

The Age-Friendly City: A Review on Policy Evaluation of Elderly Welfare

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Abstract. It is important for the government to pay attention to the challenges of an aging population, starting from the economic sector, risk vulnerability, and the provision of health services. This encourages the urgency of the concept of "Age-Friendly Cities" (AFC) in the form of environmental facilities that are safe for the elderly. The team of authors conducted a study to understand the development of elderly welfare policies in the AFC. The systemic literature review method was applied in this study. The result is that the majority of mixed methods are used in researching AFC policy evaluations. Studies on the evaluation of indicators of space and outbuildings, or environmental conditions and buildings as well as facilities available outside the home, are the dominant research focus. Policy makers must pay attention to the diversity of their citizens so that the implemented policies can provide solutions for the elderly.

Keywords: AFC, Evaluation, Elderly

1 Introduction

Population aging is the biggest challenge in terms of social conditions in this century, and appropriate treatment from the government is needed because these conditions affect public opinion and have an impact on policy making [1]. There are many studies that reveal that population aging invites various problems in various sectors that need to be watched out for by governments in various countries, such as the economic growth sector [2], Provision of Healthcare Services [3], health care financing [4] and equitable distribution of health services for each elderly person who each has different financial capabilities [5], provision of elderly home care facilities [6] to social conditions for countries that still have poverty problems, increasing the level of vulnerability risk faced by the elderly [7], and the urgency of realizing 'AFC' through safe and secure facilities and environments for residents categorized as *elderly* [8], [9].

Taking into account the urgency of WHO about the explosion of the elderly in 2050 which then initiated the *concept* of AFC for elderly citizens, which is a form of follow-up action from the Political Declaration and Madrid International Plan of Action on Ageing from the UN in 2002, of course there have been many studies and studies aimed at evaluating the implementation of AFC in various countries.

This study seeks to answer research questions, namely: first, what research methods are used; variabel what was studied; and r what recommendations are provided by *the AFC* evaluation themed research related to Public Administration over the past 5 years. With the

answer of the research question, it is hoped that it will contribute to the understanding of the development of the evaluation of the Elderly welfare policy in the AFC sub-topic.

2 Method

The *systematic literature review* method is applied in studies because this method can provide a collection of knowledge in a field in the form of identifying future research priorities, providing answers to questions that individual studies have not been able to answer, identifying problems in the main research that should be corrected in future studies, and generating how or why the phenomenon occurs [10]. The first inclusion provision used in this study is data mining taken from articles in internationally reputed journals indexed by Scopus, with searches carried out based on the keyword "*age friendly city AND evaluation.*" The results of the first inclusion can be observed in Table 1. The next inclusion criterion is an article that can be downloaded with the provisional results of 35 articles and then selected based on its association with the elderly and public administration.

3 Results and Discussion

From the results of a total of 35 downloadable articles, in-depth observations were obtained on 17 articles relevant to the topic of this study and published over the past 5 years as in the table below.

Table 1. First Inclusion Results

Author	Methods	Variable
[11]	Mix Method	Thermal environmental factors and age-friendly physical design elements influence the behavior of the elderly in using public open spaces in residential neighborhoods in Hong Kong.
[12]	Quantitative	evaluating pedestrian accessibility to recreational facilities for the elderly in the context of the Chinese state
[13]	Qualitative	Exploration of elderly perceptions of opportunities and concerns about the emergence of automated vehicles (AV)
[14]	Qualitative	Evaluating the friendliness of the city using the Public Participation Geographic Information System design (Integrated system of VGI, GIS & MCDA)
[15]	Qualitative	Benefits and conditions of Telecare implementation
[16]	Case Studies and Mixed Methods	Objective environmental characteristics for measuring the quality of elderly pedestrian means by quantitative methods (SWEAT-R)
[17]	Mixed Method	AFC domains
[18]	Mixed Method	Elderly satisfaction, AFC housing indicator by WHO
[19]	Quantitative	Sidewalk categories with various buffer sizes
[20]	Cities	Investigation into the use of the concept of "Neoliberalism" in the management of the TSS program
[21]	Mixed Method	Factors that need to be developed in the provision of housing for the elderly
[22]	Cities	Urban Environment and Primary Health Services
[23]	Mixed Method	Stairway

