International Journal of Strategic Property Management
ISSN: 1648-715X / eISSN: 1648-9179
2023 Volume 27 Issue 3: 176–187
https://doi.org/10.3846/ijspm.2023.19865

EMPHASIZING ACCESS TO HEALTH AND TREATMENT SERVICES IN ORDER TO IDENTIFY THE KEY FACTORS INFLUENCING AN AGE-FRIENDLY CITY

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Received 2 May 2023; accepted 30 August 2023

Abstract. One of the most important goals of urban management is to provide comfort and well-being for all citizens. According to the population trend of the world, a massive segment of the future population will be the elderly. Therefore, it is crucial to pay attention to the needs of this segment of society. In this regard, the concept of an age-friendly city that provides a favorable urban environment for the elderly has entered the world's scientific literature. Because one of the essential land utilization that the elderly have a lot of connection with is health-therapeutic use, the current research has been carried out to evaluate the current health-treatment situation of Songhor city in terms of its usefulness for the elderly. In the second step, the most important drivers influencing the location of these uses have been identified from the perspective of related experts. This research is applied in terms of purpose and descriptive-analytical in terms of research method. The required data has been collected using library-documentary studies, field surveys, and the distribution of questionnaires from related experts. According to the study's findings, more than 60% of treatment facilities in Songhor city are inaccessible to the elderly. This difficulty varies by therapeutic use; in some cases, it is less difficult than the average, while in others, it is more difficult. In addition, three factors–investment cost (V3), rivalry (V10), and population density (V8)–have been identified as the age-friendly city's main drivers out of a total of 18 main variables. The study's findings indicate that the global population is aging, and urban managers and officials should design urban environments following the requirements of the projected population by putting forth medium- and long-term plans.

Keywords: age-friendly cities, healthy cities, sustainable cities, urban land use.

Introduction

More than 55% of the world's population presently resides in cities, showing the importance of studying and focusing on urban planning (The World Bank, 2020; Komasi et al., 2023). The world's population is aging, especially in developed nations. By 2050, it is anticipated that 16% of the population will be over 65 (Harrison et al., 2021). One of the most significant programs of city managers in recent years has been the establishment of physical and social conditions for the well-being, health, and living capabilities of the aged in society (Van Hoof et al., 2021; Joy, 2021). Considering that the elderly (those 65 and over) are an important and vulnerable social group (Jelokhani-Niaraki et al., 2019). Future social and economic catastrophes could result from the challenge of aging and population reduction if they are not planned for (Gudowsky et al., 2017). Fortunately, the World Health Organization (WHO) suggested building an age-friendly city as a response to the aging of the world population in the 1990s and early 2000s (Chui et al., 2022; Van Hoof et al., 2022).

Managers can better support elderly people in two major areas: the social and physical environments (Brooks-Cleator et al., 2019). Numerous aspects influence the success of an age-friendly city. These aspects have been discussed in some studies, including the availability of parks and places to spend time apart (Figueiredo et al., 2023), suitable and age-friendly housing for the elderly (Wu et al., 2022), the provision of health care and access to health-therapeutic uses (Thang et al., 2023), community support and social engagement (Shi et al., 2023), and others. Physical limits affect people as they age. Concerns

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about providing open space for neighborhoods suitable for the elderly's age have been raised by city managers and officials due to the rise in the old population (Peng & Maing, 2021).

Elderly residents should be able to access amenities like healthcare and recreational opportunities by living in a setting that is suited for their restrictions, according to city management. Using the health services offered in cities is one of the most crucial areas for the elderly. The critical thing to remember is that everyone uses this urban area, so the government should construct it such that everyone, especially the old, can use it. The development of smart cities is one of the most crucial strategies for achieving the objectives of an age-friendly city. The elderly in the smart city can stay in their homes and don't necessarily need to go to a nursing facility. The requirements of the elderly in terms of health and social care can be met through smart city ideas and the use of smart technologies (Colnar et al., 2021; Dokl et al., 2022).

