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DETERMINING THE FEATURES OF AGE FRIENDLY FOR CITY DEVELOPMENT

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Abstract

Malaysia is projected to become an aging nation in the year 2035. As a significant fraction of the elderly is anticipated to be residing in urban areas, therefore it is critically important for local and relevant government agencies to prepare the city environment for the increasing aging population. Age-friendly city is a concept emerged to address the urban aged population through various strategies. Although a significant number of studies were conducted on age-friendly cities, nevertheless, city features that are important to achieve the state of an age-friendly city environment remain a subject for exploration. Therefore, this study primarily aims to document the development of the age-friendly features in various countries, in understanding common features that underlie its implementation. The research applies the deductive research approach that includes descriptive and content analyses. A total of 60 important features were commonly used across the report. The findings of the study provide significance as a key input for developing embedding age-friendly city development in Malaysia.

***Keywords**:* Age-friendly city, aging population, content analysis

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INTRODUCTION

Malaysia's population has quadrupled over the past five decades, growing from a population of 7.4 million in 1957 to 32.5 million in 2019 with an annual growth rate of 0.4 percent (Mahidin, 2020). Malaysia's population in 2019 increased by 0.2 million from 32.4 million as compared to 2018. The annual population growth rate decreased to 0.6% in 2019 as compared to 1.1% in 2018. According to medium projections by the UN, Malaysia's elderly population will reach 9.7 million in 2050. At present, the number of Malaysians aged 65 years and above is estimated to be 2.2 million and is projected to increase in the year 2020 to over 7% (Mahidin, 2020). The percentage of the population that is 65 years and over has also increased over the years from only 5% in 2010 to 5.9% in the year 2015, and 6.7% in the year 2019. This trend is mainly contributed by longer life expectancy due to better health conditions and resistance to diseases.

The growing need of care for the aging population is met through adequate government policies. Reflecting the policy discourse, scholarly research that examined the policy implications of changing demographic structure (Chui, 2007; Mehta, 2006), concludes that government intervention in the forms of policy should be considered to address aging population (Chui, 2007; Mehta, 2006; Yuen & Soh, 2017).

Spatial planning, a mechanism to coordinate city features, was identified by many scholars as important to accommodate the needs of the aging population (Hamid, Momtaz, & Ibrahim, 2012; Metz, 2000). A comprehensive framework for developing an age-friendly city where conglomerate spaces between inner and outer communal space at city centers are only recently available. 'Healthy cities', 'livable cities', lifetime neighborhoods, age-friendly cities and age friendly communities carry similar connotations as age-friendly cities. These concepts place great interest in planning an inclusive environment for the aged population by providing accessible design and adaptive housing, safe outdoor environment, available and reachable services and facilities, and mobility opportunities are considered (Horner, Duncan, Wood, Valdez-torres, & Stansbury et al., 2015; Justine, 2015).

In developing or adapting cities to accommodate an aging population, development guides in the forms of best practices, measures and principles were developed by local councils, state and central governments (Plouffe & Kalache, 2011). Most of these are focused on the urban setting in the developed world (Steels, 2015) as these cities were much earlier considered as aged population cities (Hamid, 2015). Exploring the development guides, particularly examining city features in detail, certainly provide a clear understanding of the challenges that shall be faced by the governments and local authorities in the developing world. Considering this, the primary aim of the study is to document the development of age-friendly cities in various countries, with a view to

understanding common features that underlie its implementation. Also, the study focuses on the initiatives developed by government agencies as primary drivers of the age-friendly city.

LITERATURE REVIEW

Since the introduction of Global Age-Friendly City: A Guide (World Health Organization, 2007a), the guide has received overwhelming responses and translated by city councils across the globe into forms of program, development project, initiatives and measures (Buffel, Phillipson, & Scharf, 2012; Plouffe & Kalache, 2011). Although the application of the guide saw various strategies adopted by city councils, the main idea of the guide - to promote active and inclusive aging - remains intact (World Health Organization, 2003).

