Understanding stakeholders' concerns of age-friendly communities at briefing stage: A China study

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ABSTRACT

The rapid ageing society in the urbanised world urges cities to make changes and be well prepared for challenges arise. Promoting age-friendly communities (AFCs) will not only be helpful to achieve WHO's sustainable goals, but also shape cities more inclusive and equitable places. For developing countries like China, stakeholders face more challenges as medical care, the welfare system and urban-rural integration issues have not been well addressed. Therefore, understanding stakeholders' concerns at the briefing stage will be helpful to promote active collaborations. This study first reviews stakeholders and their roles to play in AFCs projects, critical factors of building AFCs and the importance of the briefing stage; Then applies a two-mode social network to analyse relationships of stakeholders and critical factors based on the evaluation metrices generated from three rounds of focus group meetings. According to the results, specific features of Chinese stakeholders and critical factors, challenges of promoting AFCs under Chinese background, and potential strategies to mitigate stakeholders' conflicts at the briefing stage are discussed. The outcomes of this study can serve as references to understand relationships between stakeholders and critical factors, which may, therefore, improve the AFCs constructing management processes in urban China.

INTRODUCTION

The rapid ageing society in the urbanised world urges cities to make changes and be well prepared for challenges arise. From the global level, making cities and communities age-friendly will not only be helpful to achieve the sustainable

development goals of World Health Organization (WHO) but shaping the cities and communities as inclusive and equitable places for vulnerable groups like senior citizens to live in. This will in return benefits everyone in the future (WHO, 2018).

For developing countries like China, promoting age-friendly communities (AFCs) is even more critical as issues regarding medical care, the welfare system and urban-rural integration have not been well addressed (Sun et al., 2017). Moreover, Chinese society relies on younger generations regarding social and economic development during the past decades, which means the construction of infrastructure and provision of social services are mostly formed based on younger people's needs. Currently, The Global Network for Age-friendly Cities and Communities (Global Network) contains 18 Chinese members, with 1 (Qiqihar in Heilongjiang Province) from mainland China and 17 from Hong Kong Special Administrative Region. Being a member of the Global Network is a commitment to making cities and communities more age-friendly, rather than just achieving a designation (WHO, 2018). As Chinese government released guidelines on promoting the age-friendly environment in 2016, apart from the WHO Global Network members, cities like Shanghai, Wuhan, Hangzhou, Qingdao in mainland China also make efforts on promoting AFCs.

To build AFCs in urban China, efficient cooperation from many sectors is needed, such sectors include but not limited to governments, service providers, civil societies and senior citizens (Chan and Cao, 2015, Cho and Kim, 2016, Garon et al., 2014, Greenfield, 2018, Menec et al., 2014, Sun et al., 2017). Although Chinese guidelines have pointed out basic principles, developing goals, major tasks and supporting measures (China National Committee on Ageing, 2016), limited attention has been paid to stakeholders' concerns, critical factors and potential conflicts at the beginning of AFC projects. Since no detailed guidelines have currently been proposed regarding stakeholders' responsibilities, it is not clear which sector will be actively involved in building AFCs, which stakeholder will have a more significant influence on certain areas. Besides, how to promote active collaborations between different stakeholders also lacks enough considerations.

To bridge the gap, this study will first review stakeholders' involvement and their roles in AFC projects, critical factors of building AFCs and the importance of the briefing stage; Then apply a two-mode social network to analyse relationships of stakeholders and critical factors based on the evaluation metrices generated from three rounds of focus group meetings. According to the results, specific features of Chinese stakeholders and their considerations towards critical factors in building AFCs, challenges of promoting AFCs under Chinese background, and potential strategies to mitigate conflicts of stakeholders at the briefing stage will be discussed. The outcomes of this study can serve as references to understand relationships between AFCs stakeholders and critical factors, which may improve the AFCs constructing management processes in urban China.

LITERATURE REVIEW

Key stakeholders included and their roles in AFC projects: A stakeholder in the AFC projects can be defined as a group of people or an organisation that plays a different role and has direct or indirect influences on the construction process

(Freeman, 2010). Under the eastern background, Chan and Cao (2015) clarified main stakeholders in promoting AFCs as elders, policymaking institutions and advisory board, district councils, universities and research institutions, business and/or private sectors, NGOs and other social groups, when discussing the implementation of age-friendly initiatives in Hong Kong. Sun et al. (2017) further compared two different promotion modes of AFCs in Hong Kong and the Chiayi City of Taiwan, pointing out the major role that academic associations played. Taking Jangsu village in Seoul, South Korea as an example, Cho and Kim (2016) elucidated the contributions that neighbourhood social capital made.