Such as most countries around the world, Iran's population is aging. By 2050, 25% of Iran's population is expected to be 60 years of age or older, according to the country's most recent census, conducted in 2015 (Estebsari et al., 2021). Several groups, including the nation's Ministry of Health, Treatment, and Medical Education, are making plans for the aged (Ghaffari Gilandeh et al., 2022). Access to city public spaces, housing, transportation, health care, social respect, and social involvement are only a few of the elderly's essential requirements. The elderly population will face major challenges in the future if there is no planning for all of these requirements, and municipal managers will also run into issues like a lack of planning space. As a result, social unhappiness has increased. For instance, the COVID-19 pandemic in recent years generated significant issues for the majority of society (Komasi et al., 2022). For the elderly, these problems were made worse. Due to fact that older people used to visit medical facilities more frequently and had difficulties when doing so in person, such as climbing clinic stairs. Given that providing urban spaces for elderly people is also appropriate for people with disabilities, planning to achieve an age-friendly city will actually attract the satisfaction of two demographic groups. In order to successfully plan for an elderly-friendly city, it is first necessary to assess the current condition, after which the key factors of such a city should be identified. The goal of the current study is to identify the normative health-therapeutic uses for the aged in urban settings in the first stage, as well as the most significant factors, in the judgment of pertinent specialists, that influence where these uses are located. Songhor city in Iran has been chosen as a case study in this regard.

1. Literature review

Although cities are places to generate jobs, hubs of innovation, and sources of income, they are also frequently epicenters of air pollution, noise, heat, and sickness (Nieuwenhuijsen, 2020). Urban planners have so offered numerous theories, techniques, points of view, and projects to address the issues facing cities. In January 1986, the WHO Healthy Cities Network was initiated (Ashton et al., 2018). The Healthy Cities Project (HCP) is a well-known global long-term and sustainable development program that incorporates four steps: assessment, planning, action, and re-evaluation (Ran et al., 2021).

Although the creation of healthy cities is a common desire at the global level (Lowe et al., 2020), with the emergence and increase of natural and human problems caused by the growth of urbanization, such as environmental pollution, lack of amenities, traffic, social crises, etc., building healthy cities is becoming a global strategy to solve urban problems (Wang et al., 2023) and has moved from being a wish and goal to becoming a necessity. A healthy city's components and their interactions with one another should be taken into account in order to comprehend the multifaceted character of a healthy city (Yan et al., 2021). Community development's guiding idea is program sustainability in the creation of healthy cities (Palutturi et al., 2021). Some studies have looked at the connections between various urban planning ideas and the indicators of a healthy city, such as the connections between the indicators of a healthy city and a livable city (Khomenko et al., 2020). A populace that is physically active is one of the fundamental traits of a healthy and sustainable city. In this sense, the city is healthy because its elderly citizens are healthy. Still, for the city to remain healthy in the future, long-term planning for the next generation is necessary. Several approaches for developing cities and environments are age-friendly, some of which emphasize physical infrastructure (Buffel & Phillipson, 2016). Age-Friendly Cities program of The World Health Organization has presented some factors that make cities and urban areas age-friendly (Harrison et al., 2021) (Table 1).

Eight livability factors affect elderly people's quality of life. These are the eight areas: 1) outside areas and structures, 2) Social and medical services, 3) transportation, 4) communication and information, 5) housing, 6) Civic engagement and employment, 7) acceptance and inclusion in society, 8) Social interaction (World Health Organization, 2019; Ravi et al., 2021).

Urban sustainability and age-friendly city

More than half of the world's population currently resides in cities (Ren et al., 2022). Nowadays, cities are the primary sources of energy use and greenhouse gas emissions (Grafakos et al., 2020; Pee & Pan, 2022). Humans use the land as a platform for their economic and social activities, but as economies have developed and cities have grown, there are now more environmental issues and urban concerns. Urban land use refers to city land structure modifications, including housing, business, industry, recreation, culture, health, transportation, instruction, parks, and other purposes (Cheng & Wang, 2021). Land use change refers to the conversion of natural and agricultural land into built-up

Table 1. The factors related to health and treatment services that make cities and urban areas age-friendly

Criteria	Indicators	References	Coding
Accessibility	Transportation availabilities	Senvar et al., 2016; Şahin et al., 2019; Çetinkaya et al., 2023; Wang et al., 2022a	V1
	Distance from other places such as laboratories and...	Senvar et al., 2016; Dellovo et al., 2018; Şahin et al., 2019; Ruza et al., 2015	V2
Cost	Investment cost	Senvar et al., 2016; Han et al., 2022	V3
	Land cost	Senvar et al., 2016; Dellovo et al., 2018	V4
Demographic features of the place	Population age structure	Şahin et al., 2019; Steels, 2015; Ruza et al., 2015	V5
	Current population	Senvar et al., 2016; Swanson, 2021; Ruza et al., 2015	V6
	Prospective population	Senvar et al., 2016; Şahin et al., 2019; Ruza et al., 2015	V7
	Population density	Senvar et al., 2016; Çetinkaya et al., 2023; Ruza et al., 2015	V8
	Social environment	Senvar et al., 2016; Şahin et al., 2019; Steels, 2015	V9
Demand, competitors, and market conditions	Rivalry	Senvar et al., 2016; Şahin et al., 2019	V10
	Need for a hospital in these locations	Senvar et al., 2016; Iqbal et al., 2022	V11
	The supply availability of medicines	Senvar et al., 2016; Şahin et al., 2019	V12
Government	Government policy	Şahin et al., 2019; Şahin et al., 2019; Steels, 2015	V13
	Tax	Şahin et al., 2019; Şahin et al., 2019; Steels, 2015	V14
Building structure	Availability of land expansion	Senvar et al., 2016; Şahin et al., 2019	V15
	Architecture	Senvar et al., 2016; Iqbal et al., 2022	V16
	Infrastructure	Senvar et al., 2016; Iqbal et al., 2022; Ruza et al., 2015	V17
	Parking	Senvar et al., 2016; Çetinkaya et al., 2023; Dellovo et al., 2018	V18

