Age-Friendly Primary Health Care: A Scoping Review

Idalina Delfina Gomes[1](✉), Liliana Santos Sobreira[1], Liliana Veríssimo da Silva[1], Marina Celly Martins Ribeiro de Souza[2], Gleicy Karina[3], and Rafaella Queiroga Souto[3]

[1] Escola Superior de Enfermagem de Lisboa, 1990-096 Lisboa, Portugal
idgomes@esel.pt
[2] The College of New Jersey, Ewing Township, NJ 08618, USA
[3] Universidade Federal da Paraíba, João Pessoa, PB 58051-900, Brasil

Abstract. *Introduction*: The global increase on the number of older adults leads to an increase in the demand for health services, which needs to adapt their care to the population. This adaptation involves empowerment, knowledge and autonomy, establishment of a partner relationship in the care and decision-making process, so that the quality and dignity of care for the older adults guaranteed. Primary health care should be made available as proximity services, in addition to investing in the continuous improvement of their practices, in which gerontotechnology has an essential contribution.

Objective: To answer the research question "What are the characteristics presented by age-friendly health units in the context of primary health care?".

Method: The scoping review follows the Joanna Briggs Institute (2015) methodology and the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) model.

Results: From the 22 articles analyzed, 7 main themes that characterize this issue resulted: 1. Information, education and communication; 2. Health care management systems; 3. Care management process taking into account most common geriatric syndromes; 4. Physical environment; 5. Transportation network; 6. Keeping older adults in their own context; 7. Health policies.

Conclusions: The characteristics of the age-friendly health centers recommended by the WHO allow bringing older people closer to the health care they need, enabling them to gain in health, well-being, as well as macro advantages in public health. The nurse should work in partnership with the older people, helping them to manage their health process and promoting Care-of-the-Self.

Keywords: Older adults · Age-friendly services · Primary health care · Care-of-the-Self

1 Introduction

The aging of the world population is an inevitable and growing reality, which implies challenges and adaptations of health services. By 2020, the world population aged 60

J. García-Alonso and C. Fonseca (Eds.): IWoG 2021, LNBE, pp. 94–107, 2022.
https://doi.org/10.1007/978-3-030-97524-1_10

and over exceeded 1 billion people, and by 2050 it is expected to reach 2.1 billion [1]. Health policies need to anticipate this trend and prepare health systems to be more adequate, effective, and accessible. They should focus on improving and meeting needs and preferences of older people, adapting health care to this population and providing outreach care, including primary health care, focusing on health promotion, monitoring and prevention of disabling and chronic conditions resulting from aging [2]. These services must be the first access to health care services for the older people. [3, 4].

According to a WHO study, the characteristics of an age-friendly primary health care encompass three dimensions: information, education and communication; health service management systems; and the physical environment [5]. Several authors agree that age-friendly care enables empowerment by increasing older people's knowledge and autonomy so that they become involved and partners in their care process, ensuring the quality and dignity of care. Thus, it is recognized that the lower the barriers to access primary health care are, and the better the needs of people are met, health gains are obtained, and public health spending is substantially reduced. It is essential that these health centers also combine technology with gerontology, i.e., have the fundamentals of gerontotechnology in the context of a multidisciplinary intervention, which acts on the three levels of prevention to improve the quality of life of the older adults [6].

A preliminary search conducted in the JBI Database of Systematic Reviews and Implementation Reports, Cochrane Library, MEDLINE and CINAHL, revealed that there is no Scoping Review (published or in development) on Age-Friendly Primary Health Care. Thus, this review arises from the need to increase knowledge about the Age-Friendly Health Centers (AFHC) in order to contribute to the development of services that provide accessibility to care, health promotion, increased autonomy and involvement of older people in their own health process, promoting the Care-of-the-Self, and ensuring the quality of nursing care provided to older people and their families [7, 8].

2 Methods

2.1 Identifying the Research Question

The research question was formulated according to the Population, Concept and Context (PCC) terminology: What are the characteristics presented at age-friendly health care units in primary health care settings?