Apart from the above, experiences from western countries like Canada, USA, Netherlands and Belgium also highlighted the power of senior citizens and some local communities (Garon et al., 2014, Menec et al., 2014, Hu et al., 2015). Considering urban China's background, key stakeholders in the AFC projects and corresponding details about each stakeholder are explained as follows:

S1-Senior citizens: A person who ages 60 years old or over, lives at home in the community, relies on both family care and community-based services.

S2- Caregivers: A caregiver can be professional, like a doctor or a nurse who is familiar with geriatric diseases and know how to take care of seniors with limited Activities of Daily Living (ADL) levels; A caregiver can also be unprofessional like the relatives or friends of senior citizens; He or she normally should be 18 years old or over, but less than 60 years old. In this study, he or she should also spend at least 3 months a year to live with senior relatives in the same city.

S3-Government, policymaking institutions: Include members from national and/or local Committee on Ageing, Home Affairs Bureau, Planning and Natural Resources Bureau, etc.

S4-Research institutions: Include researchers who engage in real estate, affordable housing, construction management, gerontology, geriatrics, geriatric nursing, sociology and other related studies.

S5-Project investors and real estate developers: Include an institution or a group of people who provide financial support for AFC projects, a company or a group of people who are responsible for real estate development work of AFCs.

S6-Urban planners, architects and interior designers: A company or a group of people who are responsible for the planning and designing work of AFCs.

S7-NGOs: Include members from Ageing Development Foundation, Retired Staff Committee, Volunteer Association, or other community-based groups.

Critical factors of building AFCs: Through focus group studies in 33 cities in all WHO regions, eight topic areas of age-friendly cities were identified as early as in 2007, and this later formed the checklist for cities and communities worldwide (WHO, 2007). Apart from the framework and indicators built by WHO that normally applied when evaluating the age-friendliness of cities and communities, researchers also identified several factors that would influence the construction processes of AFCs. In this study, critical factors (CFs) in the briefing stage of building AFCs are clarified as four categories for stakeholders to consider, which are financial factors, policy factors, coordinating and managing factors, as well as communities' environmental factors. Detailed critical factors are listed in Table 1.

Table 1. Critical factors in AFCs projects.

Code	Stakeholder	Category
CF1	Who will be the investor	Financial factors
CF2	How much money will be invested in	
CF3	Power of developing related industries	
CF4	Public's levels of acceptance and powers of purchasing	
CF5	Return on investment	
CF6	The coordinating system of public strategies	Policy factors
CF7	The coordinating system of public strategies	
CF8	The soundness of promotion mechanism	
CF9	Subsidies / tax reduction	
CF10	Clarity of evaluation standards	
CF11	Objectives of projects and target groups	Coordinating and managing factors
CF12	Clarity of the common vision	
CF13	Clarity of workload distribution	
CF14	Effectiveness of communication and information sharing	
CF15	Project organization and management	
CF16	Conditions of infrastructure	Communities' environmental factors
CF17	Convenience of transportation	
CF18	Access to essential living service facilities	
CF19	Conditions of care facilities for senior citizens	
CF20	Conditions of medical facilities	
CF21	The layout of housing and accessibilities for senior citizens	
CF22	Conditions of barrier-free facilities	

Briefing stage of building AFCs: Briefing is the first step in the design and construction process that stakeholders' requirements on a project are defined, major commitments of resources are made. The briefing process is generally accepted to be divided into strategic briefing and project briefing. The former one sets out the broad scope and purpose of key parametres including an overall budget, while the latter converts strategic briefing into construction items and specifies performance requirements for every element of a certain project (CIB, 1997). In this study, briefing refers to strategic briefing stage, which sets out the broad scope and purpose of the key parameters when an AFC project is planned to carry out in China.