land, deforestation, and the conversion of natural land into agricultural land (Wang et al., 2022b). Urban sustainability, in particular, and sustainability, in general, have now become universal issues (Liu et al., 2022). Researchers have examined the social, economic, and environmental facets of sustainability, which is a multifaceted topic (Beck & Ferasso, 2023; Valenzuela-Levi et al., 2022).

The World Commission on Environment and Development has stated the following definition of sustainable development: "Current, and future demands must be taken into consideration at the same time in order to achieve sustainable urban development" (Wang & Zhou, 2022). In other words, a development fulfills current requirements without sacrificing the capacity of future generations. The development process has changed to be more environmentally friendly and sustainable in response to the worldwide trend of urbanization. In order to advance toward futures that are healthier, more stable, dynamic, and smarter, global cities must do the same (Zhang et al., 2018). Due to the complexity of urban planning and urbanization, cities today are not only to blame for environmental and health issues but also hold the key to a sustainable future (Balaban & Puppim de Oliveira, 2017). Officials and managers may make more informed and better decisions with the aid of urban sustainability evaluation (Liang et al., 2022).

2. Case study and research methodology

The City of Songhor is located 85 kilometers northeast of Kermanshah province in Iran. Its population was 44,256 persons and (13,996 households) in 2016 (Municipality of Sanghar city, 2022) (Figure 1). For the following reasons, Songhor city was chosen as a case study: Songhor city is one of the most important cities in the province of Kermanshah. Its citizens and others who live in nearby

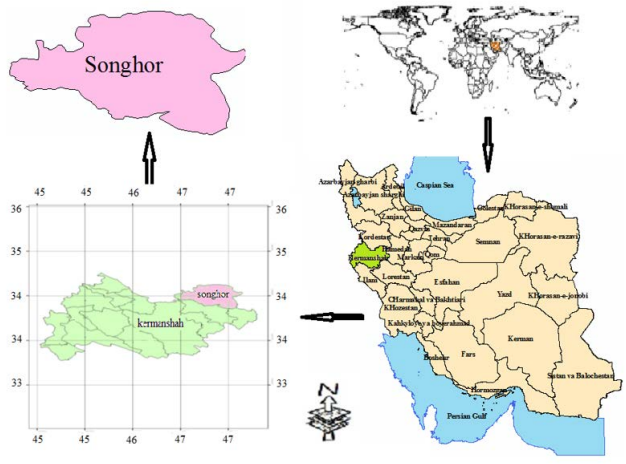

Figure 1. The geographical location of Songhor city

villages and towns utilize its medical facilities. The second reason was the accessibility of information about this city and the possibility of visiting all treatment uses.

The necessary information and data related to all land users have been accessed through visits to the field. The total number of health and treatment services showed for this purpose in 2020 was 57 instances.

2.1. Methodology of research

The current study is applied in terms of its goal and descriptive-analytical in terms of its methodology. Fieldwork and library-document research have been utilized to gather the necessary data and information in Table 1. In this way, field visits were performed to all required uses to identify them and assess their state, after which analysis was completed. The primary elements determining the location of health and treatment uses have been gathered in order to determine the important drivers influencing the location of healthcare uses, first by analyzing the research and the theoretical framework linked to the issue. Then, the primary drivers were determined using a two-stage questionnaire distributed to 30 subject-related specialists (Urban planning experts, housing experts, and medical professionals, these experts were chosen using the method of snowball sampling), and the research was analyzed using Micmac software.

