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Necessities of home care for the elderly and informal caregivers within the health centers of Shiraz University of Medical Sciences: A mixed methods study

Fatemeh Azadian[1], Mohammad Javad Moradian[2,1], Masoumeh Saffari[1], Hadis Salimi[3], Sanaz Amiri[4], Zahra Azadian[5], Mahya Shabanzadeh[6], Masoumeh Hamidi[7], Saeed Seyfi[8], Mohadeseh Gholampour[9], Mohammad Reza Ensafdaran[*10]

[1] Shiraz Geriatric Research Center, Shiraz University of Medical Sciences, Shiraz, Iran
[2] Department of Health in Disasters and Emergencies, School of Health Management and Information Sciences, Shiraz University of Medical Sciences, Shiraz, Iran
[3] Non-Communicable Diseases Research Center, Shiraz University of Medical Sciences, Shiraz, Iran
[4] Student Research Committee, Shiraz University of Medical Sciences, Shiraz, Iran
[5] Fasa University of Medical Sciences, Fasa, Iran
[6] Islamic Azad University of Kish, Kish, Iran
[7] Department of Psychology, Arsanjan Branch, Islamic Azad University, Arsanjan, Iran
[8] Shiraz University of Medical Sciences, Shiraz, Iran
[9] Department of Knowledge & Information Science, Shiraz University, Shiraz, Iran
[10] Department of Urology, Shiraz University of Medical Sciences, Shiraz, Iran

Correspond Author Email: Mohammadrezaensafdaran@gmail.com
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Abstract

Aging is a biological process that impacts all living beings, including humans. Although the inevitability of aging cannot be halted, proactive and strategic planning can assist families in implementing effective methods and policies to support their elderly members. By addressing this critical social issue, families can take essential steps to ensure that elderly relatives remain central to family life and enhance their overall quality of life.

This study employed a qualitative-quantitative sequential exploratory approach (paradigm-pragmatism method) in a cross-sectional manner in 2024, focusing on families of elderly individuals under the care of Shiraz University of Medical Sciences. To determine the sample size, 51 elderly individuals with specific conditions who were able to communicate were interviewed using an exploratory interview method. The interviews were subsequently coded, and relevant codes were extracted. The findings from the qualitative component were analyzed through content analysis, while the inferential content analysis method was utilized for data interpretation. Following the identification of the unit of analysis, open coding was conducted, leading to code classification, which facilitated the development of categories and exploration. Ultimately, each domain encompassed several main categories, subcategories, and codes. In the management category, there was one main category, three subcategories, and eight primary codes. In the knowledge category, one main category, two subcategories, and five primary codes emerged as the most significant findings from the content analysis.

Among the male interviewees, 35 percent possessed a university education, while the remaining participants held diplomas or secondary education. Regarding employment status, 45 percent were self-employed, 55 percent were retired, and 5 percent were employed in government positions. Among the female interviewees, 25 percent had a university education, 63 percent were homemakers, and 12 percent were employed. The elderly participants identified their most significant needs as social in nature, which included the availability of physical facilities suitable for their health conditions, home improvements, urban development, accessible transportation, physical office spaces, renovations of deteriorating areas, and the establishment of recreational and welfare facilities.

This study identified the home care needs from the perspectives of the elderly and informal caregivers, categorizing them into two primary areas: knowledge and management. Notably, the most critical needs emerged within the realm of social issues.

Keywords: Aging, Home Care, Informal Caregivers, Elderly Care Needs

Introduction

Over the past half century, declining fertility rates, reduced population growth, improved health facilities, socio-economic development, and increased life expectancy have contributed to an increase in the average age of societies. It is expected that by 2050, more than 16% of the world will be elderly. The Iranian population is currently transitioning from a middle-aged to an older age structure, with projections indicating that by 1429, approximately 33% of the country's population will be over 60 years old. By 1424, the growth of the elderly population in Iran is expected to surpass the global average, and five years later, it will exceed the growth rate of the elderly in Asia (1).

Iran's metropolises, particularly its industrial and major cities, have undergone rapid growth in recent decades, accommodating a substantial portion of the country's diverse immigrant population. This influx has contributed to population growth and, consequently, an increase in the elderly demographic, thereby intensifying the challenges faced by government departments and institutions in providing support for older adults in these urban areas. In light of the swift demographic changes in metropolitan regions and the insufficient support systems for the elderly, it is imperative to implement policies that facilitate independent living for older adults in their own homes (2). Numerous studies indicate that older individuals prefer to live with their families, particularly their children, underscoring their desire to spend their later years in the company of loved ones. However, circumstances may prevent them from residing with family, resulting in placements in nursing homes. Such arrangements can lead to separation from families and communities, causing significant psychological distress for both the elderly and their relatives. The marginalization of older adults can exacerbate feelings of insecurity and anxiety, fostering a sense of inferiority and loneliness. Research indicates that elderly individuals who receive care from their families generally experience better health outcomes and increased longevity. Therefore, it is essential to strengthen family-centered policies that support the elderly (3).