RESEARCH METHODS

Delphi method: A targeted literature review was carried out to identify stakeholders and CFs. Firstly, a session for identifying key stakeholders and CFs was conducted after reviewing the retrieved publications and reports from central and

local governments in China. Initial lists with six key stakeholders and 28 CFs were extracted and categorised by the authors in February 2019.

Then, 15 experts were invited to join a Delphi panel for screening the extracted key stakeholders and CFs; they were asked to add what they considered was missing, and to remove or combine what they thought was repetitive or unimportant. Eight of the invited experts returned their feedbacks till the end of March 2019. After the first-round screening, the authors adjusted the stakeholders and CFs according to the comments collected and sent the revised list for the second-round screening. At last, a list of 7 stakeholders and 22 CFs was finalised.

After the two-round Delphi-panel screening, a pilot study was conducted with four PhD candidates and one research assistant from a university on April 18, 2019. The participants were asked to read the instructions and complete the evaluation regarding the relationship between key stakeholders and CFs accordingly. Potential misunderstandings of the key stakeholders' roles and the CFs were highlighted, while how to clarify them were discussed afterwards.

Focus group meeting: Three focus group meetings were conducted. The first one was carried out in Shenzhen on May 18 with 7 participants from different institutions whose occupations are urban planners and researchers. The second one was conducted in Guangzhou on May 31 with 7 participants from the same architecture and engineering design company. The third one was organised in Qingdao on July 20 with 7 participants, including one senior citizen, one caregiver, one urban planner, two architects, two researchers from the real estate area.

According to the 7 stakeholders and 22 CFs identified, the relationship between them was evaluated through a 7-by-22 matrix with 154 interactions. A five-point Likert Scale was used to indicate to what extent, will the CF be taken into consideration by the stakeholder when making decisions during the briefing stage of an AFC project. Participants were asked to use 1 to 5 when evaluating the relationship, where 1 represents the stakeholder "will not consider the CF in most cases"; 2 means the stakeholder "will not consider the CF in some specific cases"; 3 indicates the stakeholder "holds a neutral attitude towards the CF"; 4 shows the stakeholder "will consider the CF in some specific cases"; while 5 illustrates the stakeholder "will consider the CF in most cases".

Each of the focus group meetings normally lasts 3 hours: First, the Delphi method was applied to collect individual evaluations from participants regarding critical factors considered by different stakeholders, and this would take one hour. Then an open discussion was conducted to reach a consensus between the participants; this would take two hours. After the above procedures, the evaluation matrices of relationships between stakeholders and CFs were obtained.

Social Network Analysis: A two-mode social network model is beneficial to model the relationship between two groups, and it has been proposed to evaluate the relationship between individuals and their related attributes (Liang et al., 2017). This study adopted the projection method when converting the two-mode network data to one-mode. Three kinds of centralities, namely degree centrality, betweenness centrality, and eigenvector centrality, are used to analyse stakeholders' concerns on CFs; Cluster analysis is applied to categorise stakeholders considering their

similarities at the briefing stage of AFC projects. The commercial software, NetMiner 4.3, is used for analysing and visualising the collected data.

RESULTS

Stakeholders' perspectives: According to stakeholders and CFs identified in the literature review and Delph-panel screening session, together with the links evaluated in the three focus group meetings, the two-mode network of stakeholders' concerns on CFs was established. Figure 1 shows the macro view of the distribution of stakeholders and their concerns, where the square points in the blue colour are stakeholders, other circular nodes in different colours indicate the four categories of CFs. In the correspondence mapping, the stakeholder points are located nearby if they have similar concerns over CFs, while the CFs points are nearby if similar stakeholders show concerns to them. The stakeholders and CFs are close to each other if they have considerably strong links.