The aim of this research is to analyze and map the knowledge produced about the characteristics of age-friendly primary health care, intending to answer the following questions:

- What are the characteristics of age-friendly primary health care centers identified in the studies?
- How do they correspond to the WHO recommendations?

2.2 Research Strategy

The search was conducted on the EBSCOhost and Virtual Health Library platforms, in the databases: Cinahl Complete, Medline Complete, Cochrane Central Register of Controlled Trials and Cochrane Database of Systematic Reviews, MedicLatina, Nursing &

Allied Health Collection: Comprehensive, LILACS and BDENF, with application of temporal filter starting in 2004. The identification, exclusion and eligibility of articles were carried out in different phases, taking into account the previously defined inclusion and exclusion criteria. The search terms defined (Table 1) were grouped using Boolean operators, derived from the indexed language for the search in electronic databases.

The first phase of the search took place on May 8th, 2020, using the indexed language specific to each platform. Then, the results were sorted according to their relevance to the research question. In the last phase, the selected articles were manually analyzed in order to extract the relevant information to the research question.

Table 1. Research terms

		Natural language	Indexed language
Population	Older person Aged 60 or over, as recommended by the WHO and in terms of developed and developing countries	Older person Older adult	Aged; Aged 80 and over Frail Elderly
	Family members/ informal caregivers	Informal caregivers Family caregivers	Caregivers
Context	Primary healthcare		Primary Care Nursing; Primary Health Care; Health Services for the Aged; Community Health Services
Concept	Age-friendly	Age-friendly health care; Age-friendly	

2.3 Inclusion Criteria

In this study, we included the articles involved older adults living in the community and excluded the studies conducted in hospital settings. The search terms, the inclusion and exclusion criteria (Table 2) were defined after reading the studies resulting from an empirical search in the main databases of the ESBCOhost platform on this topic.

2.4 Selection of Articles

The selection of studies was performed by two independent researchers, after analyzing the abstract of each article, keeping in mind the inclusion and exclusion criteria and the research objectives. The selection of articles to be included in this scoping review followed four steps: Identification, Analysis, Eligibility, and Inclusion. In the databases, 56

Table 2. Inclusion and exclusion criteria for the articles identified in the search

Inclusion Criteria				Exclusion criteria
Population	Concept	Context	Publishing Language	
Older people (aged 60 and over) and family caregivers	Age-friendly health services	Primary health care (health centers and community care units)	Articles in Portuguese, English and/or Spanish	- Studies carried out in Hospitals - Articles about activities developed in hospital units

articles were identified, from which 7 articles were excluded, 4 in Mandarin language, 1 systematic review, 1 integrative review, and 1 repeated article. After reading the abstracts and applying the inclusion criteria, 30 articles were selected, but only 22 articles were included in our study (review) after the full text analysis.

2.5 Reviewing Process

The data extracted from the analyzed articles were presented in a table, following the Joanna Briggs Institute [9] methodology for scoping review. The analysis of the relevance of the articles as well as the extraction and synthesis of the data were performed by two independent reviewers.

2.6 Presentation of Data

The data collected from each article presented in Table 3, according to study reference, study population, context, type of study, objectives and WHO recommendations [1].

3 Results

After the analysis of the articles listed in the table above, we grouped the characteristics of the age-friendly health centers (AFHCs) into 7 main themes to characterize them:

1- Information, education, and communication: To guarantee an efficient communication, professionals have the responsibility to gather all the specific technical competences to respond to the needs of the older adults and their families, demonstrating communicational abilities, voluntarism, and availability, not practicing ageism [10–12, 14, 15]. Technological resources are used to expedite the transmission of information, for scheduling appointments and identifying needs [15]. The use of uniforms and badges, by all members of the team, is indispensable, so that all the users know to whom they should go [3]. Information regarding the medication regimen is essential to avoid any errors or pharmacological interactions [16]. Improving the health of the older adults involves health education and promotion of healthy lifestyles, appropriate to their individuality, adopting the partnership model of care.