MICMAC software ("Matrice d'Impacts croises multipication appliqué and classment, i.e., cross-impact matrix multiplication applied to classification") was developed in 1973 by Duperrin and Godet; It investigates the influences, connections, and dependent variables (Hu et al., 2009; Kumar et al., 2019). The steps involved in creating and completing questionnaires are as follows:

- Step 1: Analyzing existing documents and reviewing the literature review.
- Step 2: Identifying factors that influence an elderly-friendly city.
- Step 3: Interviewing experts to determine the location of variables and the main factors.
- Step 4: Creating a questionnaire to identify the key drivers.

2.2. Conceptual framework

The age-friendly city has various features. Several factors have an impact on each of these characteristics Figure 2. Urban planners should focus on all eight characteristics in order to address the requirements of the elderly in an age-friendly city. Due to the subject's complexity, the "outdoor spaces and buildings" section has been covered in the current research. A number of variables influence this section of the age-friendly city. The next section of the research discusses the 18 factors that were discovered through library studies, a review of the research literature, and expert opinions.

3. Findings of the research

3.1. Standard access to health and treatment services

A field survey has been utilized to evaluate the current situation of standard access to health and treatment services. The codes A1-A57 are concerned in uses relating health and treatment services, including uses situations such (General practitioners; Dentist; Laboratory; Pharmacy and drugstore; Ophthalmology) and finally, standard level of them has been identified. According to the data in Table 2 and Figure 3, it is difficult for elderly people to access more than 60% of health and treatment uses. This difficulty is not uniform for health and treatment services; in some cases, it is lower than 50 percent, and in other cases, it is higher than 50 percent.

For instance, only around 16% of dentistry use is appropriate for elderly people, whereas 100% of pharmacy use is appropriate for elders. This is so that users, including those who are elderly, can access a user without physically going there, like a pharmacy. Unfortunately, many of the health and treatment uses that are challenging for the

Figure 2. Conceptual framework

Table 2. Standard state of access to health and treatment facilities per service type (source: own research, 2023)

Code	Type of space											
	General practitioners		Dentist		Laboratory		Pharmacy and drugstore		Ophthalmology		Standard level	
A1												
A2												
A3												
A4												
A5												
A6												
A7												
A8												
A9												
A10												
A11												
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A57												
Total	26		19		3		9		4		57	
	11	15	3	16	2	1	9	0	1	3	22	**35**
Percent	42.31	57.69	15.79	84.21	66.67	33.33	100	0	25	75	38.60	**61.40**

Note: Yellow color: type of use; Red color: non-standard; Green color: standard.

Figure 3. The state of access to some health and treatment uses in the city of Songhor

elderly to use are those that are connected to general practitioners and dentists, whom the elderly must frequently visit in person. General practitioners can do routine tasks at patients' homes, such as visits and other procedures, but providing services like dentistry, which demands sophisticated equipment, presents significant difficulties.

3.2. Key factors influencing the selection of health and treatment use

The general characteristics of the investigated variables are displayed in Table 3. As can be seen, the matrix has 18×18 dimensions and was created using two iterations with a fill rate close to 73%. The variables had a combined value of 236; the variables with a score of 3 (strong influence variables) had the highest value of 157, and the variables with a score of 2 had the lowest value of 21 (variables with moderate influence). In Table 4, the values for the variables with scores of 1 (low impact) and 0 (no impact relationship) were 58 and 88, respectively.

Table 3. The general characteristics of the factors influencing the choice of health and treatment service locations (source: own research)

Indicator	Value
Matrix size	18
Number of iterations	2
Number of zeros	88
Number of ones	58
Number of twos	21
Number of threes	157
Number of P	0
Total	236
Fillrate	72.83951%

Table 4 shows the consistency of variables throughout two iterations. As shown, the variables are completely stable.

Table 4. Variable stability (source: own research)

Iteration	Influence	Dependence
1	95%	99%
2	101%	100%

Proportions

The ranking of each variable's influence on each other and its influence (direct and indirect), is shown in Table 5.

Table 5. The ranking of each variable's influence on the other, as well as its dependence (direct and indirect) (source: own research)

Rank	Label	Direct influence	Label	Direct dependence	Label	Indirect influence	Label	Indirect dependence
1	V13	788	V4	805	V13	735	V4	796
2	V17	788	V17	753	V17	735	V17	719
3	V3	718	V12	718	V3	704	V13	691
4	V11	718	V13	718	V11	691	V12	688
5	V4	700	V11	683	V4	668	V18	676
6	V6	647	V18	665	V12	664	V11	666
7	V10	647	V2	612	V10	650	V2	651
8	V12	647	V1	595	V6	637	V1	639
9	V18	612	V6	595	V5	606	V6	598
10	V5	577	V5	577	V18	589	V5	563
11	V1	542	V16	525	V1	568	V15	559
12	V8	542	V15	507	V8	530	V16	499
13	V15	455	V14	472	V15	464	V14	489
14	V7	437	V3	455	V7	453	V3	453
15	V14	315	V9	402	V14	354	V9	399
16	V2	297	V7	385	V2	335	V7	378
17	V9	280	V10	332	V16	316	V10	332
18	V16	280	V8	192	V9	293	V8	193

