



**DIGITAL TOOLS**  
for dementia caregivers

# PR 3 REPORT

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## Introduction

Dementia is a syndrome that affects multiple cognitive functions, including memory, language, problem-solving, orientation, perception, attention, concentration, and judgment. By 2050, it is projected that around 100 million people worldwide will be living with dementia (Cheng, 2017), making it one of the most significant health challenges our society faces. The lifespan of dementia patients can range from 4 to 20 years, depending on factors like age and other underlying health conditions (Tom et al., 2015). People with dementia are unable to function independently, leading to a considerable need for daily assistance, which is often provided by family members at home (Moreno et al., 2015).

The family is the main source of care for patients with Alzheimer's disease. The psychological, socio-economic and physical repercussions of the caregiving role affect the members of the family unit with an onerous cognitive, emotional and behavioral commitment that is a source of stress.

From this emerges the need to adopt an integrated management of the disease, with the care of both the patient and the caregivers, offering the latter targeted interventions, both to alleviate social isolation and the feeling of loneliness that often affects those who take care of a person with dementia, and to reduce stress and teach how to manage it. With advancements in technology, new tools are now available that can assist caregivers, providing a fresh perspective on dementia care. These technologies offer new opportunities to ease the caregiving process, potentially reducing the burden on caregivers and improving the quality of care they can provide.

**"Digital Tools for Dementia Family Caregivers"** Project proposes a highly innovative educational model that leads to the development of a professional curriculum based on the use of Digital Competences applied to the caregiving process. It combines innovation with the need to support family members in helping patients with dementia.

- Curriculum design for family caregivers through specific skills that can transform a necessity into a professional opportunity. The project aims to improve Digital Competences, so the program focuses on the use of digital tools as a key element.
- Generate digital competences with Extended Reality immersive experiences.
- Validation of competences acquired through the curriculum.
- European sharing of experiences, involving European specialized organizations that will contribute their expertise in designing the caregiver curriculum.

This report is the culmination of phase 2 of the project. It represents the outcome of the testing and validation work from the first part of the project, namely "state of the art and curriculum design." During phase 2, the Project partner organizations were able to test the results of the focus groups, and the effectiveness of the curriculum developed through the actual training of family caregivers.

## Objective

The training program of the "Digital Tools for Dementia Caregivers" project aims to enhance digital skills and provide essential tools to support caregivers in their daily tasks. Specifically, the objectives are to:

- **Enhance caregivers' technological skills:** Equip caregivers with the knowledge and proficiency to effectively use digital tools and technologies, enabling them to access useful resources, manage care more efficiently, and stay updated on the latest developments in dementia care.
- **Reduce caregiver stress:** Provide caregivers with strategies and digital tools that help alleviate the emotional and physical burdens associated with caregiving. This includes offering resources for stress management, mental health support, and practical solutions to streamline caregiving tasks.
- **Improve the quality of life for both caregivers and patients:** Empower caregivers to improve the well-being of patients with dementia using technology that fosters better communication, engagement, and care planning. This also includes enhancing caregivers' ability to provide personalized, compassionate care that meets the unique needs of everyone.
- **Enhance the overall quality of care:** Enable caregivers to apply digital tools to deliver more effective and informed care. By improving their technological literacy, caregivers can make better decisions, access relevant information, and adopt best practices in dementia care, ultimately leading to better outcomes for both the caregivers and their patients.

The objectives set in the project are aimed at achieving the following results through the training:

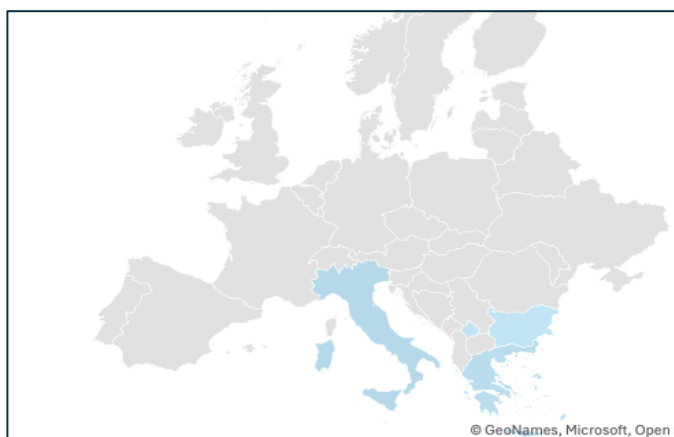
- **Improvement of digital skills in family caregivers:** A significant improvement in digital skills is expected, with an increase ranging from 80% to 100% of participants.
- **Consistency of curriculum content with the needs of the target group:** The developed curriculum must effectively address the specific needs of the caregivers, with a match between 80% and 100% of the content and the practical and educational requirements of the participants.

- **Functionality and efficiency for each participant:** The program should ensure a high level of functionality and efficiency, ensuring that each participant can apply the knowledge gained effectively in their caregiving context.

## Methodology





### Participants

The target of this project is family caregivers, i.e., those who assist their loved ones with dementia without



being professionals in the field. The sample considered consists of a total of 219 family caregivers from the countries of the project partner organizations. A total of **62 Italian caregivers** participated in the training, coordinated by the social promotion association **Dementia Care ETS**, **58 Greek caregivers** under the coordination of the **Alzheimer Athens** organization, **50 Kosovar caregivers** coordinated

by the **ECSA Kosova** organization, and **49 Bulgarian caregivers** coordinated by the Bulgarian organization **Foundation Compassion Alzheimer**.

Country	Organisation	N° of caregivers
ITALY		62
GREECE		58
KOSOVO		50
BULGARIA		49
<b>Total</b>		<b>219</b>

## Methods

To assess the effectiveness of the training program, both a quantitative and qualitative approach was used through the administration of paper-based questionnaires. The decision to use paper-based questionnaires, rather than online tools like Google Docs, was driven by two main reasons:

- **Ensuring participant engagement:** By administering paper questionnaires, it was ensured that participants provided their feedback directly before and after the training, without the risk of them delaying or forgetting to complete online questionnaires, especially after the training had concluded.
- **Practical considerations and digital skills:** Additionally, not all participants were comfortable using online tools, as they did not all possess the same level of digital competence. For this reason, paper questionnaires were deemed more suitable, allowing each participant to easily share their opinions without facing technical difficulties.

Both the pre-training and post-training questionnaires included a mix of multiple-choice questions and open-ended questions. The multiple-choice questions provided a standardized, quantitative measure, while the open-ended questions allowed for more detailed and personalized qualitative feedback.

The pre-training questionnaire aimed to assess the participants' familiarity with assistive technologies before the start of the training. This provided a baseline that helped understand the participants' technological skills and potential areas of difficulty. The post-training questionnaire, on the other hand, was designed to measure the improvement in digital skills and increased confidence in using technology after the training. This approach allowed for an evaluation of the program's impact, both in terms of new skills acquired and changes in participants' perceptions and self-efficacy in using digital tools.

**Both the pre-training and post-training questionnaires are attached at the end of this report as Annex 1 (pre- training questionnaire) and Annex 2 (post-training questionnaire).**

## Procedure

During the trainer training, the project partner organizations organized specific training sessions for professionals from various day care centers, aiming to maximize the number of family caregivers who would later participate in the training. After the trainer training, it became their responsibility to identify family caregivers and offer them the training. The choice to work with small groups was strategic, as it allowed the training to be tailored to the individual needs of the participants, helping them to the best of their ability in acquiring the skills needed to use new technologies and digital tools.

Each training session was structured uniformly by all partner organizations to provide a comprehensive and interactive learning experience. The session structure included several key moments designed to optimize learning and ensure that each participant could gain the maximum benefit from the program:

1. **Administration of pre-training questionnaires:** Pre-training questionnaires were distributed at the beginning of each session to collect information on the participants' familiarity with assistive technologies and their expectations regarding the training.
2. **Introduction of the group and analysis of digital process needs:** At this initial stage, the group was introduced to the training program, and the specific needs of the participants regarding the use of digital technologies were explored, helping to better understand their individual requirements.
3. **Presentation regarding the program and training curriculum of the project:** A detailed overview of the program was provided, with a particular focus on the curriculum developed for the training, ensuring that participants had a clear understanding of the course's objectives and content.
4. **Questions and answers related to each chapter of the curriculum:** After each chapter of the curriculum, a Q&A session was held to clarify doubts, delve deeper into specific topics, and encourage dialogue between trainers and participants.
5. **Group discussion:** The group discussion offered participants the opportunity to share personal experiences, reflections, and suggestions, creating a collaborative and supportive learning environment.
6. **Post-training questionnaires:** At the end of each session, post-training questionnaires were administered to assess participants' progress, gather feedback on the training's effectiveness, and better understand the improvements made in terms of digital skills and confidence in using new technologies.

This structure allowed for a balanced learning path that combined theory, practice, and reflection, facilitating deeper learning and tangible improvement in the digital skills of family caregivers.

## Clarifications of closed-ended questions

In the closed ended/multiple-choice questions, the response options were provided using a Likert scale. Participants were given the opportunity to assess the question or statement in the questionnaire on a scale from 1 to 5, where 1 represents the lowest level of comfort or agreement and 5 represents the highest level. During the analysis phase, this scale was then translated and adapted to the corresponding question.