Author	Methods	Variable
[24]	Quantitative	Age-friendly experience
[25]	Mixed Method	Spatial distribution of the elderly
[26]	Quantitative	Walking behavior and access patterns of the surrounding environment in achieving the destination location
[27]	Mixed Method	Factors causing anxiety, cognitive impairment and depression of the elderly in Odisha

In relation to the types of research methods that are widely used, the results of qualitative methods are obtained as a widely used method to evaluate the application of *AFC* in relevant articles, namely as many as 4 articles using it [20]. The next method that is widely used is *the Mix Methods* or mixed method between qualitative and quantitative, used by as many as 9 articles [11], [16], [21]–[23], [25], [27] [17][18]. The last method used is a quantitative approach as an evaluation method in 4 *AFC application studies* [12], [28], [29] [19].

Based on these findings, it can be concluded that, the method mixes the method more widely used with this method, a study hopes to gain a stronger understanding of the problem or research question [30]. The mixed method in the context of this study is the elderly, because the purpose of the *AFC* concept set by WHO is the concept of age-friendly cities, especially for elderly residents.

Answering the second research question, namely the variables studied or also known as the focus of the research. In accordance with the guidebook published by WHO in 2007, in order to create the *AFC* concept, it is necessary to fulfill the following indicators; first, *outdoor spaces* and buildings or environmental conditions and buildings and facilities available outside the home ; second, *transportation* or transportation facilities ; third, housing or settlement ; fourth, social participation of elderly residents; fifth, *respect and social inclusion* of other citizens who are not elderly citizens ; sixth, *civic participation* and employment or opportunities in community participation and employment ; seventh, communication and *information* and ; eighth, *community support and health services* or the condition of support from the surrounding community and health service facilities [31].

The most popular focus that is widely investigated is the evaluation of environmental and building and facilities available outside the home for the Elderly, with a total of 11 (eleven) articles. In detail, the focus of the study includes, evaluation of the condition of pedestrian facilities in the form of sidewalks and stair paths for the elderly [12], [16], [23] [19] to a comparison of walking ethics and open space in a city with little population density (Brisbane, Australia) with a city with a high population density (Hong Kong) [29], as well as evaluating the physical condition of the surrounding environment and urban environment that can support the elderly to carry out activities outside the home [11], [14], [22], there is even an article that discusses the factors that cause anxiety, cognitive impairment and depression of the elderly in Odisha so that it requires policies in the fields of health, social, and support in the development of a healthy environment for the elderly [27].

Research focus on ideal housing for the elderly that is beneficial to policymakers and developers of housing projects in big cities also appears in 2 (two) relevant articles [21] [18]. Meanwhile, one other article highlights the focus of the evaluation of transport conditions that captures the phenomenon of the emergence of automatic cars in the city of Manchester, England [13]. Regarding the focus of evaluating community support for the health of the elderly, at least 4 (four) articles were raised in addition to articles discussing all WHO indicators. Detailed research focus in the form of evaluation of the application of information technology in the provision of health services for the elderly in the form of telecare [15], Evaluation of urban environments and primary health services [22], as well as the article there is one article

discussing about health, social, and healthy environmental development for the elderly in Canada [25]. And there is one article that does not discuss the measurement of the 8 (eight) AFC indicators launched by the WHO at all but is about the politicization of Neoliberalism in the application of the AFC in the City of Toronto [20].

In answering the third research question in this study, the writing team tried to combine the recommendations carried out based on the evaluation process carried out by the thirteen relevant studies by categorizing according to the focus of the research. Based on an article examining the eight *AFC* indicators set by WHO, it is recommended to policymakers to recognize the heterogeneity of their citizens so that the policies taken will be able to become a solution for elderly residents [24].

Regarding *the focus outdoor* spaces and buildings evaluation or evaluation of environmental conditions and buildings and facilities available outside the home, thermal environmental factors and age-friendly physical design elements have been shown to influence the behavior of seniors to use public open spaces in residential environments both in local practices in Hong Kong and globally [11].

There are two studies that specifically focus on the evaluation of pedestrian facilities for the elderly. They recommend that the design and accessibility policies of sidewalks should consider the use of sidewalks for the elderly, for example through investigations into activities using recreational facilities, as a key consideration in policies governing accessibility [12], the same support provided by another article emphasizing that government policies should focus on encouraging physical activity, offering educational support, and improving perceptions of the availability of an elderly-friendly environment especially in the policy of stopping cigarette smoke [27].