As shown in Table 5, variable V13 (government policy) has the highest degree of direct effect with a score of 788, while variable V16 (architecture) has the lowest degree of direct influence with a score of 280. The variable V4 (Land cost) has the highest degree of direct dependency with a score of 805, and the variable V8 (People density) has the lowest degree of direct dependence with a score of 192. Variable V13 (government policy) has the highest level of indirect effect, scoring 735, whereas variable V9 (social environment) has the lowest level of indirect influence, scoring 293. The variable V4 (land cost) has the most indirect reliance with a score of 796, whereas the variable V8 (people density) has the lowest indirect dependence with a score of 193.

List of variables sorted by influence

The ranking of the variables' direct and indirect influences is shown in Figure 4. As can be observed, out of the 18 factors that were directly and indirectly investigated, variable V13 (government policy) came in first.

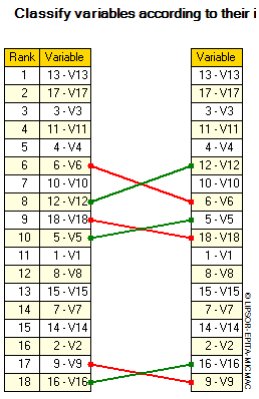

Figure 4. Ranking of variables' direct and indirect influences (source: own research)

List of variables sorted by dependence

The ranking of a variable's direct and indirect dependence is shown in Figure 5. As can be observed, out of the 18 factors that were directly and indirectly investigated, variable V13 (government policy) came in first.

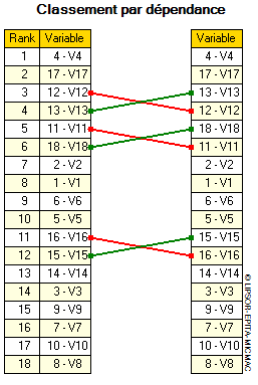

Figure 5. Ranking of direct and indirect dependencies between variables (source: own research)

Direct influence/dependence map

Figure 6 shows how the key factors relating to an age-friendly city interact and what impact they have. As shown, the upper left part of the picture contains the factors that have the greatest influence and the least reliance. These factors are, therefore, the key factors affecting a city's capacity to accommodate the age-friendly city. Three elements–investment cost (V3), rivalry (V10), and population density (V8)–have been identified as important drivers impacting the elderly-friendly city out of a total of 18 main variables affecting it.

Although other factors must also be taken into account, these three have been identified as the primary contributors to an age-friendly city.

For example, the variables in the upper right corner of Figure 6 represent variables with strong influence and dependence.

Nine factors have been identified as key drivers influencing the elderly-friendly city out of the total of 18 main variables affecting it: government policy (V13), infrastructure (V17), the need for a hospital in these areas (V11), the current population (V6), land cost (V4), the supply availability of medicines (V12), parking (V18), population age structure (V5), and transportation accessibility (V1).

The variables located in the lower right part of Figure 6 represent variables with low influence and high dependence and include three variables: availability of land for expansion (V15), architecture (V16), and distance from other places such as laboratories and... (V2). Finally, variables with low influence and effectiveness are placed in the lower left part of Figure 6 and include three variables: prospective population (V7), tax (V14), and social environment (V9).

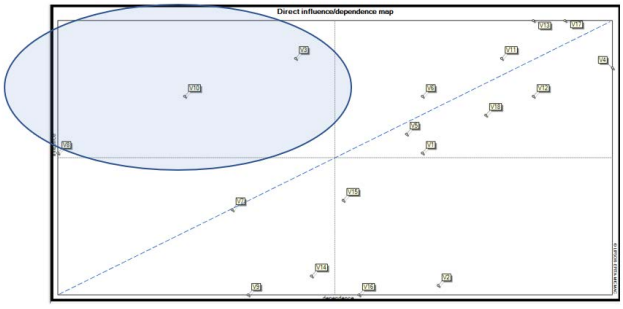

Figure 6. The variables of an age-friendly city's influence and dependence (direct) (source: own research)

Direct influence graph

The biggest influence is at the 5% level, and Figure 7 shows the direct impact of influencing variables on the age-friendly city. As can be seen, 7 of the 18 factors that affect whether a city is elderly-friendly–parking (V18), architecture (V16), land cost (V4), the availability of land for expansion (V15), the social environment (V9), infrastructure (V17), and distance from other locations like laboratories and... (V2)–had the most significant impact on the other factors. Also,

Figure 8 shows the direct influence of all 18 factors that influence an age-friendly city, ranging from the lowest to the greatest influence at a 100 percent level.

