

# Evaluating the Possibility of Intergenerational Home-Sharing in Shanghai and the Potential Benefits for both the Young and the Old Generation

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**Abstract**—This article explores the new housing model of intergenerational home-sharing, a concept first introduced in European countries to deal with the impending aging society. Empty-nest seniors lent their additional rooms to young people for lower rent in large cities, while young people offer companionship and doing the housework for the senior. The aging population in Shanghai is increasing, as estate prices soar during the recent years, bringing tremendous pressure to the opportunity – seeking young. This paper aims to discuss the likelihood of implementing such concept in Shanghai by interviewing with local seniors and community service workers and analyzing the willingness of young people and seniors using anonymous questionnaires.

**Index Terms**—Aging society, empty-nest elderly, generational gap, Home-sharing

## I. INTRODUCTION

From 2000, China has entered the aging society. According to the 7th population census, China has 1.41 billion population in total, with 0.19 billion people aged above 65, accounting for 13.5% of the total population. According to the international standard, a country with 7%-14% of people aged above 65 belongs to the mild aging society, while 14%-20% belongs to the middle aging society. China is now on the brink of the middle aging society. Focusing on Shanghai, by the 7th population census, 3.61 million people are at or above the age of 65, accounting for 24.6% of the total population in Shanghai. Due to various reasons of population shift and the change of family structures, the number of empty-nest seniors are also rising at a tremendous speed. The society is facing severe challenges of employment, medical service, and public policy changes.

In September 2021, as China is shifting toward the aging society, online streaming platform Bilibili cooperated with China National Committee of Aging, introducing a variety show that features co-housing between generations. Three seniors, all with different ages, shared homes with young people with different professions, bringing up possibilities of intergenerational home – sharing along with warmth, love, and mutual care. This model of living is not unique in foreign countries. To deal with this impending situation of the aging society, European countries had initiated models of intergenerational home-sharing, with elderlies lending spared

rooms at lower prices than the market to young people. In exchange, the younger generation does housework and offers companionship to the elderly.

## II. CONCEPT OF HOME-SHARING

The home-sharing concept was first raised by Maggie Kuhn in 1980 and was then carried out in various western countries including Germany, Spain, and the UK. The origin of this concept is raised due to the urbanization progress at the end of the 20th century [1]. Gillespie and Sloan pointed out that home-sharing involves two or above strangers living in a shared home, each having some private spaces [2]. Intergenerational home-sharing focuses majorly on the seniors, but also lays its emphasis on the disabled people, students who need low-cost rooms to continue their study, and young workers who are newly employed. However, the emphasis of such model still lies in the seniors who live alone.

The definition of intergenerational home-sharing here focuses not only based on the commercial model of the home-sharing concept, but also discusses the potential impacts of the model, including cross-generational communications, learning of technologies from the younger generation, and sharing of experiences from the older generation. Intergenerational home-sharing here is more situated on the condition of the city, and was raised because of the increasing cost of housing, empty-nest elderly, and the generational gap caused by the digital age nowadays.

The services provided by the young tenants in exchange for the lowered rents are dependent on the demand of the senior lenders. The services include but are not limited to companionship, going shopping together, looking after the pets, cleaning of houses, mowing the lawn, reading, and setting up smart appliances [3].

Due to the high cost of long-term caring and the pressure of the public medical service, along with moral and financial problems, the British Columbia government had issued several measures to adapt the aging society [4]. Related research of home-sharing has been emerging by the end of the 20th century. Concepts regarding the topic are clearly made, while the actual form of home-sharing has several explanations. Schreter made 3 different definitions of home-sharing regarding the different types of sharing methods [5]:

- 1) Home-sharing that is self-initiated or happening naturally, without any involvement of 3rd party organizations.
- 2) Sponsored by organizations, as they built or purchase houses and look for people who have needs of living together.
- 3) Assisted by third-party organizations. The organization is non-profit, assisting the process of home-sharing.

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Horne and Baldwin [6] believed that home-sharing can delay the age of entering the nursing homes, helping the elderly to have an enriched life. However, it can also bring potential problems such as messier rooms, higher costs of electricity and sewage, unwelcoming guests, as well as unexpected noises. Altus, D.E and Mathews, R.M investigated 252 participants of home-sharing and found that over 94% of all elderly participants can sustain the same or even higher living standard than their previous living conditions [7]. When researching about the meanings for the elderly of their house, Després C. and Lord. S found that the aged respondents consider their homes to be places of receiving physical and mental security, indicators of social status and involvement, center of daily life, as well as the place of familiarity, attachment, and memories [8].

