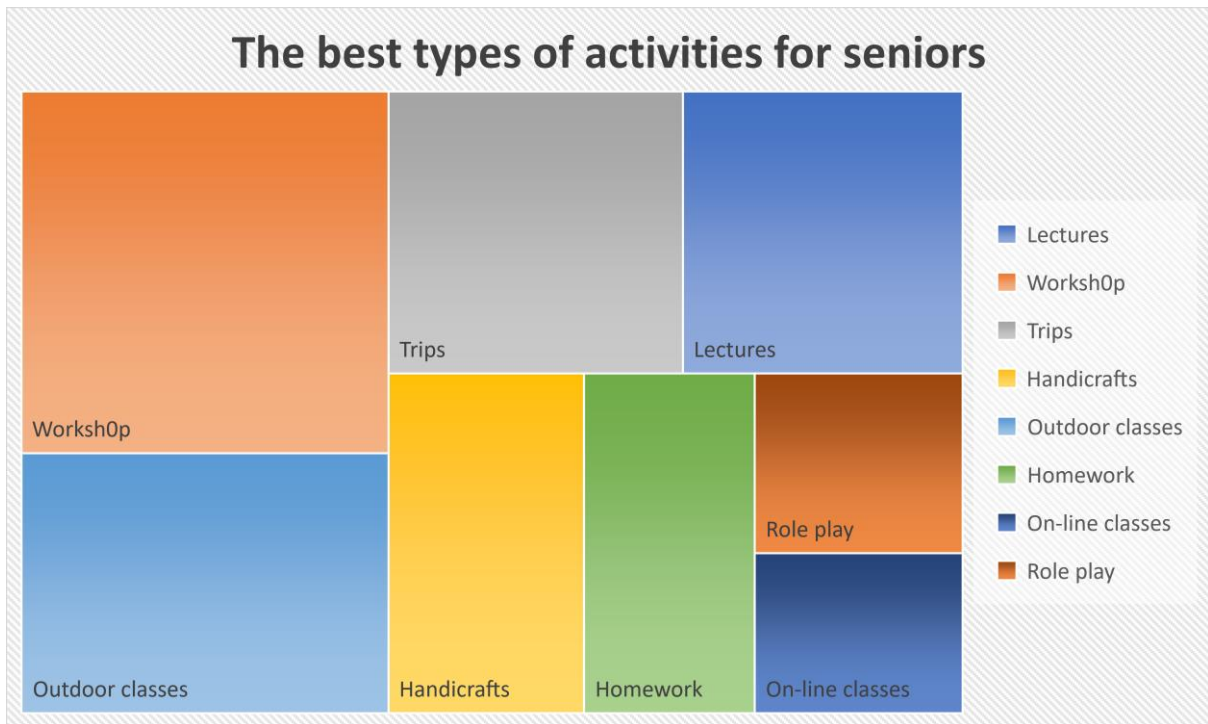


Chart 8. A matrix showing the forms of classes preferred by respondents in the education of older people.

The respondents also answered the question about the preferred size of groups during the classes for seniors. Groups of 5 to 10 people were in favor of the highest number of votes. The second most frequent answer was groups of 11-20 people, and the third group of less than 5 people. Only a few respondents said that classes are best conducted in groups of more than 20 people. None of the respondents decided that the groups should be larger than 50 listeners.