Although there are some differences, the three correspondence maps generated from the focus group meetings show that communities' environmental factors, including the conditions of infrastructure (CF16), convenience of transportation (CF17), access to essential living service facilities (CF18), conditions of care facilities for senior citizens (CF19), conditions of medical facilities (CF20), the layout of housing and accessibilities for senior citizens (CF21), conditions of barrier-free facilities (CF22), are senior citizens and the caregivers' main concerns. Research institutions (S4) and NGOs (S7) have some similar concerns like the implementation of policies and strategies (CF6), the coordinating system of public strategies (CF7) and the clarity of stakeholders' common vision (CF12).
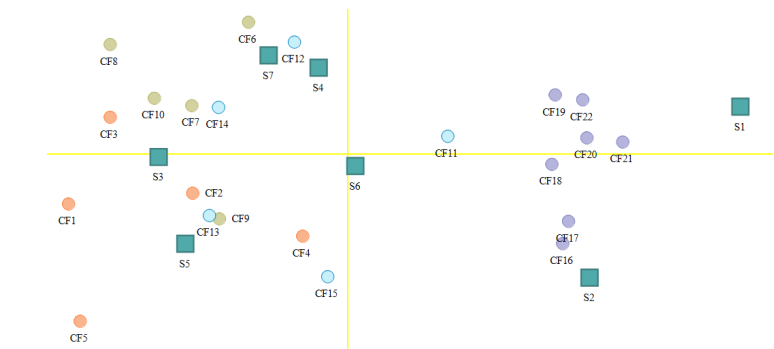

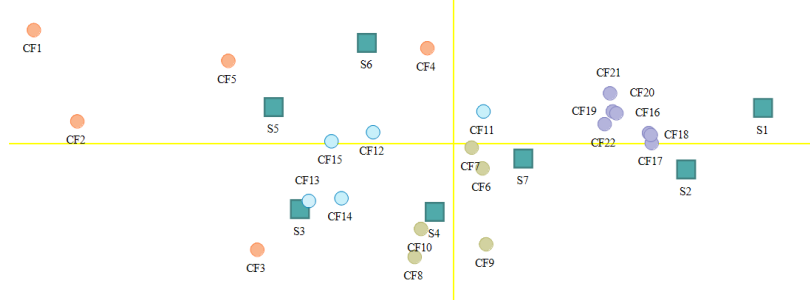Figure 1-1. First-round focus group meeting

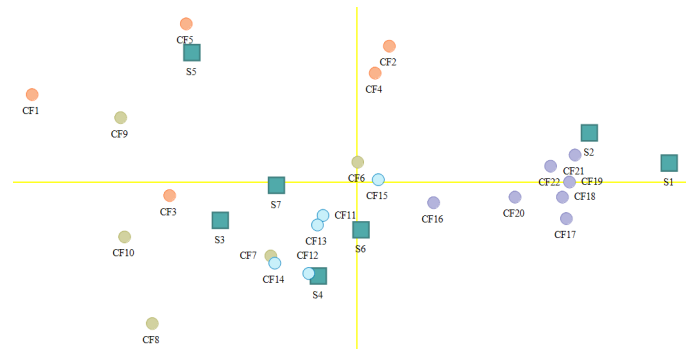Figure 1-2. Second-round focus group meeting

Figure 1-3. Third-round focus group meeting
Figure 1. Correspondence analysis of stakeholder-CF network.

Table 2. The prioritisation of CFs according to different kinds of centrality.

Ranking	Round 1	Round 2	Round 3	Ranking	Round 1	Round 2	Round 3
1	CF19	CF16	CF22	12	CF12	CF10	CF2
2	CF16	CF20	CF20	13	CF7	CF4	CF15
3	CF11	CF17	CF21	14	CF4	CF8	CF4
4	CF20	CF19	CF19	15	CF9	CF12	CF14
5	CF18	CF22	CF11	16	CF2	CF15	CF10
6	CF22	CF21	CF16	17	CF10	CF5	CF3
7	CF21	CF18	CF17	18	CF8	CF13	CF13
8	CF17	CF11	CF18	19	CF3	CF3	CF9
9	CF6	CF6	CF6	20	CF13	CF14	CF8
10	CF14	CF7	CF12	21	CF1	CF2	CF1
11	CF15	CF9	CF7	22	CF5	CF1	CF5

Critical factors' perspectives: The three kinds of centrality are also used to represent the importance of CFs to stakeholders, if a certain kind of centrality values regarding different CFs are the same, then the ranks of such CFs are calculated by the other kind of centrality values. The ranks of CFs are shown in Table 2. Although the ranks are not exactly the same, all of the seven stakeholders' concerns come to communities' environmental factors as the ranks of such CFs are all higher than the 9th place, and this result is partially in line with what can be seen from Figure 1. The objectives of projects and target groups (CF11), which belongs to the category of coordinating and managing factors, was also considered as a priority by stakeholders since three-rounds of participants ranked it as the 3rd, 6th, and 5th, respectively. Participants' from the three rounds reached consensus on the implementation of policies and strategies (CF6), which belongs to the category of policy factors, and the rank of this factor is the 9th. For the factor belongs to the financial category or the coordinating and managing category (except CF11), although some stakeholders would consider such factors as priorities, the overall prioritisation of them is relatively low when taking all stakeholders' opinions into consideration.

