

## Life Satisfaction Of Korean Elderly Parents According To Offspring Gender: A Kangwha Cohort Study

Review Article

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### Abstract

**Background:** The aging population trend is increasing globally and raises social concerns regarding life satisfaction of elderly people. Offspring are perceived to be a significant factor for Korean elderly people. This study identified whether elderly life satisfaction was related to offspring gender.

**Methods:** This cross-sectional study consisted of 2,875 respondents (male, 7,176; female, 1,699) aged 65 years or older from the Kangwha Cohort Study. Analysis of variance and linear regression model were used to analyze the association between offspring gender and life satisfaction. The variables related to life satisfaction were controlled for in the present study.

**Results:** Elderly Korean women who had son(s) and daughter(s) scored on average 6.491 points ( $p = 0.000$ ) higher on the Life Satisfaction Index (LSI) than women with no children. Parents who were 75-84 years old and had only son(s) scored on average 6.166 points ( $p = 0.034$ ) higher on the LSI than parents of the same age with no children after adjusting for age, marital status, occupation, education, chronic disease, smoking, and alcohol consumption.

**Conclusion:** Life satisfaction of elderly Korean parents varied according to offspring gender. The results may be related to ideology of the nuclear family, tradition of male child preference, importance of social support, and vulnerability of the social security system as Korean social cultural characteristics.

**Key Words:** Gender; Offspring; Life Satisfaction; Elderly; South Korea.

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### Introduction

The aging population trend is increasing globally. The most advanced welfare countries have become aging societies, in which 7% of the entire population is composed of older people. Koreans aged 65 years and older accounted for 11.3% (5,420,000 people) of the population in 2011. If this trend continues, the aging population rate is expected to be 14.3% in 2018 and 20.8% in

2026; thus, the Korean society will be considered an aged society and super-aged society, respectively [1].

This rapid increase in older people causes the elderly to comprise the majority of the population and increases social concern regarding the life satisfaction of the elderly. Life satisfaction, a term used since the 1960s, refers to the responses to individual and external factors (social, economic, and environmental). Measurement methods of life satisfaction vary according to researchers, and different detailed factors are used among the external factors [2].

Numerous studies to date have been conducted regarding factors pertaining to life satisfaction of the elderly. Generally, socio-economic status, subjective health and social support were reported to be important variables in life satisfaction of the elderly; [3-8] in Korea, economic status was especially important [9]. In addition, a gender gap regarding life satisfaction has been observed in the elderly [10,11]. Based on studies regarding life satisfaction factors of elderly Koreans, satisfaction related to offspring represented a measurement of successful aging [12].

Reports show that life satisfaction through the success of offspring and life reflected through offspring correlated with elderly life satisfaction [13,14]. Consequently, offspring were perceived to be a significant factor in the lives of elderly Koreans.

In this study, we identified whether elderly life satisfaction was related to offspring gender. The relationship between offspring

gender and elderly life satisfaction was analyzed. The offspring were divided into four groups; no children, only son(s), only daughter(s), and son(s) and daughter(s). The life satisfaction among the four groups was compared in order to identify whether a son preference exists in Korea [15,16] as in most Asian countries [17-22].

## Materials and Methods

### Data and Sample

The primary survey for the Kangwha Cohort was conducted in March 1985 [23-32]. Kangwha County is a rural island in South Korea located 50 km from Seoul with a mostly agricultural population. The population in 1993 was 71,116, and the number of residents who were ≥ 55 years of age in February 1985 was 9,378. Among them, 67.9% (or 6,372 residents) participated in the primary survey. In March 1994, a secondary survey, including interviews for demographic characteristics, Mini-Mental State Examination (MMSE), Activities of Daily Living (ADL), and Instrumental Activities of Daily Living (IADL), as well as Life Satisfaction Index (LSI), was performed. The present study used the data from the 'Kangwha Cohort Study' which was conducted in March 1994. Participants who provided insufficient information were excluded, and the final study population was 2,875 respondents (male, 7,176; female, 1,699) aged 65 years or older. The Institutional Review Board of Human Research of Yonsei University approved the study (Approval No. 4-2007-0182).

