



Original Article

Effect of health consciousness behavior and health-promoting behavior on the quality of life in elders in South Korea

NAM HYUN CHA, PhD¹⁾

¹⁾ Department of Nursing, Andong National University: 1375 Gyeongdong-ro, Andong-si, Gyeongsangbuk-do 36729, Republic of Korea

Abstract. [Purpose] This study aimed to examine the correlation between health consciousness behavior and health-promoting behavior and quality of life, and to examine the factors affecting the quality of life for elders in South Korea. [Participants and Methods] This study is a cross-sectional study. A total of 191 respondents were selected through convenient sampling. Data were collected with a self-reported questionnaire from August 20 to September 20, 2019. [Results] Differences in health consciousness behavior and health-promoting behavior according to general characteristics and health behavior were as follows. Health consciousness behavior was significantly different according to gender, age, education, religion, occupation, exercise, smoking, drinking, health checkup. Health health-promoting behavior was significantly different according to gender, age, education, stress, health status, drinking. Quality of life was significantly different according to education, stress, health status, exercise, drinking. There was a positive correlation between health-promoting behavior and quality of life. Fifty three point zero percent of the variance in quality of life was explained by health-promoting behavior, health status and exercise. [Conclusion] The findings of this study may be useful in understanding the quality of life for elders and developing more specific programs about health-promoting behavior programs and health status and exercise management strategy is required.

Key words: Health behavior, Health promotion, Quality of life

(This article was submitted Jul. 6, 2020, and was accepted Aug. 19, 2020)

INTRODUCTION

Older people may experience lower life satisfaction and quality of life due to weakened physical, mental and economic abilities, as well as weakened social relationships and support systems¹⁾. Therefore, efforts should be made to prevent diseases, maintain and promote health by actively managing one's health. This is because the quality of life is higher for groups with high levels of health and self-prevention of diseases and good health-promoting behavior^{2, 3)}. Further, health conscious behaviors such as exercise, smoking, drinking, and health examination are health-impacting health behavior⁴⁾, and health-promoting behavior can prevent and reduce the occurrence of health problems and protect individual health, minimizing functional disorders caused by aging, and improving self-health management ability through personal lifestyle and health promotion, thereby improving the quality of life for the elderly. Older people's health is very highly correlated with life satisfaction and affects successful aging and is an important variable in life satisfaction⁵⁾. Taking desirable lifestyle behaviors with positive thinking about health is a health promotion act and its influence on the quality of life of the elderly in times of social and domestic contraction as they enter the twilight of life is very great⁶⁾.

There were not many leading papers on health consciousness behavior and health promotion for the elderly, including

Corresponding author. Cha Nam Hyun (E-mail: yeoreo@daum.net)

©2020 The Society of Physical Therapy Science. Published by IPEC Inc.



This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial No Derivatives (by-nc-nd) License. (CC-BY-NC-ND 4.0: <https://creativecommons.org/licenses/by-nc-nd/4.0/>)

analysis of factors related to health consciousness behavior, research on the quality of life and performance of daily life⁷), and few prior studies on health consciousness behavior, health-promoting behavior, and differences in quality of life for the elderly who have a weak coping with aging. Also, it was thought that it was necessary to collect samples from more diverse regions to collect data that could be generalized, as most studies were limited to those respondents to some limited areas.

In this study, I think that checking the difference, relationship and influence of quality of life according to health consciousness behavior and health-promoting behavior of the elderly can help the elderly to know their participants health condition, improve their understanding of themselves, and improve their quality of life. The purpose of this study was to identify whether the health consciousness behavior of the elderly is positive and checking the differences and relationships between health promotion activities and quality of life.

PARTICIPANTS AND METHODS

This study is a cross-sectional study. This study was approved by the Institutional Bioethics Committee of the Andong National University (approval number 1040191-201908-HR-007-01). The participants were fully briefed before the study and provided informed consent. The participants were 191 elders (gender: 64 male, 127 female; age: ≥ 65 years) who lived in three cities and nearby rural areas in South Korea and can communicate. The participants were aged 65 or older who visit senior citizens' home and classrooms and were allowed to participate in the research. The data collection period was implemented for one month from August to September 2018.

The study questionnaire was designed to measure general characteristics, health consciousness behavior, health-promoting behavior, quality of life. General characteristics consisted of variables that gender, age, educational level, religion, occupation, housing holdings, stress, health status, exercise, smoking, drinking, health checkup with a total 11 items. The question on health consciousness developed by the Disease Control and Prevention Center in South Korea. It consisted of a total of 4 questions using a 1-point scale. The possible score range was 0 to 4, and the higher the score of the respondent was, the higher their level of health consciousness. Health-promoting behavior developed by Sohn⁸) was revised by Seo⁹), was used. It consisted of a total of 13 questions using a 5-point scale. The possible score range was 13 to 65, and the higher the score of the respondent was, the higher their level of health-promoting behavior. Cronbach's alpha reliability coefficient for this instrument was 0.89. Quality of life developed by Paik & Choi¹⁰) was revised by Seo⁹), was used. It consisted of a total of 17 questions using a 5-point scale. The possible score range was 17 to 85, and the higher the score of the respondent was, the higher their level of quality of life. Cronbach's alpha reliability coefficient for this instrument was 0.91.