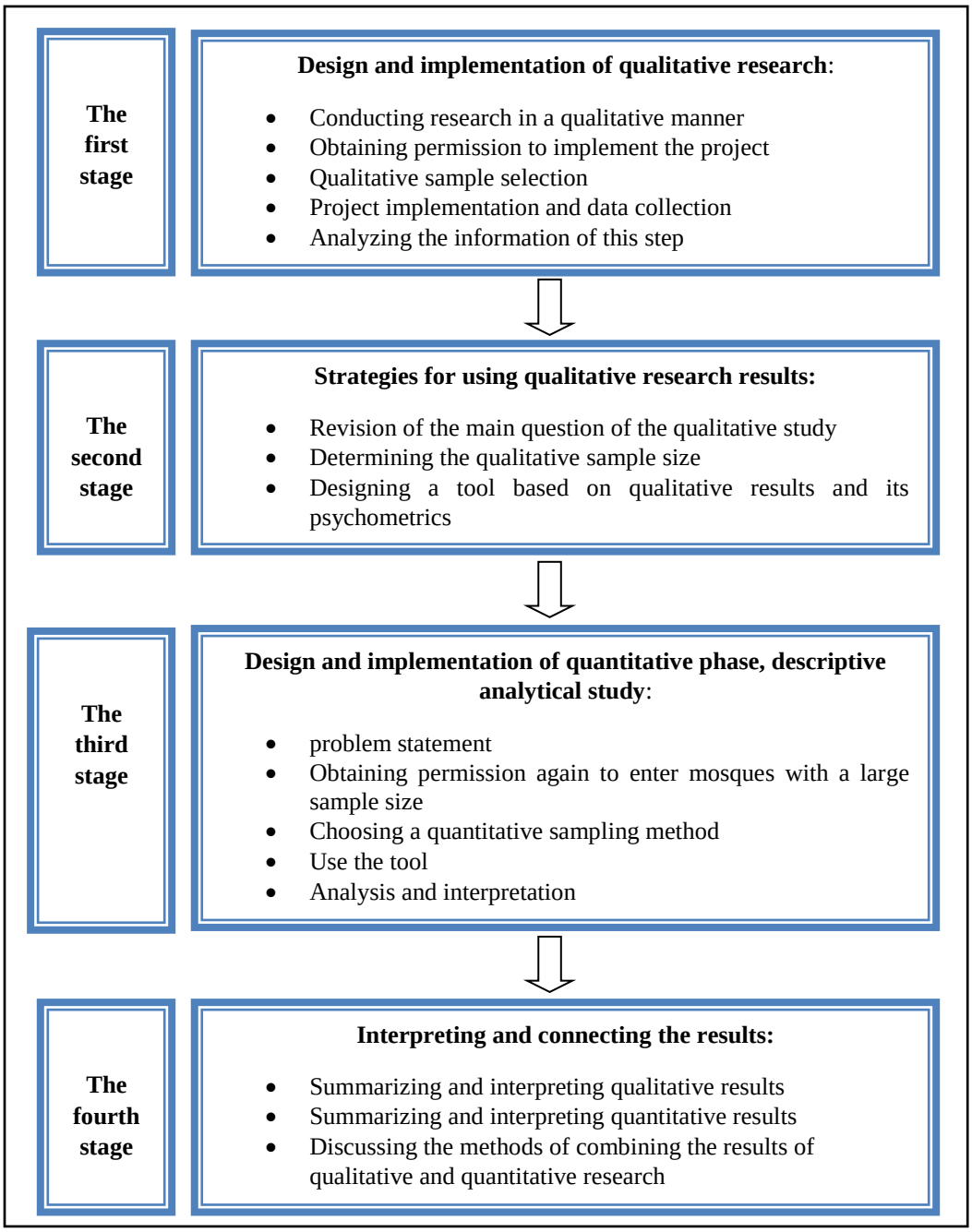
In developing countries such as Iran, government revenue generation is limited, resulting in insufficient growth of public sectors dedicated to supporting the elderly. Coupled with widespread poverty and significant inequalities, these factors pose challenges to existing support networks for older adults. Therefore, it is essential to prioritize neighborhood-based and family-centered support programs for the elderly in policy-making. Family-oriented policies are necessary to empower older individuals to live independently within their communities and homes (4). Additionally, urban spaces, neighborhoods, and residences should be designed to mitigate isolation, loneliness, and immobility among the elderly, recognizing that families alone cannot address these needs. Given the importance of aging and its implications for older adults, families, and society as a whole, focused attention on this demographic is essential (5). Although many studies have examined aging and related issues in Iran, there remains a gap in research specifically aimed at developing family-centered and community-centered strategic proposals for supporting the elderly, particularly with an emphasis on placing the family at the forefront of the discussion.