The Age-Friendly City Guide consists of two main components which are themes or discussion topics and city features, which was developed by engaging with the elderly from 35 cities in the world (World Health Organization, 2007b). A total of eight themes were explored during the focus group sessions to develop a comprehensive understanding on the city features that are important for the elderly. The first three themes are outdoor spaces and buildings, transportation, and housing which are considered major due to having a strong influence on personal mobility, safety from injury, security from crime, health behavior and social participation. Looking into the details, building and outdoor space need to be designed with the objective to create suitable housing for all ages, particularly for elderly aging in place (Plouffe & Kalache, 2010; Tobi, Fathi, & Amaratunga, 2018). This could be achieved by implementing good access into buildings, increasing the ability to walk and move safely to facilities (Aini et al., 2016; Plouffe & Kalache, 2010).

Regular, safe, affordable and accessible transportation is a critical element to engage the elderly in physically active and socially connected activities (Rashid & Yigitcanlar, 2015). Transport intervention is essential to support the elderly to live independently. Transportation systems that cover private and public modes, need to provide a sufficient degree of mobility and accessibility to essential service destinations such as sundry shops, medical and health facilities, in addition to other destinations for recreation and leisure opportunities. Similarly, improvement of current road condition through regular maintenance on roadside - verge clearing and grass cutting, cleaning of silted ditches and culverts, patching, and pothole repair - will certainly provide safer driving for the elderly (Morris, 2016; Rashid et al., 2020).

Housings for the elderly require attention on design, supply and support that allows the elderly to age comfortably and safely within the community to which they belong (Aini et al., 2017; Khalid et al., 2020; Knopf et al., 2015; Tobi et al., 2018). Thus, several works documented that to age in place, the elderly

require house design that is easy to maintain, adaptive and equipped with in-home assistive technology (Morris, 2016). Since housing ownership is a demanding issue, the elderly need to be provided with better housing options and flexibility in financing a housing unit. The housing elements should be accompanied by the provision of suitable facilities in the housing areas that include daycare centers and day hospitals, social clubs, rehabilitation, counselling and advice centers, volunteer schemes and community home nursing (Yusof, 2019).

Respect and social inclusion, social participation and civic participation and employment are three topics that resonate with the social environment, culture, participation and mental wellbeing (World Health Organization, 2007b). Features that could instill respect towards the elderly in the form of mechanism or practical approaches include opening opportunities for older adults to participate in decision making bodies, campaigning to stop stereotype on ageism (Ronzi et al., 2020) and portraying positive image of the elderly in various components of cityscape, especially billboards (Morris, 2016). Past researchers identified the elderly face great challenges due to generation gaps, therefore intergenerational activities within neighborhoods need to be promoted (Bloomberg & Quinn, 2011; Morris, 2016)

Social participation and social support are strongly connected to good health and well-being. Participation in the society allows the elderly to continue to exercise their competency, enjoy respect and esteem, and maintain supportive and caring relationships. In a broader sense, literature suggests the elderly's participation is likely determined by the access, affordability and availability of opportunities (Plouffe & Kalache, 2010; Ronzi et al., 2020). Opportunities should be provided for elderly to contribute to their communities after retirement through unpaid and voluntary work (Bloomberg & Quinn, 2011).

Meanwhile, communication and information, community support and health services consider both social environments and health and social service factors. Staying connected with events and people, getting practical information to manage life and getting the support and services they need for themselves and those they care for, are main features in an age-friendly city (Hickman et al., 2017; World Health Organization, 2007a). Health and support services are vital to maintaining health and independence in the community (Aini et al., 2016; Plouffe & Kalache, 2010; Tobi et al., 2018). Currently, health services funded by locals are gaining numbers in cities to offset the shortfalls of government-funded services. Not limited to health-related services, community services should be extended to include services for crime prevention and disaster management (Orpana et al., 2016; World Health Organization, 2007b).