For example, Q1 pre-training: "How comfortable are you with using digital tools and technologies in your daily caregiving activities?" Caregivers responded on a scale ranging from 1 (labeled as "not at all comfortable" in this report) to 5 (labeled as "extremely comfortable" in the report). These instructions were clearly communicated to the participants when they completed the questionnaire.

## Plan of statistical analysis

After collecting all the questionnaires, the organizations transferred the responses into an Excel file. To process all the information, we grouped the responses to open-ended questions into categories to obtain the frequency of thematic responses. The *Athens Alzheimer* organization and *ECSA Kosova* also used SPSS version 23 to analyze the results.

The organizations then created a brief report regarding the caregivers' data from their respective countries. The individual reports were shared among the partners, and *STEPP* conducted an aggregated analysis of the data and prepared this report.



Pictures from the training

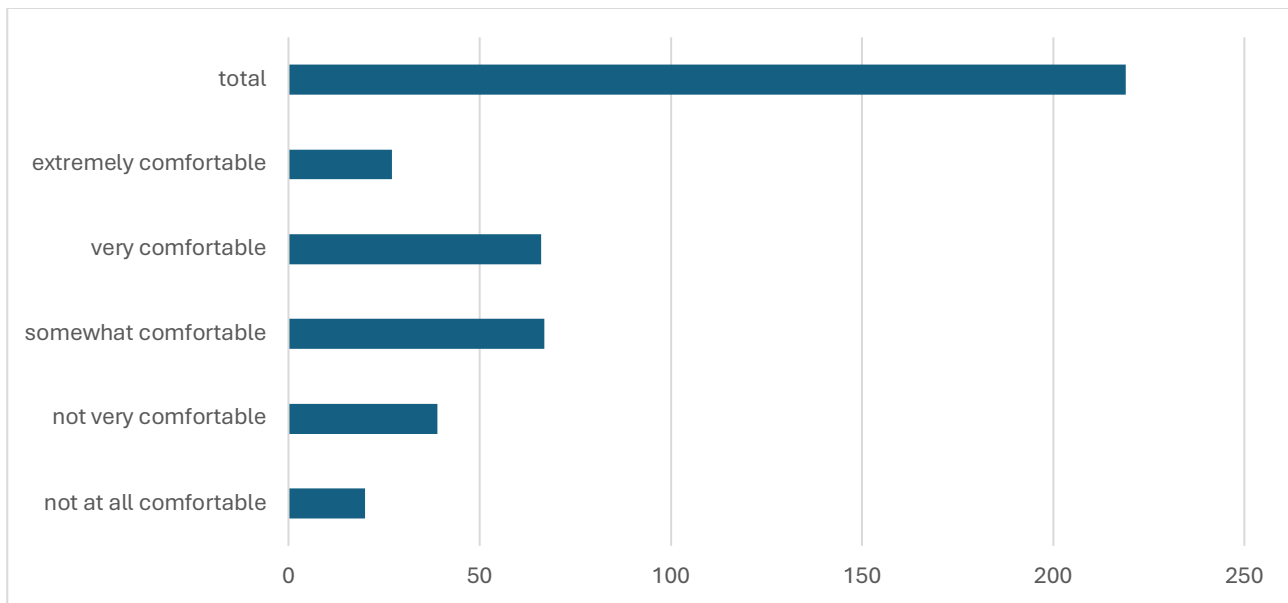
## Results

### Pre-training questionnaires

Below are the aggregated data derived from the analysis of the pre-training questionnaires completed by the project partner organizations. For clarity, the questions and the corresponding answers are presented as they were asked to the caregivers prior to the training.

#### ***Q1. "How comfortable are you with using digital tools and technologies in your daily caregiving activities?"***

The data collected from the pre-training tests in response to the question "How comfortable are you with using digital tools and technologies in your daily caregiving activities?" provides an interesting insight into the level of comfort caregivers have when using digital technologies in their daily routines. The distribution of responses suggests a variety of experiences and skills in using digital tools. Preliminarily, there is a noticeable consistency in the distribution of responses, regardless of the country of origin of the caregivers.



Source: own elaboration from the training data collection.

In particular, the results show that a significant portion of caregivers do not feel entirely comfortable with digital technology. Results in detail:

- **20 respondents** stated they were "not at all comfortable," indicating a group of caregivers who likely have no experience or familiarity with using digital tools. This group may have more resistance or a lack of confidence in using technology, possibly due to fear of not being able to master it or a lack of training.
- **39 respondents** said they were "not very comfortable." This data suggests that a good portion of caregivers face some difficulty in adopting technology but is not completely opposed to the idea. There may be initial barriers to overcome, such as fear of making mistakes or a lack of familiarity with specific tools, but they are still willing to improve.
- **67 respondents** indicated they were "somewhat comfortable," which represents the largest group. This suggests that a significant portion of caregivers already have some level of comfort with digital tools, although they might not feel fully confident or skilled in their use. They may use certain tools functionally but might not yet be completely autonomous or at ease in integrating technology into their daily routines.
- **66 respondents** reported being "very comfortable." This group shows a good grasp of technology and a certain level of confidence in using it to improve daily caregiving. These caregivers likely already incorporate various digital solutions into their routines, such as apps for task management or health monitoring devices and may be more inclined to adopt new technologies.

- **27 respondents** stated they were "extremely comfortable." This group is the most skilled and familiar with digital tools, likely to use them in an advanced and daily manner. These caregivers view technology as a valuable resource to improve care and streamline their work.

## Data Interpretation

The data shows a varied distribution, but with a general trend towards a certain level of comfort with technology, especially among those who are "somewhat comfortable" and "very comfortable." However, there is also a significant number of caregivers who still do not feel completely at ease with using digital tools, suggesting a need for targeted training.

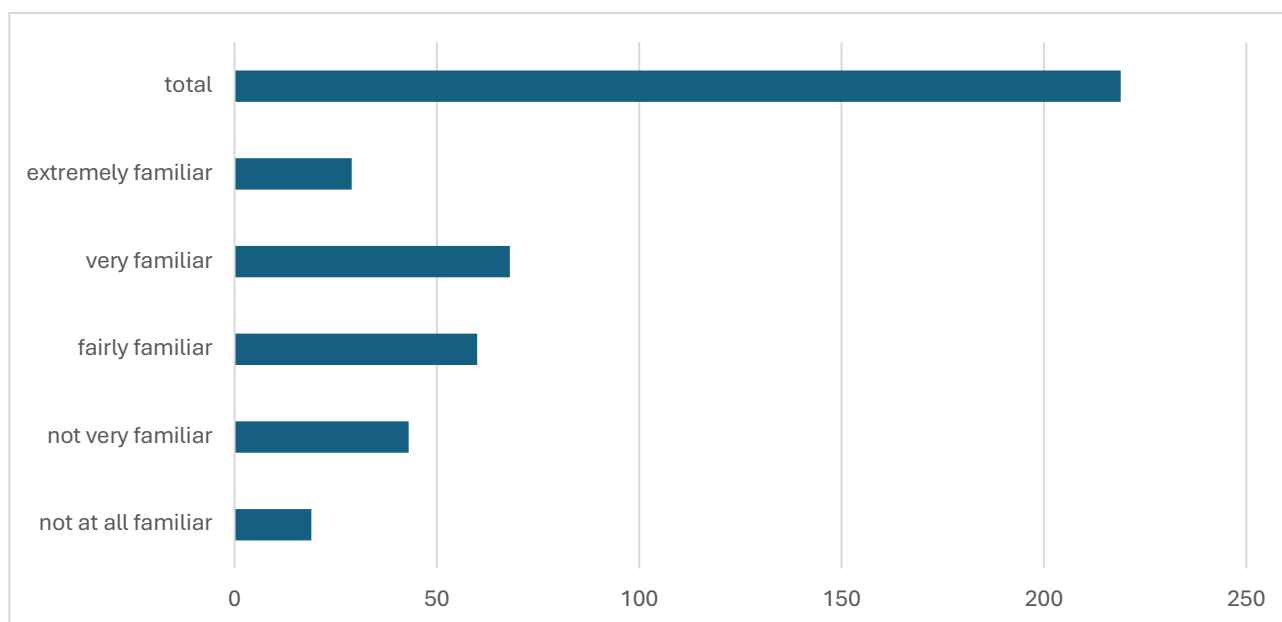
The responses indicate that many caregivers are open to adopting digital tools but may require support to overcome psychological or practical barriers related to using advanced technologies. These results also highlight the need for a training program that not only introduces new technologies but also helps caregivers build confidence and competence in using digital tools, reducing uncertainty and increasing their effectiveness in daily caregiving activities.

In summary, while a good number of caregivers are already comfortable with technology, there is a significant area of opportunity to improve digital skills, particularly among those who feel less confident in using these tools.

### ***Q2. "How familiar are you with the objectives and content of the curriculum we will cover in this training?"***

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The question "How familiar are you with the objectives and content of the curriculum we will cover in this training?" aims to assess how aware family caregivers are of the goals and content related to the digital tools that will be presented in the training. The fact that the training focuses on digital tools for caregivers of people with dementia is particularly significant, as many people in this category may not be familiar with advanced digital technologies or may not know how such tools can be useful in the caregiving context.



Source: own elaboration from the training data collection.