DISCUSSIONS

The prioritisation of stakeholders and their concerns: According to the SNA results mentioned above, although there are some differences among the three rounds of focus group meetings, rankings of the local government and policymaking institutions (S3), together with project investors and real estate developers (S5) are much higher than other stakeholders. While the rankings of NGOs (S7), senior citizens (S1) and caregivers (S2) are in the last three places. The results are understandable as the central and local government in China normally speak louder than other stakeholder groups and this is also true in the developed countries including but not limited to Canada, the United State and South Korea (Cho and Kim, 2016, Greenfield et al., 2012, Chan et al., 2016), since the government and policymaking institutions are working to provide financial support of AFC projects, facilitate communications between different agencies and organisations (Chan and Cao, 2015). The ranking of S5 is just behind S3, which indicates the power of such two stakeholders. During the focus group meetings, the concerns expressed by participants from the government are mostly related to policy factors, while financial factors in the briefing stage were considered more important by those from the investing or real estate developing companies. This is not to say that the government does not care about the financial factors, participants explained that in many regions, promoting AFCs through specific measures like repairing the barrier-free facilities, installing elevators for the aged buildings, are the wellbeing projects that should be done even without the return on investment. Therefore, the governments will focus more on policy-related issues to make sure that AFC projects can well be proceed, and this is normally where conflicts exist between the governments and the investors.

The rankings of research institutions (S4), urban planners, architects and interior designers (S6) in the first two rounds come after the former mentioned two stakeholders; While in the third round, the ranking of S6 comes at the first place. One possible reason is three of the participants chose S6 as their first or second occupation, and according to the former practical experiences, their suggestions were seriously considered by the governments and the investors, which may therefore affect their opinions. Compared with S3 and S5, S4 and S6 care more about coordinating and managing factors, which would affect the collaborations between different stakeholders. Participants from research institutions consider communities' environmental factors as priorities, for the good conditions of infrastructures and other facilities will be helpful to senior citizens' physical health; The urban planners, architects and interior designers think such factors are important, mainly because they need to follow the design guidelines and be aware of what kind of facilities are needed. Such issues are also the main concerns from senior citizens and caregivers.

The ranking of NGOs comes at the 5th place. Participants said although some associations like the ageing development foundations, the community-based services groups may give valuable ideas regarding how to promote the AFCs in urban China, the impact of NGOs in AFC projects is normally limited since very few organisations can get enough social and financial resources or have great popularities that would make differences regarding the former four stakeholders' decisions. Besides, most of the NGOs in mainland China are governing and directing by local governments,

which may also limit their influences.

Although S1 and S2 are the actual "end users" of AFCs, the rankings of them are at the last two places. This happens partially due to the fact that a great number of senior citizens in mainland China are quite passive or do not get enough information regarding how to be involved in civic affairs, therefore, they normally hope that policymakers can notice their requirements and make them satisfied (Xiang et al., 2019). For the caregivers in this study, participants consider them mainly as the offspring of senior citizens or the paid domestic workers instead of professional family doctors or nurses who are familiar with geriatric diseases, thus the caregivers normally take their parents' concerns into considerations. Under such circumstance, the similarity degree between S1 and S2 are the highest compared with all the other stakeholders. However, during the focus group meetings, participants expressed that although as caregivers, they would make every effort to ensure the seniors healthy and happy lives, they sometimes do not fully understand senior citizens' real concerns. This can explain why the caregivers' ranking becomes the last one.

Challenges of promoting AFCs under Chinese background: In response to WHO's age-friendly city concept and the global network that has been built to accelerate the exchange of experiences, China National Committee on Ageing (CNCA) proposed the "liveable environment" concept and began the pilot projects in several cities and communities as early as in 2009. CNCA also suggested the work on creating the "warm family" for senior citizens as an extension of the age-friendly concept. On the basis of the pilot projects, the 2012 version (implemented in 2013) of "Law of the People's Republic of China on Protection of the Rights and Interests of the Elderly" put a new chapter entitled "liveable environment" and thus made the construction of liveable environment as a requirement from the legal aspect.

