

Analysis of Factors to Improve the Happiness of the Elderly under Aging Trend

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Abstract. China is facing a serious issue of population aging, which in turn leads to insufficient elderly care systems and a significant increase in empty-nest households, greatly impacting the quality of life and happiness of elderly individuals, thereby affecting the overall societal harmony and stability. Currently, numerous studies are being conducted to investigate and measure the happiness levels of the elderly, with the aim of providing reference for solutions to address population aging. This article begins by discussing the issues arising from the aging trend and utilizes data from the China General Social Survey (CGSS) to analyze the influential factors affecting the happiness of the elderly, including health factor, family care factor, material factor, and spiritual factor. Key sub-factors and positive or negative weightings of each influencing factor are identified through research. Furthermore, conclusions are drawn on how to enhance the happiness of the elderly. Finally, effective recommendations are proposed from multiple dimensions, including government assurance, societal industries, family care, and individual self-care, to improve the happiness of the elderly.

Keywords: Aging population; elderly happiness; family care; physical and mental health.

1. Introduction

Currently, China is facing a serious aging population problem. According to data from the National Health Commission (NHC), as of the end of 2021, there were 267 million individuals aged 60 and above, making up 18.9% of the overall population. However, by 2035, the number of people aged 60 and above is projected to exceed 400 million, comprising over 30% of the total population [1]. Population aging not only signifies a decline in the labor force and slower economic growth, but also leads to a decrease in the happiness of the elderly due to issues such as insufficient elderly care systems and the prevalence of empty-nest households. This not only affects their personal living quality, but also the society's harmony and stability. Therefore, researching the factors that can improve the happiness of the elderly under the aging trend is of great significance.

Since the 1950s, the happiness of the elderly has been a research focus. Currently, there is no consensus in the academic community on the definition of happiness, but it is generally agreed that the measurement of happiness is usually determined by the subject's subjective feelings. Some studies suggest that subjective happiness is an individual's cognitive and emotional evaluation of their life status. In terms of cognition, it usually refers to an individual's judgment of life satisfaction, while emotion refers to an individual's mood, emotion, and sensation, which are measured by the frequency and intensity of positive and negative experiences [2]. Currently, assessment methods for subjective happiness mainly include happiness scale, anxiety self-assessment scale, and general situation questionnaire [3]. The data used in this research is also based on a survey of subjective happiness among the elderly population.

The subjective happiness of the elderly is influenced by various factors. For example, studies have shown that demographic factors such as gender, age, and educational level may have an impact on their subjective happiness. Health factors such as age-related health issues, family issues such as marital status, and economic factors as the most direct factors affecting the subjective happiness of the elderly have been widely studied [4, 5]. This research will analyze the factors that affect the happiness of the elderly based on public survey data such as CGSS, and ultimately aim to form effective recommendations for improving the happiness of the elderly, and contribute to the enhancement of their happiness.

2. Analysis of Problems Caused by Aging Population Trend

Health status is one of the important factors that affect the happiness of the elderly. The phenomenon of low happiness of the elderly due to their own or their spouse's poor physical condition is common [6]. As they age, the elderly undergoes significant changes in their lifestyle, social status, and interpersonal relationships after retirement. They are more likely to experience negative emotions such as anxiety, depression, sadness, and fear, which greatly affect their happiness [7].

Family issues are the second problem that arises. With the process of urbanization in China, offspring working outside hometown have become mainstream, resulting in an increase in empty-nest elderly, and the proportion of elderly individuals living alone is continuously rising, accompanied by an increase in the social divorce rate. Relevant studies have found that in Chinese society, living together has a positive impact on the health and subjective happiness of the elderly, while the loneliness of empty-nest elderly and widowed elderly living alone whose offspring work out of hometown can easily have negative effects on their psychological health [8]. For example, Li et al. found that elderly individuals who do not live with their offspring have lower scores in self-rated health and life satisfaction, and are more likely to be unable to take care of themselves and experience loneliness. Elderly individuals who live with others rate their health better [9].

The third issue is socializing problem. After retirement, the daily pace of life of the elderly undergoes significant changes. Compared to the fixed social circle of colleagues during their working years, the primary challenge faced by the elderly after retirement is rebuilding their social circle. Facing new social challenges, differences in personality, interests, and hobbies among the elderly can cause division within the elderly population. While elderly individuals who can maintain good social frequency and integrate into social circles will undoubtedly experience a stable increase in the happiness, those who cannot establish new social circles are at risk of experiencing more negative emotions like lonely and depressed.