In China, according to the National Health Commission, the current structure for the aging society reveals a “9073” form, with 90% of the elderly living in their homes, 7% relying on local community, 3% living in nursing homes [9]. Zhen, W summarizes the major problems of services for elderly, including high prices, low specialization levels, lack of related workers, and the misunderstanding of the responsibility of elderly services [10]. The intergenerational home-sharing concept described in this article serves as a supplement to the elderly care industry and can alleviate the pressure of medical and financial resources. By Zhao, Z & Zeng, S, intergenerational home-sharing can effectively bring different generations with different needs together and can utilize the use of resources for sustained growth [11]. Xu, J points out that this model can also bring up connection between the two generations, relieving the loneliness of the elderly while introducing them to the society nowadays [3]. Meanwhile, scholars have made analysis based on the potential problems of home-sharing, including unregulated agreements of service, lack of standards of measurement, difficulties of matching the sharing duos, long periods of running-in. These factors may all affect the implementation of the model [12].

### III. LIVING CONDITIONS OF SENIORS IN SHANGHAI

Entering 21st century, aging is becoming a more and more important social phenomenon in China. The announcement of postponed retirement by the Chinese government indicated that China is adapting and changing to this condition. As the economy develops, the demand of the elderlies for better living standards increases. However, the birth rate is experiencing a constant decrease, meaning that fewer and fewer young people are going to take care of the rising number of seniors.

According to the statistics on demographics and programs of senior citizens in Shanghai [13], 5.335 million people age above 60, accounting for 36.1 of the total population in Shanghai. The aging problem is significantly more severe than average condition of China, and the government is now introducing and implementing effective measures taking care of the seniors. By interviewing with the community service workers and volunteers, the author recorded the current programs for the seniors as followings.

According to the community service workers, there are two major programs running for the seniors who live at home in Shanghai – The Old Partner Program and the Long-Term Care Insurance.

The Long-Term Care Insurance (LTC) is a measure that was officially issued in 2018, applicable to every senior who receives pension. The LTC has levels ranging from 2-6, depending on the health situation of the elderly. The levels differ by the amount of time that government hired workers visit. The workers are employed by the government and performs a series of care to the elderly. Government fundings will cover 90% of the expense hiring the workers, while the elderly only has to pay for 10% of the price. The LTC offers personal care to the seniors at an affordable price, which is highly beneficial for those who have troubles of caring for their own living. However, the LTC also has strong limitations. Since the government budget covers 90% of the total expense, the cost of LTC for the government is high, indicating the high standards for people that are eligible for this program. The total percentage of all the seniors who can enjoy this program is very small. According to an interview with a local community service worker, the number is small, and it is hard to make estimations of the actual number of participants since the LTC is applied individually by the seniors.

The Old Partner Program was raised by the government from 2012, targeting the aged, empty-nest seniors. The program is carried out by community workers and neighborhoods, pairing every empty-nest senior that is above 70 with a younger, retired neighbor. The latter is required to contact the former at least twice a week, in the form of visiting, calling, or meeting each other outside. By giving the empty-nest, aged seniors care, their neighbor can better help them with problems in life, or their mental conditions, and provide emergency support. The aim of the program is to use resources of neighborhoods to give basic care to the empty-nest seniors, but the program has no significant impact, as it only offers basic greetings to the empty-nest seniors and fails to address their actual needs. The loneliness and inconvenient condition of living is not resolved.

Another significant problem lies in the lack of volunteers. People are needed to look after the seniors and take responsibilities without payment. Such requirement has become unrealistic as the living standards and speed of cities like Shanghai is extremely fast. People would rather have a good rest at weekends and are busy throughout the week for their living. One of the respondent Mrs. Chen, an active community service worker, described the current condition of the volunteers as experiencing a shortage of volunteers. She is only forty, but there are no other volunteers aged around 50 or 60. The remaining volunteers were all around 70 and can hardly continue the work in a year or two. With limited volunteers, the attentions paid to each empty-nest senior will greatly decrease.

