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ORIGINAL ARTICLE

Perception of Utility and Efficacy of Implementation of TEC-MED Model of Care for Frail Older People and Their Caregivers: A Qualitative Study

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ABSTRACT

Introduction: The global population is ageing, and healthcare systems continue to adopt outdated social models of ageing that do not respond to older people's needs. The aim of this study was to explore the experiences of participants in the implementation of the Transcultural social-ethical-care (TEC-MED) model for integrated community care.

Methods: A qualitative descriptive research study was conducted. Qualitative data were collected through individual interviews and focus groups with purposive sampling.

Results: We gathered experiences from five older people, five informal caregivers, two training agents (nurses), six healthcare professionals and eight stakeholders (senior management of businesses, public administrators, researchers and educators). Four themes were extracted: TEC-MED as a new model of home care, TEC-MED model outcome, key role of training agent and platform and resources. Overall, all the participants were satisfied with the model and various positive outcomes were found. The TEC-MED model of care was inclusive and personalised and bridged the communication and integration gaps between different services for the care of dependent older people and their caregivers in the community. Recommendations were made for improvements to the model.

Conclusion: New models of care that are inclusive, personalised and integrated are necessary to respond to the multiple needs of the older people. A model that integrates the multiple skills of healthcare professionals is an optimum solution in the care of the older people and their caregivers in Mediterranean countries. Similar research is imperative for other healthcare systems to help them prepare adequately to respond effectively to the needs of present and new generations of older people.

Implications for Practice: The TEC-MED model presents a promising approach to addressing the complex care needs of older people and their caregivers by fostering inclusivity, personalisation and integration across services. For nursing practice, this model emphasizes the importance of multidisciplinary collaboration and the role of nurses in facilitating the adoption of new care strategies. Implementing such models in everyday practice could improve the quality of care provided to older adults,

enhancing communication between healthcare providers and ensuring that care is more aligned with the individual needs of patients. Furthermore, integrating digital platforms and targeted resources, as highlighted in the TEC-MED model, can aid in overcoming existing barriers in healthcare systems, improving the coordination of care at the community level.

1 | Introduction

The trend of a growing ageing population and the increasing prevalence of multiple chronic conditions poses notable economic, social and health challenges and opportunities in healthcare systems in the contemporary era. These changes in demographic patterns necessitate a global shift in focus towards addressing the healthcare requirements of older people at home and preventing institutionalisation (Maresova et al. 2019). In some regions of Europe, such as Italy, public health services face numerous difficulties in meeting the holistic care needs of older people and delivering integrated care services. In 2021, only 3% of Italians aged 65+ received home care, despite a staggering 3 million individuals with multiple chronic conditions and disabilities requiring continuous care (ISTAT 2021). This percentage underscores the pressing need for improvement and the urgency of implementing new integrated care systems tailored to the specific needs of older people. The TEC-MED model of care is proposed to respond to the care needs of frail older people and caregivers in home care.

2 | Background

Rapid demographic changes are taking place internationally. In 2019, 20.3% of the population of the European Union (EU) was 65+ years old. This number is projected to increase to one third of the population in 2050, and the number of those aged 85+ is expected to double (European Union (EU) 2020).

Two of the main issues that concern policymakers are the sustainability of healthcare systems and the costs of providing adequate health and long-term care for the older people (EU 2020). Another issue to consider is social transformations. The future experience of ageing will be significantly different from that currently experienced, due to ongoing changes in the structure of family units (World Health Organization (WHO) 2015). This means that in the future, the older people will have an increased probability of living alone and with reduced social interactions. As a result, healthcare support should take into account not just health issues, but also financial and environmental factors, such as social welfare, living conditions, family relationships and neighbourhood (EU 2020). Therefore, the response to population ageing will require an integrated public-health approach (WHO 2015).

Favourable perspectives regarding future generations of older people need to be considered. The efforts of healthcare systems in recent years regarding disease prevention, promotion of health literacy and healthy lifestyles, technological progress and treatment of chronic diseases, have brought positive outcomes in terms of population longevity (EU 2020). In the future, optimistic results will include an increase in healthier population ageing, better quality of life and general well-being (WHO 2020). Therefore, the challenge of present and future healthcare systems will be to keep older people active and involved in their communities for as long as possible (EU 2020). This can be accomplished only by effecting a shift in current mindsets, abandoning outdated social models of ageing (WHO 2015) and providing comprehensive and integrated care customised to the needs of the new generation of older people (WHO 2020).

Living with chronic illnesses often leads to limitations in daily activities and the need for others' support. A significant portion of this support to older people is given by their loved ones, such as spouse, partner, family member, friends or neighbours (OECD/European Union 2020; Kullgren et al. 2022). Those supporters, termed informal caregivers, compose 34.4% of the European population and are mostly in the age group 18–64 years old (ISTAT 2019). Informal caregiving provides emotional support; helps prevent disability; enhances illness management and medication adherence; improves quality of life; and reduces isolation, mortality and the need for institutionalisation in older people (Riffin et al. 2017). Being a caregiver has been linked to a heavy physical and mental burden, which can negatively impact one's emotional, social, financial, physical and spiritual well-being (Musich et al. 2017; Division of Population Health, National Center for Chronic Disease Prevention and Health Promotion 2019). Alternatively, caregivers can have a positive view of their experiences by recognising the emotional and practical benefits, such as the satisfaction of knowing their loved ones are well cared for, gaining new skills and increasing their confidence (National Academies of Sciences, Engineering, and Medicine 2016). Caregiving burden and benefits coexist and are seldom separate perceptions. Therefore, it is crucial for public health initiatives to care for both older people and their caregivers. This can be achieved by providing caregivers with the necessary information and support to alleviate the stress of caregiving and to enhance the health and well-being of both caregivers and older people (Division of Population Health, National Center for Chronic Disease Prevention and Health Promotion 2019).