Indirect influence graph

Figure 9 shows the indirect effects of influencing factors on the age-friendly city, with the highest effects at the 5% level. As can be seen, out of the 18 factors influencing an age-friendly city, ten factors have the greatest impact on other factors. These factors include parking (V18), infrastructure (V17), investment cost (V3), current population (V6), the need for a hospital in these areas (V11), supply availability of medicines (V12), land cost (V4), population age structure (V5), government policy (V13), and rivalry (V10). Also, Figure 10, which includes all 18 variables impacting the age-friendly city, displays the indirect influence of those factors (from the weakest to the strongest influence at the 100% level).

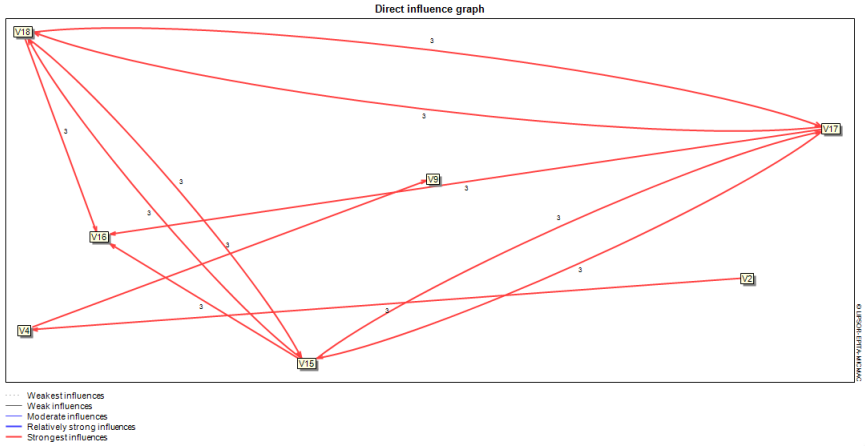

Figure 7. The direct impact of influencing variables on the age-friendly city (the strongest impact at the 5% level)

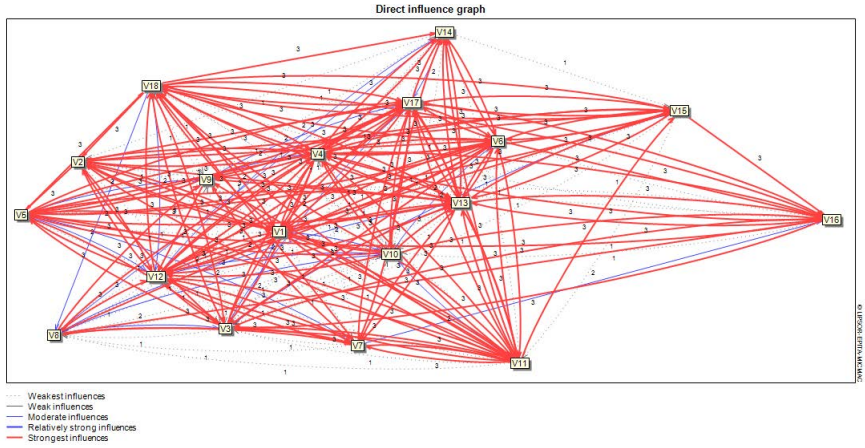

Figure 8. The direct impact of influencing factors on the age-friendly city (from the weakest to the strongest influence at the 100% level)

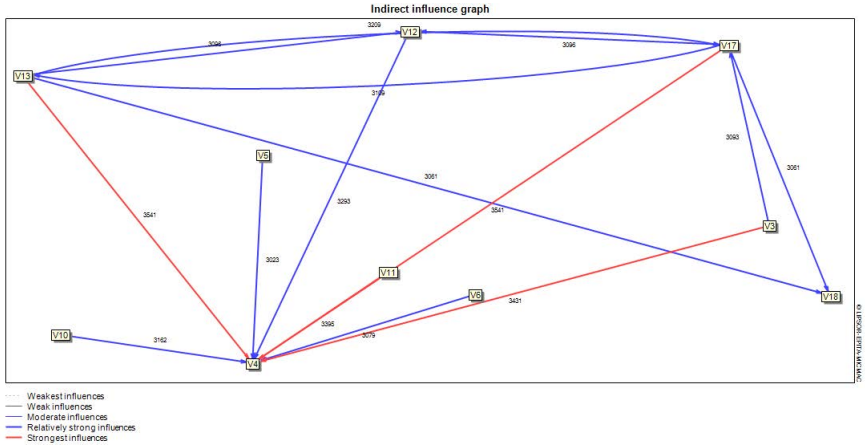

Figure 9. The indirect impact of influencing variables on the age-friendly city (the strongest impact at the 5% level)