### Measures

The investigators interviewed each subject using a structured questionnaire for demographic characteristics, including age, sex, education, chronic disease, marital status, occupation, health behaviors (smoking and drinking), offspring gender, and LSI. Life

satisfaction was assessed by the LSI-A index, which was first prepared, validated, and published by Neugarten *et al* [33, 34]. The internal consistency reliability coefficient (Cronbach's alpha) was computed at 0.82 in a Korean study with 600 elderly subjects. Of the 20 items in the questionnaire, 12 items were positively worded; 0, 1, and 2 points were assigned to "disagree," "don't know" and "agree" answers, respectively. The scores that could be achieved from LSI-A ranged between 0 and 40 points. Offspring were divided into four groups: no children, only son(s), only daughter(s), and son(s) and daughter(s).

### Statistical analysis

Characteristics of the study sample were summarized by descriptive statistics such as mean, standard deviation (SD), and percentage. Analysis of variance and linear regression model were used to analyze the association between offspring gender and life satisfaction. All variables measured in the study were controlled for in our multivariate analysis. The adjusted variables were age, marital status, occupation, education, chronic disease, smoking, and alcohol drinking. A significance level of  $p < 0.05$  was used for all tests. Analyses were performed with SAS Windows version 9.1.

## Results

### Sample Characteristics

General characteristics are presented in Table 1. The survey consisted of a total of 2,875 participants. The mean LSI of the study participants was  $20.7 \pm 9.6$ . The mean age of the study participants was  $74.1 \pm 6.3$  years. The mean number of sons of the study participants was  $2.5 \pm 1.3$ . The mean number of daughters of the study participants was  $2.6 \pm 1.4$ . Most participants were female (59.5%), had no education (66.0%), had no chronic disease (59.1%), and were non-smokers (58.5%) and non-drinkers

**Table 1. Baseline characteristics of the study population**

| Characteristic             | Kangwha Cohort Study (n = 2,875) |
|----------------------------|----------------------------------|
| Mean ± SD                  |                                  |
| Age (years)                | 74.1 ± 6.3                       |
| Life Satisfaction Index    | 20.7 ± 9.6                       |
| <b>Number of Offspring</b> |                                  |
| Sons                       | 2.5 ± 1.3                        |
| Daughters                  | 2.6 ± 1.4                        |
| N (%)                      |                                  |
| <b>Chronic disease</b>     |                                  |
| Ever                       | 1,164 (40.5)                     |
| Never                      | 1,711 (59.5)                     |
| <b>Gender</b>              |                                  |
| Male                       | 1,176 (40.9)                     |
| Female                     | 1,699 (59.1)                     |
| <b>Marital status</b>      |                                  |
| Yes                        | 1,630 (56.7)                     |
| No                         | 1,245 (43.3)                     |
| <b>Occupation</b>          |                                  |
| Agriculture                | 2,394 (83.3)                     |
| Non-agriculture            | 481 (16.7)                       |
| <b>Education</b>           |                                  |
| No                         | 1,897 (66.0)                     |

|                         |              |
|-------------------------|--------------|
| Elementary              | 843 (29.3)   |
| High School             | 135 (4.7)    |
| <b>Smoking</b>          |              |
| Current                 | 944 (32.8)   |
| Former                  | 249 (8.7)    |
| Never                   | 1,682 (58.5) |
| <b>Alcohol drinking</b> |              |
| Drinker                 | 823 (28.6)   |
| Former                  | 160 (5.6)    |
| Non-drinker             | 1,892 (65.8) |

**Table 2. Life Satisfaction Index (LSI) according to gender**

| Offspring gender       | Total(n = 1978) |      |     |            | Male (n = 852) |      |      |        | Female (n = 1,126) |      |      |            |
|------------------------|-----------------|------|-----|------------|----------------|------|------|--------|--------------------|------|------|------------|
|                        | n               | Mean | SD  | p          | n              | Mean | SD   | p      | n                  | Mean | SD   | p          |
| No children            | 37              | 13.6 | 8.7 | < 0.0001** | 3              | 16   | 5.3  | 0.3291 | 34                 | 13.4 | 9    | < 0.0001** |
| Only son(s)            | 179             | 20.4 | 9.9 |            | 77             | 21.2 | 9.4  |        | 102                | 19.8 | 10.3 |            |
| Only daughter(s)       | 89              | 15.5 | 10  |            | 28             | 18.7 | 11.6 |        | 61                 | 14.1 | 8.8  |            |
| Son(s) and daughter(s) | 1673            | 21.2 | 9.4 |            | 744            | 21.4 | 8.9  |        | 929                | 21.1 | 9.8  |            |