The collected data can be summarized as follows:

- Not at all familiar: 19 respondents
- Not very familiar: 43 respondents
- Fairly familiar: 60 respondents
- Very familiar: 68 respondents
- Extremely familiar: 29 respondents

### Data Interpretation

Overall, a significant portion of the participants report not being very familiar with the project objectives or the use of digital tools for dementia care. However, the majority of participants define themselves as “fairly or very familiar” with the objectives and content of the curriculum.

In general, the profile of the participants shows a variety of familiarity levels with the topic and digital tools. The situation presented by these circumstances appears particularly fertile for the purpose of the training, as it allows for the verification of the curriculum content and the methodology applied across a broad and heterogeneous range of starting conditions.

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***Q3. “What are your expectations regarding the specific topics, such as e-health literacy and digital content creation, that will be covered in this program?”***

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The responses to this open question (as with the subsequent responses to all open-ended questions) were heterogeneous. In some cases, caregivers did not provide any answer or gave generic responses ("Many expectations" or, conversely, "No expectations"). However, by analyzing the questionnaires from the various countries where the Project's training took place, it was possible to identify some underlying trends. Specifically, caregivers generally seem to converge on a few key themes, which are listed below:

- **Learn about new things:** This includes answers related to learning new technologies, new skills, digital tools, new knowledge about care, new ways to use technology/internet, online services, and better use of technology in care.
- **Secure online information:** This includes answers about distinguishing good information from bad, finding reliable information about health problems, finding easier information on the internet, and understanding and evaluating online medical information.
- **Learn platforms and applications:** This includes answers about discovering platforms and applications, cognitive training exercises, creative activities for the patient, support for caregivers, and the usability of the training.
- **e-health literacy:** This includes answers concerning medical services and advice, and providing accurate information to the doctor about the patient.

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***Q.4 “What are the main challenges you currently face as a caregiver that you hope this training will address?”***

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Open question. Regarding the challenges faced daily by caregivers, excluding generic responses, the following particularly relevant themes were identified across the different countries:

- **Everyday care:** This includes answers about handling/helping with everyday life, care, needs, occupation, self-service, security, communication issues, and medical appointments.
- **Time management:** This includes answers about managing care time or having no personal time.
- **Behavioral problems:** This includes answers concerning managing behavioral problems (mood changes, hostility, hoarding, denial, apathy, social isolation, not taking medication) or difficult situations with the patient.
- **Using Internet:** This includes answers concerning difficulties in finding trustworthy information or new material, using the internet or apps, finding qualitative information online, or updates on dementia.

- **Psychological issues:** This includes answers concerning caregivers' fear for the future, shouting at the patient, nerves, or emotional strain.

#### ***Q5. "What specific skills or knowledge do you hope to gain by the end of this training?"***

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Open question. When asked about the specific skills they hoped to acquire before the training, caregivers responded in an uneven way. Excluding responses of generic uncertainty, their expectations can essentially be summarized according to the following points:

- **Learn to use technology:** This includes answers related to learning how to handle online/trustworthy/good information, using the internet for everyday care, using digital tools/technology/platforms/applications/online services successfully, and aiming for better/secured use of the computer.
- **Handle difficult situations:** This includes answers about handling difficult reactions, getting as much help as they can, caring better for the patient, helping the patient feel better, and making their lives easier.
- **Communication with others:** This includes communication with doctors and other caregivers.

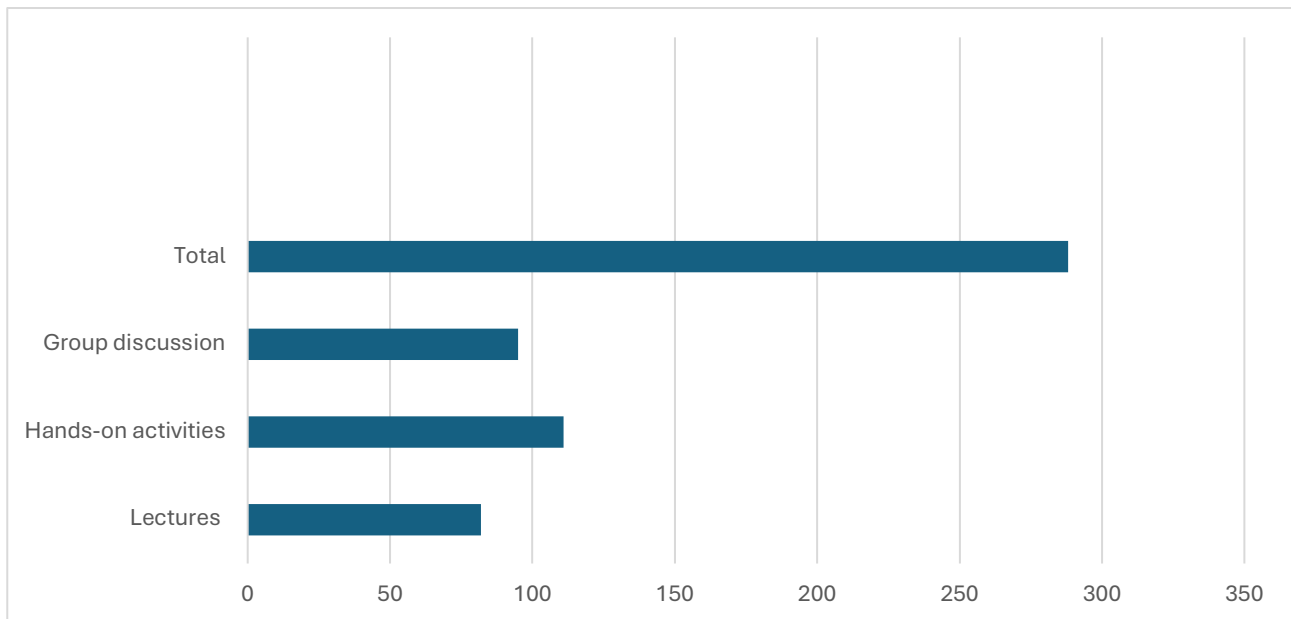
#### ***Q6. How do you prefer to learn new information?***

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The data collected regarding the family caregivers' preferences for learning new information, in response to the question "How do you prefer to learn new information?", clearly reflect the most appreciated learning methods by the participants in the "Digital Tools for Dementia Caregivers" training project. Here is an in-depth analysis:

Distribution of Responses:

- **Lectures:** 82 responses
- **Hands-on activities:** 111 responses
- **Group discussion:** 95 responses
- **Total:** 288 responses



Source: own elaboration from the training data collection.

### Data Interpretation

- **Hands-on activities:** with 111 responses, hands-on activities are the most preferred learning method. This suggests that the majority of family caregivers prefer to learn through **direct experience**.
- **Group discussions:** group discussions are the second most preferred method, with 95 responses. This data indicates that many participants find value in **interaction and exchanging ideas with others**. Group discussions can be useful for sharing experiences, doubts, and practical solutions related to dementia care, as well as for learning through dialogue and mutual support. The choice of this method suggests a strong desire for **experiential and collective learning**. This could be especially useful in a context like dementia care, where the **direct experiences of caregivers** and peer discussions are important resources for addressing daily challenges.
- **Lectures:** with 82 responses, are the least preferred method, although still significant. Some caregivers might find that theoretical lessons provide the necessary knowledge base to better understand the practical activities. The fact that it is the least preferred method might indicate that participants are not particularly inclined to learn through traditional lessons, which could seem more theoretical and less engaging.

It is important to specify that many participants chose more than one learning method (in fact, there are 288 responses out of 219 total participants). This suggests that there is **no clear or absolute preference** for a single learning method. Family caregivers seem to be open to a variety of approaches and recognize that the effectiveness of learning depends on the type of content and the teaching methods used.

The choice of multiple options could also mean that participants do not identify with just one learning style but recognize the need for a **mix of methods**. This could reflect their preference for **dynamic and varied learning**, which allows them to approach the content from different angles. This indicates that a **multimodal approach** would be particularly suitable, as it would allow participants to alternate between **theoretical, practical, and collaborative** methods, depending on their personal needs and preferences.

The caregivers' different backgrounds, their experience with technology, and their approach to dementia care might explain this variety of preferences. Some might prefer the clarity of lectures, while others might learn better through practical involvement or through interaction with others (group discussions).

### ***Q7. “How do you think this training will impact your ability to use digital tools to improve your caregiving”***

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In the responses that caregivers provided to this open-ended question, we can identify some recurring themes. Specific areas of interest emerge in which caregivers—at least those who provided more defined answers—believe they can benefit in their daily activities. Specifically, two general trends emerge:

- **Better use of internet:** This includes answers related to better or more tailored searches for online information, improved use of digital technology, evaluation of online information, and the search for information or support.
- **Time management:** This includes answers concerning help in everyday care to save time.

### ***Q8. “Are you aware of any specific areas where your digital competences might need improvement”***

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To this further open-ended question in the pre-training questionnaire, caregivers provided composite responses, as they did in other open-ended questions. From the analysis of the questionnaires, the responses were organized by attempting to summarize common threads. Caregivers seem, with varying levels of definition, to be aware that the areas where their digital skills need improvement are primarily:

- **Ability to search for reliable information:** This includes answers concerning finding trustworthy information, reliable sites, secure online use, or evaluating online information.
- **Generic use of the internet and applications.**
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***Q9. “How often do you seek health-related information online, and how confident are you in evaluating its reliability?”***

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Overall, most participants actively search for health-related information online, but many do not feel entirely confident in evaluating the reliability of such information. This highlights a potential area for improvement, suggesting that training regarding the reliability of online sources and how to evaluate information could be particularly beneficial for participants. The presence of participants who do not frequently search for information online may also indicate that some caregivers prefer traditional methods of information gathering or feel overwhelmed by the volume of data available online.

