

The Mediating Effect of Wisdom in the Relationship between Self-leadership and Quality of Service of Caregivers caring for Patients with Impaired Mobility and Elderly with Dementia

Hee Kyung Kim

Professor, Department of Nursing, Kongju National University, Gongju, Republic of Korea

Abstract

Background/Objectives: The purpose of this study is to analyze the mediating effect of wisdom in the relationship between self-leadership and quality of service in caregivers who provide nursing services to patients and elderly.

Methods/Statistical analysis: The subjects of this study were 96 caregivers from January to February 2021. Data analysis is performed using SPSS Win 25.0 program, and were analyzed by correlation between variables by Pearson correlational coefficients, and factors affecting service quality and mediating effects by multiple linear regression and Sobel test.

Findings: As a result of regression analysis to test the mediating effect of wisdom, in step 1, self-leadership had a significant effect on wisdom ($\beta=.73$, $p<.001$), in step 2, self-leadership affected the quality of service ($\beta=.59$, $p<.001$), in step 3, self-leadership had a positive effect on the quality of service ($\beta=.26$, $p=.022$), and wisdom also had a positive effect on the quality of service ($\beta=.46$, $p<.001$) and showed 44.9% explanatory power. It was found that wisdom has a partial mediating effect.

Improvements/ Applications: Education and training are needed to increase self-leadership and wisdom in caregivers in charge of visiting care. In particular, caregivers need to make efforts to acquire wisdom in their daily lives.

Keywords: *Self-leadership; Quality of service; Wisdom; Dementia; Elderly; Caregivers; Mediating effect*

Introduction

Due to the rapid aging of Korea, the population aged 65 or older in 2020 is 15.7%, and it will continue to increase in the future, and by 2025, it is expected to reach 20.3%, entering a super-aged society. In 2019, the proportion of people over 65 who are satisfied with their current life was 25.0%, a decrease of 4.9% compared to the previous year, and the elderly showed lower life satisfaction compared to all age groups^[1]. To analyze the

cause of this situation, in the 2017 survey on the elderly, more than 75% of the elderly have two or more chronic diseases^[2] and complex chronic diseases require continuous treatment and management, increasing the burden of public expenditure and personal out-of-pocket medical expenses. Moreover, it is difficult for the elderly of the low-income class to use sufficient medical care even though their health status is worse^[3]. These physical disorders lead to depression and helplessness, leading to poor quality of life.

Therefore, systematic and continuous provision of care in daily life can help maintain and promote the health of patients or the elderly. The Health Insurance Corporation determines the level of the person who will be eligible for nursing care, and provides assistance to patients who have difficulty in maintaining their daily life because of

Corresponding Author:

Hee Kyung Kim

Dept. of Nursing, Kongju National University, Gongju, Republic of Korea

Email: hkkim@kongju.ac.kr

their mobility, and in the case of elderly with dementia, it is judged as 4th and 5th grade and institutionalized so that they can receive care by caregivers at home.

In Korean culture, the elderly prefer to live in their own home rather than move to a care institution to receive care, and their families also want caregivers to visit their homes to provide services, unless they have to rely on high-quality hospital-centered care. The caregivers, who will perform these tasks, are the primary care workers providing direct services to long-term care recipients. It is contributing to the improvement of the quality of life of the people by supporting physical and household activities, reducing the burden on the family, and helping those who have difficulty living alone due to the elderly or senile diseases^[4]. Since the nursing services they provide are very important to the health of the subject, education and research must be accumulated so that high quality services can be provided. Quality of service refers to the performance of a service with the attributes of reliability, responsiveness, ability, accessibility, courtesy, communication, honesty, stability, understanding and tangibility^[5].

As a result of analyzing previous studies on factors necessary for caregivers to increase the quality of service, job commitment and self-leadership are highly correlated with job competency, and self-leadership has an important mediating effect in the relationship between job commitment and job competency^[6]. In addition, caregivers' job competency and wisdom were highly correlated and were a major influence factor^[7,8]. Therefore, it can be inferred that the roles of self-leadership and wisdom will be very important for caregivers to increase quality of service with job competency. And as a result of a study on caregivers' self-leadership affected the quality of service, and constructive thinking, action-oriented strategies, and natural reward strategies, which are sub-domains of self-leadership, were found to affect quality of service, and leadership explained quality of service by 39.1%^[9].