Italy is among the nations facing a rapid growth in its aged population, with the 65+ age group projected to make up 45.9% of the total population in the near future (EU 2020). Similarly, the nation is facing a rapid growth in multiple chronic diseases and dependency (ISTAT 2019). The Italian National Healthcare System (NHS) handles the treatment of acute medical conditions effectively, but there are issues with continuity of care when transitioning from the hospital to the community (Maresova et al. 2019; Mazzola et al. 2016). Despite the long-standing provision of home care through public health policies, integrated home care services in Italy, encompassing health, social and financial support, still play a peripheral role and remain significantly inadequate in meeting the actual needs of the population (Mazzola et al. 2016; Gagliardi et al. 2012). Italy continues to rank among the lowest in Europe in this regard (Cingolani et al. 2023). Additionally, most long-term home care

Summary

- What does this research add to existing knowledge in gerontology?
  - Public health initiatives should address support and information needs of older people and caregivers, to alleviate stress and improve health and well-being.
  - Health, social and financial support services available in the community are often not effectively coordinated or adequately aligned with older people's and caregivers' needs.
  - Updating community care to prioritise inclusive models for older people and caregivers, integrating and coordinating care across providers, settings and time, would produce a comprehensive approach to meet their needs.
- What are the implications of this new knowledge for nursing care for and with older adults?
  - Exploring issues related to social networks and economic, relational, personal and family resources is important for promoting healthy practices, self-efficacy, well-being and healthy ageing.
  - The TEC-MED model, described as 'the new model of home care', bridges the gap in community care by integrating social and health aspects.
  - The care model proposed sensitises professionals to provide concrete responses to the needs of the ultimate beneficiaries: older people and their informal caregivers.
- How could the findings be used to influence practice, education, research, and policy?
  - Capturing the different points of view of the stakeholders involved in the care process allows policymakers and practitioners to identify and plan the needed interventions and results for the final beneficiaries.
  - Creating a resilient network between training agents and final beneficiaries, through continuous communication, training activities and skills improvement, is a key element for the success of social and health programmes.
  - Interdisciplinary teams; promotion of ageing-friendly physical and social infrastructures; and employing intergenerational technology to support and implement family assistance programmes and to render care holistic, safe and person-centred.

for older people in Italy is informally supplied by family members or foreign paid caregivers and it is mostly privately financed (Mazzola et al. 2016; Cingolani et al. 2023; Gagliardi et al. 2012). This informal support is going to be strained in the future due to the reduced numbers of components of the family units, career demands, the extension of the working age for caregivers and financial issues (EU 2020; Brugiavini, Carrino, and Pasini 2023; Melchiorre et al. 2021). Relying solely on informal care may lead to unmet needs and lower welfare for older people and society at large. Therefore, it is necessary for the Italian NHS to address the growing demand for care, to modify the traditional approach and increase provision of home care services through partnerships between formal and informal care and the development of care models that are personalised, inclusive to older people and caregivers, integrated and coordinated throughout various care providers and settings, and over time.

Efficient healthcare services should prioritise and take into account the care preferences of individuals. Older people prefer ageing at home (Boland et al. 2017; Sarlo, Bagnato, and Martinelli 2019); their own home embodies a space filled with memories, freedom, comfort and safety, enabling them to partake in daily activities and maintain their sense of identity and quality of life (Molina-Mula, Gallo-Estrada, and González-Trujillo 2020). However, literature indicates that the choice between staying at home or opting for institutionalisation is influenced by factors such as chronic health conditions; physical functionality; care needs; limited public care services; family's, friends' and neighbours' support; welfare resources; and attachment to one's residence (Melchiorre et al. 2021; Filipovič Hrast, Sendi, and Kerbler 2020).

A recent study on frail older people across various Italian regions showed that the majority (51%) prefer staying at home, with potential assistance from family members or paid caregivers (20%) due to the perception of public health service provision as inadequate (Melchiorre et al. 2022). The attachment to home and the assumption that children will assume caregiving responsibilities for their ageing parents, is particularly pronounced in Italy (Martinelli, Cilio, and Vecchio Ruggeri 2021), reflecting a cultural inclination to age in place. Given the importance of community dwelling for older people, particularly with limited care support (formal or informal) leading to risks like frailty, loneliness and neglect, there is an urgent need for tailored and updated integrated care models.

3 | The TEC-MED Project

To overcome the challenges described, the European Union is supporting different research projects on inclusive models of care in the community in various countries. An example is the TEC-MED Model (Development of a Transcultural social-ethical-care model for dependent population in Mediterranean basin) (https://www.enicbcmed.eu/projects/tec-med). The project includes six countries: Egypt, Greece, Italy, Lebanon, Spain and Tunisia. These countries present similar trends in the reduction of social and ethical care provided to frail dependent older people. Therefore, the project aims to advance just, equal, and lasting economic, social and territorial growth, to encourage cross-border cooperation and reinforce services and principles in the communities of the countries involved. The model comprises five defining elements that contribute to its unique characteristics and simultaneously impact its overall conceptualisation. These elements are: quality, research and dissemination, gender perspective, ethics, social inclusion and transculturalism (Porcel-Gálvez et al. 2022). The TEC-MED model was created through an extensive, inclusive approach involving all participating countries.

The framework of the project was developed to cover six dimensions: (a) the subjects of care, who are older people (aged 60+), dependent and/or at risk of social exclusion, and their informal caregivers (e.g., family members, friends); (b) healthcare providers, who are formal caregivers (healthcare or social

care professionals); (c) services offered to the older people and their caregivers, which include social and healthcare; (d) governance, which cares for the participation of the older people and their families in their own care with policies such as those on active ageing or resource management and needs assessment; (e) financing, which concerns the involvement of public and private entities in the care model, through different social and healthcare services; and (f) technology, which includes the use of different instruments such as electronic platforms to train the subjects of care, tele-medicine, etc. The project interventions address all these dimensions at the macro, meso and micro levels.

The pilot phase of the TEC-MED project aimed to assess the social health conditions of older people and their caregivers and promote some tailored interventions to improve these conditions. The pilot phase involved all six countries involved in the project, and in Italy, the pilot phase ran from April to December 2022.

Care recipients were individuals aged 60+ who were dependent and/or at risk of social exclusion, as well as their informal caregivers. These individuals were all considered to be the final beneficiaries of the project. The following exclusion criteria were applied since the pilot phase of the project required active participation of older people. Older people were excluded if they had severe hearing loss, severe mental illness, depression, cognitive impairment or a terminal disease. This approach enhanced the reliability and validity of the project results by minimising the risk of non-compliance and inaccuracies due to participants' health-related limitations.

The healthcare providers, termed training agents, received training in the assessment of older people and caregivers, the interventions to be provided and the use of the TEC-MED platform. The TEC-MED platform is an online platform that aims to educate the various participants in the project, including the care recipients. In Italy, all the training agents were Registered Nurses. The pilot phase also involved stakeholders such as senior management of businesses that offer healthcare services to older people, public administrators, researchers and educators.

All the final beneficiaries in the sample had received a baseline assessment at enrolment and were assessed again after 3 and 6 months. Assessments included physiological, psychological, social and economic aspects, facilitating a holistic assessment. Based on the assessment findings, the training agents identified possible problems and suggested or performed some interventions. Most interventions were educational and directed at improving the self-care and/or empowerment of the final beneficiaries; other interventions regarded socialisation or the use of services offered by the healthcare system; while others focused on improving health literacy or teaching subjects how to use the TEC-MED platform to find educational interventions and tutorials. Some interventions were specifically directed at caregivers to improve their resilience and knowledge in caregiving activities and their responsibilities towards the older people.