Analyzing the responses to this question, we can observe some key trends that reflect participants' behavior when searching for health-related information online and their confidence in evaluating its reliability.

The recurring categories in the responses are as follows:

- **Very often**
- **Often**
- **Often but not always confident**
- **Often but not confident at all**
- **Sometimes**
- **Rarely**
- **Never**

Most participants appear to search for health information online with some regularity. However, a significant number of them do not feel entirely confident in evaluating the reliability of the information they find. While many search for health-related information often, there is a clear uncertainty about assessing the quality or truthfulness of online sources. Among those who search frequently, nearly half express doubts about the reliability of the information. Some feel confident at times but not always, while others report lacking confidence altogether. This indicates that while participants are actively engaging with online information, they may feel unprepared to critically evaluate it, suggesting a need for further guidance on how to assess the trustworthiness of online health resources. On the other hand, there is also a notable portion of participants who search for health information less frequently, or even never. This could suggest a lack of trust in online sources or a preference for alternative methods of obtaining information, such as consulting healthcare professionals or using offline resources. This group may be less inclined to rely on the internet for health-related inquiries, which could point to barriers in both access and comfort with digital tools.

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***Q10. Have you used digital tools like social media or apps to connect with other caregivers or support networks? If so, how effective have they been?***

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The responses to this question reveal a broad range of experiences among participants regarding their use of digital tools to connect with other caregivers or support networks. A small group of participants reported that they use digital tools like social media or apps and find them effective in connecting with others. These respondents feel that these platforms provide a meaningful and valuable way to engage with support networks or fellow caregivers, suggesting that these digital tools are indeed fulfilling a purpose in their caregiving routines. However, an equal number of participants also use these digital tools but expressed that their effectiveness is limited. These responses suggest that while caregivers are making an effort to connect online, they may not always find the tools as useful as they hoped, or they may encounter barriers such as limited engagement or difficulty in finding the right platforms or support. A relatively smaller group indicated that they use these tools only rarely or not much. This suggests that either they have not fully embraced digital communication for caregiving or face challenges that prevent them from utilizing these platforms regularly. Finally, a significant portion of participants reported that they do not use digital tools like social media or apps at all to connect with caregivers or support networks. This group may either prefer in-person communication or be less familiar with or trusting of digital tools for caregiving support. Overall, while some caregivers have found digital tools effective, there is a noticeable portion who either struggle with them or choose not to engage with them, reflecting a diversity of experiences and preferences within the group.

## Post-training questionnaires

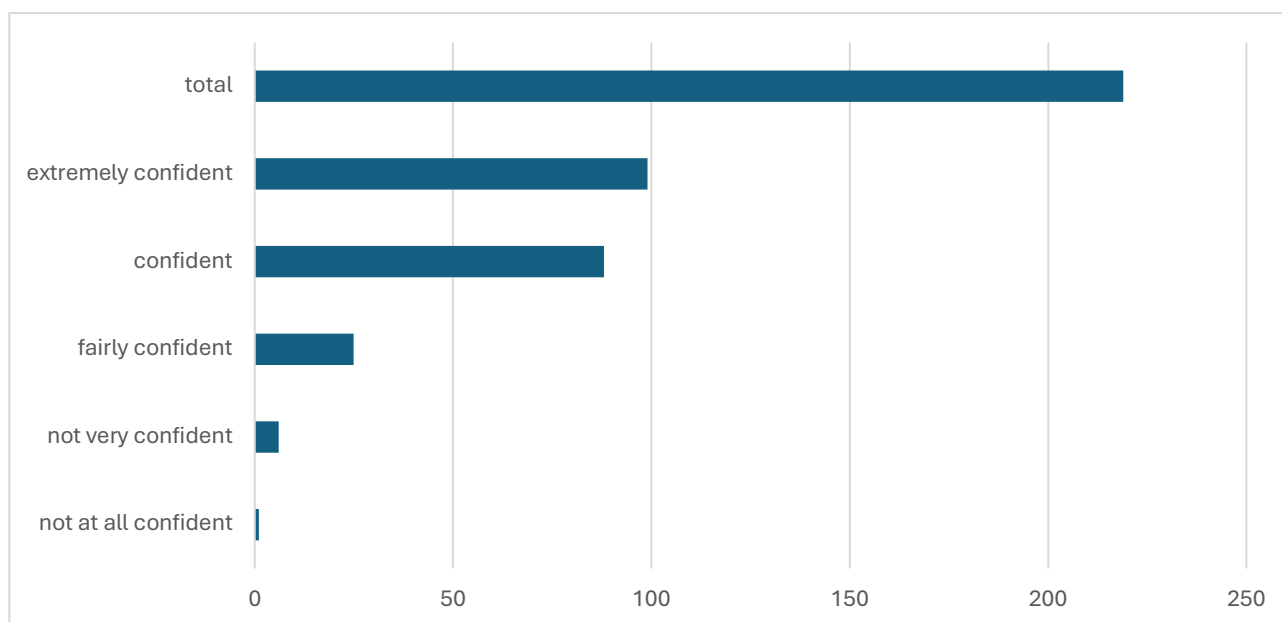
Below are the results and commentary derived from the analysis of the post-training questionnaires completed by the caregivers participating in the project.

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***Q1. “After the training, how confident do you feel in using digital tools and technologies in your caregiving practices?”***

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The analysis of the data collected in response to the question "After the training, how confident do you feel in using digital tools and technologies in your caregiving practices?" allows for some meaningful reflections on the effectiveness of the "Digital Tools for Dementia Caregivers" training project in improving family caregivers' confidence in using digital tools.



Source: own elaboration from the training data collection.

Below is the distribution of responses.

- **Not at all confident:** 20 respondents
  - **Not very confident:** 39 respondents
  - **Fairly confident:** 67 respondents
  - **Confident:** 66 respondents
  - **Extremely confident:** respondents
- Total:** 219 respondents

### Data Interpretation

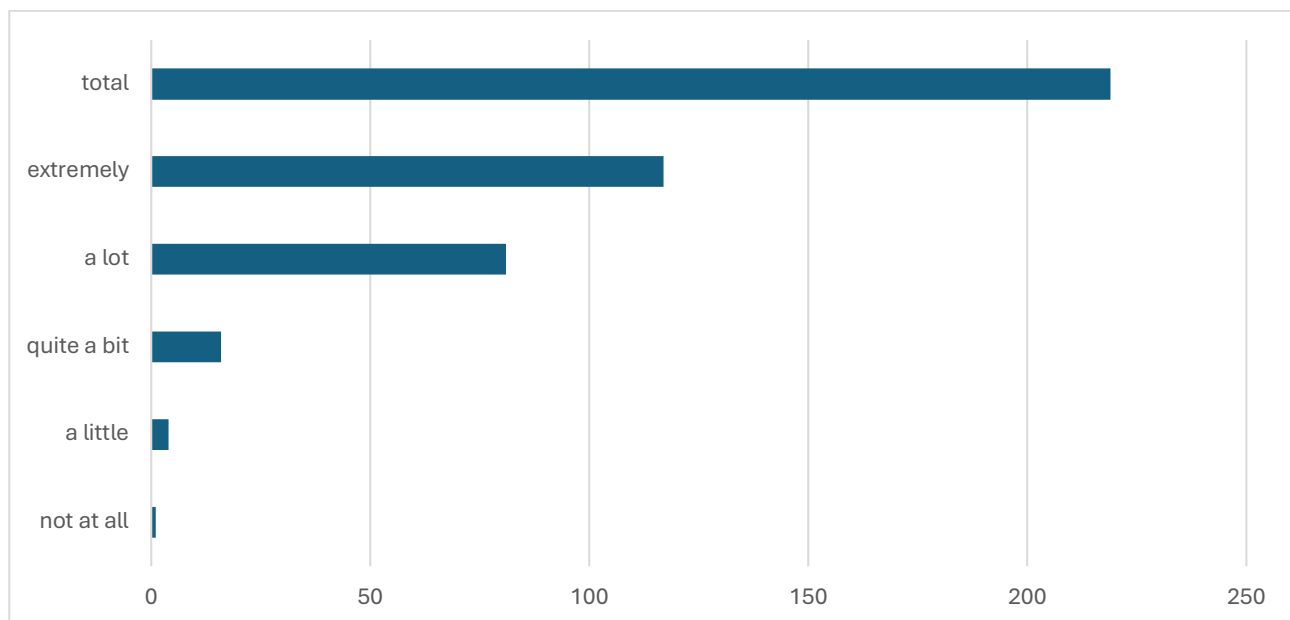
Most participants reported feeling fairly, confident, or extremely confident in using digital tools after the training. This suggests that most family caregivers have gained a certain level of confidence in using digital tools for dementia care, indicating that the training had a positive impact on improving their self-esteem and technological competence. Only a small portion of participants feel somewhat or not at all confident regarding the use of digital tools. These figures suggest that the training was generally effective, with a very small percentage of people feeling insecure about using digital tools. This is a great result, considering that family caregivers may have limited experience with technology. While many participants feel fairly confident or more in using digital tools, the fact that there is still a good number of participants who describe themselves as only "fairly confident" or "confident" suggests that there may be variation in confidence among participants. Some may have had more in-depth training or a more positive experience with the tools, while others might need further practical support sessions to feel completely at ease.