\*p < 0.05, \*\*p < 0.01

**Table 3. Life Satisfaction Index (LSI) according to age group**

| Offspring gender       | 65-74 years (n = 1,239) |      |      |          | 75-84 years (n = 643) |      |      |            | 85+ years (n = 96) |      |      |        |
|------------------------|-------------------------|------|------|----------|-----------------------|------|------|------------|--------------------|------|------|--------|
|                        | n                       | Mean | SD   | p        | n                     | Mean | SD   | p          | n                  | Mean | SD   | p      |
| No children            | 23                      | 13.6 | 7.1  | 0.0002** | 13                    | 13.2 | 11.5 | < 0.0001** | 1                  | 19   | 0    | 0.0642 |
| Only son(s)            | 119                     | 20.6 | 9.8  |          | 54                    | 19.9 | 10.2 |            | 6                  | 22   | 11.7 |        |
| Only daughter(s)       | 52                      | 17.9 | 10.6 |          | 29                    | 11.7 | 8    |            | 8                  | 14.1 | 7.8  |        |
| Son(s) and daughter(s) | 1045                    | 21.2 | 9.5  |          | 547                   | 21   | 9.3  |            | 81                 | 23.2 | 8.9  |        |

\*p < 0.05, \*\*p < 0.01

(65.8%).

**Comparison of LSI According to Offspring Gender**

The LSI score for the four different offspring groups (no children, only son(s), only daughter(s), and son(s) and daughter(s)) are displayed in Table 2 (gender groups) and Table 3 (age groups). The son(s) and daughter(s) group had a significantly higher LSI score than the other groups. Women who had only son(s) had a 5.7 point higher LSI score than women who had only daughter(s). In all age groups, the son(s) and daughter(s) group had a higher LSI score than the other groups.

**Adjusted Association between Offspring Gender and LSI**

The LSI score for the four different offspring groups is displayed in Table 4. In multivariate analysis, the no children group was used as the reference group. Women who had only son(s) scored an average 5.702 points (p = 0.003) higher on the LSI than the reference group, after adjusting for age, marital status, occupation, education, chronic disease, smoking, and alcohol drinking. Women who had son(s) and daughter(s) scored an average 6.491 points (p = 0.000) higher on the LSI than the reference group, after adjusting for the same covariates. No significant interaction effects were found between offspring gender and LSI among men. Parents who were 65-74 years old and had only son(s) scored an average 6.151 points (p = 0.005) higher on the LSI than the reference group. Parents who were 65-74 years old and had both son(s) and daughter(s) scored an average 6.511 points (p = 0.001) higher on

**Table 4. Life Satisfaction Index (LSI) according to offspring gender**

| Offspring gender       | Total     |            | Male      |       | Female    |         | 65-74 years |         | 75-84 years |        | 85+ years |       |
|------------------------|-----------|------------|-----------|-------|-----------|---------|-------------|---------|-------------|--------|-----------|-------|
|                        | LSI       | p          | LSI       | p     | LSI       | p       | LSI         | p       | LSI         | p      | LSI       | p     |
| No children            | reference |            | reference |       | reference |         | reference   |         | reference   |        | reference |       |
| Only son(s)            | 5.917     | 0.001**    | 2.891     | 0.584 | 5.702     | 0.003** | 6.151       | 0.005** | 6.166       | 0.034* | 3.464     | 0.751 |
| Only daughter(s)       | 1.068     | 0.562      | 0.906     | 0.868 | -0.252    | 0.904   | 3.263       | 0.17    | -1.807      | 0.564  | -6.586    | 0.529 |
| Son(s) and daughter(s) | 6.373     | < 0.0001** | 3.008     | 0.562 | 6.491     | 0.000** | 6.511       | 0.001** | 6.609       | 0.013* | 3.307     | 0.740 |

\*p < 0.05, \*\*p < 0.01, \* Adjusted for age, marital status, occupation, education, chronic disease, smoking, and alcohol drinking

the LSI than the reference group. Parents who were 75-84 years old and had only son(s) scored an average 6.166 points ( $p = 0.034$ ) higher on the LSI than the reference group after adjusting for the same covariates.