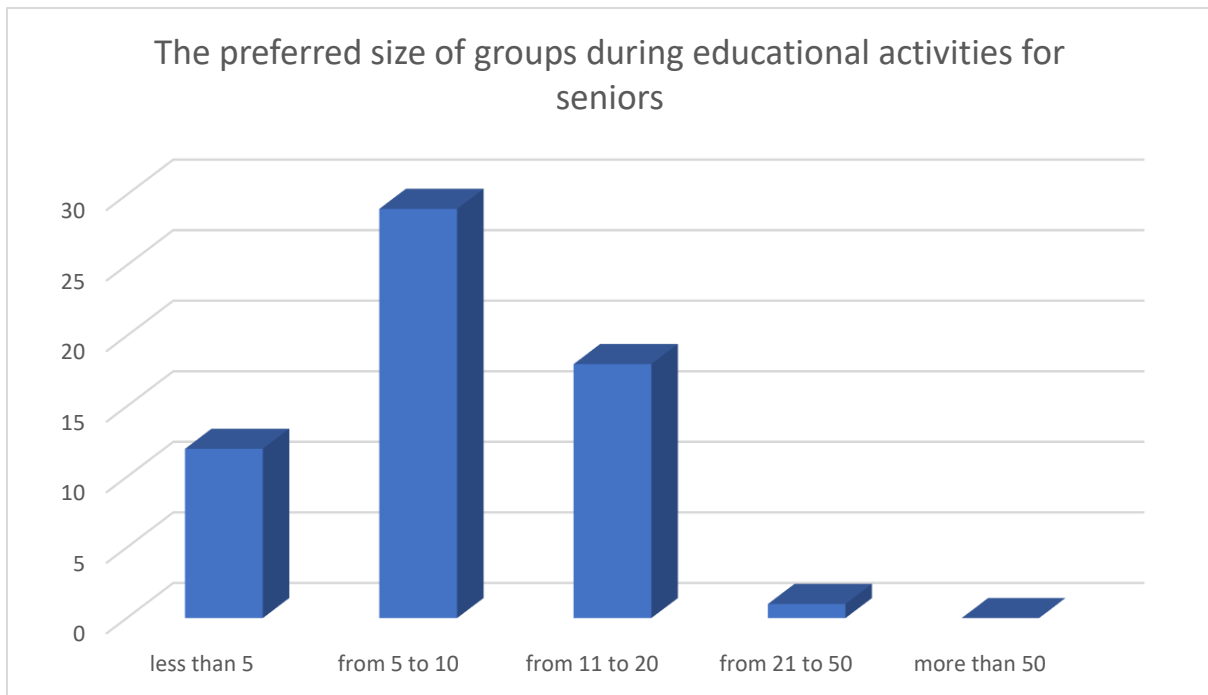


Chart 9. Research group size preferred by researchers for educational activities for seniors.

The respondents were also asked to specify the preferred frequency of classes in the project. The largest number of researchers (35%) decided that optimal classes should be held once a week. The second highest (27%) response was given every 2-3 weeks. The third (20%) answer was "more than once a week". 18% of the respondents decided that classes should be organized once a month or less frequently.

These data show that researchers believe that meetings for citizenship projects should be held cyclically, not too long apart.