The distribution of responses shows that, while confidence has improved, some participants may still have doubts about using the tools in real-life situations, even if they report feeling confident. It might be helpful, for example, to offer follow-up sessions or additional material that allows participants to consolidate their confidence through practical experience or continuous support.

### ***Q2. “How well do you feel the training program met your expectations in terms of content and delivery?”***

The analysis of the data collected in response to the question "How well do you feel the training program met your expectations in terms of content and delivery?" allows for some reflections on the general perception of the participants regarding the effectiveness of the "Digital Tools for Dementia Caregivers" training. The responses followed this distribution:

- **Not at all:** 1 respondent
  - **A little:** 4 respondents
  - **Quite a bit:** 16 respondents
  - **A lot:** 81 respondents
  - **Extremely:** 117 respondents
- Total:** 219 respondents



Source: own elaboration from the training data collection.

### **Data Interpretation**

From the analysis of the aggregated responses from organizations in the different countries participating in the project, a concrete attempt can be made to interpret the data by identifying underlying trends, in particular:

- **High general satisfaction:** most participants, 178 out of 219 stated that the training significantly met their expectations, with responses ranging from "a lot" to "extremely." This highlights strong appreciation for the content and delivery of the training, suggesting that the program positively addressed the participants' needs and that the content was perceived as relevant and useful.
- **Very few negative responses:** the responses from those who expressed dissatisfaction, specifically those who chose the options "Not at all" (1 participant) or "A little" (4 participants), are minimal. This is a positive sign, indicating that the vast majority of participants found the program in line with their expectations.
- **Possible area for improvement:** although overall satisfaction is high, a small number of participants (21 in total) chose lower responses (from "fairly" to "a little"), suggesting that there might have been some aspect of the training that did not fully meet their expectations. This could be due to differences in initial expectations or specific training needs that were not fully addressed by the program.

### ***Q3. "Which topics covered in the training were most relevant to your needs as a caregiver?"***

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From the responses provided by the caregivers participating in the training to this first open-ended post-training question, three key factors stand out regarding the topics they found most interesting:

- **New tools and applications:** Participants highlighted the importance of digital tools for caregiving, discovering new methods and solutions for care, as well as engaging with digital content and cognitive training applications.
- **Online security:** Many participants emphasized the need for trustworthy information, secure access to updated materials, and effective use of the internet while ensuring their online safety.
- **e-health literacy:** Responses also focused on improving communication with patients, doctors, and healthcare professionals, recognizing the value of digital literacy in enhancing these interactions.

### ***Q4. "How has the training addressed the challenges you previously identified in your caregiving role?"***

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From the responses to this open-ended question, several common themes stand out among participants (those who provided more specific responses, rather than general ones):

- **New perspectives on caregiving:** Many participants noted that the training introduced fresh ideas, tools, and approaches, offering them new ways to improve their caregiving practices and skills.

- **Improved use of the internet:** Participants mentioned that the training helped them gain confidence in using the internet for caregiving-related tasks, such as searching for information and utilizing online resources effectively.
- **Holistic approach to training:** The training was seen as providing a comprehensive view of caregiving, helping participants understand how different aspects of care interconnect and how to approach their roles more effectively.

Furthermore, some recurring themes emerged in the responses, such as the importance of **sharing information**, using **supportive materials**, engaging in **discussions and examples**, and gaining a **clearer understanding of everyday caregiving challenges**. These elements highlight how the training helped participants feel more equipped to tackle their caregiving tasks.

#### ***Q5. “Which parts of the training curriculum presented are of most interest to you?”***

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From the participants' open-ended responses, several key themes emerged as areas of strong interest:

- **New applications and technologies:** Many participants expressed interest in learning about new digital tools and applications designed for both caregivers and patients. This included technologies for communication, cognitive training, and finding support groups for caregivers.
- **e-health literacy:** A significant number of participants highlighted their interest in gaining the ability to navigate online resources for health-related information. This included finding educational materials, searching for medical seminars, making online appointments, and improving communication with doctors and patients.
- **Online and internet security:** Participants also showed a strong interest in understanding how to safely navigate the internet, focusing on how to verify the reliability of online information and ensure secure access to digital health resources.

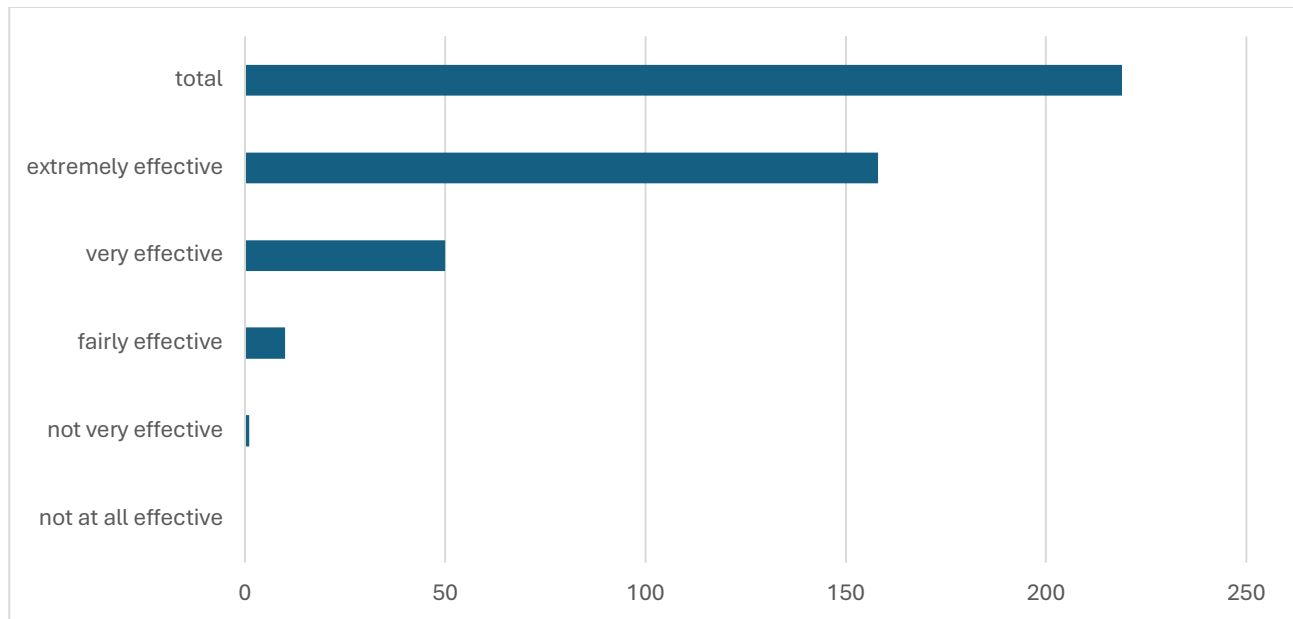
#### ***Q6. “How effective were the methodologies used during the training (e.g., lectures, hands-on activities, group discussions) in helping you understand and apply the content?”***

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The analysis of the data collected in response to the question “How effective were the methodologies used during the training (e.g., lectures, hands-on activities, group discussions) in helping you understand and apply the content?” provides significant insights into the effectiveness of the methodologies used in the "Digital Tools for Dementia Caregivers" training.

### Distribution of responses (219 responses):

- **Not at all effective:** 0 respondents
- **Not very effective:** 1 respondent
- **Fairly effective:** 10 respondents
- **Very effective:** 50 respondents
- **Extremely effective:** 158 respondents



Source: own elaboration from the training data collection.