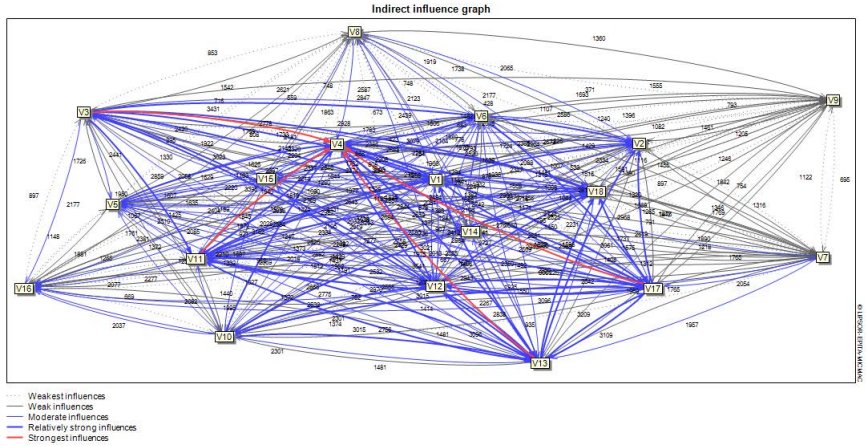

Figure 10. The indirect impact of influencing factors on the age-friendly city (from the weakest to the strongest influence at the 100% level)

4. Discussion

In an age-friendly city, access to services is essential. Access to health and treatment services is one of the most crucial urban uses. These days, access to places like pharmacies, shopping malls, supermarkets, bakeries, etc., is much simpler than it used to be due to the growth of information and communication technology, including the Internet.

However, there are two significant obstacles to the elderly using information and communication technology, which have prevented the majority of the elderly from using these facilities; The first difficulty is learning how to utilize the Internet and virtual environments, which the majority of elderly people, especially in third-world nations, are unable to do.

The second issue is financial in nature and has two components: first, the cost of using Internet technology as such, which users bear; second, the cost of the services that vendors offer online, which is frequently far higher than paying for them in person. However, all 18 variables examined had an impact on the age-friendly city, according to research literature, study background, and expert opinions connected to the research topic.

Yet, according to expert specialists, three factors have been identified as the major drivers of an age-friendly city, and these are the following three factors. These three factors have the most influence and the least dependence on other variables:

Investment cost (V3)

The value of the investment has been recognized as one of the major factors influencing the location of health, and treatment uses in Songhor city. A key factor in choosing the placement of health and treatment uses has been their closeness to the city core. Due to the great demand for commercial space in the city's center, both the purchase and rental prices for these spaces are extremely high.

For a variety of reasons, some service-treatment-related businesses select locations that fall short of what is expected in an age-friendly city. They are as follows: 1) There aren't any ground-floor apartments that are accessible to elders and other persons. 2) Compared to other units, ground floor apartments are 3) The issues with the renovation of these structures and the old buildings in this area of the city.

Rivalry (V10)

Because they are easily accessible to residents, urban centers have a special privilege. Urban centers are the preferred locations for most privately owned enterprises. Because of this, a competitive current has developed among most businesses, raising the cost of real estate and the rent for these units in the city center. Most employees in this industry always attempt to choose urban centers as their site of employment to outperform the competition and have more access to clients. Jobs related to health and treatment services are not an exception to this trend.

Due to the lack of land and property in this area of the city, new businesses related to health and treatment use cannot use the units in the age-friendly city governorate. Although some doctors and other related businesses have recently expanded their operations outside of the city center, some of these locations may not meet the bare minimum requirements for the needs of the elderly.

Population density (V8)

The majority of citizens have been drawn to urban centers due to the concentration of service facilities there.

This section of the city has a higher population density than the rest of the city due to several factors.