Lastly, social issues also have an impact on the elderly. Insufficient or unstable income can cause the elderly unable to meet their basic living needs, increasing their burden and anxiety, thereby affecting their happiness [10, 11]. In addition, age discrimination, social exclusion, and inadequate social healthcare resources can also affect the self-esteem and happiness of the elderly [12, 13].

3. Research Method

3.1. Data Source

The method is to select the survey data from the Chinese General Social Survey (CGSS) in 2017, which was led and executed by the China Survey and Data Center of Renmin University of China, and it is the earliest large-scale comprehensive survey project in China academia. The survey covers people of different ages, and adopts a multi-level, multi-stage, and proportional sampling method for data collection and tracking investigation over a large area and a long period of time, involving data at different levels such as individuals, families, and society.

According to the international definition of the elderly population, people aged 60 and above are selected as the research subjects. After selecting the relevant items on individual health, family, social activity, society and subjective happiness from the database, missing samples of these items in the questionnaire are removed, and variables are operationally set. Through selection, a final sample of 1520 elderly people's data is obtained.

3.2. Variables Selection

The research's dependent variable is the happiness in old-age security. According to the question in the survey questionnaire, "Overall, do people feel happy in the life?" and the options range from "1" (very unhappy) to "5" (very happy). The options are assigned a value of 1 to 5 from very unhappy to very happy.

In terms of control variables, the elderly's gender, educational level, and age group are taken into consideration. As for the independent variables, the research selects aspects such as children's companionship, economic conditions, health status, mental needs, and new technology applications. Sub-elements are set up to compare the relationship between various elements and happiness of the elderly.

3.3. Analysis Methodology

The data is analyzed by SPSS (Statistical Package for the Social Sciences) statistical analysis software, and the research methods include descriptive statistical analysis, correlation analysis, and multiple linear regression analysis. Descriptive statistical analysis is used to analyze the basic living conditions of the elderly and their overall subjective happiness. Correlation analysis is employed for examining the relationship between independent variables and dependent variables, as well as identifying the variables that ultimately contribute to the regression equation. In addition, based on the correlation analysis, multiple linear regression analysis is used to further explore the correlation and degree of relevance between the subjective happiness of the elderly living alone and various independent variables, and finally determine the factors that affect the subjective happiness of the elderly living alone.

Through a comprehensive multidimensional analysis, this paper proposes an analytical model for the elements influencing elderly happiness, as illustrated in Figure 1. This serves as a reference to enhance the happiness of the aging population in the face of an increasing aging trend.

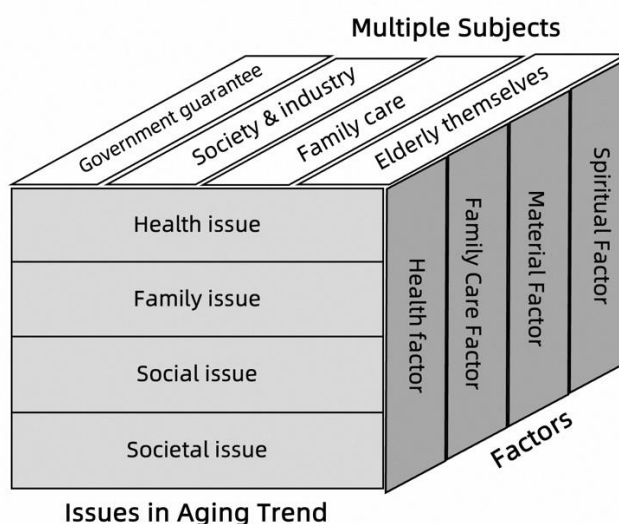


Fig. 1 Analytical model for factors affecting elderly happiness (Photo credit: Original)

4. Analysis of Factors Affecting Elderly Happiness

4.1. Descriptive Analysis of Elderly Happiness

First, descriptive statistics are conducted on the happiness of the elderly. Table 1 presents the distribution of the happiness of the elderly. Five options are given in the statistics, namely, “very unhappy”, “relatively unhappy”, “do not know”, “relatively happy”, “very happy”. A total number of 1520 old people have been interviewed to choose from the options. Overall, it can be seen that the proportion of people who feel "relatively happy" is the highest, accounting for 59.87% of the total number; "very happy" accounts for 20.46%; while "happy" and "very Unhappy" accounted for 6.05% and 1.25% respectively. In general, the elderly feels happy.