During the pilot phase, quantitative and qualitative data were gathered and different indicators were measured. In this article, we present the results of the qualitative findings. Therefore, the aim of this study was to explore the experience of the different participants with the TEC-MED model during the implementation of the pilot phase; to identify perceptions regarding the model's usefulness, effectiveness, strengths and weaknesses; and to determine areas for improvement. The participants involved were: final beneficiaries (older people and informal caregivers), training agents (nurses), other healthcare providers (health and social care professionals) and stakeholders (senior management of businesses that offer healthcare services to older people, public administrators, researchers and educators).

4 | Materials and Methods

4.1 | Study Design

A qualitative descriptive design was used in the study to examine the experience of implementing an innovative model such as the TEC-MED model, using participants' voices and remaining anchored in the data. The Consolidated Criteria for Reporting Qualitative Studies (COREQ) checklists were used to ensure the quality of reporting (Tong, Sainsbury, and Craig 2007).

4.2 | Participants and Procedures

We used purposive sampling to achieve a high level of heterogeneity among participants regarding age, gender, education level and profession. In order to describe the phenomenon according to the different points of view of participants, the thematic role of the respondents was also considered: older people, informal caregivers (caregiver/family member), formal caregivers (healthcare professionals), training agents and stakeholders (senior management of businesses that offer healthcare services to older people, public administrators, researchers and educators). Participants and stakeholders included in the Italian pilot phase were invited to participate in individual interviews and focus groups. Interviews were conducted in person where possible, depending on pandemic contingency measures. In addition, video interviews were conducted on the Microsoft Teams software. Ten one-to-one interviews and four focus groups were conducted in December 2022 by researchers trained for qualitative interviews (GE, ML and DI).

4.3 | Data Collection and Management

For this study, we used Donabedian's (1966) conceptual framework, which is widely used to assess the quality of health and care services, as providing a more complete picture of the TEC-MED model, recognising the differences between the 'structure', 'process' and 'outcome' elements (Donabedian 1966, 2005; Berwick and Fox 2016).

The structure evaluation of the TEC-MED model included assessment of the usability and adequacy of the resources and platform and the perceived effectiveness and competence of the training agents. The process evaluation involved the interactions between older people and their informal caregivers with the training agents and the platform. The focus was mainly on health education, support in accessing and utilising the social-health network and interpersonal communication. Outcome

evaluation assessed the achievement of the objectives of the service specifications and other impacts perceived by stakeholders and final beneficiaries.

4.4 | Instruments

Based on the TEC-MED model and the structure, process and outcome indicators, structured interview questions were created (for the questions asked, see Table S1) (Zammuner 2003). After receiving the consent of the respondents, the interviews were recorded; their average duration was 25 min, with a range of 15–35 min. The data were transcribed verbatim within 2 days of the interview.

4.5 | Ethical Considerations

The study was conducted in accordance with the Declaration of Helsinki and approved by the Ethics Committee of UniCamillus University (Ethics Approval Number E00331-2022; approval date March 18th, 2022). Data confidentiality was ensured by anonymising interviews using an alphanumeric code and restricting access to data to only two researchers (GE and ML).

4.6 | Data Analysis

Inductive content analysis was conducted to analyse the data in three steps. During the open coding phase (first phase), two researchers (GE and ML) independently read the transcripts several times and made notes within the texts to describe all aspects of the content. In the categories creation phase (second phase), all emerging first level codes were compared and grouped together as second level codes and these in categories. Through subsequent abstraction (third phase), broader themes were generated from similar categories. N-vivo version 10.0 was used to manage, organise and encode data transcription (Bowen, Rose, and Pilkington 2017). Two researchers (GE and ML) encoded and classified the data separately. A third researcher (DI) checked the codes and categories for consistency. Any divergence was discussed by the research team and resolved through discussion. The results were presented to a sample of participants, who provided positive feedback.

4.7 | Data Saturation

Following the principle of purposive sampling, in which participants were intentionally selected on the basis of their experiences relevant to the phenomenon under study, constant analysis and theoretical evaluation indicated that data collection could be discontinued, as additional participants did not add any significant new perspectives to our conceptual framework, thus confirming data saturation (Saunders et al. 2018).

4.8 | Trustworthiness

Credibility, dependability, confirmability and transferability criteria were used to ensure the trustworthiness of the results. To ensure credibility, frequent debriefings were conducted to reach unanimous agreement on the confirmation and differentiation of the themes, the categories and the codes and to exclude any prejudices, preferences and biases on the part of the researchers in the study. Reliability and confirmability were ensured by using audit trails: a researcher who was less involved in the research examined the categories and second and first level codes and compared them with the original texts to determine their internal consistency. Finally, transferability was ensured by providing a description of the socio-demographic characteristics of the participants, and a detailed description of the research process and results, so that readers could transfer the results and conclusions to other situations (Kyngäs, Kääriäinen, and Elo 2020).

5 | Results

5.1 | Characteristics of the Sample

The participants were mainly female (80.8%) aged between 29 and 82 years (average 55.8 ± 14.92). The thematic roles were represented by five older people, five family caregivers, two training agents, six healthcare professionals and eight stakeholders. The socio-demographic data of the sample are shown in Table 1.

5.2 | Themes

Content analysis identified 103 codes. These were grouped into 30 second-level codes, then these into 10 categories, finally, into four themes: TEC-MED as a new model of home care; TEC-MED model outcomes; key role of training agent; platform and resources. The four themes describe the implementation aspects of the TEC-MED model (see Table 2).

5.3 | Theme 1: TEC-MED as a New Model of Home Care

This theme highlights the participants' perceptions of the type of approach and innovation of the experimental model. It includes two categories: Approach and Innovation.

The category 'Approach' includes 3 second-level codes and 10 first-level codes that describe how various stakeholders perceive the TEC-MED model's approach: Multidisciplinary and Multidimensional; Inclusive; and Care.

Some participants (health professionals and stakeholders) reported their considerations on the setting up of a multidisciplinary model that involves the participation of various social and healthcare professionals, such as nurses, general practitioners and psychologists (P11, P12, P15 and P24), who collaborate with the training agent for a multidimensional assessment of older people and their family caregivers, not only from a health point of view but also from a social one (P11, P15 and P24).

Another aspect linked to the model's approach is inclusiveness, understood as the inclusion of different interlocutors in the care process:

TABLE 1 | Socio-demographic data of the participants.

