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# A Study on the Quality of Life for the Elderly

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**Abstract.**
This study was attempted to compare factors that affect quality of life, depending on how we perceive subjective health conditions in older adults living alone. This study surveyed 1,074 elderly people aged 65 or older living alone among the 7th National Health and Nutrition Survey conducted from 2016 to 2018. The perceptions of subjective health conditions were categorized into three categories: 'good', 'normal', and 'bad'. Their general characteristics, physical and psychological factors were analyzed. Data analysis was conducted after generating and analyzing a weighted composite sample plan file using SPSS22. The significance level was 0.05. Based on this, it is necessary to develop arbitration that can improve the quality of life according to the subjective health conditions recognized by the elderly living alone.

**Keywords:** Elderly**,** Living alone, National Health and Nutrition Survey, Physical and Psychological factors, Quality of life

## 1 Introduction

As the aging population accelerated, the proportion of the population aged 65 or older was already 15.5% in 2019, which has already entered an aged society. In other words, one in five people aged 65 or older is an elderly person aged 80 years or older. This phenomenon is expected to become a super-aged society with a population of more than 20% of the elderly by 2026. One of the most prominent characteristics of the type of household in the aged society is the increase in the number of single-living households, namely elderly people living alone. The proportion of elderly people living alone in Korea increased from 19.7% in 2008 to 23.6% in 2017. Older adults in Korea, who had shorter preparation periods for aging compared to other developed countries, lacked preparedness for poverty, disease, solitude, and role loss, and this difficulty in old age was reported to be more vulnerable than the general elderly.
As our society ages, attention is also being paid to ways to improve the quality of life for the elderly. The quality of life of the elderly is a concept that integrates expectations, assessments, and concerns about life with satisfaction. Quality of life is also directly linked to happiness and achievement of goals in life. Welfare services are provided for the elderly living alone, but the contents are mainly survival-related, selective services focused on the lowest level or vulnerable class. Accordingly, the ultimate goal of welfare is not to improve the quality of life of the elderly living alone.
Major external variables that affect the quality of life of the elderly living alone include participation in social activities, economic activities, and social support. Variables centered on demographic characteristics include gender, educational background, marital status, relationships with children, and economic conditions. Other major variables affected by physical and mental health factors such as daily life performance, cognitive function, stress, insomnia, depression, self-efficacy, and health. In order to improve the quality of life for the elderly, it is necessary to analyze various characteristics that affect the quality of life of the elderly and find reasonable ways based on them.

## 2 Related Works

Older people experience a variety of health, psychological, and social problems during the aging process. However, among other things, the lack of subjective health status and confidence in health leads to maladaptation of daily life. Physical changes also interact with social changes, causing psychological problems.

The health problems of the elderly should be changed from simply extending their life span to increasing the quality of life and the efficiency of health care. As a result, the need for active prevention and enhanced health care in a treatment-oriented approach is required. Health activities shall extend the period of healthy living and reduce the period of dysfunction through the prevention of disease and the improvement of health conditions. The importance of health is life for the elderly and can be said to be linked to quality of life. In old age, it is difficult to change the lifestyle, so efforts on health activities of the elderly are neglected. Therefore, the quality of life can be improved by being able to participate in independent and meaningful work. Also, a sense of well-being that determines mental health is necessary for psychological well-being beyond just the absence of disease.

The subjective health status of the elderly has a significant impact on mental as well as physical health. Depression in older adults is often a factor in the loss of confidence, and continuous depression can also cause physical illness. The biggest problems faced by senior citizens aged 60 or older were health, economic problems, alienation and loneliness, and welfare facilities. Among them, more than 30% of the elderly aged 65 or older responded with alienation and loneliness, complaining of difficulties. Recently, as economic standards have risen and life has become more abundant, interest in pursuing the quality of life in old age has been increasing, but solving the problem of the elderly has become increasingly difficult.

A new approach to the subjective health of the elderly is required. In older adults, health is a condition that does not interfere with their physical and social functions even if they have a disease that is not without any disease.

The subjective health status of the elderly influences the desire to acquire health-related knowledge and, consequently, facilitates good health practices. Therefore, this study focused on the fact that subjective health conditions affect mental health as well as physical aspects to identify the relationship between health behavior, depression, and quality of life.

This study was conducted to provide basic data on the development of arbitration to improve the quality of life by identifying factors that affect the quality of life of the elderly living alone due to the recognition of subjective health conditions.

The specific objectives of this study are as follows:

The general characteristics of elderly people living alone and the differences in health-related factors according to the recognition of subjective health conditions are identified.

Identify the factors that affect the quality of life of the elderly living alone due to the recognition of subjective health conditions.