Table 1. Three scheme comparing

Option	Number	Percentage (%)
very unhappy	19	1.25
relatively unhappy	92	6.05
do not know	188	12.37
relatively happy	910	59.87
very happy	311	20.46
Total	1520	

4.2. Relationship Between Health Factor and Elderly Happiness

The multi-factor regression model, a statistical analysis method, is employed in this study. The happiness of the elderly is the independent variable in the model, and the sub-factors of each influencing factor are the dependent variables. By analyzing the correlation between multiple dependent variables and independent variables, the impact of each sub-factor on the happiness of the elderly can be inferred.

Three sub-factors of health factor are used in the analysis, including physical health status, frequency of exercise, and frequency of hospitalization due to illness. Data on the three sub-factors are selected from CGSS. Through regression analysis on the data, the correlation between these sub-elements and elderly happiness is determined and shown in Table 2.

Table 2. Regression analysis on the correlation between sub-factor of health Factor and elderly happiness

Sub-Factor of Health Factor	Correlation Coefficient
physical health status	0.0304
frequency of exercise	0.0093
frequency of hospitalization due to illness	0.0262

It can be witnessed from Table 2 that physical health is very important to the happiness of the elderly, and physical health is the basic guarantee for the elderly to feel happy. The frequency of physical activity can indirectly affect the health status of the elderly, and is positively correlated with the happiness of the elderly.

On the contrary, the frequency of sickness and hospitalization of the elderly will greatly weaken the sense of happiness of the elderly. It is obvious that hospitalization will not only cause the elderly to endure physical pain, but also cost them lots of money for treatment and cut off daily social activities. Naturally, it is difficult for the elderly to feel happy [4].

4.3. Relationship Between Family Care Factor and Elderly Happiness

Four sub-factors of family care factor are used in this paper, namely, children living with parents, living with spouse, children providing financial support to parents, children helping with housework/babysitting, and children being listeners to parents. The data regarding the four sub-factors are selected from CGSS. Regression analysis is conducted to obtain the correlation coefficients between each sub-factor and the happiness of the elderly and results are shown in Table 3.

Table 3. Regression analysis on the correlation between sub-factor of family care factor and elderly happiness

Sub-Factor of Family Care Factor	Correlation Coefficient
children living with parents	0.0066
living with spouse	0.0339
children providing financial support to parents	0.0018
children helping with housework/babysitting	0.0018
children being listeners to parents	0.0045

It can be seen from Table 3 that living with spouse and children living with parents have the greatest positive impact on the happiness of the elderly, because when grow older, the elderly often suffers from physical and social status decline. The companionship of spouses and children can provide more help and support in life, such as shopping, medical treatment, financial management, etc., and hence help improve the life quality and sense of security of the elderly [3]. Compared to children helping with housework/babysitting and childing providing financial support to parents, childing being listeners to parents have a greater effect in improving the happiness of the elderly. It can also be witnessed that the elderly does not have much demand for their children's financial support or housework assistance, and they need their children to be good listeners, and happiness can be improved through emotional communications [14].

4.4. Relationship Between Material Factor and Elderly Happiness

Five sub-factors of material factor are utilized in this paper, namely, total annual income, housing area, medical insurance, pension insurance, and travel budget. Data related to these sub-factors are selected from CGSS. Table 4 shows the results of regression analysis on the data, that is, the coefficients between each sub-factor and elderly happiness.

Table 4. Regression analysis on the correlation between sub-factor of material factor and elderly happiness

Sub-Factor of Material Factor	Correlation Coefficient
total Annual income	0.0018
housing area	0.0001
medical insurance	0.0041
pension insurance	-0.0052
travel budget	0.0956

With the rapid development of society, the material needs of the elderly are increasing gradually. At the same time, the fulfillment of material needs has become one of the key factors for improving the happiness of the elderly.

Firstly, as shown in Table 4, stable retirement income indicated by the total annual income determines the quality of life and happiness of the elderly. Data show that the quality of life and happiness of high-income elderly people are generally higher than those of low-income. High income allows the elderly to enjoy better medical, educational, cultural and other services, as well as more entertainment, travel, social activities and other activities, improving the quality of life and happiness of the elderly [11].

Secondly, tourism budget and medical insurance have significant effect on improving the happiness of the elderly. Sufficient tourism budget can avoid the awful situation of the elderly being alone at home, enable them to discover the world and visit places they have never been to. Medical insurance help reduce worries of the elderly, especially when encountering a disease which may cost too much and affect the quality of life [5].

For negative indicators, housing area and pension insurance seem to have subtle effects on improving the happiness of the elderly. Housing is an important part of the life of the elderly.