Moreover, as most caregivers are middle age and old adults, the wisdom of middle-aged adults and interpersonal relationship harmony and productivity showed a high correlation, and wisdom appeared to have a mediating effect on the sense of crisis and productivity in the middle-aged^[10], it can be expected that the wisdom

attitude of caregivers will smooth relationships with the subject and provide their own services productively. Also, wisdom was an important factor in the health preservation of the elderly^[11], and as it is thought that wise people will maintain good health and provide services well, so wisdom was included. Wisdom is an element that caregivers must have when performing their duties as they increase their ability to accept life and establish relationships with others with problem-solving and insight^[7]. In case of wise caregivers, it is thought that they can provide care to the elderly with a positive attitude, sympathy, and balance.

Therefore, the researcher investigated the relationship between self-leadership and wisdom targeting caregivers in charge of visiting care, and by analyzing the mediating effect of wisdom in the relationship between self-leadership and quality of service, this study aimed to improve the quality of service of caregivers.

Materials & Methods

Subjects

The subjects of this study were 96 caregivers who belong to 3 nursing home care centers for the elderly located in D City. The number of study subjects was calculated using the G-power 3.1.9.4 program. The number of samples required to maintain 2 predictors, effect size of .15, significance level of .05, and power of .90 was 88, and 96 people were surveyed considering the dropout rate of 10%.

Instruments

Self-leadership

The self-leadership tool of Prussia, *et al.* modified and supplemented by Koh^[12] was used. With a total of 20 questions, the higher the score, the higher the degree of self-leadership. Cronbach's α was .94 in the study of Kim^[6], and .92 in this study.

Wisdom

The Korean wisdom scale (KMWS) developed by Kim^[13] was used. A total of 43 questions consisted. The higher the score, the higher the degree of wisdom. At the time of development, Cronbach's α = .93, and in this study was .98.

Quality of service

The 'SERVQUAL' scale developed by Parasuraman *et al.*^[5] used for caregivers by Jung^[14] was used. The tool was composed of five factors including, reliability, responsiveness, assurance, empathy, and tangibility, with a total of 20 questions. In the study of Jung^[14], Cronbach's α was .97, and in this study, it was .95.

Data collection

The researcher and research assistant directly visited the 3 elderly home visiting care centers located in D city, explained the purpose and method of the research to the center director, and obtained permission, and after meeting with the center director, the research purpose, method, and especially the data collection method were explained, and the research purpose was explained to the caregivers through the center director, and the questionnaire was completed after receiving a written consent. It took about 10-15 minutes to complete each questionnaire.

Ethical Consideration

Approval was acquired by the ethics committee of K University on the objective, methodology and protection of rights of participants (KNU_IRB_2020-99). During the study period the guidelines on ethical studies were observed. The consent form included details on anonymity and confidentiality, and it was explained that participation in the study can be stopped at any time if he/she wants to discontinue the study even after consenting to participate in the study according to his or her voluntary will, and that there is no disadvantage.

Data analysis

Using the SPSS/WIN 25.0 program, the frequency, percentage, mean and standard deviation of each variable were calculated, and the correlation between each variable was analyzed through Pearson's correlation coefficients, and the mediating effect of wisdom was analyzed using multiple linear regression, and the significance test for mediating effect size was analyzed by the Sobel test.

Result and Discussion

General characteristics of subjects

Subjects of this study were female care workers (100%) who are in charge of visiting care, ranging in age from 38 to 80 years old, with an average of 59.23 ± 8.16 years old and 55.2% (53 persons) upper 60 years old. Most (95.8%) were married, and as for the educational background, 67.8% (65 people) had a high school diploma or higher, and the average working experience as a care worker was 57.31 ± 45.99 months, ranging from 6 months to 12 years. 69.8% (67 people) had religion. It was found that more than half (69.8%, 67 people) had no other certifications than the care worker certification. 73 (76.0%) care workers had received maintenance training or job training more than once in the past year.

Degree of self-leadership, wisdom, and quality of service in subjects

The care workers' self-leadership scored 3.94 ± 0.47 points out of 5 points, wisdom scored 3.82 ± 0.57 points out of 5 points, and quality of service scored 4.16 ± 0.50 points out of 5 points. [Table 1]

Table 1: Degree of communication ability, Empathy and Quality of service in Subjects (N=96)

Variables	M \pm SD	Range
Self-leadership	3.94 \pm 0.47	1~5
Wisdom	3.82 \pm 0.57	1~5
Quality of service	4.16 \pm 0.50	1~5

Correlation between self-leadership, wisdom, and quality of service in subjects

Quality of service and self-leadership ($r=.59$, $p<.001$), quality of service and wisdom ($r=.65$, $p<.001$), and wisdom and self-leadership ($r=.73$, $p<.001$) all showed high positive correlation [Table 2].