For statistical analysis, the SPSS software version 23.0 for Windows was used. The general characteristics of the participants were analyzed by frequency and percentage, mean and standard deviation, and the difference between the variables according to the general characteristics were analyzed by independent t-test, one-way ANOVA, and post verification. The relationship between variables, it was analyzed using Pearson Correlation Coefficients and Multiple Regression were conducted to identify factors affecting the quality of life. The statistical significance level was set at $p < 0.05$.

RESULTS

The general characteristics of participants are shown in Table 1. Among the general characteristics of the study respondents, 33.5% were male and 66.5% were female, and the age was 46.1% in their 70s, 41.4% in their 60s, and 12.5% in their 80s. Education was ranked in the order of middle and high school graduates (50.3%), elementary school graduates (21.5%), college graduates (18.8%), and no studies (9.4%), followed by affiliated with a religion (84.7%), jobless with 71.2%. Further, most people owned homes (83.8%), stress was found to be in the order of neither high nor low stress (45.6%), slight and very little stress very feeling (37.1%), and Very high and high stress high-feeling (17.3%), health was similar (45.5%), good (35.1%), and bad (19.4%). Health behaviors were mostly positive, with 72.8 percent of the elderly carrying out the exercise, 91.1 percent of the elderly not smoking, 67.5 percent of the elderly not drinking and 87.4 percent of the elderly carrying out medical checkups.

Differences in health consciousness behavior, health-promoting behavior, quality of life according to general characteristics of participants are shown in Table 1. It was gender, age, education, religion, occupation, exercise, smoking, drinking, health check-up that showed a significant difference in health consciousness behavior according to general characteristics. It was gender, age, education, stress, health status, drinking that showed a significant difference in health-promoting behavior according to general characteristics. It was education, stress, health status, exercise that showed a significant difference in the quality of life according to general characteristics.

The health consciousness behavior was not significant with health-promoting behavior and quality of life. But health-promoting behavior was found a significantly positive correlation ($r=0.56$, $p<0.001$) between quality of the life (Table 2).

The investigate the influencing factors of elders, general characteristics variables, which were nominal variables, were transformed into dummy variables, and multiple regression analysis. The factor that significantly affected the quality of life were health-promoting behavior ($\beta=0.62$, $p<0.001$), health status ($\beta=0.20$, $p=0.003$), and exercise ($\beta=0.28$, $p=0.004$). The explanation ability of these factors was 53.0% (Table 3).

Table 1. Difference of the health consciousness behavior, health-promoting behavior and the quality of life by general characteristics and health behavior (n=191)