## 3 Proposed Method

This study is a descriptive survey study that secondary analyzed the data of the 7th 2016-2018 National Health and Nutrition Survey to compare the factors of the quality of life of the elderly living alone according to the subjective health status recognition.

The subjects of the study were 1,074 elderly people living alone out of a total of 24269 persons subject to the 7th National Health and Nutrition Survey. The National Health and Nutrition Survey is a nationwide health and nutrition survey conducted on the basis of Article 16 of the National Health Promotion Act enacted in 1995. It was implemented every three years from 1998 to 2005, and has been implemented every year since 2007 to improve the timeliness of national statistics.

The National Health and Nutrition Survey collects survey data through a household member identification survey, a health survey, a checkup survey, and a nutrition survey. It produces statistics with representation and reliability at the national level of people's health, health behaviors, and food and nutrition. Through this, the purpose is to use it as basic data for health policies, such as setting and representing goals of the National Health Promotion Plan and developing health promotion programs.

Common characteristics include gender, age, education level, economic status, and occupation

status. The educational status was classified as "under-secondary", "middle school", "high school graduate", and "over-secondary" as education-level reclassifications. Total household income is "About what is the total household income in the last January, including wages, real estate income, interest, pensions, government subsidies, relatives or children's allowance? The respondents answered the question, "The amount of income ( ) million won. When asked, "Have you worked for more than an hour for income or worked as an unpaid family employee for more than 18 hours in the past week?" the answer "yes" was "job" and "no" was classified as "no job."

Among health-related factors, physical factors include the number of chronic diseases, the presence of activity restrictions, and the prevalence of obesity. Chronic disease numbers are hypertension, dyslipidemia, stroke, myocardial infarction, angina, osteoarthritis, rheumatoid arthritis, osteoporosis, pulmonary tuberculosis, asthma, allergic rhinitis, atopic dermatitis, cataracts, glaucoma, renal hypertrophy, renal disease. The presence or absence of activity restrictions was classified as a result of responding "Yes" or "No" to the question "Are you currently restricted from daily life and social activities due to health problems or physical or mental disorders?" Obesity prevalence was classified as underweight for those with a body mass index of 18.5kg/m2, normal for those with a body mass index of 18.5kg/m2, and obesity for those with a body mass index of 25kg/m2.

The psychological factor is stress. When asked, "How much stress do you usually feel in your daily life?" "I feel very much," "I feel a lot," and "I feel a little bit." It was divided into "little feeling."

The data analysis was weighted using the SPSS 22.0 program to generate and analyze composite sample plan files, and the significance level was 0,5. Depending on the subjective health status recognition, the degree of characteristics and factors of the elderly living alone was based on mistakes and weighted percentages, and comparisons between groups used cross-analysis and ANOVA. Factors affecting the quality of life of elderly people living alone due to the recognition of subjective health conditions were analyzed using linear regression analysis.

## 4 Experimental Results

### 4.1 Demographic Characteristics of Groups

The general characteristics of the subjects are as shown in Table 1. Subjective health status recognition showed significant differences in gender, age, education level, economic status, and occupation among the three groups "good", "normal" and "bad". All three groups had more women in gender. In all three groups, 75 years of age and older were the most. All three groups had the highest level of education below elementary school graduation. All three groups answered "middle" economic conditions. All three groups answered "no" with or without jobs.

**Table 1.** Demographic Characteristics of Groups

| Characteristics | | Good (N=171) | Middle (N=473) | Bad (N=430) | $x^2(p)$ |
|---|---|---|---|---|---|
| | | n(weight %)/ Mean | n(weight %)/ Mean | n(weight %)/ Mean | |
| Sex | Male | 70(27.3) | 121(46.1) | 71(26.6) | 42.92 (<.001) |
| | Female | 101(12.3) | 352(44.0) | 359(43.8) | |
| Age(yr) | 65-69 | 40(16.9) | 108(48.8) | 83(34.3) | 15.35 (0.010) |
| | 70-74 | 44(17.7) | 129(50.6) | 88(31.7) | |
| | 75+ | 87(14.9) | 236(40.5) | 259(44.6) | |
| Education | ≦Elementary | 105(13.5) | 310(40.9) | 346(45.5) | 49.92 |

| | | | | | |
|---|---|---|---|---|---|
| level | school | | | | (<.001) |
| | Middle school | 23(19.4) | 68(55.4) | 34(25.3) | |
| | High school | 22(19.6) | 57(52.3) | 30(28.1) | |
| | ≧College | 19(32.5) | 33(51.3) | 10(16.2) | |
| Economic satus | Low | 52(12.7) | 164(40.1) | 192(47.2) | 27.07 (<.001) |
| | Middle | 97(16.7) | 263(46.9) | 217(36.4) | |
| | High | 21(26.1) | 45(53.1) | 17(20.8) | |
| Economic activity | Yes | 59(21.0) | 136(47.0) | 86(32.0) | 12.11 (0.010) |
| | No | 110(14.2) | 332(43.6) | 334(42.2) | |