## Discussion

In this study, we analyzed elderly life satisfaction according to offspring gender and age in Korea. In general, the son(s) and daughter(s) group was highest in life satisfaction, followed in descending order by the only son(s), only daughter(s), and no children groups. This result reflected the ideology of a nuclear family, tradition of male child preference, importance of social support, and vulnerability of social security system as Korean social cultural characteristics.

### Ideology of a Nuclear Family

First, the life satisfaction of elderly parents with offspring was higher than parents without offspring. This result was related to the regional characteristics of Kanghwa County, which is mainly a farming community. In a traditional agricultural society, children represent an available workforce and are indispensable for family succession. At the time of the investigation in 1993, industrialization was somewhat advanced, and there was a widespread ideology of a nuclear family in South Korea. A nuclear family, by definition, is composed of heterosexual parents and their children, with the father and mother conducting traditional roles (instrumental role and expressive role, respectively) [35]. According to the nuclear family ideology, children of a single-parent family may be abnormal and their life satisfaction could be low.

### Male Preference

The reason why the life satisfaction of the only son(s) group was higher than the only daughter(s) group may be related to male preference and women's low status in Korea. Recently, the male preference has declined among young parents in the Korean society, and thus there is a new saying, "foolish father loving daughter." According to Chung and Gupata (2007), the decline in male preference is due to norm changes and improvement in urbanization and education [36]. However, in 1993, older people in rural areas had the traditional preference for a son because they were the generation who thought highly of the paternal line, and having a son was an important factor in life satisfaction.

If there was (were) son(s), the life satisfaction of the female parent was higher than the male parent. This result could be due to the woman's status in Korean society, which was guaranteed only through birth of a son. Wilson *et al.* reported that men prefer instrumental support while women prefer emotional support.[37] For female elderly parents, existence of a son implies not only the securing of instrumental support for living costs, but also emotional support for occupying a more stable position in the family. The elderly parents' daughters in their third and fourth decades of life largely lived in urban areas apart from their parents and did not have a formal obligation to support them. Most of the daughters could not afford to provide instrumental support to their parents because they could not engage in economic activities due to childbirth and rearing.

### Social Support

The result that the life satisfaction of the son(s) and daughter(s) group was highest shows that emotional support and instrumental support were important for elderly life satisfaction. Social support is generally classified into two categories, instrumental role and expressive (or emotional) role. While instrumental support refers to the various types of tangible help that others may provide (e.g., money, information), expressive (or emotional) role refers to what people do that make us feel loved and cared for and bolsters our sense of self-worth (e.g., talking over a problem, providing encouragement/positive feedback) [38]. For example, a son has an instrumental role in the provision of a living cost or allowance to his parents, and a daughter has an expressive (or emotional) role in the exchange of personal information with her parents; thus, the life satisfaction of the son(s) and daughter(s) group was highest among the four groups.

### Social Security System

The result that life satisfaction of the only daughter(s) group was the lowest among the four groups and was lower than the no children group appears relevant to the Korean social security system, under which elderly people with offspring cannot receive any social security benefits, even if their daughter has no economic capacity to support them. In other words, the parents in the only daughter(s) group did not receive instrumental support from their offspring as in the other groups with sons and did not get social security benefits because of the existence of female offspring, unlike the no children group.

## Conclusion

The life satisfaction of elderly Korean parents varied according to offspring gender. Life satisfaction of Korean elderly parents was highest in the son(s) and daughter(s) group and lowest in the only daughter(s) group. This result could be explained by the ideology of the nuclear family, tradition of male child preference, importance of social support, and vulnerability of the social security system as Korean social cultural characteristic.

This study has strengths in that offspring presence is an important and influential factor on elderly life satisfaction, and further, elderly life satisfaction varies according to the offspring gender. However, this study has several limitations. First, the Kangwha Cohort data targeted the elderly in a local area; thus, the results cannot be generalized to the entire elderly Korean population. Second, we could not identify causal relationships between variables because the data used in 1994 were cross-sectional. In future studies, social economic status such as house income and social support (support money from offspring, offspring visit) should be included. Third, according to advanced studies on the validity of self-reports, social desirability in the process of collecting data may be a problem [39,40]. The data used were subjective with regard to how elderly life satisfaction varies according to offspring gender, but over-reporting is negligible because the reliability was higher due to the skilled interviewers. Finally, the number of people 85 years of age and older was relatively low; thus, the analytical interpretations were insufficient. Future studies should address these limitations.

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