Variables	Categories	n (%)	Health consciousness behavior		Health promotion behavior		Quality of life		
			M ± SD	p	M ± SD	p	M ± SD	p	
General characteristics	Gender	Male	64 (33.5)	2.57 ± 0.96	<0.001	48.69 ± 5.34	0.013	57.34 ± 8.72	0.052
		Female	127 (66.5)	3.20 ± 0.62		51.38 ± 7.28		60.65 ± 11.05	
	Age (yrs)	≤ 69	79 (41.4)	2.69 ± 0.74	0.001	49.20 ± 6.12	0.012	59.13 ± 9.77	0.739
		70–79	88 (46.1)	3.09 ± 0.77		50.78 ± 7.01		59.35 ± 10.59	
		≥ 80	24 (12.5)	3.42 ± 0.87		54.20 ± 7.26		61.09 ± 11.26	
		Uneducated	18 (9.4)	3.58 ± 0.51		53.86 ± 7.23		58.67 ± 12.58	
	Education level†	Elementary school	41 (21.5)	3.52 ± 0.73	<0.001	51.35 ± 8.93	0.001	61.30 ± 12.61	0.032
		Middle and high school	96 (50.3)	2.75 ± 0.77		48.66 ± 5.89		57.86 ± 10.17	
		≥University	36 (18.8)	2.77 ± 0.68		53.53 ± 4.66		63.88 ± 6.45	
	Religion†	Catholic	82 (42.9)	3.35 ± 0.75	<0.001	51.38 ± 8.06	0.227	61.06 ± 11.97	0.114
		Protestantism	53 (27.7)	3.05 ± 0.65		51.35 ± 5.63		59.65 ± 8.18	
		Buddhism	27 (14.1)	2.64 ± 0.73		49.00 ± 5.62		60.63 ± 10.27	
	Occupation	No	29 (15.3)	2.24 ± 0.66	0.004	48.44 ± 6.13	0.284	54.00 ± 10.34	0.939
		Yes	136 (71.2)	3.08 ± 0.82		51.00 ± 7.30		59.57 ± 10.86	
	Housing holdings	No	55 (28.8)	2.67 ± 0.72	0.951	49.75 ± 5.96	-0.946	59.43 ± 10.58	0.055
		Yes	160 (83.8)	2.93 ± 0.78		50.44 ± 7.05		60.44 ± 10.71	
	Stress†	Owner	31 (16.2)	2.94 ± 0.83	0.107	50.57 ± 5.77	<0.001	55.24 ± 8.09	<0.001
		Very high stress	9 (4.7)	3.40 ± 0.55		52.86 ± 8.47		57.43 ± 13.72	
		High stress	24 (12.6)	2.63 ± 0.68		46.50 ± 6.29		52.64 ± 7.17	
		Neither high nor low stress	87 (45.6)	2.97 ± 0.89		49.28 ± 5.49		58.12 ± 9.19	
Health status†	Slight stress	35 (18.3)	2.93 ± 0.66	0.097	52.16 ± 5.93	0.009	62.00 ± 8.58	<0.001	
	Very little stress	36 (18.8)	3.25 ± 0.79		53.97 ± 8.83		65.31 ± 12.13		
	Very bad	11 (5.8)	3.00 ± 0.00		51.40 ± 10.35		59.40 ± 10.06		
	Relatively bad	26 (13.6)	3.40 ± 0.94		49.78 ± 6.54		55.80 ± 9.06		
	Similar to others	87 (45.5)	2.97 ± 0.81		48.91 ± 6.86		56.37 ± 9.73		
Health status†	Comparatively good	60 (31.4)	2.79 ± 0.77	0.009	52.15 ± 5.33	0.009	63.5 ± 9.09	<0.001	
	Very good	7 (3.7)	3.00 ± 0.63		56.57 ± 8.10		69.71 ± 12.63		
Health behavior	Exercise	Yes	139 (72.8)	3.83 ± 0.66	<0.001	50.89 ± 6.43	0.127	60.62 ± 10.30	0.008
		No	52 (27.2)	2.70 ± 0.66		49.10 ± 7.06		55.34 ± 9.95	
	Smoking	Yes	17 (8.9)	1.40 ± 0.70	<0.001	47.30 ± 4.32	-0.190	54.90 ± 9.47	0.123
		No	174 (91.1)	3.09 ± 0.70		49.86 ± 5.62		60.01 ± 10.10	
	Drinking	Yes	62 (32.5)	2.12 ± 0.70	<0.001	48.09 ± 5.16	0.003	56.28 ± 8.93	0.014
		No	129 (67.5)	3.32 ± 0.56		51.56 ± 7.28		60.83 ± 11.05	
	Health check up	Yes	167 (87.4)	3.08 ± 0.76	0.001	50.17 ± 7.01	0.261	58.94 ± 10.15	-0.331
		No	24 (12.6)	2.87 ± 0.74		52.27 ± 4.91		61.67 ± 11.84	

M: Mean; SD: Standard Deviation. †: Scheffé test.

DISCUSSION

Looking at the differences in health-conscious behavior were associated with female elders, (those in their 70s and 80s were more positively correlated than those in their 60s), those with lower education levels, those with a religion, those without jobs, non-smokers, and non-drinkers. Positive health-promoting behavior was associated with women, elders with higher education levels¹, those with a religion, less stress, those who perceived their health conditions, and those who do not smoke nor drink. The difference in the quality of life by general characteristics is when the level of education is high. The

Table 2. Correlations among the health consciousness behavior, health-promoting behavior and the quality of life (n=191)

Variables	Health consciousness behavior	Health-promoting behavior	Quality of life
	p	p	p
Health consciousness behavior	1		
Health-promoting behavior	0.21	1	
Quality of life	0.81	0.56***	1

***p<0.001.

Table 3. Predictive variables for participant's the quality of life (n=191)

Variables	B	SE	β	p
(Constant)	8.84	5.95		0.140
Health consciousness behavior	2.14	1.75	0.16	0.226
Health-promoting behavior	0.72	0.08	0.62	<.001
Health status†	2.65	0.88	0.20	0.003
Stress†	-3.33	5.31	-0.04	0.532
Education†	-1.64	2.59	-0.04	0.529
Exercise†	7.54	2.59	0.28	0.004
Drinking†	-3.00	2.58	-0.13	0.248

Adjustive R² =0.53, p<0.001

†Dummy variables ((Health status: Very good=0, Comparatively good=1, Similar to others=2, Relatively bad=3, Very bad=4), (Stress: Very high stress=0, High stress=1, Neither high nor low stress=2, Slight stress=3, Very little stress=4), (Education: Uneducated=0, Elementary school=1, Middle and high school=2, University=3), (Exercise: Yes=0, No=1), (Drinking: Yes=0, No=1)). B: Unstandardized Coefficient B; SE: Unstandardized Coefficient Standard Error; β : Standardized Coefficient Beta.

quality of life was high in elderly people who exercise and non-drink when they felt less stress and responded that they were in good health.