### 4.2 Physical & Psychological Factors of Groups

The results of comparing the physical and psychological factors of the target person to the three groups of "good", "normal" and "bad" in subjective health status recognition are shown in Table 2. Among the physical factors, differences between the three groups were found in the number of chronic diseases, whether they were restricted from activities, and whether they were obese. The number of chronic diseases was the highest in the "ordinary" group, while the number of chronic diseases was the highest in the "bad" group, with more than three to four. The most people in the "bad" group answered yes. Obesity prevalence was the highest in the "ordinary" group. Among psychological factors, stress was the highest in the "bad" group. The quality of life was the highest in the "good" group.

**Table 2.** Physical & Psychological Factors of Groups

| Characteristics | | | Good (N=171) | Middle (N=473) | Bad (N=430) | $F/x^2(p)$ |
|---|---|---|---|---|---|---|
| | | | n(weight %)/ Mean | n(weight %)/ Mean | n(weight %)/ Mean | |
| Physical factors | Number of chronic diseases | 1-2 | 89(22.3) | 198(48.3) | 123(29.4) | 76.97 (<.001) |
| | | 3-4 | 38(11.5) | 149(41.4) | 159(47.1) | |
| | | 5-6 | 10(5.8) | 55(39.4) | 93(54.8) | |
| | | 7+ | 0 | 17(28.7) | 41(71.3) | |
| | Activity Restrictions Status | Yes | 4(1.3) | 67(23.3) | 193(75.5) | 189.73 (<.001) |
| | | No | 166(20.6) | 404(51.2) | 233(28.2) | |
| | Obesity | Under-weight | 3(7.7) | 10(21.4) | 22(70.9) | 21.09 (0.001) |
| | | Normal | 108(18.5) | 260(45.0) | 217(36.5) | |
| | | Obesity | 58(13.5) | 195(45.9) | 186(40.6) | |

| | | | | | | |
|---|---|---|---|---|---|---|
| Psychological factors | Stress | Feel a lot | 4(7.8) | 9(14.2) | 36(77.9) | 93.02 (<.001) |
| | | Tend to feel a lot | 11(7.0) | 51(31.3) | 103(61.7) | |
| | | Tend to feel a little | 64(13.4) | 218(50.6) | 159(36.0) | |
| | | Feel little | 90(22.7) | 193(47.4) | 123(29.8) | |
| | Quality of life | | 0.96 | 0.91 | 0.72 | 3.43 (<.001) |

### 4.3 Influencing Factors on Quality of Life

The results of linear regression analysis with the number of chronic diseases, activity restrictions, prevalence of obesity, and stress as independent variables are as shown in Table 3. The factors influenced the quality of life of elderly people living alone, whose subjective health status was "good" group, were age, education level, and 18.5% (F=2.11 and p=0.021). It was higher for senior citizens aged 70 to 74 than for 75 years old, and the level of education was higher for senior citizens who answered middle school graduation than for senior citizens who answered college graduation. The factors that affected the quality of life of the elderly living alone, whose subjective health status was "normal" group, were activity restrictions, stress, and explanatory power of 14.2% (F=4.74, p<0.001). It appeared lower in the elderly who answered that there was a restriction on activity, and "I tend to feel a lot" and "I feel a little bit" than the elderly who answered, "I rarely feel it." The older people who answered, appeared lower. Factors affecting the quality of life of elderly people living alone, whose subjective health status is "bad" group, were age, number of chronic diseases, activity restrictions, obesity prevalence, stress, and 22.2% (F=7.56, p<0.001). It was higher in senior citizens aged 65 to 69 than in senior citizens aged 75 or older, and higher in senior citizens who answered 1 to 2 or 3 to 4 than those who answered 7 or more chronic diseases. It was lower in older adults with activity restrictions, and higher in older adults than in older adults with obesity prevalence. Stress is "a little bit." It was higher in older adults who answered "I hardly feel it."