Table 3. Data extraction grid

Study	- Population - Context of the Study - Type of Study/Article	Objectives of the Study	Characteristics/focus in age-friendly health centers as recommended by the WHO
Woo et al. [3]	-Older people, both sexes (>60 years old) -Community (primary care) -Qualitative	Assessing the adequacy of primary health care to the needs of older people in Hong Kong	Accessibility: easy access; public transportation Signage: suitable for all users Physical environment: suitable for people with different needs and new users Consultation / Information Process: All issues are solved in one interaction. There is no long wait Care management system / fees: reasonable fees Training / knowledge dissemination: through government social media platforms
Pelaez & Rice. [10]	-Older people -Community (primary care) -Qualitative	Define the role of primary health care in promoting healthy aging	Care management system: policies of inclusion of the older adults in the community; combating ageism; flexible retirement projects; continuation of social roles Communication: Health Professionals have specific geriatric knowledge, management, analytical and communication skills Training: Health professionals with specific training in geriatrics
Hoontrakul et al. [11]	-Older people (age > 60 years) -Primary care Case study	Developing age-friendly primary health care in a primary care unit	The basic health unit has reorganized its service to meet the needs of its population, with emphasis on professional culture and attitude, medical biology, and knowledge about aging and care of the older people

(*continued*)

Table 3. (*continued*)

Study	- Population - Context of the Study - Type of Study/Article	Objectives of the Study	Characteristics/focus in age-friendly health centers as recommended by the WHO
Kuo et al. [12]	-Older people, both genders (≥65 years old) -Community (primary care) -Qualitative	Assessing the quality of outpatient services for older people in Taiwan	Care Management System: Professionalism and availability; Robustness and consistency in operationalizing policies and procedures Communication: Good communication skills of all staff Training: Periodic training of employees Physical space: adequate to the older people
Fulmer & Li. [13]	-Older people, Elderly people with dementia (> 65 years) and family -Health care system in the United States of America (different levels of care) -Qualitative	Identify the characteristics of a more effective, age-friendly health care system to prevent readmissions and avoidable health care expenditures, as well as improve the quality of care	The Age Friendly Health Systems model emphasizes the training of patients and family caregivers and focuses on four key aspects to meet their needs: 1. what is most important to the person (communication skills) 2. mobility 3. medication 4. mental activity
Ssensamba et al. [14]	-Older people, both genders (≥60 years old) -Community (primary care) -Quantitative Descriptive cross-sectional study	Determine the preparedness of Uganda's health care system to meet the needs of geriatric, age-friendly health care	Training: health professionals with special training in geriatrics Physical environment: infrastructure appropriate to the needs of the older people and close to the community; equipment to assist in activities of daily living Care process: Updated health policies, incorporating WHO guidelines; geriatric assessment scales applied
Motsohi et al. [15]	-Older people, both genders (>60 years old) -Community (primary attention) -Qualitative	Evaluation of the experience of older people in two health centers, and the gaps in care provided in the two settings	Communication / Information: Innovative methods to address gaps in information transmission Access: Health services should be reliable, easily accessible, older people should have faster access to health services

(*continued*)

Table 3. (*continued*)