Table 2: Correlation between Self-leadership, Wisdom and Quality of Service in subjects

Variables	Self-leadership r(p)	Wisdom r(p)	Quality of service r(p)
Self-leadership	1		
Wisdom	.73 (<.001)	1	
Quality of service	.59 (<.001)	.65 (<.001)	1

Mediating effects of wisdom in the relation between self-leadership and quality of service in subjects

As a result of examining the autocorrelation of the dependent variable and the multicollinearity between the independent variable before testing the mediating effect, the Durbin-Watson index for autocorrelation was 1.86, which was close to 2, which was independent. The multicollinearity between the independent variables was less than 10 with the VIF index 2.11, and tolerance was 0.47, which is above the standard value of 0.1, and there was no multicollinearity, which meant the data was suitable for regression analysis.

As a result, in step 1 regression analysis, self-leadership, an independent variable, had a statistically significant affect on wisdom, a mediating variable ($\beta=.73$), and the explanatory power for empathy was 52.6%. In the second-stage regression analysis, self-leadership, an independent variable, had a significant effect on the quality of service, a dependent variable

($\beta=.59$), and the explanatory power for quality of service was 35.0%. In step 3, in order to test the effect of wisdom, a mediating variable, on quality of service, which is a dependent variable, as a result of regression analysis with self-leadership and wisdom as predictive factors and quality of service as dependent variable, self-leadership was found to have a positive effect on quality of service ($\beta=.26$), and wisdom also had a positive effect on quality of service ($\beta=.46$), and it showed 44.9% of explanatory power.

As a result of comparing the β values, it was confirmed that wisdom showed a partial mediating effect as much as 0.33. The β value of .26 in step 3 was lower than the β value of .59 in step 2, and because the effect of self-leadership was reduced by the parameter wisdom, the partial mediating effect of wisdom was confirmed. As a result of confirming the significance of the mediating effect coefficient, it was statistically significant ($Z=3.78$, $p<.001$) [Table 3].

Table 3: Mediating effects of wisdom in the relation between self-leadership and quality of service

Variables	B	β	t	p	R2	Adj. R2	F	p
Step1: Self-leadership→ Wisdom	.88	.73	10.21	<.001	.526	.521	104.19	<.001
Step2: Self-leadership →Quality of service	.63	.59	7.12	<.001	.350	.344	50.72	<.001

Cont.... Table 3: Mediating effects of wisdom in the relation between self-leadership and quality of service

Step3: Self-leadership, Wisdom → Quality of service					.449	.437	37.94	<.001
1. Self-leadership → Quality of service	.28	.26	2.33	.022				
2. Wisdom → Quality of service	.40	.46	4.09	<.001				
Z= 3.78, p<.001								

Discussion

By analyzing the mediating effect of wisdom in the relationship between self-leadership and quality of service, targeting caregivers who are in charge of visiting care for elderly with impaired mobility with conditions such as dementia and stroke, research was attempted to provide basic data to improve the quality of service of caregivers.

Self-leadership and wisdom in caregivers showed a positive correlation with quality of service. Caregivers’ self-leadership had a significant effect on the quality of service [9]. Self-leadership is a skill for self-efficacy, the basis of behavioral control, and the learning process of self-completion. It is also the process of exerting influence on oneself to perform tasks and duties, motivating oneself to achieve goals and developing one’s own framework. Therefore, it was confirmed that the self-leadership of caregivers can have an important influence in providing nursing services to the elderly.

Moreover, wisdom is the mental ability to quickly realize the reasoning of things and process things accurately [15]. It is also facilitated through life’s internal and external experiences [16] and it can be said that caregivers after middle age are more likely to be wise because they have lived for a long time and have had a lot of experience. Generally, those who perform the duties of caregivers are middle-aged and elderly women, and these are subjects who are familiar with the act of care, and since they mainly perform duties related to nursing care, it is judged that wisdom and quality of service could derive a positive correlation. Wise middle-aged and elderly adults had higher self-esteem

and higher ability to adapt in life than the lower-age group [17], and they were expected to be able to lead their work well, and this supported the results of this study. Also, in a study of 116 and 123 caregivers in charge of visiting care [7,8], wisdom and job competency showed a statistically significant positive correlation, and wisdom was found to be an important factor influencing the job competency of caregivers where, as the wisdom increased, the job competency was higher, and therefore, it is believed that the caregivers can provide high quality services by exerting high competence. Therefore, it is necessary to provide an opportunity to acquire wisdom in life while educating and training to demonstrate self-leadership of caregivers based on the results of this study so that excellent nursing services for the elderly can be provided.

