Proceedings of the International Conference on Global Politics and Socio-Humanities
DOI: 10.54254/2753-7048/46/20230828

Aging Population in China: A Public Policy Perspective

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Abstract: In China, with the unprecedented trend of the aging population, the elderly's life satisfaction and subjective well-being tend to be ignored as studies reveal that more than 81.3% of the Chinese population aged over 60 was at risk of multimorbidity. To make appropriate interventions, this paper investigates the efficacy of existing applications of gerontechnology and intergenerational programs with research that utilized photovoice or photo-elicitation methods that evaluate the age-friendliness of communities and cities. The results revealed that gerontechnology, intergenerational programs, and photovoice or photo-elicitation studies were gaining popularity worldwide; however, China was still in its infancy. Hence, further cooperation between government organizations, healthcare agencies, educational institutions, and other related industries should be the direction for China to focus on.

Keywords: Elderly, Life satisfaction, Gerontechnology, Intergenerational program, Photovoice

1. Introduction

Imagine residing in a nation home to about 25% of the elderly population worldwide. As one of the global phenomena in recent decades, population aging results from low fertility rates and high life expectancy. The National Bureau of Statistics indicated that in 2017, the elderly over 65 reached 158 million, and according to the recent trend, it is likely to rise to 366 million by 2050. As people age, multimorbidity, which refers to the coexistence of two or more physical and mental illnesses that progress slowly with unclear causes, becomes inevitable. Through analyzing employees from Beijing Medical Claim Data, the presence of multimorbidity between ages 45-59 was 51.6%, and for those over age 60, it was 81.3%. However, foreseeing the current situation, studies indicate that the Chinese government has not yet proposed related policies to promote an age-friendly society and enhance the subjective well-being of the elderly population [1]. In contrast, the Japanese government has taken anticipatory measures of the current situation by implementing the long-term care system (LTCS) since 2000 [2]. Indeed, China is falling behind, and the latest 14th Five-Year Plan emphasizes that the LTCS should not only coordinate home care and community services but also promote elderly-friendly technologies and products [3]. Likewise, recent research also coined the low availability of home and community-based services (HCBS) in China [4]. To bring everlasting convenience to the elderly population, the World Health Organization proposed the core construction and model of an age-friendly society, which refers to cities and communities that transform their offerings to promote

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the building of an inclusive environment that is attentive to its residents' needs as they age to enhance their life satisfaction.

In this discussion, the unprecedented rise of the aging population and prevalence of physical and mental concerns have called attention to examine the current policy formation, which forms the inquiry: How to improve the physical and mental health of elderly people in China by building a more age-friendly society?

Overall, with sluggish progress in forming appropriate systems and policies to mitigate the aging population, it is paramount for the Chinese government to learn from countries with matured LTCS and specifically emphasize HCBS to promote an age-friendly society and thus improve life satisfaction in the elderly population. LTCS refers to a system that guarantees personal, social, and medical support, while HCBS refers to different types of community-wise or home-wise person-centered care. Indeed, to seek breakthroughs in the spider-web of multimorbidity, it is suggested to utilize different means, which in this case, through gerontechnology and home-based care to improve physical health, intergenerational programs, and community-based care to ameliorate mental health, and photography-related approaches to reveal the concern regarding the elderly's life satisfaction.

2. Gerontechnology

As suggested by the recently proposed Five-Year Plan, elderly-friendly technologies and products are the direction moving forward, considering the availability of professional caregivers and the large elderly population base. Gerontechnology, first adopted in Europe, refers to the combination of gerontology and technology, which includes technological products, health services, and age-friendly environments [5]. Recently, the European Union introduced ProACT, a digital platform that obtained a high level of engagement and positive feedback from the elderly through various longitudinal studies conducted in European countries. Differing from existing platforms that specifically operated for single chronic conditions, ProACT focuses on multimorbidity and is designed to be all-in-one, which allows both the elderly and caregivers to share simultaneous access to the health status. The main features include general management, clinical triage for medical professionals, advanced analytics, and medical education resources [6]. The priority of the study is to improve the quality of life for the elderly with minimal intervention, which is by handing them a device (e.g., iPad) and measurement tools (e.g., glucometer) according to their illness. The elderly will be responsible for inserting the data of their daily checks, which allows medical professionals to keep track of their health status simultaneously on a separate screen. Moreover, based on the specific illness of each participant, unique health tips and information will be delivered through the Education and Reading petals (see Figure 1).