Method

This study utilizes a sequential qualitative-quantitative exploratory design rooted in the pragmatism paradigm. It was conducted cross-sectional in 1403 among elderly families associated with Shiraz University of Medical Sciences. A total of 51 participants (31 women and 20 men) provided informed consent for their involvement in the study. This primary qualitative research serves as a foundational element in the development of an appropriate measurement instrument. The study emphasizes two critical concepts essential for understanding the integration of qualitative and quantitative approaches: establishing a point of contact and employing a combined strategy. The

measurement tool was developed based on the findings of the qualitative phase. Qualitative data were first collected through face-to-face interviews, and the sessions were recorded. The interview data were then analyzed using systematic coding techniques to support the development of an appropriate measurement instrument; this coding process was essential both for constructing the tool and for assessing its validity and reliability. Finally, the developed instrument was implemented within a quantitative framework through a cross-sectional descriptive study to evaluate the current context using the constructed tool (Figure 1).

Figure 1. Workflow template for strategies using qualitative research results



This study received approval from the Ethics Committee of Shiraz University of Medical Sciences under ethics code IR.SUMS.REC.1403.146.

Results

In this study, 35% of the male interviewees held a university education, while the remaining participants had completed either a diploma or secondary education. Among the male participants, 45% were self-employed, 55% were retired, and 5% were employed in government positions. In comparison, 25% of the female respondents possessed a university degree, 63% identified as housewives, and 12% were engaged in the workforce.

Qualitative explanation of the study

The findings related to the qualitative component were analyzed using the content analysis method. Since this research was conducted across two domains, awareness and knowledge, the inferential content analysis approach was employed for data analysis. After establishing the unit of analysis, open coding was performed, followed by code classification, which facilitated the identification of categories and thematic exploration. Ultimately, the number of primary categories, subcategories, and codes within each domain was determined, as presented in Table 1.

Management: 1 primary category, 3 subcategories, and 8 main codes

Knowledge: 1 primary category, 2 subcategories, and 5 main codes

Table 1. Main classes, subclasses and codes extracted from the qualitative section

Main class	Subclass	Codes
Management (short term)	future planning	Coordination for training and empowering the elderly in health centers
		Training expert staff to teach resilience and participation programs for the elderly
		Management, control and investigation of issues related to care and physical, mental, social and spiritual health of the elderly
		Preparation and training of programs to teach legislation, policy making and strategy in the affairs of the elderly to the elderly themselves and their families
		Giving funds to buy the necessary equipment for the welfare of the elderly in relevant organizations such as social security organization, welfare and help seekers covered by the relief foundation
		Preparation, distribution of educational media regarding the physical, mental and social health of the elderly
		The training of the required human resources, especially the assessment of the needs of the elderly
		Training of legal inspectors and cases by the officials of universities and departments related to elderly affairs
	Attracting public participation	The participation of the board of trustees in meeting the needs of the elderly who do not have financial means
		The participation of health donors in the direction of participation in the implementation of programs: such as creating space, equipment related to welfare, medicine and counseling
		Directing people's aid to provide the necessary equipment for welfare, education and paramedical and psychological services
		Providing protocols to health-related organizations under the supervision of law enforcers, lawyers and healthcare policymakers to ensure the mental, physical and social well-being of the elderly
	Training of troops	Training the relevant workers, families, institutions and organizations regarding the method of keeping the elderly at home with emphasis on behaviors appropriate to the age, sex, physical and mental condition of the elderly

		Educating children, grandchildren and relatives involved in creating a favorite environment for the elderly
		Teaching Ngo groups to hold religious, happy and entertaining ceremonies to maintain the mental health of the elderly
Knowledge	Information about the current situation	General information about the size of the space used by the elderly in their homes
		Determining the number of elderly people every year by organizations and directing them to the centers of the involved institutions
		Determining and addressing the social, cultural and welfare facilities needed by the elderly to the families
	Information about the desired situation	The size of the space suitable for the elderly population
		Appropriate services provided for special ceremonies of old age

Qualitative study findings: Concept clarification

Through the content analysis of the interviews conducted during the open coding stage, a total of 63 codes were extracted. These codes were subsequently consolidated into 29 during the data integration phase. The identified codes were organized into five subcategories and two primary categories. The two principal categories identified were management and knowledge. The management category includes three subcategories: planning, public participation, and training of expert personnel.