Identifier	Interview method	Gender	Age (years)	Educational qualification	Profession	Thematic role
P1	One to one	Female	82	Primary School	Retired	Older people
P2	Focus group	Female	78	Primary School	Retired	Older people
P3	Focus group	Female	67	High School Diploma	Retired	Older people
P4	Focus group	Male	71	Primary School	Retired	Older people
P5	Focus group	Female	81	Primary School	Retired	Older people
P6	Focus group	Female	48	Bachelor's Degree	Nurse	Caregiver
P7	Focus group	Female	53	High School Diploma	Employee	Caregiver
P8	Focus group	Female	52	High School Diploma	Employee	Caregiver
P9	Focus group	Female	63	High School Diploma	Housewife	Caregiver
P10	One to one	Female	62	High School Diploma	Employee	Caregiver
P11	One to one	Female	47	PhD	Nurse	Healthcare Professional
P12	One to one	Female	44	Master's Degree	Nurse	Healthcare Professional
P13	Focus group	Female	64	Master's Degree	Nurse	Healthcare Professional
P14	Focus group	Female	44	Bachelor's Degree	Nurse	Healthcare Professional
P15	Focus group	Male	38	PhD	Doctor	Healthcare Professional
P16	Focus group	Female	29	PhD	Nurse	Healthcare Professional
P17	One to one	Female	59	Master's Degree	Executive	Stakeholder
P18	One to one	Female	66	Master's Degree	Executive	Stakeholder
P19	One to one	Female	40	Master's Degree	Researcher	Stakeholder
P20	One to one	Male	55	Master's Degree	Executive	Stakeholder
P21	Focus group	Male	67	Master's Degree	Executive	Stakeholder
P22	Focus group	Female	64	Master's Degree	Nurse	Stakeholder
P23	Focus group	Female	46	PhD	Researcher	Stakeholder
P24	Focus group	Male	45	PhD	Professor	Stakeholder
P25	One to one	Female	36	Master's Degree	Nurse	Training Agent
P26	One to one	Female	31	Nursing Degree	Nurse	Training Agent

> [...] not only to gather useful information for the application phase of the project, but also to grasp the point of view of different people involved, in order to identify inclusive interventions for the final beneficiaries [older people and their families].
>
> (P11, female, 47 years old, nurse)

The approach according to caregivers, health professionals and stakeholders is 'care-oriented', because it values, and assesses, holistic care (P8, P11, P13, P15, P21, P22 and P23), personalised care (P6, P11, P13, P15, P21 and P23) and family-centred care (P11, P15, P24).

> [...] the innovation of the TEC-MED model lies not only in the assessment of the needs related to the disease of the fragile older people, but also in exploring social, economic, relational, personal and family resources, including primary caregivers and family.
>
> (P11, female, 47 years old, nurse)

The category 'Innovation' includes 2 second-level codes and 5 first-level codes in which stakeholders identify certain gaps in home care and the strategies that the TEC-MED model uses to address them: Identification of Assistance Gaps and New Strategies.

According to participants (caregivers, health professionals and stakeholders), the innovation of this model is to bridge the gaps in home care, in which the social aspects of older people are neglected in favour of pathology-related health aspects (P9, P11, P13, P20, P21, P23 and P24). At a time when older people make

TABLE 2 | Description of themes and categories, second and first level codes.

Themes	Categories	Second-level codes	First-level codes	Participants	Frequency
TEC-MED as a new model of home care	Approach	Multidisciplinary and Multidimensional	Multidisciplinary integration	P11, P12, P15, P24	4
			Multidimensional assessment of older people and family	P11, P15, P24	3
		Inclusive	Inclusion and sharing points of view	P11	1
			Identification of inclusive interventions	P11, P15	2
		Care	Holistic care	P8, P11, P13, P15, P21, P22, P23	7
			Personalised care	P6, P11, P13, P15, P21, P23	6
			Family centred care	P11, P15, P24	3
	Innovation	Identification of assistance gap	Expressed and unexpressed needs of older people and caregivers	P6, P11, P13, P15, P17, P18, P20, P21, P22, P23, P25	11
			Neglected aspects of the person in home care	P9, P11, P13, P20, P21, P23, P24	7
			Community social and health integration	P11, P13, P21, P23, P24, P26	6
		New strategies	New model of home care	P11, P13, P15, P20, P21, P23, P24	7
			Advanced technology	P11, P13, P15	3

(Continues)

TABLE 2 | (Continued)

Themes	Categories	Second-level codes	First-level codes	Participants	Frequency
TEC-MED model outcome	Assistance	Quality	Increase in performance quality	P1, P6, P7, P8, P9, P11, P12, P13, P15, P17, P18, P19, P25, P26	14
			Socio-health integration	P4, P11, P13, P15, P20, P24, P25	7
			Pathways facilitation	P6, P7, P12, P18, P20	5
			Reducing time for access and use of services	P11, P12, P20	3
		Customer satisfaction	Satisfaction with the service provided	P1, P3, P9, P10, P11, P13, P17, P18 P20, P25, P26	11
			Satisfaction with the intervention of the Training Agents	P1, P2, P3, P4, P9, P10, P18, P25	8
		Older people safety	Prevention of falls and trauma, avoiding dangers at home and outside	P1, P4, P22	3
			Prevention of disabling diseases	P6, P22	2
	Quality of life and lifestyle	Positive influences	Positive influence on older people's daily living	P7, P11, P12, P13, P17, P18, P19, P20, P24, P26	10
			Positive influence on caregiver's life	P6, P7, P8, P9, P10, P18, P19, P25	8
		Healthy lifestyle	Training outside and inside the home	P1, P4, P5, P13	4
			Following a diet and eating regularly	P1, P5	2
			Recognising and avoiding negative lifestyle choices	P4	1

(Continues)

TABLE 2 | (Continued)

Themes	Categories	Second-level codes	First-level codes	Participants	Frequency
	Wellness	Physical well-being	Taking care of your health	P1, P2, P3, P4, P5	5
			Restoring energy	P6	1
		Emotional well-being	Feeling heard and understood (older people)	P1, P4, P5, P6, P10, P14, P21	7
			Feeling protected (older people)	P1, P5, P10, P12, P14, P21	6
			Feeling protected and supported (caregivers)	P6, P8, P9, P10, P12, P14	6
		Social well-being	Improvement of the relationship between professionals and families	P6, P10, P12, P14, P18, P22, P25	7
			Increase in social activities for the older people	P1, P2, P3, P4, P8, P12	6
			Improvements in the relationship between older people and family members	P1, P6, P7, P8, P25, P26	6
			Caregivers' and older people's visibility in the community	P17, P25	2
			Having more time for yourself (caregivers)	P6	1
			Decreasing the time spent inside the house (older people)	P12	1
			Better organisation of daily life (caregivers)	P6	1
			Improvement of older people/family relationship with family physician	P6	1
		Professional well-being	Health workers' visibility in the community	P1, P18, P20	3
			Professional growth	P13, P14, P18	3
		Autonomy and independence	Increased caregiver's autonomy in some caring activities	P6, P7, P8, P9, P10, P17	6
			Active participation by older people and caregivers	P6, P12, P13, P21, P22	5
			Independence in older people's daily life activities	P1, P2, P18	3