Study	- Population - Context of the Study - Type of Study/Article	Objectives of the Study	Characteristics/focus in age-friendly health centers as recommended by the WHO
Cheung et al. [16]	- Older people and vulnerable groups -Hospital outpatient consultation and home visits in community settings -Interviews	Assess the difficulties and problems of equity in accessing health services, as well as how health policies can contribute to change the whole community	Involve nurses' representatives in the governmental discussion on health policies Pharmaceutical care: based on the needs of the older person Specialized care: equitable coverage of the country with specialists in different areas
Alhamdan et al. [17]	-Older people, both sexes (>60 years old) -Community (primary attention) -Qualitative Descriptive cross-sectional study	-Assess primary health care provided to older people in Riyadh; -Make it easier for older people to use health centers	Physical environment - accessibility and the structural conditions of the building where they are provided Signage/Information: clear and distinct indications for people with sensory deficits Counseling for healthy lifestyles / Education: specific to the age group and individualized to the needs of each older person
Ricciardi et al. [18]	-Older people/ community -Primary care -Descriptive study	Establish how health and social systems can be sustainable in Europe	The study brings up the need for investment in prevention measures for the control of chronic diseases, since these are responsible for expenses and burdens on local health systems
Petersen et al. [19]	-Older people, both genders (>60 years) -Community -Quantitative	Assess the oral hygiene conditions of older people, including professional use and Care-of-the-Self	Care process: the multidisciplinary team should be involved in the oral health approach to create a complete and detailed oral hygiene care plan;
Lin et al. [20]	Older people, both sexes (≥65 years) Community (primary care) Qualitative	Analyze the impacts of an aging population on Taipei's society	Care Management: Health professionals have a holistic view of the older person, identifying all their needs; Communication between health and social services Training: Development of specific training for health professionals in geriatrics

(*continued*)

Table 3. (*continued*)

Study	- Population - Context of the Study - Type of Study/Article	Objectives of the Study	Characteristics/focus in age-friendly health centers as recommended by the WHO
Liggett et al. [21]	-Older people in the community and in hospital services -Primary care -Descriptive study	Developing an age-friendly system of care to meet the needs of the older population, integrating care after hospital discharge	The integration between all levels of care constitutes a system where the older person goes through "stages" of consultation, from investigation with nurses to care or hospitalization. This is expected to improve care and efficiency, from arrival at the hospital to post-discharge follow-up
Dalmer [22]	-Older people and Family Caregivers -Community setting -Home setting -Ethnographic Study	Assessing whether the work of caring for an older person who stays at home is recognized: "aging at home"	Ageing at home policies, which aim at the importance of older people's choice of where they want to grow old, taking into account access to services and support for their needs. Information is vital, and there is a connection between it and the ability to be a resource
Lee et al. [23]	-Older people, both genders (≥65 years old) -Community -Quantitative Descriptive cross-sectional study	To evaluate the index of community services and health services from the perspective of older people living in Siheung	Care management systems: people should remain in their homes, with home support from all necessary services. Primary health care should provide nursing assessment at the older person's home and intervention to address identified needs
John & Gunter. [24]	-Older population in rural and urban settings, residents in the city of Oregon, USA -Mixed method (quantitative and qualitative)	Finding out how various factors influence, the population's perception of living in an age-friendly community, in rural and urban settings	The "senior-friendly" model is represented as a flower with 8 petals: Transportation; Housing; Social participation; Respect and social inclusion; Civic participation and employment; Communication and information; Community support and health services; Outdoor spaces; and Buildings - all of which are influenced by the physical and social environment and existing services

(*continued*)

Table 3. (*continued*)

Study	- Population - Context of the Study - Type of Study/Article	Objectives of the Study	Characteristics/focus in age-friendly health centers as recommended by the WHO
Doolan-Noble et al. [25]	-Older people, both genders (≥65 years old) -Community (primary care) -Quantitative	Describe the process of funding priorities for healthy aging in New Zealand	Training: The area of age-friendly communities needs more investment if its implementation is to become a social benefit for older people Physical environment: physical accessibility facilitated; availability of transportation to accommodate varying needs
Hancock et al. [26]	-Older people of both genders (>65 years old), family members and caregivers -Community (primary care) -Qualitative	To understand how older people in rural areas maintain their health and well-being, according to the eight domains defined by the WHO, in the town of Wangaratta	Care Management: Equitable distribution of resources Physical Environment: Accessible transportation adapted to restrictions, maintaining autonomy; Accessibility to all areas of public interest Promotion of Care-of-the-Self: Older people are supported in maintaining their independence, cognitive stimulation, and emotional balance
Lehning et al. [27]	-Older people living in Detroit -Community -Systematic review	To examine the association between measures of age-friendly environmental character and self-rated health in a sample of older people in Detroit, Michigan	The study analyses look at the characteristics of the physical environments in which the older adults in Detroit live, and how this influences their self-assessment and perception of their health
Jiang et al. [28]	-Population: 30 older people (65 and older) 30 professionals - Context: 2 rural areas 2 urban areas Method: Qualitative	Identify and prioritize the factors that facilitate behavioral change, such as behavioral settings for nutrition in older people based on the social ecological model	The World Health Organization's Age-Friendly Cities project presents models for communities to promote successful aging in eight domains. This study focuses on the nutritional component of the older population and the role of communities in providing adequate meals for older people