### Data Interpretation

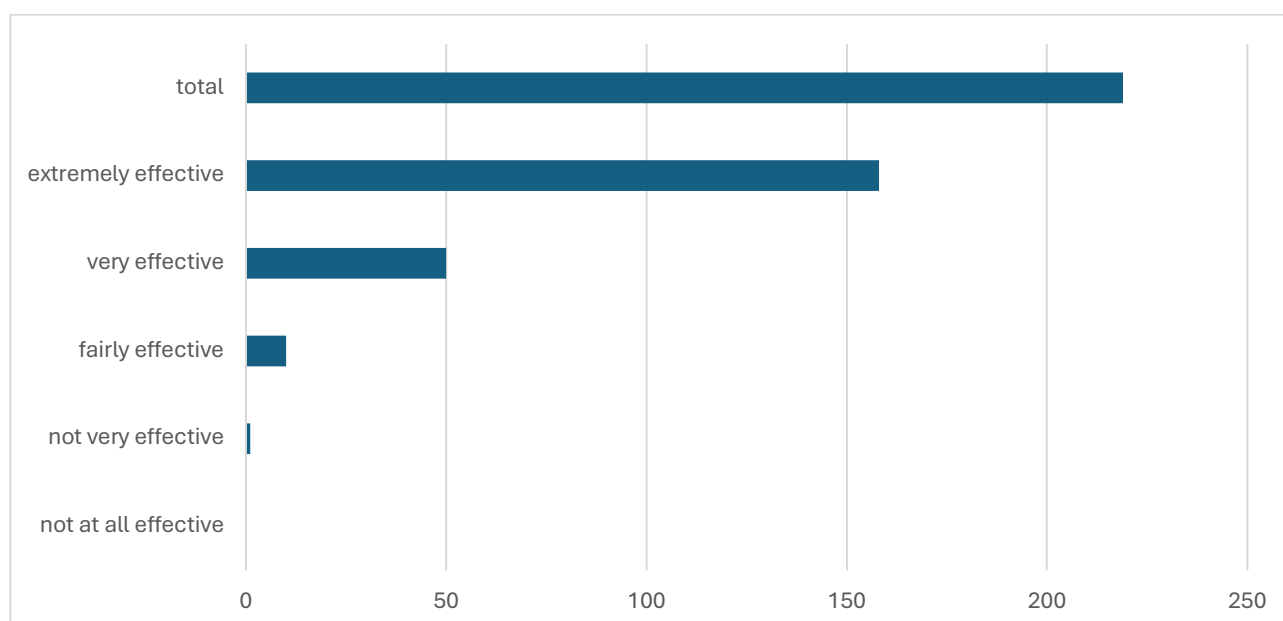
The vast majority of participants found the methodologies used in the training to be very effective or extremely effective. Specifically, 158 participants rated the methodologies as "extremely effective." This suggests that the techniques employed, such as hands-on activities, group discussions, and lectures, were particularly appreciated, significantly contributing to improving the understanding and application of the training content. The responses indicating low effectiveness are extremely limited: only 1 participant stated that the methodologies were "not very effective," and no one chose the response "not at all effective." This is a very positive sign, indicating that most participants found the training program and the methodologies used useful and aligned with their expectations. Only 10 participants selected "fairly effective," suggesting that while they generally found the approach useful, there may be aspects that could be further improved. This could indicate that some methodologies, although generally positive, may not have been completely satisfying for a small portion of participants, who might need more targeted support or prefer different learning methods.

The overall positive evaluation of the methodologies suggests that the training used effective methods to engage participants and facilitate learning. The practical and interactive approach seems to have had a strong impact on the learning process, with few participants experiencing difficulties. Despite the overwhelmingly positive feedback, there are still 10 participants who may have found some methodologies only fairly effective. It could be helpful to gather more specific feedback to understand if there are particular aspects that did not fully meet their expectations. For example, these participants may prefer a greater focus on certain methods or practical content. The high number of positive responses indicates that the interactive approach, which includes hands-on activities and group discussions, had a very positive impact. This suggests that the mix of methodologies, which allows participants to learn in a practical and interactive way, is particularly suitable for a program focused on the use of digital tools in dementia care.

### ***Q7. “How do you evaluate the work of the trainer?”***

The data regarding the evaluation of the trainer's effectiveness, provided by the participants of the "Digital tools for dementia caregivers" training, show the following distribution of responses:

- **Not at all effective:** 0 respondents
- **Not very effective:** 1 respondent
- **Fairly effective:** 10 respondents
- **Very effective:** 50 respondents
- **Extremely effective:** 158 respondents



Source: own elaboration from the training data collection.

## Data analysis

Many participants consider the trainer to be either "extremely effective" or "very effective." The fact that more than half of the participants rated the trainer as "extremely effective" is a particularly positive result. This indicates that the vast majority of participants found the trainer highly competent and able to deliver a training experience that fully met their expectations. The high number of responses in this category suggests that the teaching techniques, communication approach, and ability to engage participants were perceived as excellent. Such a result demonstrates a strong impact and success in the training provided. A small portion of participants rated the trainer as "fairly effective," meaning that while they rated the trainer positively, some participants perceived areas where the training could be improved. This might refer to specific aspects such as the speed of teaching, the clarity of explanations, or the trainer's availability to address questions or concerns. Despite this, the "fairly effective" rating indicates that the training was still useful, even if it did not reach excellence for everyone. The fact that only 2 people rated the trainer as "not very effective" and no one chose "not at all effective" is an important indicator. These numbers suggest that, although there may have been areas for improvement, the trainer was still able to satisfy many participants. The low number of negative responses demonstrates that the training was generally perceived as useful and effective, without any major dissatisfaction. Furthermore, the absence of responses in the "not at all effective" category indicates that there were no obvious failures in meeting the training objectives. In general, the results show an extremely positive evaluation of the trainer. Most participants considered the training very effective. Even those who did not give the highest rating still recognized the trainer's effectiveness, as evidenced by the high percentage of "very effective" ratings. The only area with less favorable ratings concerns a small percentage who considered the training to be "fairly effective," suggesting a generally positive opinion but with some areas for improvement. The absence of drastic evaluations such as "not at all effective" indicates that the trainer still achieved a good level of satisfaction among participants. These results point to a high level of success for the training, with minimal dissatisfaction.

### ***Q8. "How would you rate the training's effectiveness in improving your digital competences, particularly in areas you identified as needing improvement?"***

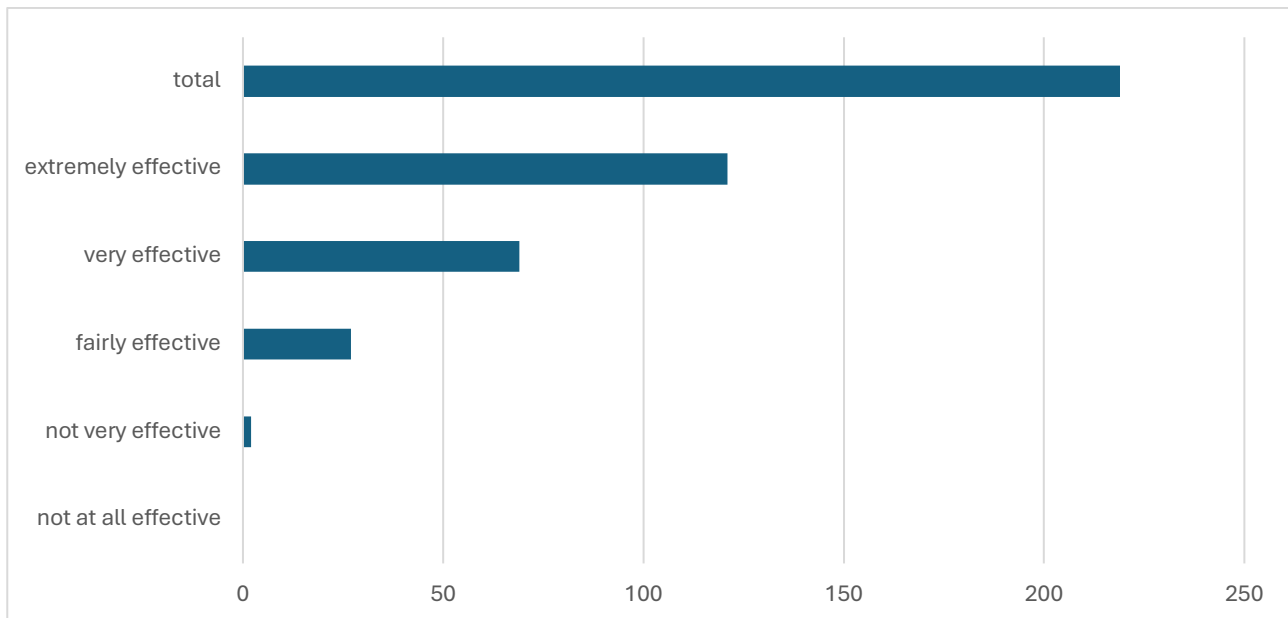
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The participants' responses to the question in question were distributed as follows:

- **Not at all effective:** 0 respondents
- **Not very effective:** 2 respondents
- **Fairly effective:** 27 respondents
- **Very effective:** 69 respondents

- **Extremely effective:** 121 respondents

**Total:** 219 respondents



Source: own elaboration from the training data collection.