(Continues)

TABLE 2 | (Continued)

Themes	Categories	Second-level codes	First-level codes	Participants	Frequency
Key role of training agent	Activities	Health Information	Information on the services offered	P1, P2, P4, P6, P7, P11, P20, P25, P26	9
			Guidance in the use of services	P1, P2, P4, P6, P7, P11, P20, P25, P26	9
			Guidance in accessing new services	P1, P2, P4, P7, P17, P20, P25, P26	8
			Guidance in obtaining prescriptions for care services and aids	P1, P5, P6, P7, P12, P14, P20	7
			Guidance on behaviour in critical situations	P2, P10, P15, P20, P24, P26	6
			Information on the informal social network (voluntary associations, older people's centres)	P1, P5, P13, P14, P26	5
			Indications on the social and healthcare paths to be undertaken	P15, P20, P24, P25	4
			Guidance on how to contact the family physicians	P1, P14, P20	3
		Health education	Advice and guidance on lifestyles	P1, P3, P4, P5, P11, P13, P16, P22	8
			Medication management	P3, P5, P6, P11, P13	5
			Self-care and empowerment	P1, P11, P12, P22	4
			Advice on the management of pressure injuries	P25	1

(Continues)

TABLE 2 | (Continued)

Themes	Categories	Second-level codes	First-level codes	Participants	Frequency
	Skills	Personal traits and attitudes	Well-informed	P1, P2, P4, P5, P7, P8, P10, P11, P12, P14, P18, P20, P22	13
			Availability	P1, P2, P3, P4, P5, P6, P14, P18, P24	9
			Motivated	P2, P12, P14, P18, P20, P22	6
			Discretion	P4, P5, P6	3
			Professional	P6, P7, P8	3
			Responsible	P2, P20, P22	3
		Relational	Facilitator and problem solver	P1, P9, P11, P15, P20, P24	6
			Active listening	P1, P11, P14, P26	4
			Empathy	P1, P4, P5, P26	4
			Applying specific counselling techniques (motivational interviewing)	P4, P5, P11, P22	4
			Cultural competence	P2, P6, P20, P25	4
			Effective communication	P1, P11, P26	3
		Technical assistance	Updated knowledge on social and health services	P1, P2, P3, P6, P11, P18, P20, P24, P25, P26	10
			Updated knowledge on available resources	P1, P2, P3, P6, P11, P18, P20, P24, P25, P26	10
			Technical knowledge of the platform	P14, P18, P24, P25, P26	5
			Technical training for older people and caregivers	P13, P14, P17, P26	4
		Technical-evaluative	Knowledge of evaluative methodologies	P11, P24, P26	3
			Data collection and analysis	P11, P26	2
			Use of assessment tools	P11, P26	2

(Continues)

TABLE 2 | (Continued)

Themes	Categories	Second-level codes	First-level codes	Participants	Frequency
Platform and resources	Training	Complementary and appropriate	Appropriate in content	P2, P3, P4, P5, P7, P8, P9, P10, P12, P13, P17, P18, P19, P20, P22, P24, P25	17
			Complementary to the training of training agents	P6, P7, P8, P14	4
		Satisfying	Satisfying for older people and caregivers	P2, P3, P4, P5, P7, P8, P9, P10	8
			Satisfying for healthcare professionals	P12, P13	2
	Utilisation	Usability platform	Easy use and access	P6, P8, P9, P11, P12, P13, P14, P15, P16, P17, P18, P21, P23, P24, P25, P26	16
			Use complexity for older people	P1, P2, P3, P7, P13, P14, P15, P17 P19, P20, P22	11
		Most consulted sessions	Health education	P6, P7, P10, P11, P14, P16, P17, P25, P26	9
			Self-care	P4, P5, P6, P7, P10, P17, P18, P25, PP26	9
			Disease	P6, P7, P10, P11, P17, P26	6
			Caregiver's skills	P6, P7, P10, P17, P25, P26	6
		Type of utilised resources	Downloadable paper material (information, brochures and questionnaires)	P1, P4, P5, P9, P13, P15, P25	7
			Consultation of the caregiver manual	P6, P7, P8, P9, P10	5
			Use of paper evaluation questionnaire	P7, P10, P25, P26	4
			Classifications used for social and health problems for older people and caregivers	P20, P22, P25, P26	4

(Continues)

TABLE 2 | (Continued)

Themes	Categories	Second-level codes	First-level codes	Participants	Frequency
	Future implementations	Training	Increase time for caregiver/older people training sessions	P1, P3, P6, P8, P9, P10, P12, P17, P18, P19, P20, P25	12
			More specialised training in specific areas	P13, P17, P24, P25	4
			Increase time of training sessions for health workers	P11, P15, P20	3
		Platform	Real-time response (digital interlocutor or chat)	P11, P15, P18, P20, P24	5
			Familiarisation sessions and peer comparison	P11, P18	2
			Elimination of technical terms	P17	1
			Prefer video material to PDF files	P15	1
		Research/studies	Increasing the inclusion network	P11, P23, P24	3
			Difficulty of the training agents	P23, P24	2
			Results on the training agents' profile	P23, P24	2
			Report on older people's social and health problems	P23, P24	2
		Evaluation	Extend the experiment for long-term changes	P11, P15, P17, P18, P19, P20, P24	7
			Reduce the length of the evaluation questionnaire	P13, P14, P15, P25, P26	5
			Extend the experiment because it brings benefits	P4, P5, P18, P19, P20, P24	6
			Increase time for operator interviews	P12	1

up a large part of the population and, as a result, affect the demand for care (P17, P21 and P23), this model helps to identify the expressed and unexpressed health needs of older people and their caregivers (P6, P11, P13, P15, P17, P18, P20, P21, P22, P23 and P25) and integrates the health aspect with the social one, which is fundamental for the 'care in the community' setting (P11, P13, P21, P23, P24 and P26).

Indeed, it is so fundamental that TEC-MED is identified as a 'new model of home care' (P11, P13, P15, P20, P21, P23 and P24), up-to-date from the technological point of view (P11, P13 and P15).