However, a clear mechanism to achieve the state of an age-friendly city through practical and pragmatic features remains a subject for exploration. Outside of the World Health Organization's Age-Friendly Guide and research

protocol, there are no universally-agreed features to develop an age-friendly city (Steels, 2015). Localized strategies, guidelines and standards for age-friendly city application continue to grow, reflecting the variation of community aspirations and need towards age-friendly features.

METHODOLOGY

This research employed two stages of a qualitative approach to determine city features of age-friendly city as follows.

Resources

In the initial stage, relevant literature sources were mainly derived from Google as the main resource. A search on the World Wide Web using the search engine Google was used instead of scholarly databases such as Scopus or web of science; mainly to capture development guides that are commonly non peer-reviewed materials or indexed by scholarly databases. Boolean operator techniques were applied using the string search of "Age-Friendly" AND "Framework" OR "Best Practices" OR "Guidelines" for more focused results. Materials retrieved were then filtered using inclusion criteria (see Table 1) to determine the relevancy of the materials prior to the review (Kasmuri, 2020; Moher et al., 2009).

Table 1: Inclusion and exclusion criteria

Criteria	Inclusion Criteria	Exclusion Criteria
Types of Document	Development Guides, Best Practices or other similar types	Other forms of publication
Publisher	City Council	Other publisher
Timeline	2002-2020	Before 2002
Language	English	Non- English
Document Format	Pdf	Html, word or ppt

Content Analysis

The ultimate goal of content analysis is to examine text in the reports as main data in order to explore features that were implemented by city councils to achieve the state of an age-friendly city. Content analysis offers a robust analytical approach to form and extend knowledge via observation, theory, and keywords from the review of existing literature. Cross-sectional content analyses consist of six (6) steps which are i) transcribe, ii) coding, iii) cluster, iv) integrate and v) develop themes of features (Tobi et al., 2018). In the initial stage, 302 quotations representing age-friendly city features were identified in the selected reports. Quotations were read thoroughly and main descriptions were extracted from each and transformed into code. These codes were then compared to generate features that represent all codes.

By the end of the content analysis process, 103 features were formed. Next, all features were then assessed based on the number of occurrences, with two occurrences used as cut-off points to determine the importance of the features. This assessment identified a total of 60 suitable features, arranged based on age-friendly themes as key features for an age-friendly city. Following this, frequency analyses were performed to determine the occurrences of features across reports with two occurrences of features considered as important in the age-friendly city framework.

FINDINGS

Sampled Reports

The selected samples were mainly derived from reports on age-friendly city features, namely from England, United States, Australia, New Zealand and Taiwan (see Table 2). The reports capture age-friendly implementation in various levels that include district, city, state and federal government. As for themes applied, most of the reports implement eight (8) themes, with only two reports which are Age-Friendly DC and New Zealand Positive Ageing were identified to have 10 themes.

Content Analyses

The following section gives the explanation on analyses performed to determine city features. For building and outdoor space's theme, 11 features were identified across the reports with inclusive public space identified as the highest frequency (refer Table 3). The features with the lowest frequency were localized services, recreation facilities as well as safety and security. However, since safety and security were widely accepted in literature, thus having a great impact towards the elderly, the study believes the inclusion of these features in any development guides should be highly valued.

For transportation, 14 features were identified across the reports, with public transportation level of service were identified with the highest frequency, licensed drivers and vehicle with GPS with both were identified to be the least mention.

There is a significant number of features pertaining to the housing dimension, thus this dimension had the highest number or 13 features across dimensions. Of these features, only seven had frequencies of more than two. This includes Modification, Housing and Residential Design, Housing Assist, Housing Fund, Housing Option and Housing Purchasing Guidance. Among these features, housing options related to various housing schemes for the elderly were considered the most prudent of all housing features. Conversely, features with the lowest frequency were related to after sales elements such as adaptation, repair and maintenance.