**Table 3.** Influencing Factors on Quality of Life

| Model | | | β | SE | t | p | $R^2$ | F | p |
|---|---|---|---|---|---|---|---|---|---|
| Good | Age(yr) | 65-69 | -.005 | .019 | -.28 | .778 | 0.185 | 2.11 | 0.021 |
| | | 70-74 | .041 | .017 | 2.44 | .017 | | | |
| | | 75+ | 1.00 | | | | | | |
| | Education level | ≦Elementary school | -.011 | .021 | -.51 | .610 | | | |
| | | Middle school | .035 | .019 | 1.78 | .049 | | | |
| | | High school | .001 | .023 | .05 | .960 | | | |
| | | ≧College | 1.00 | | | | | | |
| Middle | Activity Restrictions | Yes | -.063 | .021 | -2.98 | 0.003 | 0.142 | 4.74 | <.001 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Status | No | 1.00 | | | | | | |
| | stress | Feel a lot | .005 | .049 | .10 | .918 | | | |
| | | Tend to feel a lot | -.057 | .021 | -2.69 | .008 | | | |
| | | Tend to feel a little | -.029 | .013 | -2.23 | .026 | | | |
| | | Feel little | 1.00 | | | | | | |
| Bad | Age(yr) | 65-69 | .094 | .022 | 4.16 | .000 | 0.222 | 7.56 | <.001 |
| | | 70-74 | -.004 | .026 | -.14 | .885 | | | |
| | | 75+ | 1.00 | | | | | | |
| | Number of chronic diseases | 1-2 | .154 | .044 | 3.49 | .001 | | | |
| | | 3-4 | .101 | .042 | 2.37 | .019 | | | |
| | | 5-6 | .083 | .044 | 1.89 | .060 | | | |
| | | 7+ | 1.00 | | | | | | |
| | Activity Restrictions Status | Yes | -.085 | .020 | -4.13 | .000 | | | |
| | | No | 1.00 | | | | | | |
| | Obesity | Underweight | -.038 | .044 | -.86 | .388 | | | |
| | | Normal | .052 | .021 | 2.52 | .013 | | | |
| | | Obesity | 1.00 | | | | | | |
| | Stress | Feel a lot | -.148 | .050 | -2.98 | .003 | | | |
| | | Tend to feel a lot | -.068 | .030 | -2.24 | .026 | | | |
| | | Tend to feel a little | -.011 | .023 | -.49 | .625 | | | |
| | | Feel little | 1.00 | | | | | | |

## 5 Conclusion

This study is a descriptive survey study to analyze the data of the 7th National Health and Nutrition Survey from 2016-2018 to compare the factors of the quality of life influencing the recognition of subjective health conditions of elderly living alone. A total of 1,074 people were identified for general characteristics, physical and psychological factors. The main findings of the study were gross income, stress, activity restrictions, and educational conditions that affected the lives of those who perceived subjective health status as 'good'. The factors that affected the quality of life of the person perceived as "normal" were age, gross income, stress, and activity restrictions. The factors that affected the quality of life of those perceived as "bad" were gross income, stress, the number of diseases and restrictions on activities.

Based on the factors presented in this study, it can be used as a basis for the development of an arbitration program to improve the quality of life suitable for each subject.

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**References**


1. Jeong, W.C., & Tae, M.O.: Study on moderating effect of subjective health state of elder who lives alone on the influence of those people's stratum consciousness on their depression. The Journal of the Korea Contents Association, 17(12) (2017) 426-436.
2. Heidari, M., & Shahbazi, S.: Effect of self-care training program on quality of life of elders. Iran Journal of Nursing, 25(75) (2012) 1-8.
3. Ranzijn, R., & Luszcz, M.: Measurement of subjective quality of life of elders. The International Journal of Aging and Human Development, 50(4) (2000) 263-278.
4. Thakur, R.P., Banerjee, A., & Nikumb, V.B.: Health Problems among the Elderly: A Cross. Sectional Study. Annals of medical and health sciences research, 3(1) (2013) 19-25.
5. Sarvimäki, A., & Stenbock-Hult, B.: Quality of life in old age described as a sense of well-being, meaning and value. Journal of advanced nursing, 32(4) (2000) 1025-1033.
6. Logsdon, R.G., Gibbons. L.E., McCurry, S.M., & Teri, L.: Assessing quality of life in older adults with cognitive impairment. Psychosomatic Medicine, 64(3) (2002) 510-519.
7. Anneli, S. & Stenbock-Hult, B.: Quality of life in old age described as a sense of well-being, meaning and value. Journal of advanced nursing, 32.4 (2000) 1025-1033.
8. Higgs, P., Hyde, M., Wiggins, R., & Blane, D.: Researching quality of life in early old age: the importance of the sociological dimension. Social Policy & Administration, 37.3 (2003) 239-252.
9. Borglin, G., Edberg, A. K., & Hallberg, I. R.: The experience of quality of life among older people. Journal of aging studies, 19(2) (2005) 201-220.
10. Brett, C. E., Gow, A. J., Corley, J., Pattie, A., Starr, J. M., & Deary, I. J.: Psychosocial factors and health as determinants of quality of life in community-dwelling older adults. Quality of Life Research, 21(3) (2012) 505-516.