5.4 | Theme 2: TEC-MED Model Outcomes

This theme describes the outcomes of applying the TEC-MED model. It encompasses three categories namely: Assistance; Quality of life and lifestyle; and Wellness.

The category 'Assistance' includes 10 first-level codes and 3 second-level codes (Quality, Customer Satisfaction and Older people Safety) and encompasses the results reported by stakeholders achieved through the application of the TEC-MED model in terms of care provided to older people and informal caregivers.

For example, many report on the improvement in terms of reducing waiting time for accessing health or social services (P11, P12 and P20), facilitation of care pathways (P6, P7, P12, P18 and P20) and increasing the quality of performance of health workers (P1, P6, P7, P8, P9, P11, P12, P13, P15, P17, P18, P19, P25 and P26). Both final beneficiaries and stakeholders are satisfied with the services received and the advice, guidance and interventions provided by the Training Agents. These help to increase older people's safety by preventing falls and injuries or the onset of disabling diseases (P1, P4 and P6).

The category 'Quality of Life and Lifestyle' consists of 5 first-level codes and 2 second-level codes (Positive Influences and Healthy Lifestyle) that describe the positive impact of the TEC-MED model on the lives of older people.

For example, the model encourages older people to adopt healthy lifestyles, such as exercising, following a diet or eating healthily, and recognising and avoiding unhealthy lifestyles (P1, P4 and P5).

> She [training agent] gave me advice on some of my questions. I am more careful of my diet, I eat better, more regularly [...] I take care of the right food for the osteoporosis [...] they have pushed me to do more activity.
>
> (P5, female, 81 years old, older people)

The category 'Wellness' includes 18 first-level codes and 5 second-level codes (Physical, Emotional, Social and Professional Well-being, and Autonomy and Independence) in which participants report the effects of applying the model on their well-being.

Informal caregivers emphasised the importance of feeling protected and supported in assisting their family member (P6, P8, P9 and P10), as well as being given time to recover energy, dedicate time to themselves or organise their daily activities better (P6), which improved their psycho-physical-social well-being. Having more time, knowing how to manage certain activities, and feeling protected and supported, contributed to and positively influenced the caregivers' quality of life (P6, P7, P8, P9 and P10) and also improved their relationships with the older people they assisted (P6 and P10).

Older people, furthermore, claimed that they felt listened to and understood (P1, P4 and P5), were more independent in their daily activities (P1 and P2) and participated much more in the socialising activities proposed in social venues in the community (P2, P3 and P4).

> Relations with other people have improved since participating in the study [...] I had no relationships with other people before but now I have other relationships [...] even communicative relationships, because the comparison with others has improved my mood. I used to be locked in the house all the time. Now I know many people and I have friends, we play cards, then I cook for myself. Before I was unmotivated and I didn't always do it [...].
>
> (P2, female, 78 years old, older people)

The TEC-MED model also increases the independence of older people in activities of daily living and increases the autonomy of caregivers in some care activities (P6, P7, P8, P9 and P10). This also contributes to more active participation in care by both older people and caregivers.

> I am more independent in the caring process [...] how to deal with the dressing. At first, I used to wait for the nurse for everything [...] because I was always afraid. Instead, knowing these aspects too, listening to [the training agent's explanations], it was effective.
>
> (P8, female, 52 years old, caregiver)

Finally, stakeholders indicate that the model succeeds in increasing the visibility in the community not only of older people and caregivers but also of healthcare professionals, and also in contributing to their professional development (P11, P18 and P20).

5.5 | Theme 3: Key Role of Training Agent

In this theme, participants describe the activities carried out and the skills possessed by the training agent. This includes two categories: Activities and Skills.

The category 'Activities' includes 12 first-level codes and 2 second-level codes (Health Information and Health Education) and describes the activities performed by the training agents as reported by the participants. These activities include guidance

in accessing and utilising the available health services, health education on healthy lifestyles, medication management, pressure ulcer management and the development of the self-care and empowerment of the final beneficiaries.

The category 'Skills' includes 19 first-level codes and 4 second-level codes (Personal Traits and Attitudes; Relational; Technical Assistance; and Technical-Evaluative) that describes the skills and characteristics of the training agents as reported by the participants.

Training agents were defined as professional, prepared and responsible healthcare workers (P1, P2, P4, P5, P6, P7, P8, P10, P11, P12, P14, P18, P20 and P22), motivated (P2, P12, P14, P18, P20 and P22), available (P1, P2, P3, P4, P5, P6, P14, P18 and P24) and with relational and technical-professional skills.

In the area of interpersonal competencies, the agents were recognised for their active listening, empathy and counselling skills. The training agent was also considered a facilitator in accessing and utilising health and social services and an intermediary in contacts with institutions (P1, P9, P11, P15, P20 and P24).

In the area of professional technical skills, they possessed updated knowledge of social and healthcare services, were aware of resources available in the community (P1, P2, P3, P6, P11, P18, P20, P24, P25 and P26) and were able to direct and train the final beneficiaries (older people and caregivers) through consultations.

> The training agent is a nurse [...] so we say that they must have skills in the professional field to carry out an action especially in the community [...] they must know how to make decisions and must be able to act with respect to all those things that can be variable in the family context, different from the hospital, because in the family context the decision to do or to have to do a certain thing is made in absolute autonomy [...] the training agents must be prepared for the family care context.
>
> (P22, female, 64 years old, stakeholder)

5.6 | Theme 4: Platform and Resources

In this theme, participants express their opinions and suggestions on the usability of the platform and resources of the TEC-MED model. In fact, it includes three categories: Training; Utilisation; and Future Implementations.

The category 'Training' includes 4 first-level codes and 2 second-level codes (Complementary and Appropriate; and Satisfying) in which participants express their opinions on the training of older people and caregivers on using the platform and the appropriateness of the content provided. Four participants (final beneficiaries) considered that the training received through training sessions or platform was complementary to that of the training agent (P6, P7, P8 and P14).

The category 'Utilisation' includes 10 first-level codes and 3 second-level codes (Platform Usability; Most Consulted Sessions; and Type of Utilised Resources) which encompass participants' opinions on the usability of the platform.

The platform was considered innovative (P18) and interesting (P18 and P20) and most respondents considered it easy to use and access. Older people said they had made little use of it (P1, P2, P3, P4 and P5). This was related to the older people's low propensity for technology, in the case of almost all participants. Health workers said that caregivers were more likely to take advantage of it and for this reason they preferred to train them on usage (P13).

> There was participation from the caregivers, so where it was possible the caregivers were instructed on how to use the platform.
>
> (P22, female, 64 years old, stakeholder)

The sessions that participants claimed to have watched were those about 'health education', 'self-care', 'diseases' and 'caregiver skills' (P4, P5, P6, P7, P10, P11, P14, P16, P17, P18, P25 and P26). The educational material, in addition to being available on the platform, was downloadable. For this reason, older people made more use of the printed leaflets or materials downloaded by caregivers or made available to them by health professionals.