### IV. THE WILLINGNESS OF INTER-GENERATIONAL HOME-SHARING IN SHANGHAI FOR THE YOUNG

On the social perspective, comparing to the western countries, Shanghai’s population density is significantly higher. Based on the 7th population census, the population density of Shanghai is about 4694 people per square kilometer. In Shanghai, due to the close physical distance from each other, the cost of attaining services and communicating with others is very low. As a result, the

government's programs toward the aged are based on the caring from neighborhoods. The elderly can perform activities and chat with similarly aged people to relieve their loneliness. Due to the low cost of social gatherings, the elderly hardly needs any chances of specially using intergenerational home-sharing to relieve their loneliness.

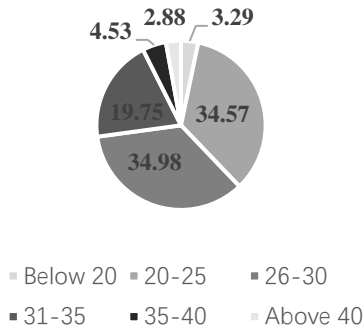


Fig. 1. Age group of the participants (Percentage)

From the employment perspective, intergenerational

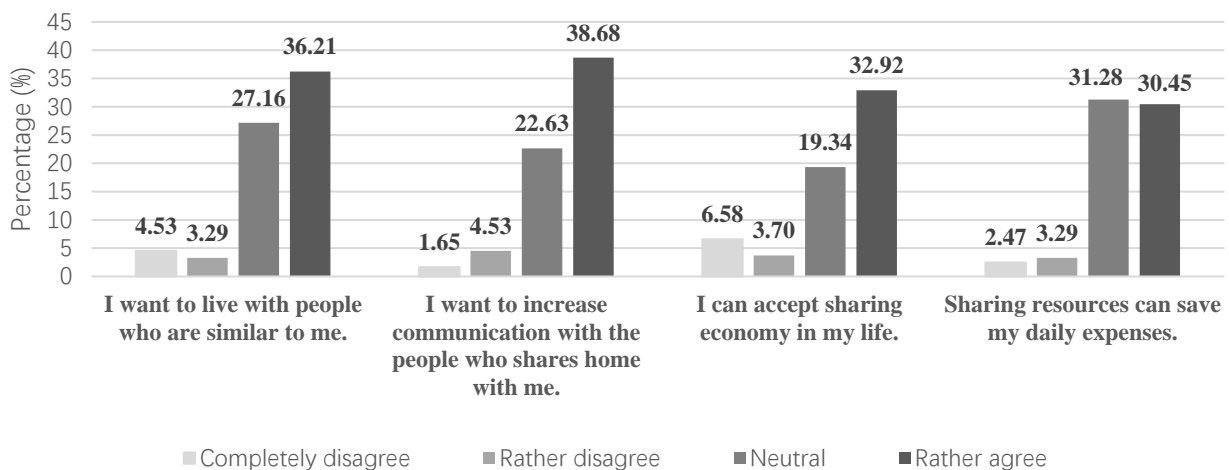


Fig. 2. Acceptance of participating in the sharing economy.

From the perspective of future development of the city, the concept of home-sharing is facing severe challenges as Shanghai is now entering stages of de-centralization. Apart from the city's largest economic center of Lujiazui, Shanghai is now developing smaller centers around the city, including Jiading, Qingpu, Fengxian, Songjiang, and Nanhui to solve problems of high population density, high housing prices, as well as limited opportunities. Surrounding centers in the suburbs possess great opportunities, as well as cheaper costs of living. Intergenerational home-sharing, in this case, is challenged as it remains questionable for future young people to continue to live in only urban areas.

The following research investigates the willingness of young people in participating intergenerational home-sharing. A questionnaire is designed upon the previous interviews with community service workers and the seniors. The listed options were listed by participants of the interviews.

According to Fig. 1., the questionnaire is designed for the young people ranging between 20-30 years old and aims to investigate the understanding of the sharing economy and their wiliness to participate in the home-sharing mode with a senior. The questionnaire received 250 answers, of which 243

home-sharing currently in Shanghai still had a long way to develop. Shanghai is currently a rapidly developing city, but the working hours and the living pace is also incredibly fast. According to the national statistics in 2021, the average working hours per week is 47.8 hours, while the Labor Law in China requires workers to work less than 8 hours per day. The real situation in major cities like Shanghai is that people are working overtime to finish their work. The actual amount of time they spent in working has surpassed the required amount of time. In European countries, there are strict requirements about specific working lengths and welfare insurances. The working schedule is highly stable and fixed, and people have more time to do things that they enjoy doing. Such stable time schedule allows the intergenerational home-sharing model to be effectively carried out in European countries, as young people can have time spending with the elderly. However, in Shanghai, the intensive work schedule strongly contradicts with the living arrangements of the seniors and is likely to cause problems when living together.

of them are effective samples. According to the background questions, 70% of the participants aged between 20-30. Male and female participants each consists of 51.44% and 48.56% of the total group.