(*continued*)

Table 3. (*continued*)

Study	- Population - Context of the Study - Type of Study/Article	Objectives of the Study	Characteristics/focus in age-friendly health centers as recommended by the WHO
Rahman & Byles. [29]	-Female older adults -Health care centers/residential care homes -Longitudinal study	To examine whether home and community-based care use and characteristics of older people relate to time to admission to Residential Structures for Older People	It is important at a certain point in adult life, particularly in the last years of life, to reside in specific facilities for the older adults (care / nursing homes), which can meet the needs that are not met by community care services for this population
Smith et al. [30]	-Older people, (>60 years old), mostly African-American from the city of Detroit -Age-Friendly Community -Exploratory	Measuring the environmental, social and physical characteristics of an age-friendly community	Age-friendly communities must have: -Access to business and leisure -Social interaction -Scarce neighborhood problems -Community involvement -Transportation -Public services accessible to older adults

2- Health care management systems: AFHC offer a complete, multifactorial assessment of the individuals' needs, are responsible for having the resources available to support the development of their activities of daily living, provide all consultations, treatment, and complementary diagnostic tests so that all needs are met in a single visit, and resolve the problems of older people in a timely manner. [3, 12, 14, 17]. There is investment in chronic disease prevention and oral health care, avoiding long-term health system overload and achieving health gains [18, 19]. The articulation between public and private health care and between primary and differentiated health care is effective, and timely communication between all is ensured to improve the service provided to the older people and their families [20, 21].

3- Care management process considering most common geriatric syndromes: Nursing care and assistance with basic life activities are provided at the older person's home, avoiding their institutionalization (unless this is their wish). Family members are considered part of the holistic dimension of the older person's well-being and a target of care [22]. Health care professionals should provide health education, geriatric assessment, and an individualized care plan focused on health promotion, disease prevention, maintenance of autonomy and meaningful social interactions [17, 23]. It is important to understand the interaction between the person's characteristics and the context in which they live, as well as how these are involved in their aging process [24].

4- Physical environment: When the AFHC are implemented near the community they serves, facilitates accessibility to the building in which care is provided, reducing the need for travel [14, 25]. Access to the exterior areas and to the interior of the building is facilitated and adapted to people with reduced mobility (parking spaces, access ramps); the circulation areas, waiting rooms, offices and bathrooms have ample structures that

facilitate circulation with wheelchairs or other walking aid devices and/or the presence of a companion, are lit adequately, adapted for a safe circulation; the identification signs of the user circuit are visible, lit adequately, written with high contrast and also available in Braille [3, 11, 14, 17, 26]. In short, the physical space of the AFHC should be adapted to the specific needs of its public [12].

5- Transportation network: Age-friendly communities (AFHCs) offer good public transportation options that are adapted to the needs of the older adults, such as the use of oxygen tanks, walking aids, and are affordable, allowing the presence of a companion [3, 17, 25, 26]. Drivers of these services should take into account the population they transport thus adapting their driving style (avoid sudden braking, wait for people to be sat down before starting to drive) [3].

6- Keeping older adults in their own context: Maintaining residence in their home, or at least in their community, during the aging process is a factor that increases the quality of life of older people and their families [22, 27]. The use of home support from multidisciplinary teams and volunteer programs that ensure the psychological, cognitive, social, health, and well-being needs are met as well as support structures such as supermarkets, hairdressers, dry cleaners, etc. that allow older adults to maintain their autonomy [23, 24, 28]. However, the older person should be allowed to leave their home if they wish, and the community should provide those answers [29]. Residential care or nursing facilities for the older adults are established in the communities where older adults live, allowing them to remain in a familiar environment [14, 25]. AFHCs offer access to business and leisure, social interaction, good neighborhood, community involvement, transportation networks and public services [30].