Appropriate housing area can provide a safe, comfortable and convenient living environment for the elderly. However, the data show that the housing area does not all positively affect the happiness of the elderly, but to some extent shows negative correlation. Larger the housing is not necessarily the better. Larger housing area with the elderly as the only habitant will strengthen the loneliness of the elderly and reduce the sense of happiness. The pension insurance has little help to the quality of elderly, probably because that the amount of pension is too small to make significant influence.

4.5. Relationship Between Spiritual Factor and Elderly Happiness

Three sub-factors of spiritual factor, namely, depression and despondency, lack of companionship and social interaction are used in this paper. Relevant data are selected from the CGSS database. After regression analysis over the data, the correlation between these sub-factors and elderly happiness is determined and shown in Table 5.

Table 5. Regression analysis on the correlation between sub-factor of spiritual need factor and elderly happiness

Sub-Factor of Spiritual Need Factor	Correlation Coefficient
depression and despondency	-0.0015
lack of companionship	0.0998
social interaction with neighbors	0.0065

As shown in Table 5, mental health has a significant impact on the happiness of the elderly. Depression and despondency have a significant negative impact on the happiness of the elderly, while optimism can significantly improve the happiness of the elderly. Undoubtedly that happiness itself is the subjective emotional projection of the elderly, and spiritual needs and negative emotions will inevitably weaken the happiness of the elderly.

In addition, the frequency of social interaction with neighbors is positively correlated with the happiness of the elderly. Due to the reconstruction of the social circle of the elderly, sufficient social interactions with neighbors can help kill time and avoid loneliness, make the elderly feel more needed and make them explore more hobbies, and make the life of the elderly more colorful [6].

5. Conclusion

From the above data analysis results, it is manifest that health elements, family care elements, material elements, spiritual elements, etc. are all relevant to the happiness of the elderly. The analysis also suggests both the positive and negative effects of each element.

Overall, 80.33% of the elderly think they are relatively happy or very happy, but there are still nearly 20% of the elderly who do not feel happy, and effective measures need to be designed and implemented to improve the situation.

Health and living with spouse are the primary factors that show the greatest impact on the happiness of the elderly. At the same time, the optimism of the elderly as spiritual support is also one leading factor that has significant impact. From the perspective of external influences, the elderly with high tourism expenditure tends to have a very high happiness index, which is also one of the important conclusions drawn by this study. In addition, several negative indicators including frequent illness and hospitalization can drastically reduce happiness, living in a house that is too large can also make the elderly feel more lonely, inadequate pension insurance may cause the elderly to feel insecure, and frequent depression witnessed in the elderly are also important factors that need to be avoided.

The happiness of the elderly is closely related to all aspects of society. When seeking solutions to improve the happiness of the elderly, all parties need to focus on factors such as the positive and negative weights of various elements and the value of the weights.

From the side of government guarantee: the cultural and tourism industry of the elderly should be vigorously developed to meet the growing cultural and tourism needs of the elderly; the medical and social guarantees of the elderly should be improved. The elderly has special and urgent health and

medical needs, and the government needs formulate targeted medical policies to ensure that the elderly can enjoy high-quality and timely medical services; improve life services so that they are more the aging-friendly. Whether it is public transportation, residential design or municipal facilities, the actual needs and usage habits of the elderly should be taken into account.

From the side of society & industry: medical institutions should provide health and disease management services specifically for the elderly, and should also ensure that their facilities are convenient and safe, such as barrier-free facilities and clear guidance signs, so that the elderly feel comfortable and respected when seeking medical treatment; the society should encourage the establishment of universities for the elderly, and focus on providing diversified and interest-driven courses, and courses that help the elderly to re-join the job markets should also be added; the community service center should be transformed into a comprehensive service platform to meet the diverse needs of the elderly, so that the elderly can find a sense of belonging in the community and strengthen their connection with the community.

From the side of family care: the company of spouses and children is the most effective means to improve the happiness of the elderly. After parents enter old age, compared with financial support from their children, they long more for listening and daily life company, for example, living with parents for a period of time, listening to their voices, helping with housework, etc. Of course, children, as the backbone of social development, can also introduce some new changes in society and new developments in technology to the life of their parents, from which the old parents can gain a lot of happiness boost.

From the side of the elderly themselves, they are encouraged to maintain a healthy lifestyle, maintain a positive attitude, communicate more with family and friends, maintain social activities, and stay open to psychological counseling when necessary. Moreover, it is important for them to improve anti-fraud awareness and avoid the aftermath which can cause hit on happiness in old age caused by telecommunications fraud.

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