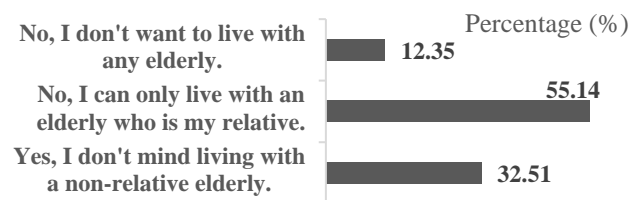


Fig. 3. Without considering the rent, would you mind living together with a non-relative elderly?

The questionnaire tests four dimensions regarding intergenerational home-sharing: willingness towards the sharing economy, willingness to participate in home - sharing, worries and thoughts regarding the home-sharing model, and the basic information of the respondents. The questionnaire is based on multiple choice questions, scaling questions, and

ranking questions.

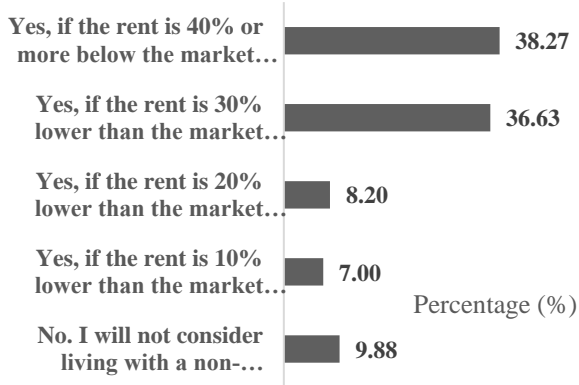


Fig. 4. If the rent is lower than the market, would you consider living with a non-relative senior?

economy. By sharing and providing the goods and services needed from each other, the demands of both sides are met.

The second question of the questionnaire aims to find out the opinions of young people towards the sharing economy and living together with people.

According to Fig. 2., despite some people aren't willing to accept the sharing economy, most people have shown acceptance to home-sharing and the sharing economy. This can also account to the trending facilities of sharable bikes, sharable batteries, and other sharing products of the economy.

Many young people nowadays have experiences of living together with the elderly when they are little. It can be inferred that young people will not reject the concept of living with the elderly alone, but since intergenerational home-sharing involves living together with a non-relative senior, the difference of lifestyle will surely bring numerous troubles between the two. When designing the questions, the author separates the two concepts, and questions the participants of living with a non-relative senior.