Although it was a breakthrough that only four years were taken for the "liveable environment" to develop from a theoretical concept to legal clauses, the construction stage of AFCs in China is still quite early. Besides, there are many problems regarding the connections between the "Law of the People's Republic of China on Protection of the Rights and Interests of the Elderly" and other laws, policies, or strategies in the construction area. For example, in the "Urban and Rural Planning Law of the People's Republic of China" (revised in 2007, implemented in 2008), no clauses have mentioned liveable or age-friendly cities and communities; in the "Regulation on the Construction of Barrier-Free Environments" (released and implemented in 2012), the focus is mainly about how to protect disabled persons' rights and interests, less attention has been put into the seniors, especially those with limited ADL levels (Hu, 2014). Therefore, it is difficult to promote the AFC projects in urban China without clear guidelines from both the legal and strategic levels.

Currently, the development process of AFC projects is not balanced in the urban area. The practical experiences in coastal or megacities like Qingdao, Shanghai, are much more mature than those of inland or small and medium-sized cities. Even for a certain city, unbalanced issues of promoting AFCs also incur in the newly constructed and formerly built regions, as well as central and marginal areas. In addition, real estate projects pertaining to housing for the seniors mainly focus on needs from the wealthier ageing group, which means a huge number of middle- and

low-income senior citizens' needs are likely to be overlooked. From the three focus group meetings, participants from the governments, the real estate companies, as well as the design institutions, also mentioned this phenomenon as a great challenge. Participants of the second-round discussion in particular, who are all from the same architecture and engineering design company, indicated that although the costs of apartments in such projects are relatively high for most seniors living in the urban area, the sales conditions are still quite optimistic. However, the wealthier seniors account for only a small percentage of the whole ageing group; For the rest of the senior citizens, the fact is that they get old before getting rich, which means they are not able to purchase such kind of apartments and enjoy related care services. Under such circumstance, together with senior citizens' senses of belonging and the influences they get from the traditional Chinese culture (Xiang et al., 2019), they prefer to "ageing in place" after retirement. Therefore, how to make renovations to seniors' current accommodations more age-friendly, should be the main concerns when promoting AFC projects in urban China.

From the latest national sampling survey (started in 2015, completed in 2016) on the living conditions of China's urban and rural older persons, 58.7% of the seniors indicated that their accommodations were not age-friendly enough; Regarding community-based facilities, 59.9% and 61.6% of the senior citizens expressed dissatisfaction with the fitness places and living facilities (including the supply of water, gas, heating and electricity), respectively; 62.4% were dissatisfied with the signposts, while 76.4% were discontented with the public washrooms. Healthcare service like the doctors' house visits, daily life assistance like room cleaning, are what senior citizens expect from their communities, a former questionnaire type of research that was carried out by the authors also implies this trend (Xiang et al., 2019). For the aged communities that were built before the 1990s, the barrier-free facilities, especially elevators inside the residential buildings, ramps at the entrances, were in great need. The lack of such facilities not only limits senior citizens' participation in outdoor activities, causes safety problems to seniors with limited ADL levels, but also brings pressures to the governments, the investors, as well as the designers who will be in charge of the constructing work of AFC projects.

Potential strategies to mitigate conflicts between stakeholders at briefing stage: Considering urban China's current patterns of promoting AFC projects, there are four main kinds: (1) Allocating elderly-care facilities in the newly constructed communities; (2) Developing Continuing Care Retirement Community (CCRC) specially for senior citizens; (3) Inserting or renovating community-based elderly-care facilities in the built regions; (4) Redesigning the spare buildings, including but not limited to factories, office buildings, guesthouses, into elderly-care facilities. According to the practical experiences, the third one is more widely accepted by senior citizens as such kind of community-based facilities can satisfy their needs of "ageing in place"; Comparing with the other three, this kind of facilities are normally small-scale and therefore need less investment, the pattern is also more easily to copy. Therefore, more private capitals who would like to invest in AFC projects are now working to explore opportunities pertaining to build or renovate such kind of facilities. From the focus group meetings, participants also

considered this pattern the best to promote AFC projects.