7- Health Policies: Legislative bodies define policies that enable the active, productive and successful aging of their population, promoting self-sufficiency and independence of each older person, reducing age-related stigma, integrating active older people into the community [10, 14, 19, 22]. Health professionals, through their institutional representatives, contribute to the discussion of health policies and, to the improvement older adults‘ quality of life [16]. The government is responsible for the equitable distribution of resources and the creation of emergency plans, the definition of social and economic policies to protect older people in their access to financially viable and long-term housing, and the development of flexible retirement plans [10, 23, 26]. Research on aging and AFHCs are stimulated, and the result of these studies should be implemented in practice as soon as possible [19, 25].

4 Discussion

The results of this study are consistent with those defined by the WHO [5] and add further complementary guidelines for the identification of AFHCs. Regarding information, education and communication, there is evidence that shortcomings continue to occur, namely that older people feel that they are not heard. It has been found that health services often do not provide the quality of care expected by citizens [14]. From the point of view of the health care management system, some studies have shown that services are poorly prepared to meet the specific needs of older people, due to a lack of coordination of all actors involved in decision making, from public funding to human resource

management, leadership, political decision-making and structural conditions [14]. The emergency and comprehensive assessment systems of older adults do not meet their real needs and should be improved and implemented effectively [23]. The physical environment is widely explored by the literature reviewed, identifying shortcomings such as: insufficient and inadequate public transportation to meet the needs of the older adults, namely, the access to their appointments, treatments and examinations; sidewalks too narrow and busy, constituting an added danger for people with altered mobility [3, 26]. The inequities in the resources available to the rural and urban population are often discussed, making it difficult for older adults to stay at home. Moreover, the level of interaction with the surrounding community varies according to factors such as gender, ethnicity, economic and social status, and level of education [30]. As for the issue of health policies, it is evidenced the responsibility of national and municipal governments to expedite the best practices, offer technical conditions and manage the process of making institutions and cities friendly to the older adults [16].

Throughout this review, we could conclude that this is a topic that raises global interest and that has been discussed since 2002, when the WHO published "Active Ageing: a policy framework". Despite not being a recent theme, studies have indicated that there is still much to be done regarding the primary health care providing to the older adults and their families their real needs. Moreover, a repeated recommendation in many of the articles analyzed here is the dissemination of age-friendly practices in these health care institutions [3, 14, 15, 17].

The contribution of gerontotechnology to improve health responses to the needs of the older adults is implicit in the analyzed articles, demonstrating that many of the means that are already available to health professionals can be better used to respond more effectively to the older population that uses health care services. However, this issue cannot be solved by direct care alone, which is why health professionals must have a voice in policymaking, research, and training [3, 10, 12, 14, 16, 19]. Coordination of all health professionals and administrative staff is needed, as well as political involvement, not only from the Ministry of Health, but from the whole government that should prioritize the issue of age-friendly institutions and communities.

5 Conclusion

The complexity of older adults' health care is a challenge for health workers, and it is increasingly important to constantly update knowledge to improve practices and meet the real needs and expectations of older people and their families. Nurses play a key role and should adapt their interventions to the specific needs of these individuals, namely using gerontotechnology to promote their holistic care and contributing to a sustainable health [6, 31]. In line with the strategy defined by the WHO, a new strategy to provide care to the older adults is necessary and pertinent, in which health promotion and disease management are privileged as opposed to an approach centered on cure. In the approach centered on the older person and their family members living in the community and guided by their life project, nurses should work in partnership with them, helping to manage their health process, contributing to their safety, continuity of care, and active and healthy aging, besides promoting Care-of-the-Self [7, 8].

It is hoped that this scoping review will contribute to knowledge regarding the characteristics of age friendly health centers, to critical analysis in this area, regarding to what is recommended by the WHO, and will allow us to understand the impact of age-friendly health centers on the promotion Care-of-the-Self for the older adults.