Home-sharing is still a model based on the sharing

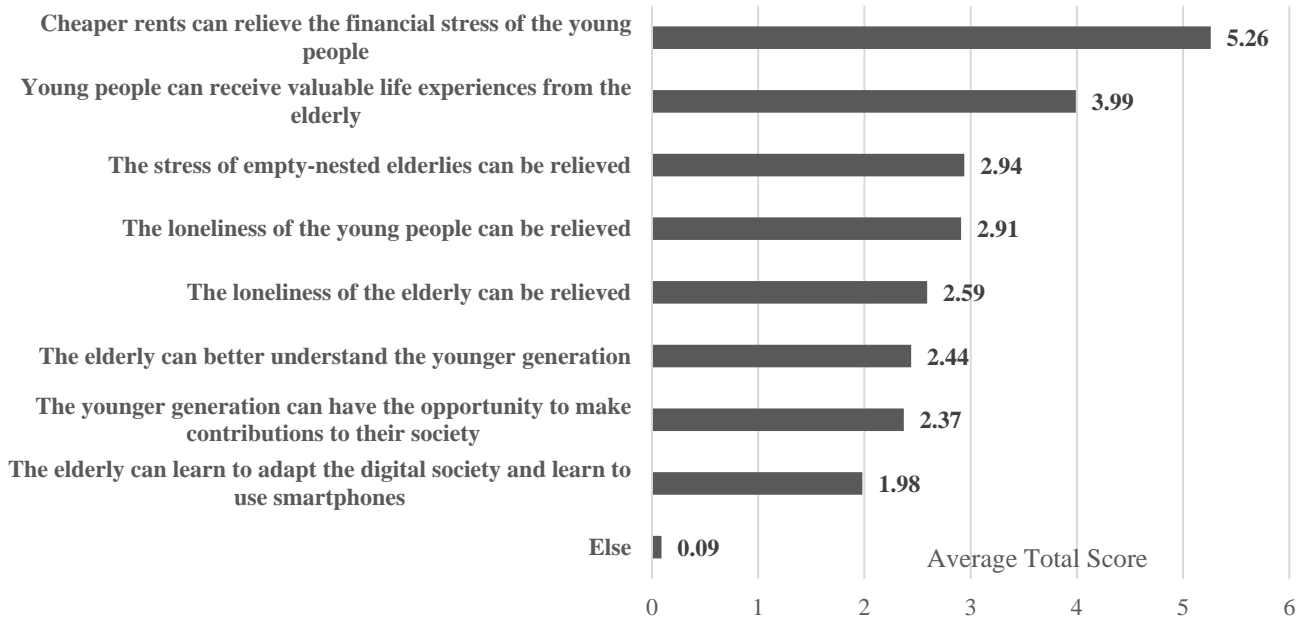


Fig. 5 Rank the choices that you agree most in the below options of intergenerational home-sharing.

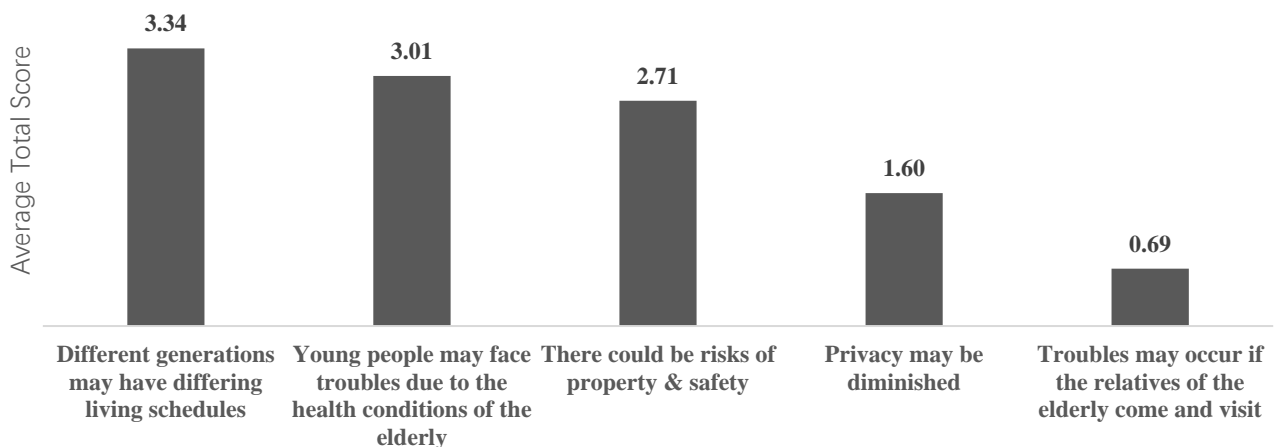


Fig. 6. The potential risks of home-sharing.