Preferred frequency of educational classes for seniors

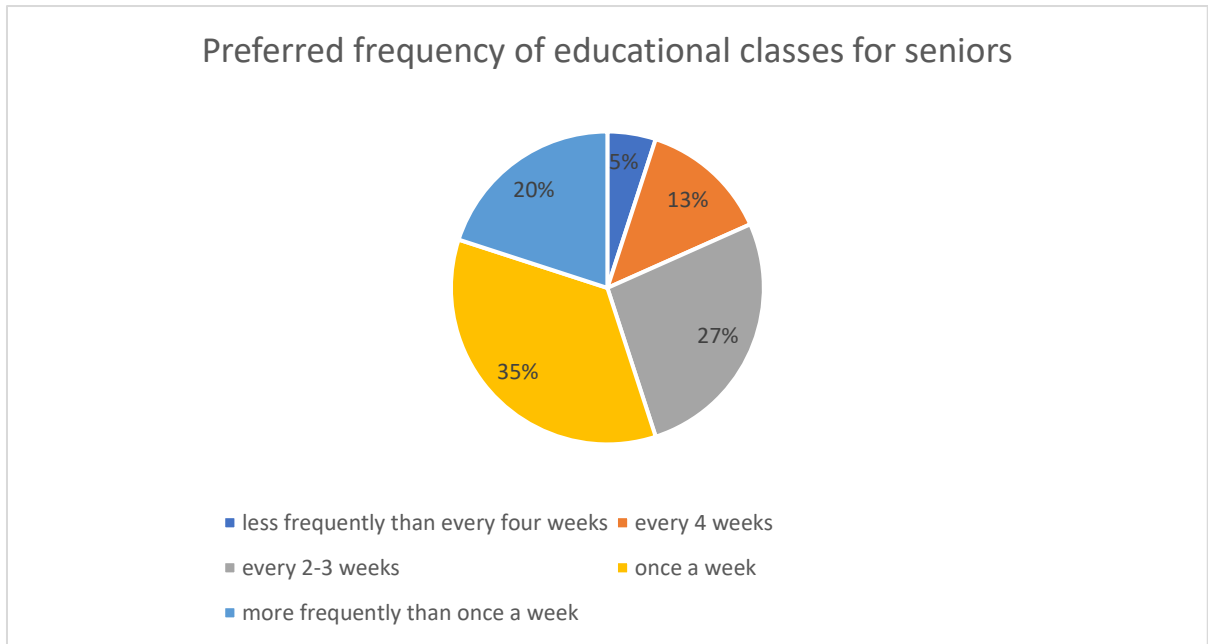


Chart 10. The frequency of educational activities for seniors preferred by researchers.

Respondents were also asked about the preferred duration of individual classes as part of a citizenship project for older people. Most researchers supported the time from 1.5 to 3 hours. The second most frequently chosen answer was less than 1.5 hours. Only a few respondents said that the classes should preferably last from 3 to 4 hours. Nobody has selected an answer in more than 4 hours.

Here, too, the researchers' preferences coincide with the diagnosed needs of the elderly, whom we studied in this project. Both groups believe that classes cannot be too long.

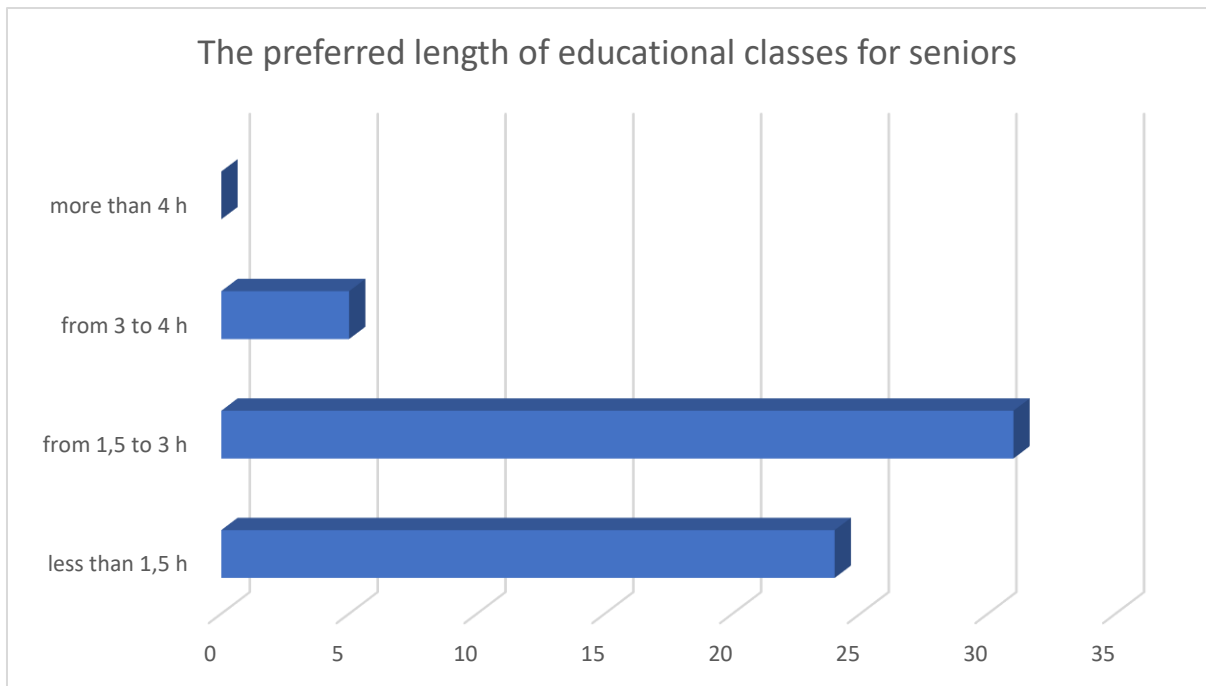


Chart 11. The preferred length of a single unit of educational activities for seniors by researchers.