According to similar research focusing on sidewalk facilities, empowering the elderly through participatory engagement can make them feel like contributing as members of their community and controlling their own health, and will increase community familiarity, foster a sense of place, and foster a sense of community because interaction with the larger community is facilitated [16]. As a result, it is critical to encourage multidisciplinary collaboration among urban planners, landscape architects, public health experts, and engineers to create public spaces capable of fostering a strong attachment to place and sense of community, as well as the evaluation of trails on Mount Chongqing that results in a summary of the elements and principles for designing friendly trail stairs for senior citizens [23]. Furthermore, studies suggest that a low population density city (Brisbane) provide elderly-friendly housing in the city center with access to relevant destinations [29].

Another concern in the focus of the evaluation of the AFC for the elderly in the context of public administration, recommends that the involvement of the population in the measurement of a more age-friendly environment is very important, in particular the participation of the elderly population because of those who will enjoy directly this condition, where this involvement is strongly influenced by the *Volunteered Geographic Information System* (VGI system) in the form of voluntary participation of residents in reporting the situation and conditions of the surrounding environment to the authorities so as to help urban planners improve the age of the city, especially for seniors [14]. In addition, information on the spatial distribution of the elderly and the vulnerability of the elderly on a local and national scale is important to obtain in the formulation of targeted policies according to environmental typologies, namely urban, suburban, or rural areas [25].

Recommendations on the most popular indicators studied, closed with results from a study in Milan Italy on environmental support and health care benefits for the elderly, could be useful in supporting policymakers and technicians in the development of future sectoral plans [22].

Because the study also focuses attention on health services for the elderly, and can be attributed to other studies on health services that provide recommendations for the evaluation of telecare as an alternative to the system of providing health facilities in the form of strengthening internet connection infrastructure, which is intended so that the elderly, according to their expectations, can stay at home instead of having to live in nursing homes and reduce the incidence of vulnerabilities that occurs, reduces loneliness and contributes to a higher quality of life of urban residents [15].

In terms of the focus of evaluation related to the provision of transport facilities, the relevant article highlights the existence of a fully automatic vehicle licensing policy and recommends several things based on the perceptions of the elderly population [13], first there are concerns over the costs incurred to have a private vehicle with a fully automated system, safety when using it, driving etiquette of other motorists; Secondly, there are also challenges based on the perception of the elderly, namely, the use of public transportation, the condition of sidewalks and vehicle parking facilities and traffic congestion; Third, the opening of opportunities for them to improve their door-to-door mobility ability, as well as physical activity. Furthermore, this study revealed that the automatic mode of transportation that is most in demand by elderly citizens is public transportation, followed by shared vehicles and finally private cars [13], so it is recommended to policymakers to pay attention to the perceptions of these seniors so that they can be more effective and have a good impact on the creation of AFCs.

In the recommendations related to *the* housing evaluation study, it states the importance of multi-level assessment of elderly-friendly housing, because it is not only beneficial for users or parents, but also beneficial for local governments and housing project developers [21].

4 Conclusion

The challenge of *population aging* has been considered important and scrutinized by various countries. This is because the impact caused by these challenges ranging from the economic sector, vulnerability risk, provision of health services, so that the urgency of the AFC concept in the form of safe facilities and environment for the elderly is realized in the form of the initiation of the World Health Organization (WHO) which is a follow-up action of the Political Declaration and Madrid International Plan of Action on Ageing UN in 2002. Three conclusions can be drawn from articles themed over the past 5 years on the evaluation study of AFC implementation for the elderly in the context of public administration. First, *mixed methods* are the most popular approach used. Second, the average article examines one of the WHO indicators as the focus of the study and there is only one each for an article examining two indicators and one article examining all WHO indicators. Third, policymakers should pay attention to the heterogeneity of their citizens so that the policies taken will be able to be a solution for elderly residents, for example in the elderly's perception of fully automated transportation and the provision of multi-level housing for them.

Acknowledgments. The author would like to thank the Public Administration Masters Study Program, Faculty of Social and Political Sciences, Sebelas Maret University, which has provided full support in the completion of writing this article.

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