> I didn't use the platform, too complex for me [...] but they gave me a booklet with very useful tips, I found those more useful.
>
> (P5, Female, 81 years old, older people)

Finally, the category 'Future Implementations' includes 15 first-level codes and 4 second-level codes (Training; Platform; Research/Studies; and Evaluation) in which participants identify weaknesses in the TEC-MED model, suggesting modifications to be made and tested in the future. The main problem highlighted was the time devoted to training, considered insufficient.

> In my opinion it would have been better to have more time to do it, both for us caregivers and the older person.
>
> (P8, female, 52 years old, caregiver)

> As for the older person and caregivers I would have lengthened the training time, the coverage was too narrow, they needed more time spent on training.
>
> (P25, female, 36 years old, training agent)

> I wouldn't take anything away from the training done, but I would include a few more hours especially for the older person.
>
> (P12, female, 44 years old, nurse)

Another suggestion was to implement structured courses specifically for older people and their families, based on the initial

evaluation of training agents (P13, P17, P24 and P25). As far as the platform is concerned, the stakeholders suggest the integration of real-time response, familiarisation sessions and peer comparison.

Finally, stakeholders recommended future research on the issues faced by training agents and the social and health problems of the older person.

> [...] there is some information that is probably not collected at present in Italy. Based on the information gathered by the training agents, we have a fairly accurate social and health picture, a whole series of aspects that certainly are not [otherwise] considered. We consider many others, especially those on the medical aspect, so from that point of view it is very interesting. What is lacking in the platform is the ability of maybe having accessible reports that also give highlights on a whole series of issues [...].
>
> (P24, male, 45 years old, stakeholder)

Stakeholders stated that the model had an immediate impact on the care of older people and informal caregivers (P20, P24), but this effect would not be long-term if the project was discontinued after the pilot phase (P24). Older people also suggest that this type of model should be further experimented with for the benefits it brings them (P4, P5).

6 | Discussion

This qualitative study explored experiences of the different participants with the TEC-MED model, during the implementation of the pilot phase, to identify strengths and weaknesses of the model and to determine areas for improvement. From the findings of the study, four themes were identified that described the implementation aspects of the TEC-MED model.

In the first theme, 'TEC-MED as a new model of home care', the model is recognised for its innovation and novel approach to care. Participants called the model innovative because it explores not only the health needs of older people, both expressed and unexpressed, but also issues related to social networks and economic, relational, personal and family resources. The international literature highlights the importance of social networks (family, friends or neighbours) in promoting healthy practices, self-efficacy, well-being and healthy ageing (Wu and Sheng 2019; Abdi et al. 2019). Furthermore, inclusiveness emerged as a key aspect of the TEC-MED model, as it strives to involve diverse stakeholders in the care process. By soliciting input from different individuals involved, the model aims to identify inclusive interventions tailored to the needs of older people and their families. This inclusive approach fosters a collaborative environment conducive to delivering personalised and family-centred care, which is essential for promoting overall well-being (Lahiri et al. 2022).

Another important aspect that was highlighted by the caregivers, health professionals and stakeholders was the novel approach: the model was 'care-oriented' in a holistic way. The use of terms such as 'holistic care,' 'personalised care' or 'family-centred care' reflects the variety of ways in which this holistic attention to care has been interpreted and recognised by those involved in implementing the model. This again underscores the inclusive and flexible nature of the TEC-MED model, which adapts to the diverse needs and perspectives of older people, their families and healthcare professionals. The literature reports the opinions of the final beneficiaries, who feel and suffer deeply from the lack of holistic care. They complain, for example, about the significant lack of specialised services and the inadequate communication skills of healthcare professionals. They also express the need for specific care services to avoid institutionalisation or excessive, premature or inappropriate use of health services (Abdi et al. 2019).

The model was described by interviewees as 'the new model of home care', capable of bridging the gap in home care, through the integration of the social aspect, which is fundamental for community care. In fact in the focus groups, the topic of the care network was discussed with strong emphasis on care, focusing not only on physical well-being, an area where care is actually carried out in a highly specialised manner, but also on psychological and social aspects. There is much discussion in the literature about the limited knowledge and understanding of health professionals regarding these needs and the lack of interventions dedicated to these issues (Abdi et al. 2019). The TEC-MED model, on the other hand, demonstrates that it addresses these gaps by sensitising training agents and other health professionals in providing concrete responses to the needs of the final beneficiaries—the older people and their informal caregivers.

In the second theme, 'TEC-MED model outcomes', participants reported beneficial effects on assistance, quality of life and wellness for older people, their caregivers and healthcare professionals. Narratives reported improvement in terms of time optimisation, increased autonomy, psycho-emotional well-being for caregivers, and increased independence, participation in socialising activities and adoption of healthy lifestyles for older people. A European study on the caregiver population (Akgun-Citak et al. 2020) has highlighted the challenges and needs for support of informal caregivers in the care of older people. Research has indicated that simply providing formal information is insufficient for supporting caregivers. Instead, healthcare professionals should aim to empower informal caregivers by assisting with small tasks and providing support, which can help to reduce caregiver fatigue and minimise the likelihood of informal caregivers taking inappropriate actions (Dixe et al. 2019).

Moreover, another outcome of the model was its positive influence on healthcare professionals, indicating that their visibility and involvement in the community were enhanced through their participation in the model. This suggests that the TEC-MED model not only improves older people's care but also fosters professional growth and development among healthcare providers. This result is particularly important considering the challenges faced by healthcare professionals in delivering comprehensive care to older people and their caregivers (Gustavsson et al. 2023). The increased visibility and professional development opportunities afforded by the TEC-MED model offer a valuable means for healthcare professionals to

address these challenges effectively. By enhancing their visibility in the community and providing avenues for professional growth, the model can not only improve the quality of care provided but also support the well-being and resilience of healthcare professionals in navigating the complexities of care of older people.

The third theme, 'Key role of training agent', emphasised the skills and activities of the nurses involved in the project. The training agents in the TEC-MED model were perceived as supporting family caregivers and older people by providing them with information in the management of their condition and coordinating health services. Training agents were identified as competent social or healthcare workers with technical-professional and interpersonal skills, able to guide and train the final beneficiaries. This was appreciated by the older people and informal caregivers (final beneficiaries), who felt supported, informed and reassured. Final beneficiaries desire well-planned interventions that aim to strengthen social policies in the area. They also request the strengthening of recreational centres for the older people and the introduction of a professional figure that can be closer to them, like the training agent of the TEC-MED model.