As for inserting or renovating community-based elderly-care facilities in the built regions, the first task to be completed is taking senior citizens and their caregivers' opinions regarding communities' environmental factors into consideration carefully, for they are the "end user" of AFCs. Although it is often the case that in urban China, senior citizens and their caregivers would try their best to get used to the not age-friendly enough environment, they would give developers and designers the first-hand information regarding which part of their current accommodations and communities should be renovated. Therefore, engaging senior citizens and caregivers in the briefing stage would be of great help to promote AFC projects, and this is also an approach to focus on senior citizens "lived" experiences, which is in line with WHO's objectives of carrying out the Global Age-Friendly Cities project (WHO, 2019).

After getting to know the users' opinions, it will be helpful to clarify senior citizens' needs according to their different ADL levels and income conditions at the briefing stage. As indicated by participants from the three focus group meetings, the objectives of projects and target groups (CF11) are stakeholders' prioritised considerations in addition to the communities' environmental factors. By finishing the classification, the standards for service providing, facility operation and construction management can be more easily set in an early period of the project, which would be beneficial to not only senior citizens and their caregivers, but also project developers and designers. On the basis of clear objectives, the governments and policymaking institutions can then offer preferential policies to investors and real estate developers, so as to make sure of effective resource utilisations.

During the briefing stage, it is also important for stakeholders to clarify their responsibilities. According to the prioritisation and clustering results drawn from the three rounds of focus group meetings, local government and policymaking institutions (S3), as well as the investors and real estate developers (S5) would be the suitable stakeholders to facilitate meetings and discussions between different stakeholders. Research institutions (S4) and NGOs (S7) as comparatively neutral parts, are suggested to be the consultants and help to conduct the prophase investigations with senior citizens (S1) and caregivers (S2). Besides, they could give valuable suggestions to urban planners, architects and interior designers (S5) as they are more professional and more familiar with expressing users' requirements. Through comprehensive research of users' needs, classification of AFC projects' objectives and target groups, as well as stakeholders' responsibility assignments of at the briefing stage, potential conflicts between stakeholders would be prevented, and the constructing management process of AFCs in China is likely to be improved.

CONCLUSION

China's population is growing old at a faster rate than almost all the other countries: The effect of 37 years' Old Child Policy, combined with dramatic improvements in health care, have contributed to increases in life expectancy and decreases in China's birth rate. Promoting AFCs in urban settings of China requires efficient collaboration from many sectors, efforts in dealing with a variety of issues

arising from the working period are also needed. Although CNCA has put forward guidelines on promoting the age-friendly environment in 2016, pointed out basic principles, developing goals, major tasks and supporting measures, limited attention has been paid to stakeholders' concerns in the past studies.

Through the three rounds of focus group meetings in this research, the prioritisation and clusters of stakeholders are identified: although there are some differences, local government and policymaking institutions, together with project investors get the comparatively higher prioritisations, while senior citizens and caregivers appear to rank at the last among all the seven stakeholders. Regarding the critical factors, communities' environmental factors receive the most attention from stakeholders. This study also summarises the main challenges of promoting AFCs under the Chinese background, which are the lack of connection between legal clauses and constructing strategies, the unbalanced development situations in different regions, the insufficiency of barrier-free and elderly-care facilities in the built communities. Three measures, which are conducting comprehensive research of users' needs, classifying objectives and targeted groups of AFC projects', and assigning stakeholders' responsibilities at the briefing stage are proposed as potential mitigating strategies. The findings of this research will serve as references to researchers and practitioners about stakeholders' concerns over different categories of critical factors, and will also be helpful for governments and policymaking institutions to consider allocating effective resources for AFC projects.

One limitation of this study is that no participants from NGOs finally managed to join the discussion. Therefore, their concerns were generated from other stakeholders' past experiences of working or communicating with them, which may therefore, lead to some misunderstandings. It should be also noticed that the results of focus group discussions can only show different stakeholders' general opinions regarding their concerns. For the specific projects, their concerns and prioritisations may change accordingly. To figure out specific issues stakeholder face and mitigating measures they apply to deal with the challenges when promoting AFCs in urban China, further study may start from carrying out case studies, as well as organising different stakeholders who have completed an AFC project together to participate in the focus group meeting.

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