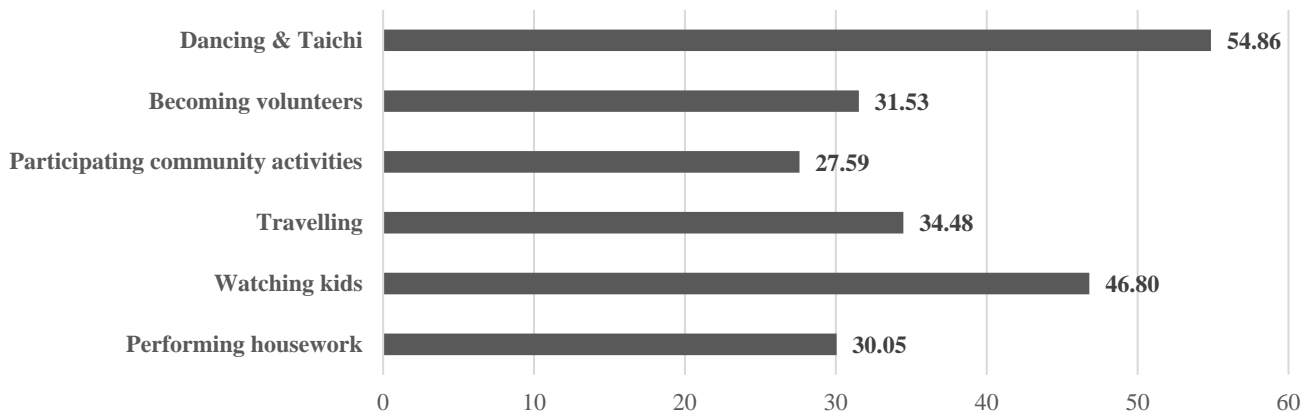


Fig. 7. The current major activities for the seniors (Percentage).

TABLE I: THE POTENTIAL ADVANTAGES OF HOME-SHARING FOR THE SENIORS

	Helping young People to relieve living pressures	Lower the potential risks of living alone	Get to know more about the young generation	Having someone to relieve the loneliness	Better adapt in the digital society	Having someone to do the housework
Average Total Score	4.71	4.58	4.55	4.44	4.42	4.30

Figs. 3-4. indicated that young people are only willing to live with a non-relative senior only if the rent is significantly lower than the market price.

When it comes to ideas and worries about intergenerational home-sharing, after introducing the concept, participants were asked to give responses on a multiple-choice ranking question. Two questions involving the benefits and problems are included in the sheet. To make sure all rankings and choices are taken into careful consideration, calculation functions of average total scores of each choice are used. The weighted score is determined by both the total amount of options as well as the sequence the participant ranked. For example, suppose there are 5 options to rank, the weighted score for the firstly selected option would be 5. As the selection continues, the weighted scores will gradually decrease.

$$AverageTotalScore = \frac{\sum \text{Frequency} \times \text{Weighted score}}{\text{Total number of participants}}$$

As mentioned in the graph, the most obvious choice for the young people is the decrease of rents paid. But according to the results shown in Fig. 5., in the home-sharing process, young people are not only seeking for the decrease of rents, but also receiving life advice from the elderly. Not only meeting their satisfaction of housing conditions, but young people are also willing to make their own effort to relieve the risks of the empty-nested elderlies, provide companionship and care, and help them learn the trending technological appliances.

There were also challenges regarding the home-sharing model. With the same calculation function of the multiple-choice ranking question, young people ranked their concerns of the model shown in Fig. 6.

The differences in living schedules may be the largest concern for the young people. This is discussed in the previous analysis of the workload of the young people. Health

risks of the elderly, a prevalent problem among the seniors, is also another major worry. Privacy, a factor that is previously thought to be important, matters less comparing to the disparity and conflicts caused by different lifestyles.

While problems and concerns appear in the home-sharing model, young people are mostly optimistic about its application in the future. 43% of the participants agreed that policies and government actions are needed to support the model, 38% believed its large potential of solving the aging and high real estate cost problem soon. Only 19% of the participants believe this home-sharing concept is unlikely to carry out. While the income difference plays a minor role in most opinions of the questionnaire, as income increases, people start to care more of others, wishing to hear from advice from the elderly, and providing support for them in using technologies.

#### V. THE WILLINGNESS OF INTER-GENERATIONAL HOME-SHARING IN SHANGHAI FOR THE SENIORS

After receiving responses from the young generation, opinions from the seniors were also collected. The questionnaire for the seniors has 10 questions in total, investigating the current living status as well as opinions toward the intergenerational home-sharing program. 203 valid responses were collected. All participants age above 50.

##### A. THE Current Activities and Living Conditions

According to Fig. 7, the lives of the seniors vary widely. Most participants mentioned their hobbies of dancing, performing Taichi, or playing chess. Over half of the participants developed hobbies of dancing & Taichi, and seniors are using their spare time to make contributions to their society, participating volunteering activities.

Most participants live together with their spouse, accounting for 55.67% of the total participants. 28.57% live with their children. Only 15.76% of the participants live alone.

When asked to give scores to their current living satisfaction and loneliness on the scale of 1-10, the participants' scores mostly ranged between 6-8, with most of the participants satisfied with their current living status.