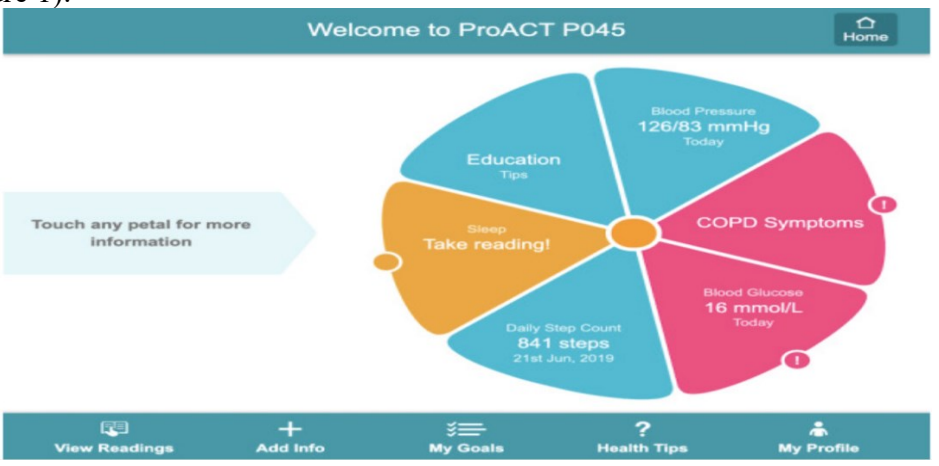

Figure 1: ProACT dashboard.

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Throughout the first-ever longitudinal study on a digitally integrated care platform, with 120 participants, more than 80% of them expressed the platform has improved their quality of life by streamlining their schedule and providing the necessary services, which prompts them to go through the 12-month trial optimistically. The satisfaction of the elderly, to some extent, alleviates the mass concern of the digital divide reflected in studies on other digital healthcare platforms. On the other hand, the elderly in China may favor the characteristics of platforms similar to ProACT; they rather receive home care and value payment for such services, which are managed by the government under the established insurance system.

In China, even though lacking digital platforms similar to ProACT, regional agencies developed the Integrated Community Multimorbidity Care Model (ICMCM), which combines the utilization of electronic health records from integrated chronic disease management information systems and digital technology [7]. In ICMCM, the emphasis is on people-centered services. It eliminates potential barriers to managing multimorbidity, which include the lack of awareness in employing information technology and big data for preventative and medical services, the lack of integration and sharing of patient data between various types and levels of healthcare facilities, the lack of digitization in tools for measuring different and specific illnesses. The general framework of ICMCM is based on big data, the internet, cloud computing, and artificial intelligence, providing digitized medical resources that integrate the forms of online and offline hospitalization. Furthermore, the system sets a standardized procedure with specific specifications, and visualization software is implemented, which permits simultaneous access to the elderly's health status, similar to ProACT.

Moreover, telemedicine has been a flourishing industry, as can be seen from mini-apps built within WeChat that link with nearby hospitals and clinics for registration and consultation. For instance, during the pandemic, Shanxi province applied the "Telemedicine Cloud Platform" and connected with 499 hospitals in 107 counties for better communication and urgent services [8]. Moreover, with the emergence of platforms such as Meituan, a Chinese shopping platform specifically designed for local services that allow the elderly to purchase medicine and deliver it to their home with a few clicks. Overall, it's evident that China obtained all the necessary pieces to create a platform similar to ProACT, and the government should take the initiative by putting them together.