### Data Analysis

Many participants rated the training as "very effective" or "extremely effective." This indicates that a large portion of the caregivers perceived the training as a highly valuable learning experience that significantly improved their digital competencies, particularly in the areas they had identified as needing improvement. This result suggests that the objectives of the training were achieved to a significant extent, with participants finding the content and delivery methods highly relevant to their practical needs. Furthermore, the fact that such a high percentage of participants rated the course as extremely effective indicates that the teaching approach, the quality of materials provided, and the interaction with the trainer were highly appreciated. This also implies that the course curriculum was well-designed and focused on the specific needs of caregivers. A group of participants rated the training as "fairly effective." While this is a positive evaluation, it implies that some participants felt there were areas where the training could have been improved. The reasons for this may vary for example, some individuals may have felt the need for greater customization of the content to better fit their specific needs or previous experiences. Others may have felt that certain areas or digital tools needed further explanation or additional practical exercises to better consolidate the skills. However, the relatively low number of responses in this category suggests that overall, the training was still appreciated and considered

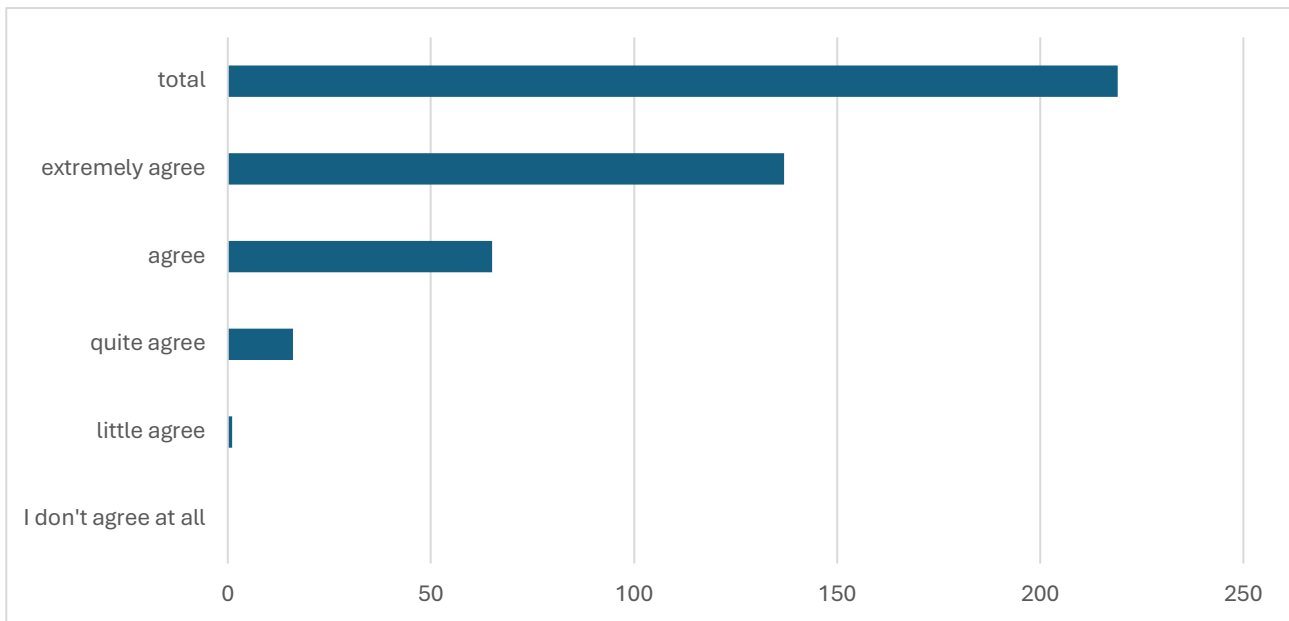
useful, even if not perfect for everyone. It is important to note that "fairly effective" responses do not represent a negative evaluation but rather a perception of effectiveness with some areas for improvement. The responses in the "not very effective" category were very limited, and no participant chose "not at all effective." This is an extremely positive result. The absence of responses in the "not at all effective" category is particularly significant, as it suggests that the training was able to adequately meet the needs of most participants, without failing to achieve the training objectives. The very low percentage of "not very effective" responses indicates that, while there may have been specific areas where some participants were not fully satisfied, these cases were exceptions rather than the rule. This reflects a generally positive perception and a high level of acceptance of the course. Overall, the results of this survey show that the training had a significant and positive impact on improving caregivers' digital competencies. Many participants rated the course as "very effective" or "extremely effective," highlighting broad agreement on the effectiveness of the training intervention. The fact that only a small percentage provided more moderate evaluations suggests that the training was generally well-designed and adequately addressed the individual needs of participants, although there may be small areas for improvement, such as more customization or greater focus on specific competencies. The low percentage of negative responses indicates that the course met the expectations of nearly all participants, without major dissatisfaction. In summary, the results suggest that the training was a success, with strong positive evaluations from participants and a good ability to address caregivers' practical needs in improving their digital skills, especially in areas they identified as needing improvement. The combination of well-designed content, a competent trainer, and a targeted curriculum led to a high level of satisfaction among participants.

### ***Q9. "The topics explained were clear and interesting."***

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The caregivers' responses to the statement can be summarized as follows:

- **I don't agree at all:** 0 respondents
- **Little agree:** 1 respondent
- **Quite agree:** 16 respondents
- **Agree:** 65 respondents
- **Extremely agree:** 137 respondents



Source: own elaboration from the training data collection.

### Data analysis

The majority of participants rated the statement as "agree" or "extremely agree." This indicates that a large portion of the caregivers found the topics covered in the training to be clear and interesting. The fact that such a high percentage of participants gave a positive evaluation underscores that the course content was understandable and stimulating for the participants, which is a key aspect of the training's effectiveness. The clarity and interest of the topics are crucial elements in maintaining high motivation and engagement during the learning process. This result suggests that the topics were presented in an accessible and engaging way, thus facilitating the learning and practical application of digital skills in the context of dementia care. A smaller number of participants selected the response "quite agree." While this is still a positive evaluation, it implies that some participants might have found the topics relatively clear and interesting, but with some aspects that could have been made even more engaging or understandable. The reasons for this could include the difficulty of certain topics, the need for further clarification, or the perception that some issues were not stimulating or relevant enough for all participants. However, the relatively low number of responses in this category suggests that, overall, the topics were still perceived as quite interesting and clear. The responses "little agree" were very limited, with only one participant choosing this option, and no one selected "I don't agree at all." This is a positive result, as it indicates that, despite possible areas for improvement, the vast majority of participants found the topics relevant, clear, and interesting. The complete absence of negative responses suggests that there were no major failures in presenting the content, and that participants did not find the topics incomprehensible or irrelevant. Overall, the results of this survey show that the majority of participants found the topics covered in the course to be clear and interesting, with a strong prevalence of positive evaluations. The low percentage of moderate responses and the absence of completely negative responses indicate that the content of the

training met the expectations of most caregivers, and that the format and teaching approach were effective in making the topics easily understandable and engaging. The few participants who gave lower ratings suggest areas for improvement that could be explored, but overall, the results indicate a good level of satisfaction with the clarity and interest of the content covered in the training.

***Q10. “How do you plan to apply the digital tools and knowledge gained from the training in your caregiving routine?”***

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The responses to the question about how participants plan to apply the digital tools and knowledge gained from the training in their caregiving routine can be grouped into several areas of interest, reflecting the intention to integrate technology into various aspects of daily caregiving.

- **Application in everyday care:** Many participants expressed the intention to use digital tools to facilitate daily caregiving tasks, such as managing daily routines, monitoring the patient’s health conditions, and organizing activities. The use of applications to remember appointments or take notes on the patient’s needs was seen as practical support.
- **Communication with others:** Another group of participants emphasized the importance of using technology to improve communication with doctors, healthcare professionals, and family members. The use of online platforms for medical consultations, information exchange, and support among caregivers was highlighted as an important step to ensure better and more coordinated care.
- **Searching for online information:** Many caregivers indicated their intention to use digital tools to search for reliable online information, particularly regarding dementia, medical treatments, and educational resources. The ability to navigate trustworthy websites and find up-to-date materials was seen as crucial for providing more informed care.
- **Practical matters:** Finally, some participants emphasized the importance of applying digital tools to practical daily matters, such as organizing caregiving tasks, improving time management, and planning daily routines.

In summary, the responses highlight how caregivers intend to use a wide range of digital tools not only to improve their research and communication skills but also to optimize everyday caregiving and the management of the patient’s needs, incorporating technological solutions into their daily practices.

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***Q11. “After the training, how confident are you in identifying and evaluating reliable health information online?”***

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The responses to the question about confidence in identifying and evaluating reliable health information online after the training show that many participants feel more confident in assessing online health information. A significant portion of participants reported a notable improvement in their ability to distinguish reliable information, while another group feels more confident, though not drastically. This suggests that the training had a widespread positive impact, increasing general confidence in digital health skills.

However, a small minority of participants indicated that they still feel somewhat insecure in evaluating online information. It is important to note that this should not be a cause for concern, as the starting levels of participants were different, and despite what was stated in the pre-training questionnaire, some participants may have begun with a lower level of confidence and competence compared to others. While these results are limited in number, it is still an aspect that deserves attention.

Overall, the data is positive and shows that, despite the small percentage of people who still feel insecure, the training had a widespread and positive effect, significantly improving confidence in evaluating online health information among participants. The data regarding the minority who still express uncertainties should be considered as a starting point for future improvements but does not detract from the overall success of the training program.

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***Q12. “Have you discovered new digital tools or strategies during the training that you plan to use to connect with other caregivers or support networks?”***

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The response to this question was generally unanimous across all countries, as the caregivers participating in the training responded affirmatively.

## Discussion

This report presents the results of a survey exploring the perceptions, expectations, and changes in digital skills of four groups of caregivers (from Italy, Greece, Kosovo, and Bulgaria) before and after the training program developed within the context of the "Digital tools for Dementia Caregivers" project. Analyzing the data reveals several key aspects that can be contextualized within a caregiver training context, where the growing importance of digital skills is fundamental to improving the care and well-being of people with dementia.

### Confidence in Using Digital Tools (Pre-training vs post-training)

- **Pre-training:** initially, many caregivers did not feel particularly confident using digital tools in their daily caregiving routines. This highlights a possible lack of training or experience with technology, which can limit the effectiveness of care.
- **Post-training:** after the training program, a significant improvement in confidence regarding the use of digital tools was observed. This indicates that the training was effective in strengthening participants' technological skills, facilitating the integration of technology into daily caregiving routines.