Also, the population density in the central area of Songhor city has increased as a result of residents from the surrounding villages using this area to access city services, especially health and treatment services. Healthcare professionals (doctors, pharmacies, etc.) are also attempting to settle in this area of the city to reach a diverse consumer base, according to the demographic track of this region of the city. Cities have a number of difficulties as a result of high population density in their center areas, including:

1) The decline in other services provided to inhabitants on a per-capita basis, such as green space. 2) The lack of

space for the development and construction of necessary uses; 3) The significant rise in real estate prices and rents in this city area. 4) Issues with parking, traffic, and so on.

Conclusions

The population of the world is aging. By developing medium- and long-term plans, urban managers and officials should design urban environments to meet the needs of the projected population. Access to the services that the elderly require is one of the city's many characteristics, and it is also one of its most significant ones. Access to health and treatment services is one of the most important uses for the elderly.

This academic research has been conducted to draw the attention of urban managers to the necessity of comprehensive urban planning in the face of global population aging. By highlighting the challenges of accessing healthcare services for the elderly and identifying key factors that influence the creation of an age-friendly city. With the changing global population, urban planners and decision-makers must utilize these findings to create cities that prioritize the well-being and dignity of all citizens, especially the elderly. This article has been conducted using field studies, and by analyzing the collected data, the current status of access to healthcare services has been examined.

The results of the analysis indicate that more than 60% of healthcare services are not accessible to the elderly in a standardized manner. This deficiency in access to healthcare services is not uniform across different types of services; in some cases, the elderly's access to healthcare services is less than 50%, while in other cases, it exceeds 50%. Furthermore, the analysis demonstrates that services such as dentistry, which require complex equipment, are accessible to only about 16% of the elderly population. On the other hand, services like pharmacies, which allow remote access, are accessible up to 100% for this group of individuals.In this article, the factors influencing the creation of age-friendly cities have been identified. Among the 18 main variables studied, three key factors named investment cost, competition, and population density have been recognized as effective elements in establishing such cities.These findings underscore that ensuring easy access to healthcare services for the elderly poses a significant challenge in the design and development of age-friendly cities for this demographic group. Attention to influential factors such as investment costs, service competition, and population density can contribute to improving access to healthcare services for the elderly and ultimately aid in creating suitable and accommodating elderly-friendly cities.

Although both the public and private sectors contribute to the development of health and treatment uses, the private sector is ultimately responsible for deciding where these uses will be located. The private sector has somewhat strayed from the criteria for an age-friendly city due to factors like the high cost of real estate and rent, the lack of adequate space in urban centers to construct a clinic, etc.

The findings of the present research align with the results of the study conducted by Senvar et al. (2016) regarding the significance of considering factors such as population density and investment value in hospital location planning. Furthermore, these findings are congruent with the outcomes of the research carried out by Dellovo et al. (2018) concerning the importance of economic dimensions in the siting of healthcare facilities within a specific context.

The following ideas have been proposed to reduce the difficulties faced by the elderly in using healthcare services, taking into account the fact that using some healthcare services necessitates a visit to a healthcare facility:

Providing services at home; it is advised that services be developed at home for the use of the elderly with particular circumstances because it can be challenging for the elderly to visit some general doctors' and dentists' offices. Most of these costs can be covered by insurance companies (governmental and non - governmental), even if they are often slightly greater than paying a visit to the doctor in person. It is also possible to partially resolve this issue in order to lower the costs of this department by offering services like a group visit from a doctor or a group visit from elderly people to a location with the appropriate standards for the elderly.

Parts of the treatment process (such as the first appointment, etc.) can now be completed online due to information and communication technology advancements. It is necessary to acquaint older people and those who care for them with online environments.

Elderly people and those who care for them can benefit from training sessions on using online resources through national media (TV, radio, etc.). The government can help the elderly by giving them access to free Internet if they meet specific requirements.

Future research on the following topics is recommended:

1) Studying an age-friendly city: exploration across urban functions including green spaces, housing, transportation.
2) Research in the field of criteria for a healthy city and its relationship with an age-friendly city.
3) Investigating the role of information and communication technologies in enhancing the quality of life for the elderly population.
4) Assessing the security status and sense of safety among the elderly in urban spaces.
5) Measuring the satisfaction of the elderly with the urban quality of life.
6) Identifying strategies to engage the elderly in urban management.

Funding

This research received no external funding.

Author contributions

Conceptualization, H. K.; Formal analysis, S. H. Z. and J. A.; Investigation, H. K. and S. H. Z.; Writing–original draft, H. K.; Writing–review & editing S. H. Z. and J. A.; Supervision, S. H. Z.; Project administration, S. H. Z. and J. A. All authors have read and agreed to the published version of the manuscript.

Disclosure statement

The authors declare no conflict of interest.

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