For social participation, 10 features were identified across the reports, with the number of occurrences being between 1 to 6, suggesting less variation across features. Features that relate to events and activities and participation were commonly identified across reports. Of these, the range of events and activities and social participation and partnership were identified the highest frequency. The findings suggest the range of events and activities are the key elements to engage the elderly in the community. However, the guide to participating social activities was least mentioned across the reports understudied.

Table 2: Selected report profiles

Document	Age-Friendly New York City	Taiwan Age-Friendly City	Age-Friendly DC.	New Zealand Positive Ageing Indicator	Liverpool Ageing Strategy and Action Plan	Age-Friendly South Australia Guidelines	UK Age-Friendly Strategy	Age-Friendly London
Country	United State	Taiwan	United State	New Zealand	Australia	Australia	United Kingdom	England
Year Published	2009	2014	2018-2023	2007	2015-2017	2012	2017-2020	2012
Level	City	Country	City/ District	Country	City	State	Country	City
Total Themes	8	8	10	10	8	8	8	8

For respect and inclusion, the analyses identified less variation between frequency across features, with the frequency between 2 and 4. From seven features identified in the reports, community inclusion, intergenerational and family interaction and respect and training, received the highest frequency. While age-friendliness assessments, age-friendly principle design, employment support, health and social care facilities and life satisfaction were only mentioned once, they were considered the least important feature for the dimension.

In Civic Participation and Employment, volunteering options or opportunities to take part in volunteering activities were communal features across reports, therefore with highest frequency. Features with the least frequency were age-friendly advertising, internship/fellowship program and valued contributions. The frequency trends also showed little variation with minimum frequency being 2 while the highest was 5, suggesting high agreement on features for this dimension across understudied reports.

Communication and Information, on the other hand, displays ten features across. Among the features were information offer and the delivery that

received the highest frequency, while communication guide, education on universal design guideline, knowledge exchange program and resident privacy were features with the least frequency.

Features in the Community Supports and Health Services show significant frequency values, ranging from 2 to 18, had been classified within ten features. Of these features, Health and Support Social Services and Caregiver and Support Program had the most frequency, while features with the lowest frequency were disability allowance, provision of burial sites and trust in others. The trends suggesting tangible features were more highly accepted than the management or awareness programs for Community Supports and Health Services.

Table 3: frequency analyses results

Dimension 1: Buildings and Outdoor Spaces		**Frequency**
1.	Accessible Buildings	4
2.	Age-Friendly Business Environment	2
3.	Age-Friendly Pedestrian System	5
4.	Community Space Availability	2
5.	Inclusive Public Spaces	11
6.	Outdoor Spaces Seating	3
7.	Sign and Way-finding	2
8.	Sufficient and Accessible Public Toilet	3
	Total	32
Dimension 2: Transportation		**Frequency**
1.	Bicycle Strategy	3
2.	Facilities and Amenities at Stop and Station	3
3.	Priority Parking	5
4.	Public Transport to key destinations	2
5.	Public Transportation Level of Service	6
6.	Specialized Transportation Services	3
7.	Taxi Program	2
8.	Traffic Management	3
9.	Training for Transportation Staff	2
10.	Transportation Option	2
11.	Transportation Services and Supports	2
12.	Well-maintained Roads	3
	Total	36
Dimension 3: Housing		**Frequency**
1.	Home Modification	4
2.	Housing and Residential Design	3
3.	Housing Assist	4
4.	Housing Fund	2