3. Intergenerational Programs

Not only do the elderly need telehealth and well-being monitoring services at home, but also beyond the reach of technological advancement — community-based care and respect. For instance, the intergenerational program seeks to engage citizens in meaningful, interdependent activities that advance the communication and trust of one another to foster the development of more cohesive communities [9]. A systematic review evaluating nearly 3800 scholarly articles on intergenerational programs reveals the emphasis on the theme of technology advancement, health, therapeutic education, arts programs, and cultural heritage, and the effectiveness of the programs relies on the mixed-method approach and pre-post design. To date, the United States has been the pioneer as the federal government was the primary promoter of intergenerational programs. A noticeable example was an initiative taken in Virginia, where a University connected with elderly healthcare organizations to establish a program called Promoting Art for Life Enrichment through Transgenerational Engagement (PALETTE). Providing the platform and opportunity for the student and elderly population to interact through creative art activities, the bi-directional features of PALETTE not only improve the younger generation's attitude toward older people and eliminate their stereotype about aging but also allow the elderly to perceive themselves positively and feel socially connected and supported, leading to higher life satisfaction [10]. Likewise, intergenerational programs involving the participation of academic institutions were also popular in the United Kingdom, Israel, Denmark, and Japan. Besides improving the mental health aspects of the elderly,

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the variety and diversity of the content also include education on advanced digital products, which solves the elderly's concern about being technologically illiterate, leading to better convenience and acceptance of digital technologies.

In China, intergenerational programs and related support are lacking, with few scholarly articles discussing their effectiveness and implementation. A study was conducted during the lockdown of the pandemic as some grandparents have to satisfy the basic needs of their grandchildren and take the role of assisting with online studies. Seeing such a trend, a University in Shanghai took the initiative to launch the Shaping Students' Vacation Life Project (SSVLP). The project results revealed that both generations became closer as the grandparents shifted their perspective on learning and behaviors, while the grandchildren observed the importance of lifelong learning [11]. Indeed, witnessing other countries proactively promulgating the interaction between children and the elderly, the Chinese government should encourage programs similar to SSVLP as indicated by the most recent Five-Year-Plan, which should also fill the gap of insufficient healthcare professionals.

4. Photovoice and Photo-elicitation

In recent years, the rise of photography-related methods has been proven effective in revealing and improving the life satisfaction of the elderly population. For instance, a study that specifically focuses on an indigenous tribe in Newfoundland, Canada, reveals the implementation of intergenerational photovoice programs may improve the subjective well-being and understanding between the students and the elderly population [12]. The photovoice method is dedicated to revealing the authentic experience and perspective of the participants themselves, which allows both groups to capture their lives and interpret them through photos. The findings reveal that the two-week sessions were both beneficial to the students and elderly as they gained more understanding and knowledge from the bi-directional approach. Moreover, the findings were shared with people in the community and were delivered to the local government. Likewise, a study conducted in Canada presents a pilot attempt at the interpretation of elderly-friendly communities from their unique viewpoints. The study investigated four communities in Manitoba with 30 elderly participants and employed the photovoice method, which incorporates participant-driven photography and interviews, as well as group discussions involving researchers. Through the pictures and descriptions from the participants, the frequency of age-friendly themes was analyzed and separated into three categories. The findings mostly correspond to the core framework of age-friendliness from previous studies. Furthermore, a study in the United Kingdom utilizes the photovoice method to investigate how the elderly view social inclusion in Liverpool. The study employed photovoice in the form of community-based participatory research, combining paper investigation and action. The result of the study raises the consciousness of the elderly on various aspects of the city. It reveals factors that might influence the ability of the participants to take photographs (eg., lack of comfort in using digital technology and difficulty in capturing negative social concepts). Moreover, these findings further emphasize the wide-range utility of photovoice, allowing the elderly to express and deliver their point of view with the potential to reach government officials and thus produce greater impacts.