References

1. World Health Organization (2020): Decade of healthy ageing: baseline report. Geneve
2. Fonseca, C., De Pinho, G., Lopes, M., Marques, C., Garcia-Alonso, J.: The elderly nursing core set and the cognition of Portuguese older adults: a cross-sectional study. BMC Nurs. **20**(1), 1–8 (2021)
3. Woo, J., Mak, B., Yeung, F.: Age-friendly primary health care: an assessment of current service provision for older adults in Hong Kong. Health Serv. Insights **6**, 69–77 (2013)
4. Abdellatif, T., et al.: Dubai primary health care centers conformation to WHO age-friendly primary healthcare recommendations. Adv. Aging Res. **6**, 83–92 (2017). https://www.scirp.org/pdf/AAR_2017101015355625.pdf
5. World Health Organization (2004): Towards Age-friendly Primary Health Care. Geneve. http://apps.who.int/iris/bitstream/handle/10665/43030/9241592184.pdf;jsessionid=D8ECD3EB64580751EC38DD787ECA9571?sequence=1
6. Graafmans, J.: The history and incubation of gerontechnology. Gerontechnology **1**(1), 3–11 (2016). https://doi.org/10.1891/9780826128898.0001
7. Gomes, I.: To Promote self-care: a partnership between the nurse and the elderly person. The construction of the partnership process in a context of vulnerability and dependency. New scholarly editions, Saarbrucken/Deutsche (2016)
8. Gomes, I.: Partnership of care in the promotion of the care-of-the-self: an implementation guide with elderly people. In: García-Alonso, J., Fonseca, C. (eds.) Gerontechnology III. IWoG 2020. Lecture Notes in Bioengineering. Springer, Cham (2021). https://doi.org/10.1007/978-3-030-72567-9_32
9. Peters, M., Godfrey, C., McInerney, P., Khalil, H., Parker, D.: The Joanna Briggs Institute Reviewers' Manual 2015 - Methodology for JBI Scoping Reviews. The Joanna Briggs Institute (2015). https://nursing.lsuhsc.edu/JBI/docs/ReviewersManuals/Scoping-.pdf
10. Pelaez, M., Rice, M.: Primary health care and aging: edited proceedings of the consultative group meeting on geriatric training in primary health care. Calif. J. Health Promot. **2**(3), 99–108 (2004). https://doi.org/10.32398/cjhp.v2i3.884
11. Hoontrakul, D., Sritanyarat, W., Nuntaboot, K., Premgamone, A.: Development of age-friendly primary health care: case study of one primary care unit. Thai J. Nurs. Res. **12**(2), 131–141 (2008)
12. Kuo, R., Wu, Y., Hsu, T., Chen, L.: Improving outpatient services for elderly patients in Taiwan: a qualitative study. Arch. Gerontol. Geriatr. **53**(2), e209–e217 (2011). https://doi.org/10.1016/j.archger.2010.09.013
13. Fulmer, T., Li, N.: Age-friendly health systems for older adults with dementia. J. Nurse Pract. **14**(3), 160–165 (2018). https://doi.org/10.1016/j.nurpra.2017.09.001
14. Ssensamba, J., Mukuru, M., Nakafeero, M., Ssenyonga, R., Kiwanuka, S.: Health systems readiness to provide geriatric friendly care services in Uganda: a cross-sectional study. BMC Geriatr. **19**(256), 1–13 (2019). https://doi.org/10.1186/s12877-019-1272-2
15. Motsohi, T., Namane, M., Anele, A., Abbas, M., Kalula, S.: Older persons' experience with health care at two primary level clinics in Cape Town, South Africa: a qualitative assessment. BJGP Open **4**(3), 1–9 (2020). https://doi.org/10.3399/bjgpopen20X101048