Planning management

In terms of educational coordination, several key aspects were evaluated, including the provision of qualified personnel to address pertinent health-related issues, management of specific locations, oversight and review of health-related matters, and the availability of essential physical facilities.

Management of public cooperation and participation

This section encompassed the involvement of the board of trustees, participation from health benefactors, and public donations.

Planning

Planning involves educational initiatives aimed at the elderly and their families, the provision of expert personnel for education concerning issues relevant to the elderly, management of specific locations, and the review of issues impacting the elderly, such as the availability of physical facilities for support programs.

Raising awareness among seniors and their families

Most participants expressed the belief that educational programs could significantly enhance the awareness of seniors, their families, and various institutions, including governmental and non-governmental organizations. They advocated for the implementation of educational initiatives such as radio broadcasts, seminars, workshops, and informational packages. This demographic demonstrated a strong willingness to engage in educational classes aimed at empowering them and raising awareness of their rights and benefits. However, participants noted a lack of educational opportunities within these institutions, despite eligible seniors having sufficient time to participate. Additionally, the accessibility of educational locations posed a considerable barrier for this group, representing a significant educational challenge. Therefore, it is imperative that educational services targeted at this predominantly elderly demographic be tailored specifically to their needs.

Provision of expert personnel for health education

It is impractical to expect elderly individuals to fully grasp the complexities of issues related to their health, welfare, and overall well-being while also managing their legal and regulatory affairs. Therefore, there is a critical need for knowledgeable professionals who can provide effective education in these areas, empowering elderly individuals to navigate their situations more proficiently.

Specialized management, oversight, and investigation of issues pertaining to the elderly in familial settings

A majority of participants indicated that the management, oversight, and investigation of issues related to the elderly require specialized knowledge and expertise in the relevant field, and these matters should not be approached superficially. Participants underscored the importance of having appropriate physical facilities to enhance living environments and improve the quality of activities available to the elderly. The provision of specialized equipment, including appropriate beds, canes, glasses, toilets, and sufficient space for engagement in various activities, is considered essential for the elderly population.

Individuals residing in marginalized areas and villages adjacent to urban centers have expressed concerns regarding financial constraints, highlighting a lack of dedicated income sources to procure essential equipment for the elderly. Findings indicate that participants acknowledged the need for expert assessment of social issues, including urban development, transportation accessibility, and the spatial dimensions of offices and public spaces.

Regarding the management of public participation, participants recognized that a board of trustees could effectively assess numerous community needs, thereby facilitating the resolution of various issues. Additionally, the renovation of facilities that are over 30 years old has been identified as a critical priority. As population density in neighborhoods and regions rises, the development of recreational and welfare facilities should also be prioritized.

During the interviews, a majority of participants expressed limited awareness of construction methodologies. From the perspective of elderly individuals, many recreational, tourism, and sports facilities were identified as insufficiently equipped with the necessary seating and tools for their use, highlighting the need for a comprehensive review and enhancement of accessibility.

Discussion

Over the past fifty years, many societies have experienced a shift toward an aging demographic due to economic and social development, as well as the expansion of facilities. This trend has become a primary concern for these societies, particularly regarding the welfare and security of the elderly and the support provided by organizations focused on family care. This research identifies policy strategies for integrating elderly individuals within family structures. Supporting the elderly in the future requires two fundamental components: effective management and the acquisition of knowledge. These components are critical elements that influence family support and the corresponding positive or negative impacts on the nature and extent of that support.

Families must possess the necessary management skills and knowledge to effectively care for elderly members. Those with elderly individuals often face challenges such as inadequate public transportation infrastructure, unsuitable building structures, and insufficient elder care equipment. In this context, the roles of government and private agencies become increasingly significant in addressing the needs of the aging population by providing essential support and care services. It is anticipated that elderly individuals will receive enhanced support from governmental, private, and non-governmental organizations, thereby empowering families to advocate for the elderly within both family units and society at large. The outcomes of this support are expected to manifest in reduced societal costs and strengthened social capital.

Coordinating training efforts and providing specialized personnel to address health-related issues are essential. Planning should include educational initiatives targeting both the elderly and their families, as well as the management of designated locations to monitor and address health concerns and provide necessary physical facilities for elderly support programs (6). Many participants believe that educational programs could significantly enhance awareness among the elderly, their families, institutions, and both governmental and non-governmental organizations. The availability of physical facilities that meet the needs of the elderly and improvements to home environments are crucial for enhancing the quality of activities available to them (7).