The Photo-elicitation approach includes participant-driven and researcher-driven. For instance, a study that utilized participant-driven photo-elicitation on 5 caregivers who take care of dementia patients in Canada reveals the effectiveness of the method through the themes identified: facilitated deeper shared understandings, encouraged greater discourse, promoted more in-depth contemplation, and the discovery of profound and otherwise concealed experiences [13]. This study employed thematic analysis, transcribed all the interviews, and placed them in various themes/categories. The interviews were conducted semi-structured by telephone, and there were two rounds; the first was to gain detailed descriptions of the experience of the participants, while the second was to gain a deeper understanding of the engagement photo-elicitation interview (PEI). As expected, through the PEIs,

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the participants reflect, initiate rich dialogues, and gain new perspectives; for instance, participants understood the decision to send the elderly to palliative care centers and realized the difficulty of the elderly and their reliance on long-distance caregivers. This study further highlights that PEIs are the key to opening the door to in-depth conversation. They naturally open up conversation and break down those "sensitive boundaries and limitations," which reaches the ultimate goal of generating meaningful information and implementing potential changes. Likewise, a study conducted in Northern England presents a photo-elicitation study on the elderly population in examining the existence of age-friendly communities. The study included 12 participants aged 60 or older through participant-driven photo-elicitation, which revealed high favorability among the elderly participants and was eventually delivered to the regional government with a formal seminar involving specialists from related fields. The study analyzed the photos and categorized them based on various themes and sub-themes related to age-friendly communities, including "Place and identity, Challenges of aging, Mobility, Health, and Well-being," etc. Furthermore, a study conducted in the Netherlands presents a study that utilizes researcher-driven photo-elicitation on the disadvantaged socioeconomic status elderly population, which was the first initiative on this target group. The study created a replicable framework of researcher-driven photo-elicitation, which included three phases: develop the photo-elicitation method, examine the quality of photographs and potential topics, and constitute the feasibility of conducting such a study. The results of the study act as an indication that the participants were not only able to facilitate conversation related to situations depicted in the selected photographs but also proactively trigger the elderly to ponder on the key parts of the study, which were health-related aspects and topics.

Overall, the rise of photovoice and photo-elicitation acts as a positive indicator and a potential direction that researchers in China could focus on in investigating the life satisfaction of the elderly. On the other hand, to raise awareness of the aging population among all populations and reach government officials, exhibitions can be hosted at academic conferences and art galleries.

5. Conclusion

After investigating and analyzing innovative initiatives taken by various countries in constructing age-friendly societies for the elderly population, the next steps for China should be clear — focusing on the development of HCBS. Guided by the recent 14th Five-Year Plan and specific policy initiatives to promote the implementation of platforms similar to ProACT, intergenerational programs such as SSVLP, and photography-related investigations, the elderly's life satisfaction is expected to improve significantly. Nevertheless, it is crucial to note that the government should be responsible and dedicated to providing substantial funding to invest in projects and experimentation, as health expenditure only accounts for 6.72% of the total gross domestic product in 2021 compared to 10.9% in Japan [14]. Indeed, with a perspicuous direction and pursuit, a viable and elderly-friendly society should be achievable.

References

[1] *Du, P., Steinmayer, V., Ijaz, N., Bjork, T., & Tata, S. (2015). Long-term Care of Older Persons in China. UNESCAP. https://www.unescap.org/sites/default/files/SDD*

[2] *Yamada, M., & Arai, H. (2020). Long-Term Care System in Japan. Annals of geriatric medicine and research, 24(3), 174–180. https://doi.org/10.4235/agmr.20.0037*