### Learning Expectations

- **Pre-training:** caregivers mainly expected to learn new things and find reliable online information. These results suggest that caregivers were interested in acquiring practical skills for using the internet to access resources that could assist in daily care.
- **Post-training:** after the training, caregivers had indeed acquired new tools and applications, as well as increased confidence in using online resources. This confirms that the training met their expectations, improving their digital skills and their ability to navigate the internet safely.

### Daily Challenges and Training Needs

- **Pre-training:** the main difficulties reported by caregivers were related to managing daily care and handling behavioral issues of their patients. These are critical aspects of caregiving that require not only practical skills but also technological tools to facilitate access to online resources that can support management.
- **Post-training:** most caregivers stated that the training addressed their needs, improving their ability to manage daily caregiving challenges. Responses indicate that the acquisition of technological tools positively impacted their ability to handle difficult situations with patients.

### Preferred Learning Methodologies

- **Pre-training:** caregivers expressed a preference for hands-on activities and group discussions as learning methods. This suggests that they favor an interactive approach, where they can immediately apply new skills and engage with others.
- **Post-training:** post-training evaluations confirm that interactive methodologies, such as hands-on activities and group discussions, were particularly appreciated by caregivers. This shows that the approach used in the training was effective in helping participants understand and apply digital skills.

### Impact of Training on Digital Skills

- **Pre-training:** at the beginning, caregivers had limited knowledge of using the internet and digital applications. The lack of familiarity with these tools could hinder their ability to access vital resources for caregiving.
- **Post-training:** after the program, most caregivers reported feeling more confident using digital tools for searching online information and connecting with other caregivers. This indicates a significant improvement in their digital skills and a greater awareness of the importance of these skills in improving the quality of care.

### Use of Digital Tools to Connect with Other Caregivers

- **Pre-training:** initially, many caregivers were not using digital tools to connect with others. This could be due to a lack of knowledge about online support networks or a limited perception of the usefulness of such tools.
- **Post-training:** after the training, all participants stated that they intended to use their new skills to connect with other caregivers or support networks. This shift demonstrates that the training not only improved their technological skills but also raised awareness of the importance of building online support networks, which are essential for the well-being of caregivers and care management.

### Perception of training effectiveness

- **Post-training:** The training was positively evaluated by most participants, who stated that it met their expectations. This suggests that the program was well-designed and effectively addressed the practical and theoretical needs of caregivers, improving both their digital skills and their ability to tackle daily caregiving challenges.

## Contextual Conclusions:

The training significantly improved caregivers' digital skills, enabling them to integrate these skills into their daily caregiving routines. This is crucial as technology is increasingly important in managing home care, especially for patients with dementia. Hands-on activities and group discussions proved to be very effective for caregivers' learning, suggesting that interactive approaches are key to better learning of digital skills.

The fact that all participants expressed an intention to use digital tools to connect with other caregivers or support networks demonstrates that the training had a significant impact on promoting the creation of digital support networks, which are vital for caregivers' well-being and quality of care. In summary, the data suggests that the training had a positive impact on improving caregivers' digital skills, providing them with useful tools to handle daily challenges in caring for people with dementia and to build online support networks, which are essential for both caregiver well-being and the quality of care provided.

## Conclusions

We can examine whether the project objectives related to the specified targets have been achieved.

The project objectives included the following targets:

- **% OF IMPROVEMENT OF DIGITAL SKILLS IN FAMILY CAREGIVERS (80-100%)**  
The results show a significant improvement in the digital skills of caregivers, with increased confidence in using digital tools after the training program. The majority of participants reported feeling more confident in using technology to search for information online and to connect with other caregivers. Additionally, the fact that all participants expressed their intention to apply the skills learned demonstrates a positive impact on the development of digital skills. It seems that **the objective of a significant improvement in digital skills (80-100%) has been achieved**, as the effectiveness of the training in strengthening digital skills has been clearly confirmed by the results.
- **% OF CONSISTENCY OF CONTENTS OF THE CV WITH THE NEEDS OF T.G. (80-100%)**  
Caregiver responses indicate that the training program met their expectations, with most participants believing the training addressed their needs. The main difficulties highlighted before the training, such as managing daily care and dealing with patient behavioral issues, were addressed through the tools and knowledge provided during the course. Additionally, many participants found the program's contents useful for handling difficult situations in caregiving. It seems that **the objective of content consistency with caregiver needs (80-100%) has been achieved**, as the program positively responded to both the practical and theoretical needs of participants.
- **% OF FUNCTIONALITY AND EFFICIENCY OF EACH PARTICIPANT (80-100%)**  
The functionality and efficiency of each participant are closely linked to the improvement of their digital skills and their ability to apply these skills in daily practice. Participants significantly improved their confidence in using technology and stated their intention to use the digital tools learned to improve their caregiving and connect with other caregivers. Furthermore, the training positively impacted their ability to manage daily caregiving challenges, suggesting an increase in efficiency in their caregiving role. It seems that **the objective of functionality and efficiency of each participant has been achieved**, as the data indicate that caregivers improved their digital skills and their ability to apply them effectively in daily caregiving.

# Pre-Training Evaluation Questionnaire

This training program of the "Digital Tools for Dementia Caregivers" project aims to enhance your digital competences and provide valuable tools for supporting those in your care. Before we begin, please complete this questionnaire to help us understand your current skills, expectations, and needs. Your feedback will ensure the training is tailored to be as relevant and impactful as possible.

DIGITAL TOOL FOR DEMENTIA CAREGIVERS - 2022-1-NL01-KA220-ADU-000085899

1.

*Mark only one oval.*

- Foundation Compassion
- Alzheimer Athens Association
- ECSA Kosova
- Dementia Care

2.

*Mark only one oval.*

- Dementia Care

3.

*Mark only one oval.*

1   2

---

Poo   Excellent

---

4. Доколко сте запознати с целите и съдържанието на учебната програма, която ще разгледаме в това обучение?

*Mark only one oval.*

1 2 3 4 5

Poor      Excellent

5. Какви са вашите очаквания по отношение на специфичните теми, като грамотност в областта на електронното здравеопазване и създаване на цифрово съдържание, които ще бъдат обхванати в тази програма? много положително за тази програма

⌵ Dropdown

*Mark only one oval.*

Много добра идея

6. Кои са основните предизвикателства, с които се сблъсквате в момента като болногледач, и които се надявате, че това обучение ще адресира?

⌵ Dropdown

*Mark only one oval.*

Опция 1

7. What specific skills or knowledge do you hope to gain by the end of this training?  
mi suguro di essere più capace

---

8. How do you prefer to learn new information?

*Tick all that apply.*

Group discussions

9. How do you think this training will impact your ability to use digital tools to improve your caregiving? continuerà ad arricchire la mia formazione

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10. Are you aware of any specific areas where your digital competences might need improvement? no

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11. How often do you seek health-related information online, and how confident are you in evaluating its reliability? Talvolta, non sempre sono sicuri i siti

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12. Have you used digital tools like social media or apps to connect with other caregivers or support networks? If so, how effective have they been? si ma con molta difficoltà

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# Post -Training Evaluation Questionnaire

This training program of the "Digital Tools for Dementia Caregivers" project aims to enhance your digital competences and provide valuable tools for supporting those in your care.

We hope the training has provided you with practical tools for your caregiving journey. Please take a moment to complete this questionnaire to help us assess the training's effectiveness and how well it met your needs. Your input is crucial for improving our program.

DIGITAL TOOL FOR DEMENTIA CAREGIVERS - 2022-1-NL01-KA220-ADU-000085899

1. Organization name/ Caregiver Role

*Mark only one oval.*

- Foundation Compassion
- Alzheimer Athens Association
- ECSA Kosova
- Dementia Care

2. After the training, how confident do you feel in using digital tools and technologies in your caregiving practices?

*Mark only one oval.*

1   2   3   4   5

---

Poo      Excellent

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3. How well do you feel the training program met your expectations in terms of content and delivery?

*Mark only one oval.*

1   2   3   4   5

Poo      Excellent

4. Which topics covered in the training were most relevant to your needs as a caregiver?

\_\_\_\_\_

5. How has the training addressed the challenges you previously identified in your caregiving role?

\_\_\_\_\_

6. Which parts of the training curriculum presented are of most interest to you?

\_\_\_\_\_

7. How effective were the methodologies used during the training (e.g., lectures, hands-on activities, group discussions) in helping you understand and apply the content?

*Mark only one oval.*

1   2   3   4   5

Poo      Excellent

8. How do you evaluate the work of the trainer?

*Mark only one oval.*

1 2 3 4 5

Poo      Excellent

9. How would you rate the training's effectiveness in improving your digital competences, particularly in areas you identified as needing improvement?

*Mark only one oval.*

1 2 3 4 5

Poo      Excellent

10. The topics explained were clear and interesting.

*Mark only one oval.*

1 2 3 4 5

Not      Very much

11. How do you plan to apply the digital tools and knowledge gained from the training in your caregiving routine?

\_\_\_\_\_

12. After the training, how confident are you in identifying and evaluating reliable health information online?

\_\_\_\_\_

13. Have you discovered new digital tools or strategies during the training that you plan to use to connect with other caregivers or support networks?

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