16. Cheung, B., Felfeli, T., Sorouri, K., Zewude, R.: The national seniors strategy: an opportunity for sustaining a healthy future for the aging population. Univ. Toronto Med. J. **93**(1), 18–21 (2015). ISSN: 1913–5440
17. Alhamdan, A., Alshammari, S., Al-Amoud, M., et al.: Evaluation of health care services provided for older adults in primary health care centers and its internal environment: a step towards age-friendly health centers. Saudi Med. J. **36**(9), 1091–1096 (2015). https://doi.org/10.15537/smj.2015.9.11789
18. Ricciardi, W., Specchia, M., Marino, M.: Health of the elderlies and healthy aging: a challenge for Europe. Active Ageing Healthy Living **1**(1), 1–9 (2014). https://doi.org/10.3233/978-1-61499-425-1-1
19. Petersen, P., Kandelman, D., Arpin, S., Ogawa, H.: Global oral health of older people - call for public health action. Community Dent. Health **27**(2), 257–268 (2010). https://doi.org/10.1922/CDH
20. Lin, M., Chou, M., Liang, C., Peng, L., Chen, L.: Population aging and its impacts: strategies of the health-care system in Taipei. Ageing Res. Rev. **9**(SUPPL.), S23–S27 (2010). https://doi.org/10.1016/j.arr.2010.07.004
21. Liggett, A., McKoy, M., Bradley, S., O'Brien, K., Dobschuetz, D., Lindquist, L.: Creating an age-friendly health system: lessons learned for the post-acute care setting. Jamda **21**, B17–B18 (2020).https://doi.org/10.1016/j.jamda.2020.01.053
22. Dalmer, N.: A logic of choice: problematizing the documentary reality of Canadian aging in place policies. J. Aging Stud. **48**(1), 40–49 (2019). https://doi.org/10.1016/j.jaging.2019.01.002
23. Lee, C., Cho, B., Cho, Y., Park, Y.: Older adults' perceptions of age-friendliness with an emphasis on community supports and health services in a city in South Korea. J. Korean Acad. Community Health Nurs. **30**(2), 234–242 (2019). https://doi.org/10.12799/jkachn.2019.30.2.234
24. John, D., Gunter, K.: EngAGE in community: using mixed methods to mobilize older people to elucidate the age-friendly attributes of urban and rural places. J. Appl. Gerontol. **35**(10), 1–26 (2015). https://doi.org/10.1177/0733464814566679
25. Doolan-Noble, F., Mehta, P., Waters, D., Baxter, G.: Supporting ageing well research: findings from a research priority setting exercise. Australas. J. Ageing **38**(2), 136–143 (2018). https://doi.org/10.1111/ajag.12615
26. Hancock, S., Winterton, R., Wilding, C., Blackberry, I.: Understanding ageing well in Australian rural and regional settings: applying an age-friendly lens. Aust. J. Rural Health **27**(4), 298–303 (2018)
27. Lehning, A., Smith, R., Dunkle, R.: Age-friendly environments and self-rated health: an exploration of Detroit elders. Res. Aging **36**(1), 1–9 (2014). https://doi.org/10.1177/0164027512469214
28. Jiang, Q., Cohen, N., Marra, M., Woolf, K., Gilbride, J., Francis, S.: Community priorities for healthy eating in older adults. J. Nutrition Gerontol. Geriatr. **36**(2–3), 75–91 (2017). https://doi.org/10.1080/21551197.2017.1365039
29. Rahman, M., Byles, J.: Older women's patterns of home and community care use and transition to residential aged care: an Australian cohort study. Maturitas **131**(1), 28–33 (2020). https://doi.org/10.1016/j.maturitas.2019.10.004
30. Smith, R., Lehning, A., Dunkle, R.: Conceptualizing age-friendly community characteristics in a sample of urban elders: an exploratory factor analysis. J. Gerontol. Soc. Work **56**(2), 90–111 (2013). https://doi.org/10.1117/12.2549369
31. Goes, M., Lopes, M., Oliveira, H., Fonseca, C., Marôco, J.: A nursing care intervention model for elderly people to ascertain general profiles of functionality and selfcare needs. Sci. Rep. **10**(1), 1–11 (2020)