[3] *The People's Government of Fujian Province, S. (2021). Outline of the 14th five-Year plan (2021-2025) for National Economic and Social Development and vision 2035 of the People's Republic of China. Outline of the 14th Five-Year Plan (2021-2025) for National Economic and Social Development and Vision 2035 of the People's Republic of China. The People's Government of Fujian Province. https://www.fujian.gov.cn/english/news/202108/t20210809_5665713.htm#C44*

DOI: 10.54254/2753-7048/46/20230828

[4] *Feng, Z., Glinskaya, E., Chen, H., Gong, S., Qiu, Y., Xu, J., & Yip, W. (2020). Long-term care system for older adults in China: policy landscape, challenges, and future prospects. The Lancet. https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)32136-X/fulltext*

[5] *Huang, H., Chen, Z., Cao, S., Xiao, M., Xie, L., & Zhao, Q. (2021). Adoption intention and factors influencing the use of gerontechnology in Chinese community-dwelling older adults: A mixed-methods study. Frontiers. Retrieved December 19, 2022, from https://www.frontiersin.org/articles/10.3389/fpubh.2021.687048/full*

[6] *Doyle, J., Murphy, E., Gavin, S., Pascale, A., Deparis, S., Tommasi, P., Smith, S., Hannigan, C., Sillevis Smitt, M., van Leeuwen, C., Lastra, J., Galvin, M., McAleer, P., Tompkins, L., Jacobs, A., M Marques, M., Medina Maestro, J., Boyle, G., & Dinsmore, J. (2021). A Digital Platform to Support Self-management of Multiple Chronic Conditions (ProACT): Findings in Relation to Engagement During a One-Year Proof-of-Concept Trial. Journal of medical Internet research, 23(12), e22672. https://doi.org/10.2196/22672*

[7] *Sui, M., Cheng, M., Zhang, S., Wang, Y., Yan, Q., Yang, Q., Wu, F., Xue, L., Shi, Y., & Fu, C. (2023). The digitized chronic disease management model: scalable strategies for implementing standardized healthcare and big data analytics in Shanghai. Frontiers in big data, 6, 1241296. https://doi.org/10.3389/fdata.2023.1241296*

[8] *Zhang C. (2022). Smartphones and telemedicine for older people in China: Opportunities and challenges. Digital health, 8, 20552076221133695. https://doi.org/10.1177/20552076221133695*

[9] *Peters, R., Ee, N., Ward, S. A., Kenning, G., Radford, K., Goldwater, M., Dodge, H. H., Lewis, E., Xu, Y., Kudrna, G., Hamilton, M., Peters, J., Anstey, K. J., Lautenschlager, N. T., Fitzgerald, A., & Rockwood, K. (2021). Intergenerational Programmes bringing together community dwelling non-familial older adults and children: A Systematic Review. Archives of gerontology and geriatrics, 94, 104356. https://doi.org/10.1016/j.archger.2021.104356*

[10] *Hudson, R. B. (2016). Intergenerational Policy Frames and Solutions. Academic.oup.com. https://academic.oup.com/ppar/article/26/3/75/2460871*

[11] *Lyu, K., Xu, Y., Cheng, H., & Li, J. (2021). The implementation and effectiveness of intergenerational learning during the COVID-19 pandemic: Evidence from china - international review of education. SpringerLink. https://link.springer.com/article/10.1007/s11159-020-09877-4*

[12] *Gabel , C., Pace , J., & Ryan, C. (2016). Using Photovoice to Understand Intergenerational Influences on Health and Well-Being in a Southern Labrador Inuit Community. Researchgate. https://www.researchgate.net/publication/304813926*

[13] *Wang, A. H. (2023). "I Took the Photograph Just to Show You a Little Bit of Perspective":Photo-Elicitation Interviewing With Family Caregivers in the Dementia Context. FQS. https://www.qualitative-research.net/index.php/fqs/article/view/3928/4911*

[14] *Zhang, W. (2023). China: Health expenditure GDP share. Statista. https://www.statista.com/statistics/279402/health-expenditure-in-china-as-a-proportion-of-gdp*