The fourth theme, 'Platform and resources', highlighted the utilisation of the platform, training needs and identified areas for future improvement of the model. The majority of participants expressed satisfaction with the training delivered through the platform, highlighting its relevance and comprehensiveness. However, some older people found the platform use challenging due to their limited familiarity with technology. This underscores the importance of considering the digital literacy and preferences of older people when designing such interventions (Oh et al. 2021; Arcury et al. 2020). Moreover, the preference for printed materials among older people suggests the need for alternative delivery methods to ensure inclusivity and accessibility.

The identified weaknesses in the TEC-MED model, particularly the perceived insufficiency of training time, indicate areas for enhancement. Participants emphasised the importance of extending the duration of training sessions, especially for older people and their caregivers. This suggests a need for more tailored and comprehensive training programmes to adequately address the diverse needs of participants. Furthermore, stakeholders suggested implementing structured courses specifically tailored for older people and their families, based on initial evaluations by training agents. This targeted approach could enhance the relevance and effectiveness of training programmes, ultimately improving outcomes for older people and caregivers. In terms of the platform, stakeholders recommended integrating real-time response, interactive sessions and peer comparison features to enhance user engagement and learning outcomes. These enhancements could facilitate a more dynamic and interactive learning experience, catering to the diverse needs and preferences of participants.

The qualitative results of the TEC-MED model confirm older peoples', caregivers' and stakeholders' perception of the usefulness and effectiveness of the TEC-MED model. The results can be extremely useful in addressing these issues, although they should be confirmed with the results of quantitative studies.

Our results are based on a qualitative analysis of the pilot testing of the TEC-MED model, which has both strengths and limitations.

The strength of this study is certainly that it includes different people involved in the care process, thus allowing different points of view to be captured to identify the interventions and outcomes of the final beneficiaries. Stakeholders, for example, reported a positive impact on the care of older people and informal caregivers, but also emphasised the need for the long-term sustainability of the project.

Another strength of the TEC-MED project is that it creates a resilient network between training agents and end beneficiaries. The literature states that continuous communication with the older people and their caregivers, training and skill enhancement activities, and networking between end beneficiaries and healthcare providers (in this study, the training agents), are key components for the success of social and healthcare programmes (Warkentin et al. 2022).

In addition, the TEC-MED model has shown that it is 'in step with the times' and new scenarios in social and healthcare. Healthcare is changing rapidly, with less hospital-based care and more community-centred care (McMaughan, Oloruntoba, and Smith 2020) and increasingly focused on community and particularly home-based services. This scenario must meet a series of fundamental requirements in order to function well, and these requirements cannot be ignored: quality, competence, training, research and technological innovation. Again, the TEC-MED model focused on providing holistic care by integrating the physical, psychological, social and economic needs of the older people and informal caregivers and facilitating the activation of healthcare resources.

Both of the latter two strengths are confirmed in the literature as decisive and fundamental. In fact, there is a need to prioritise the delivery of safe, person-centred primary care based on home care and interdisciplinary teams, promote ageing-friendly physical and social infrastructure to foster supportive communities and implement consumer-directed family care programmes and intergenerational supports for technology use (Hoffman, Webster, and Bynum 2020).

As anticipated, this study is not without some limitations.

The first limitation may be the use of the online platform for training and information activities. Indeed, some of the older people stated that they used it very little or that they mostly used the leaflets downloadable from the platform, printed by their informal caregivers. This may represent a limitation that the literature identifies as a barrier to older people's use of technology (Kruse et al. 2020). However, in our study, the training agents implemented healthcare literacy interventions for older people, also involving their informal caregivers, in order to enable the older people to use the platform in every way.

In our study, we used purposive sampling in order to collect the experiences from all stakeholders involved in the implementation of the model. However, this approach may have led to

selection bias by including only those subjects available at the time of the interview. This may have constituted a potential limitation to the addition of information and consequently to the depth of understanding of the phenomenon. However, despite this potential selection bias, data saturation was achieved and no new results emerged from interviews.

That said, the general opinion of the respondents participating in the study confirms the usability of the TEC-MED model and the importance of continuing this model of care for frail older people and their informal caregivers in the future. The model has the great benefit of providing supportive information to improve the model of care.

6.1 | Implications for Research, Education, Practice, Policy and Sustainability

By addressing the comprehensive care needs of frail older people and their informal caregivers, the TEC-MED model has the potential to significantly impact healthcare practices, policies and sustainability efforts.

The TEC-MED model or similar models should be implemented in various care settings and be an integral part of community-centred care. The TEC-MED model can be considered a best practice example for coordinating services for older people and their caregivers. To ensure the long-term sustainability of the TEC-MED model, it is necessary to consider financial, organisational and structural aspects. Additionally, it is necessary to explore potential collaborations with public and private stakeholders to secure ongoing support for the implementation and refinement of the model.

The model suggests the need for education for health and social care professionals to enhance their skills in providing holistic care, focusing on the physical, psychological, social and economic needs of older people. Education should incorporate healthcare and digital literacy interventions to empower older people and informal caregivers, addressing barriers to the use of technology and online platforms.

At the policy level, integration of holistic care models, such as TEC-MED, and inclusion of caregiver support programmes in policy frameworks for national and regional healthcare policies is necessary to face the present and future challenges.

Future quantitative studies will be conducted to validate and quantify the observed positive outcomes of the TEC-MED model and to investigate its long-term effects on the well-being of frail older people and their informal caregivers. Additionally, the model should be tested in diverse contexts, with different populations and settings, to determine its generalisability and potential impact.

7 | Conclusions

Healthcare services encounter different drawbacks in caring for older people. New models of care that are inclusive, personalised and integrated are necessary to respond to the multiple needs of the older people. The TEC-MED model was tested in six Mediterranean Basin countries, in the pilot phase. In Italy, the model was very much appreciated by older people, informal caregivers, training agents and other healthcare professionals and stakeholders. The final beneficiaries were grateful for the education and information received; the caregivers acknowledged the support and the opportunities for relief, whereas the older people appreciated the opportunities for socialisation with others and education on self-care. Different recommendations for improvement were offered. Similar research is imperative for healthcare systems to help them prepare adequately to respond effectively to the needs of present and new generations of older people. A model that integrates the multiple skills of healthcare professionals is an optimum solution in the care of the older people and their caregivers in Mediterranean countries.

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Consent

Informed consent was obtained from all subjects involved in the study.

Conflicts of Interest

The authors declare no conflicts of interest.

Data Availability Statement

The data are not publicly available due to privacy restrictions.

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Supporting Information

Additional supporting information can be found online in the Supporting Information section.