The health-promoting behavior of the respondents was found to be correlated with the quality of life and quantity, and a prior study^{1, 2, 11, 12)} was supported suggesting that the quality of life and health-promoting behavior of the elderly were highly correlated.

Therefore, the factors affecting the quality of life were health-promoting behavior, health condition, and exercise, and the model's ability to explain was 53.0%. This is thought to be the result of the high quality of life contribution to improving the quality of life¹³⁾ due to the high scores of health-promoting behavior and the positive respondents health condition of the study respondents¹¹⁾, the access to health information and the ability to manage their own health problems through exercise. In the words, regular exercise, no smoking, no drinking, and health check-ups are bound to help improve health conditions⁸⁾ and health by lowering the likelihood of disease outbreaks and maintaining long-term health¹⁴⁾. This is because the importance of health to the elderly is fundamental and essential to maintaining an absolute, happy and desirable life^{1, 12)}, which is believed to lead to a high awareness of the satisfaction and quality of life that the elderly feel subjectively.

In conclusion, in order to improve the quality of life for the elderly, positive health-conscious behaviors of the elderly themselves should be maintained independently, and local governments and the state should support the improvement of the lifestyle and active participation in the development of education and exercise programs in the future so that they can practice health-promoting behaviors and exercises for the poor elderly to improve their quality of life.

The generalizability of this study's results is a little limited since the participants were recruited from three cities and nearby rural areas in South Korea, which limited the characteristics of the resulting data. Therefore, replication of this study using larger samples drawn from elders in both the same and different regions of the country is recommended to confirm the generalizability of the results.

Funding

The research was supported by a grant from 2019 subsidy for overseas dispatch research of Andong National University.

Conflict of interest

The author declare that they have no competing interests.

REFERENCES

- 1) Xavier FM, Ferraz MP, Marc N, et al.: Elderly people's definition of quality of life. *Br J Psychiatry*, 2003, 25: 31–39. [[Medline](#)] [[CrossRef](#)]
- 2) Jung JP, Lee ER, Sin MS: The health of the elderly impact on quality of life. *J Korean Acad Health Welf Elder*, 2012, 4: 51–61.
- 3) Lis K, Reichert M, Cosack A, et al.: Evidence-based guidelines on health promotion for older people: social determinants, inequality and sustainability. Innsbruck: Fonds Gesundes Österreich; 2008, 20.
- 4) Lee JY: The past and future of health promotion projects in public health centers. *J Korean Soc Health Educ Promot*, 2007, 24: 135–148.
- 5) Cha NH, Seo EJ, Sok SR: Factors influencing the successful aging of older Korean adults. *Contemp Nurse*, 2012, 41: 78–87. [[Medline](#)] [[CrossRef](#)]
- 6) Cha NH, Seo EJ: Factors influencing productive activity and physical and psychological ability. *J Korean Acad Comm Heal Nurs*, 2010, 21: 128–138. [[Cross-Ref](#)]
- 7) Kim JY, Lee SG, Lee SK: The relationship between health behaviors, health status, activities of daily living and health related quality of life in the elderly. *J Korean Gerontol Soc*, 2010, 30: 471–484.
- 8) Sohn HH: An ecological approach to study the health promotion behavior of the elderly in Kanseo-ku, Kangnam-ku, Seoul. *Fam Environ Res*, 2004, 42: 77–92.
- 9) Seo OS: The relationship between health promotive behavior and quality of life of single elderly female family of rural area. Unpublished master's thesis, Hanseo University, 2007.
- 10) Paik JE, Choi HK: Successful aging according to Korean elderly: the definition, types, and predicting variables. *J Korean Home Manage Assoc*, 2005, 23: 1–16.
- 11) Kim WK: The relationship among health promotion behavior, health status, and quality of life of elderly. *Korean J Sport Sci*, 2012, 21: 89–98.
- 12) Sheila PB, Marky SL: Health-promoting behaviors and quality of life of filipino older persons. *Asia Pacific Journal of Education Arts Sci*, 2014, 1: 11–20.
- 13) Netuveli G, Blane D: Quality of life in older ages. *Br Med Bull*, 2008, 85: 113–126. [[Medline](#)] [[CrossRef](#)]
- 14) Kim IS: Interest in the changing health standards and forms of Koreans. *Health and Welfare Forum*, 2002, 80: 2–3.