Conclusion

According to the results of this study, wisdom was found to have a partial mediating effect in the relationship between self-leadership and quality of service in caregivers. In order for caregivers to increase the quality of care service for patients with impaired mobility and elderly with dementia, they need an opportunity to participate in leadership improvement programs and enrich their life experiences through wisdom. A follow-up study targeting or expanding the target to caregivers belonging to nursing hospitals is suggested.

Ethical Clearance: Not required

Source of Funding: Self

Conflict of Interest: Nil

References

1. StatisticsKorea.2020ElderlyStatistics,Newsrelease 2020.9.28. http://kostat.go.kr/portal/korea/kor_nw/1/1/index.board?bmode=read&aSeq=385322
2. Lee YK. Health and Care of Older Adults in Korea. Health and Welfare Policy Forum. 2018;10:19-30.
3. Bae JY. The Study on the Relationship between the Burden of Medical Expenditures and Health-related Quality of Life among the Elderly with Chronic Diseases. *Journal of Social Science*. 2014;25(4):100-129.
4. Ministry of Health and Welfare. 2019 Standard textbook for care workers. 2020. http://www.mohw.go.kr/react/jb/sjb030301vw.jsp?PAR_MENU_ID=03&MENU_ID=0320&CONT_SEQ=352250
5. Parasuraman A., Zeithmal VA., Berry LL. SERVQUAL: A Multiple-Item Scale for Measuring Consumer Perceptions of Service Quality. *Journal of Marketing*. 1988;64(1):14-40.
6. Kim HK. Mediating Effect of Self-leadership in the relation between Job Commitment and Job Competence among Care workers in Korea. *Medico-Legal Update*. 2020;20(4):2461-2466.
7. Kim HK, Lee NY., Park CH. Effects of Self-efficacy and Wisdom on Job Competence of Care Workers in Korea. *Medico-Legal Update*. 2020;20(2):724-728.
8. Kim HK., Park CH., Lee NY. Effects of Health Perception, Generativity, and Wisdom on Job Competency of Korean Care Workers. *Medico-Legal Update*. 2020;20(2):718-723.
9. Kim KO, Youn CS. The Effects of Caregiver's Self-leadership on Personal Innovation Behavior and Quality of Service, *Journal of Lifelong Education Leadership*. 2017;4(2):5-26.
10. Chae SH, Kwon HY. The Relationship between Sense of Mid-life Crisis, Wisdom, Savoring Belief, International Relationship Harmony and Generativity. *Korean Journal of Educational Therapist*. 2019;11(3):397-412. <http://DOI.org/10.35185/KJET.11.3.6>
11. Lee NY, Kim HK. Analysis on Effects of Perceived Health Status, Social Activities and Wisdom of Elderly Women Residing in Rural Environment on Health Conservation. *International Journal of Applied Engineering Research*. 2017;12(21):10701-10710.
12. Koh HI. The Impact of Employees' Self-Leadership on the Service Quality in Medical Institutions: Mediating Effect of Psychological Empowerment and Organizational Citizenship Behavior. Ulsan University, Doctoral dissertation, Ulsan, 2011.
13. Kim MH. Exploring the Concept of Wisdom and the Role on the Life among Middle-aged and Elder Adult in Korea. Doctoral Dissertation, Seoul National University, Seoul, 2008.
14. Jung HM. The Effect of Emotional Intelligence, Communication Skill, and Self-Esteem of Care Workers on Quality of Care Service. Master thesis, Yeungnam University, Daegu, 2016.
15. National Korean Language Institute. Standard Korean Language Dictionary, 2021. <https://stdict.korean.go.kr/search/searchResult.do>
16. Cho SH. The Study of the Wisdom of Seniors with relation of Self-esteem, Satisfaction of life, and Psychological well-being, Cognitive function as the Central Figure. Doctoral dissertation, Hoseo University, Cheonan, 2015.
17. Kim MH, Min KH. Age Differences of Wisdom and Its Correlation with Successful Aging among Middle-aged and Elder Adults. *Journal of the Korean Gerontological Society*. 2010;30(3): 947-971.