### B. Willingness and Worries of Participating in the Home-Sharing Concept

Through answers received from the participants, major three concerns of home-sharing were raised. Worries of personal property, potential conflicts due to the differing lifestyles, and the decrease of privacy. Using the Average Total Score function, the three factors are of similar significance, having similar scores of 3.05, 2.98, 2.97 respectively.

Despite having various parts to improve, the seniors agree that the concept of home-sharing has several advantages, such as earning additional income, relieving personal loneliness, and learning new skills of technology. The results of the questionnaire in Table.1. revealed that while believing the home-sharing concept can relieve the living pressure of the young generation, the seniors are also worried about the potential accidents that could happen when living alone. They were also showing willingness of understanding the younger generation and offering help when they are in need. When it comes to being assisted to learning new technologies as well as having someone to do the housework, the seniors were not placing them as major concerns.

## VI. CONCLUSION

Despite the analysis of home-sharing were discussed in detail in the paper, the paper still has rooms of development. The number of interview participants remain small, and the data collected may still be hard to represent all the opinions of the Shanghai citizens. More samples are needed for more accurate results.

This paper analyzes the current living condition of the elderly in Shanghai through online research, personal interviews with the residents as well as the community service workers. By gathering their responses, a questionnaire is created respectively for the young people and the seniors to investigate their willingness of participating in the intergenerational home-sharing concept.

Based on the interviews and the questionnaire results, it can be concluded that the implementation of home-sharing is still difficult in Shanghai. The reasons lie mostly because of the differing modes of living between the two generations. However, the author has noticed the willingness of young people to receive advice from the elderly, and the elderlies are also willing to help relieve the living difficulties for the young generation. Home-sharing may still be an effective model, and as housing prices increase, the demand for

housing may steadily increase. Government policies and public organizations are needed for the establishment of home-sharing.

## CONFLICT OF INTEREST

The author declares no conflict of interest.

## AUTHOR CONTRIBUTIONS

Kangze Peng is responsible for conducting the research, interviewing generations of participants, designing the questionnaire, and analyzing the data. Shuting Lian offered structural guidance of the research, discussed formatting, and assisted in designing the questionnaire and graphs. All authors had approved the final version.

## REFERENCES

- [1] Home-sharing definition. [Online]. Available: <https://homeshare.org/about-homeshare-international/the-history-of-homeshare/>
- [2] A. E. Gillespie and K. S. Sloan, "Housing options and services for older adults," Santa Barbara: ABCCLIO, 1990.
- [3] J. Xu, "Referencing the Germany 'home-sharing' mode for the aged people," *China Academic Journal Electronic Publishing House*, pp. 170-171, 2021.
- [4] J. Rekart and S. Trevelyan, "Home-sharing and quality of life: The perspective of seniors," Vancouver, Canada: Social Planning and Research Council of British Columbia, 1990.
- [5] C. A. Schreter, "Advantages and disadvantages of shared housing," *Journal of Housing for the Elderly*, vol. 3, no. 3, pp. 121-138, 1986.
- [6] J. Horne and L. Baldwin, "Examining satisfaction of older home owners with intergenerational homesharing," *Journal of Clinical Geropsychology*, vol. 6, pp. 139-147, 1988.
- [7] D. E. Altus and R. M. Mathews, "Examining satisfaction of older homeowners with intergenerational homesharing," *Journal of Clinical Geropsychology*, vol. 6, no. 2, 2020.
- [8] C. Després and S. Lord, "Growing older in postwar suburbs: the meaning and experience of home," *International Perspectives*, New York, pp 317-340, 2005.
- [9] 9073 Formation. [Online]. Available: <http://m.news.cctv.com/2021/04/08/ARTIwcuUroEXDM4NPKGnmOuu210408.shtml>
- [10] Z. Wang, "Analysis of the supply policy of home-based community service for the aging and the reconstruction of the governance model," *Probe*, pp. 116-126, 2018.
- [11] Z. Zhao and S. Zeng, "Combining the empty-nest elderly with young people's housing pressure under the shared economy - Home-sharing," *Marketing Management Review*, pp. 73-74, 2018.
- [12] X. Hu, "Ways to make shared pension really shared," *People's Tribune*, vol. 25, pp. 90-91, 2020.
- [13] Statistics on Demographics and Programs of Senior Citizens in Shanghai. [Online]. Available: <https://wsjkw.sh.gov.cn/cmsres/78/783845a354ae4b69a6fb076f932960ac/e316f0cf068719ae4b0e46b4520001c4.pdf>

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