The findings indicate that a significant majority of respondents recognize the importance of expert evaluations in urban planning, transportation options, office spaces, and recreational facilities. The renovation of facilities over thirty years old is identified as a critical priority. As populations grow in specific neighborhoods and regions, it is essential to concurrently develop recreational and welfare facilities. These results are consistent with previous research in this field.

According to the findings of the study conducted by Golizadeh et al., the foremost priority and pressing need of the elderly population in society pertains to social needs (8). This conclusion has also been corroborated by the research of Pirouz et al. (9), Passos et al. (10), and Ashokkumar et al. (11).

Rafsanjani et al. determined the social needs of the elderly by analyzing data related to mobility, intimate relationships, income and financial management, and the extent of benefits received (12). This aligns with the findings of John Stein et al. (13), while several studies have highlighted daily activities as a priority social need (14, 15, 16). Conversely, some research has indicated that economic issues are prioritized (17, 18). In the majority of studies conducted, various social needs have been examined, and due to the absence of a standardized definition of needs, disparate results have emerged.

In the context of management planning, effective coordination in education, and the mobilization of cooperation and public participation, the engagement of a board of trustees, health benefactors, and public donations can substantially enhance the capacity to acquire necessary equipment and access essential facilities for the elderly, including families caring for disabled elderly individuals. This initiative should be strengthened through education, the training of qualified personnel, and the establishment of centers dedicated to studying the circumstances of the elderly. Therefore, it is essential to develop comprehensive plans, such as educational programs for the elderly and their families, the provision of specialized personnel to address issues affecting the elderly, and the management of designated facilities for examining elderly-related matters, to support families with elderly members.

Raising awareness among the elderly and their families, as well as administrative and non-administrative institutions and organizations, through educational initiatives designed to enhance knowledge and understanding, is critical. A substantial proportion of participants expressed the belief that educational programs could significantly increase the awareness of the elderly, their families, and both governmental and non-governmental institutions through various channels, including radio and television, seminars, workshops, and educational materials. Additionally, familiarizing the elderly with legal matters and fostering the spiritual growth of families may further contribute to effective support in this area. Therefore, there is an urgent need to provide specialized personnel for community education, particularly within the target demographic.

Limitations

This study is subject to several limitations that should be acknowledged. First, the relatively small sample size of 51 participants restricts the generalizability of the findings to the broader

elderly population in Iran or other contexts. Second, the study was conducted exclusively among families affiliated with Shiraz University of Medical Sciences, which may limit the applicability of the results to other regions with different socio-cultural and economic conditions. Third, the reliance on face-to-face interviews introduces the possibility of response bias, as participants may have provided socially desirable answers rather than fully accurate accounts of their experiences. Fourth, the cross-sectional design of the study does not allow for the examination of changes in elderly needs over time or in response to evolving social and economic circumstances. Finally, the focus on two primary domains, management and knowledge, may have overlooked other important dimensions of elderly care, such as psychological, cultural, or economic factors, which warrant further investigation in future research.

Conclusion

Based on the findings of this study, the needs of the elderly can be categorized into two primary domains: knowledge and management, with the most significant needs concentrated in the area of social issues. Effective coordination for education is essential, including the provision of specialized personnel for educational initiatives related to health issues, management of specific locations, and oversight and review of health-related concerns and necessary physical facilities. Planning should include educational programs for the elderly and their families, the recruitment of specialized personnel to address elderly-related issues, management of specific locations, and assessment of factors affecting the elderly, such as physical facilities, to enhance support programs for this demographic.

Declarations

Ethical Approval and consent to participate

This study was approved by the ethics committee of Shiraz University of Medical Sciences (IR.SUMS.REC.1403.146). Informed consent was obtained from all individual participants included in the study.

Availability of data and materials

The corresponding author can provide the data upon request.

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Competing interests

The authors declare that there is no competing interest.

Author contributions

F.A. and S.A. conceptualized and designed the study. M.J.M., M.S. and H.S. were responsible for data acquisition and formal analysis. Z.A., M.Sh., M.H. and M.Gh. contributed to the data interpretation and manuscript writing. F.A., S.A., S.S., and H.S. reviewed and edited the manuscript, providing critical intellectual feedback. A.S. oversaw the project and validated the research findings. All authors read and approved the final manuscript.

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The Ethics Committee approved this study at Shiraz University of Medical Sciences (IR.SUMS.REC.1403.146). This paper was edited using large language models (LLMs), including Bard and ChatGPT. However, the accuracy of all information was independently verified by the authors.

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