The last question asked to the researchers was of an open nature and allowed them to express themselves freely. It concerned the diagnosis of the main barriers in the education of the elderly and hindering the implementation of educational projects in cooperation with this group of beneficiaries.

Researchers, among other things, point to the great diversity of the elderly. One of the problems they see is how to organize learning activities that are suitable for all participants. It's not just about the age difference, incl. between 60 and 80 years old or older, but also about the scope of their life experiences, interests, skills and abilities (also physical and intellectual).

The respondents emphasized that when conducting classes with seniors, one should take into account the specificity of the group: weaker knowledge of technology, worse sensory perception, slower processing of new information, specific interests and needs, or the presence of chronic diseases.

Survey questionnaire

The Mill of Knowledge Modernity Center and the RISE Foundation invite you to complete a questionnaire on the forms of education of the elderly. The research is carried out as part of the project KA204-C4F4E254-EN, funded by the Erasmus + program.

The results of this study will help us to prepare and test a high-quality training program for older people and to integrate them into citizenship education.

The survey is anonymous and the data collected by it will be used only for the purpose of the project.

Basic information about respondent

Basic information about researcher

1. Academic title
 - a) M.A.
 - b) PhD
 - c) PhD with habilitation
 - d) professor
2. Domain
 - a) natural science
 - b) human science
 - c) social science
 - d) legal science
 - e) technical science
 - f) health science

Questionnaire

1. Have you heard about citizen science?
 - a) yes
 - b) no
2. Do you think that seniors (old adults aged 60 and above) can be regarded as good participants in citizen science projects?
 - a) definitely no
 - b) no
 - c) hard to say
 - d) yes
 - e) definitely yes
3. Which methods are best for educational activities for seniors?
 - a) lectures
 - b) workshop
 - c) trips
 - d) handicrafts
 - e) outdoor classes
 - f) homework
 - g) on-line classes
 - h) role play
4. How often should educational activities for seniors be conducted?
 - a) less frequently than every four weeks

- b) every four weeks
 - c) every 2-3 weeks
 - d) once a week
 - e) more frequently than once a week
5. Would you be interested in working with seniors in citizen science projects?
- a) definitely no
 - b) no
 - c) hard to say
 - d) yes
 - e) definitely yes
6. You answered the previous question positively
- a) because you think that such a project may be useful
 - b) for information only
7. What kind of information is most relevant for seniors?
- a) about the daily life (guidance)
 - b) popular science
 - c) scientific knowledge
 - d) the latest scientific discoveries
8. How many senior members should have a group for educational activities?
- a) less than 5
 - b) from 5 to 10
 - c) from 11 to 20
 - d) from 21 to 50
 - e) more than 50
9. How long should classes last?
- a) less than 1,5 h
 - b) from 1,5 h to 3 h
 - c) from 3 h to 4 h
 - d) more than 4 h
10. What, in your opinion, are the main challenges in conducting educational activities for seniors?

Summary

Finally, I would like to present a few recommendations resulting from the diagnosis of the needs of older people related to the organization of lifelong education processes and the beliefs of researchers regarding the implementation of education processes of older people and the implementation of projects in the field of civic science. These recommendations may facilitate the organization of educational courses for seniors for entities wishing to conduct this type of activity.

Recommendation 1

By analyzing the responses of researchers and seniors from the parallel surveys, it can be concluded that the researchers correctly read the preferences of older people in terms of conducting educational activities. Researchers correctly assess both the nature of knowledge that should be passed on to seniors (knowledge about everyday life, counseling, popular science news), as well as when it comes to the organization of classes: cyclical meetings (preferably every week or two), lasting 60-120 minutes.

Recommendation 2

Older people are a good group to carry out projects in the field of citizenship science. On the one hand, they are interested in various types of activities outside their home and meeting other people, as well as gaining new knowledge. On the other hand, they have more free time, which they can organize more freely than working people.

Recommendation 3

When carrying out tasks in cooperation with seniors, certain features characteristic of this group should be taken into account, including:

- weaker perceptual abilities,
- faster susceptibility to fatigue,

- chronic diseases,
- visible differences (age, skills, abilities) between the participants of the classes,
- aversion to new technologies.