5.	Housing Option	11
6.	Housing Purchasing Guidance	2
7.	Housing Training	2
	Total	28
Dimension 4: Social Participation		**Frequency**
1.	Access of Internet	3
2.	Access to Facilities	3
3.	Accessibility of events and activities	2
4.	Range of Events and Activities	6
5.	Social Participation and Partnership	5
6.	Social Participation Guide	2
7.	Volunteerism Option	3
	Total	24
Dimension 5: Respect and Inclusion		**Frequency**
1.	Age-Friendly Business Best Practice	3
2.	Community Inclusion	4
3.	Intergenerational and Family Interaction	4
4.	Marketing and Outreach Plan	2
5.	Recognition and Acknowledgement	3
6.	Respectful and Training	4
7.	Stop Stereotype and Ageism	3
	Total	23
Dimension 6: Civic Participation and Employment		**Frequency**
1.	Civic Participation	3
2.	Employment Option	3
3.	Employment Services	4
4.	Paid Employment	3
5.	Staff Training	3
6.	Volunteering Options	5
	Total	21
Dimension 7: Communication and Information		**Frequency**
1.	Access to Communication System	5
2.	Age-Friendly Website	2
3.	Communication Option	4
4.	Hotline Communication Database and Record	2
5.	Information Offer and Deliver	7
6.	Networking Program	2
	Total	22
Dimension 8: Community Supports and Health Services		**Frequency**
1.	Caregiver and Support Program	12
2.	Crime Free	2
3.	Emergency Planning	2

4.	Falls Prevention Initiative	3
5.	Health and Support Social Services	18
6.	Training for Aged People	4
7.	Training of Trainers	2
	Total	43

DISCUSSION AND CONCLUSION

The issue of elderly in the community was raised in the year 1999 through the United Nations' Year of Elderly in 1999. To date, there are two main frameworks developed by World Health Organization to address the issue; the active aging framework in 2002 followed by Age-Friendly Cities (World Health Organization, 2007a), have widely accepted and overwhelming replicate in cities across the globe with variation of scale, locality, actors involved and strategies. Considering the notion, the study aims to understand the common features underlying the age-friendly city's implementation in various localities.

Application of the framework was apparent in developing guidelines and best practices to guide development in the city, district or state, especially in the selected reports. Although the study noticed some changes made to the themes of age-friendly city framework, however, philosophical paradigms founded by the World Health Organization were noticed intact. The study also noticed local interpretations were centered as the main interest.

Variation in features was more noticeable in transportation where there were 12 features that can be congregated into three main components which are road or traffic, public transportation and services. This suggests the dimensions carry greater importance in the formation of an age-friendly city. This is mainly due to well-being being entailed with a significant degree of accessibility and mobility of an individual to essential activities such as consumption, saving, production, politics, socializing or activities (Litman, 2014). Thus, affordable and accessible public transportations is an important factor in encouraging and enabling older persons to be socially included (Steels, 2015). Therefore, the dramatic changes in the population composition resulting in new challenges for transportation service provision (Abdullah et al., 2020; Wood et al., 2016), to provide greater mobility and access as a proxy to social inclusion.

By examining features across dimensions, two features which are inclusive Public Spaces and Housing Option had the highest frequency, therefore indicating the importance of both features in forming the age-friendly city in various localities. Essential access, facilities availability and maintenance are critically important in improving public space quality to accommodate the needs of the elderly (Plouffe & Kalache, 2010; Southway Housing Trust, 2017). Housing options are regarded as the most alarming issues for the elderly by many (Hamid, 2015; Knopf et al., 2015) stimulate the needs to permit elderly to age

comfortably and safely (World Health Organization, 2007b; World Health Organization, 2003) in the immediate locality of the elderly. The findings suggest policy makers and facilities providers should be mindful of the elderly's needs during planning for affordable housing, better housing options and provision of support services and facilities. Interestingly, sufficient information pertaining to housing options offered by government, private and community are also considered pivotal to address negligence or displacement (World Health Organization, 2003).

It is endeavored that the findings of the study, mainly the outlines, are able to offer better understanding on the common features of age-friendly city and become a stepping-stone to further develop age-friendly cities for the aging population especially in Malaysia.

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